

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 240-106467-3

Client Project/Site: Ford LTP Livonia MI - E203631

For:

ARCADIS U.S., Inc.  
28550 Cabot Drive  
Suite 500  
Novi, Michigan 48377

Attn: Kristoffer Hinskey



Authorized for release by:  
1/18/2019 2:37:01 PM

Michael DelMonico, Project Manager I  
(330)497-9396  
[michael.delmonico@testamericainc.com](mailto:michael.delmonico@testamericainc.com)

### LINKS

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results through  
**TotalAccess**

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Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*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: 240-106467-3

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## Glossary

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

# Case Narrative

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

TestAmerica Job ID: 240-106467-3

**Job ID: 240-106467-3**

**Laboratory: TestAmerica Canton**

**Narrative**

## CASE NARRATIVE

**Client: ARCADIS U.S., Inc.**

**Project: Ford LTP Livonia MI - E203631**

**Report Number: 240-106467-3**

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 1/3/2019 8:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

### **VOLATILE ORGANIC COMPOUNDS (GCMS)**

Samples MW-128S\_122718 (240-106467-2) and DUP-03\_122718 (240-106467-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/08/2019.

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

### **VOLATILE ORGANIC COMPOUNDS (GCMS SIM)**

Samples MW-128S\_122718 (240-106467-2) and DUP-03\_122718 (240-106467-3) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 01/08/2019.

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: 240-106467-3

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: 240-106467-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-106467-2	MW-128S_122718	Water	12/27/18 09:55	01/03/19 08:35
240-106467-3	DUP-03_122718	Water	12/27/18 00:00	01/03/19 08:35

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# Detection Summary

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

TestAmerica Job ID: 240-106467-3

**Client Sample ID: MW-128S\_122718**

**Lab Sample ID: 240-106467-2**

No Detections.

**Client Sample ID: DUP-03\_122718**

**Lab Sample ID: 240-106467-3**

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-106467-3

**Client Sample ID: MW-128S\_122718**

**Lab Sample ID: 240-106467-2**

**Date Collected: 12/27/18 09:55**

**Matrix: Water**

**Date Received: 01/03/19 08:35**

**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			01/08/19 19:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 125					01/08/19 19:19	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			01/08/19 15:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			01/08/19 15:49	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/08/19 15:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/08/19 15:49	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			01/08/19 15:49	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/08/19 15:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 121					01/08/19 15:49	1
4-Bromofluorobenzene (Surr)	73		59 - 120					01/08/19 15:49	1
Toluene-d8 (Surr)	75		70 - 123					01/08/19 15:49	1
Dibromofluoromethane (Surr)	113		75 - 128					01/08/19 15:49	1



# Client Sample Results

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

TestAmerica Job ID: 240-106467-3

**Client Sample ID: DUP-03\_122718**

**Lab Sample ID: 240-106467-3**

**Date Collected: 12/27/18 00:00**

**Matrix: Water**

**Date Received: 01/03/19 08:35**

**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			01/08/19 19:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		63 - 125					01/08/19 19:45	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			01/08/19 16:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			01/08/19 16:11	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/08/19 16:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			01/08/19 16:11	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			01/08/19 16:11	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			01/08/19 16:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		70 - 121					01/08/19 16:11	1
4-Bromofluorobenzene (Surr)	75		59 - 120					01/08/19 16:11	1
Toluene-d8 (Surr)	79		70 - 123					01/08/19 16:11	1
Dibromofluoromethane (Surr)	118		75 - 128					01/08/19 16:11	1

# Surrogate Summary

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

TestAmerica Job ID: 240-106467-3

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (70-121)	BFB (59-120)	TOL (70-123)	DBFM (75-128)
240-106467-2	MW-128S_122718	113	73	75	113
240-106467-3	DUP-03_122718	116	75	79	118

#### 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)
240-106467-2	MW-128S_122718	86
240-106467-3	DUP-03_122718	91

#### Surrogate Legend

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

# QC Association Summary

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

TestAmerica Job ID: 240-106467-3

## GC/MS VOA

### Analysis Batch: 363151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-106467-2	MW-128S_122718	Total/NA	Water	8260B	
240-106467-3	DUP-03_122718	Total/NA	Water	8260B	

### Analysis Batch: 363200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-106467-2	MW-128S_122718	Total/NA	Water	8260B SIM	
240-106467-3	DUP-03_122718	Total/NA	Water	8260B SIM	

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# Lab Chronicle

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

TestAmerica Job ID: 240-106467-3

**Client Sample ID: MW-128S\_122718**

**Lab Sample ID: 240-106467-2**

**Date Collected: 12/27/18 09:55**

**Matrix: Water**

**Date Received: 01/03/19 08:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	363151	01/08/19 15:49	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	363200	01/08/19 19:19	SAM	TAL CAN

**Client Sample ID: DUP-03\_122718**

**Lab Sample ID: 240-106467-3**

**Date Collected: 12/27/18 00:00**

**Matrix: Water**

**Date Received: 01/03/19 08:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	363151	01/08/19 16:11	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	363200	01/08/19 19:45	SAM	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: 240-106467-3

## 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	02-23-19 *
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	02-23-19 *
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	02-23-19 *
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.

<b>Client Information</b> Client Contact: Christina Weaver Angela DeGrandis Company: ARCADIS U.S., Inc. Address: 28550 Cabot Drive Suite 500 City: Novi State/Zip: MI 48377 Phone: MI001454-0003 Email: angela.degrandis@arcadis-us.com Project Name: Ford LTP Livonia MI - E203631 Site: FORD LTP		Lab PM: DeMonico, Michael E-Mail: michael.deimonico@testamericainc.com Carrier Tracking No(s): COC No: 240-56713-24439.2 Page: Job #: Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:	
Due Date Requested: TAT Requested (days): Standard PO #: MI001454-0003 WO #: Cadema #: E203631 Project #: 24015353 SSOW#:		Analysis Requested 1,4-Dioxane 82608 SIM 1,1-DCE 82608 cis-1,2-DCE, 82608 TRANS-1,2-DCE 82608 PCE 82608 TCE 82608 Vinyl Chloride 82608 HCL Resection Total Number of containers:	
<b>Sample Identification</b> Sample ID: MW-90-122718 MW-1285-122718 DUP-03-122718 MW-80SR-122718 Sample Date: 12/27/18 Sample Time: 12:15 0955 1500 Sample Type (C=Comp, G=grab) Matrix (Water, Solid, D-wastewater, BT-Tissue, AAir) Preservation Code:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8260B - VOCs (Short List) 8260B SIM - Local Method Special Instructions/Note: 240-106467 Chain of Custody	
<b>Possible Hazard Identification</b> <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 Deliverable Requested: <input type="checkbox"/> I, II, III <input checked="" type="checkbox"/> Other (specify)			
<b>Sample Disposal</b> (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/OC Requirements: Submit all results through Cadema at Sim-Tomaska C Cadema # E203631			
Relinquished by: Christina Weaver / Christina Weaver Relinquished by: Novi Cold Storage / Christi Deen Relinquished by:		Date: 12/27/18 1612 1/2/19 1138 1/2/19 1320	
Relinquished by: Christina Weaver / Christina Weaver Relinquished by: Novi Cold Storage / Christi Deen Relinquished by:		Date: 12/27/18 1612 1/2/19 1138 1/2/19 1320	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Company: ARCADIS Company: ARCADIS Company: TAL	
Cooler Temperature(s) and Other Remarks:			



TestAmerica Canton Sample Receipt Form/Narrative

Login # : 106467

Canton Facility

Client Arcadis Site Name Cooler Received on 1/3/19 Opened on 1/3/19 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Cooler unpacked by:

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

TestAmerica Cooler # 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 IR GUN# IR-8 (CF -0.2 °C) Observed Cooler Temp. IR GUN #36 (CF +0°C) Observed Cooler Temp. 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 3. Shippers' packing slip attached to the cooler(s)? 4. Did custody papers accompany the sample(s)? 5. Were the custody papers relinquished & signed in the appropriate place? 6. Was/were the person(s) who collected the samples clearly identified on the COC? 7. Did all bottles arrive in good condition (Unbroken)? 8. Could all bottle labels be reconciled with the COC? 9. Were correct bottle(s) used for the test(s) indicated? 10. Sufficient quantity received to perform indicated analyses? 11. Are these work share samples? 12. Were all preserved sample(s) at the correct pH upon receipt? 13. Were VOAs on the COC? 14. Were air bubbles >6 mm in any VOA vials? 15. Was a VOA trip blank present in the cooler(s)? 16. Was a LL Hg or Me Hg trip blank present?

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:

JL

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):

TestAmerica Multiple Cooler Receipt Form/Narrative

Login #: 106467

Canton Facility

This feature is  
→

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA	36	1.4	1.4	ICE
	1	3.2	3.2	

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

X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\W7-NC-099H-071615 Cooler Receipt Form\_page 2 - Multiple Coolers.doc xls





January 18, 2019

Kris Hinskey  
Arcadis Inc  
10559 Citation Ave  
Suite 100  
Brighton, MI 48116

CADENA project ID: E203631  
Project: Ford Livonia Transmission Project - OFF-SITE - Soil Gas and Groundwater  
Project number: MI001454.0002/3/4.00002/2B/3B  
Client project scope reference: Sample COC only was used to define project analytical requirements.  
Laboratory: TestAmerica - North Canton  
Laboratory submittal: 106467-3  
Sample date: 2018-12-27  
Report received by CADENA: 2019-01-18  
Initial Data Verification completed by CADENA: 2019-01-18

There were no significant QC anomalies or exceptions to report.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Water sample(s) were analyzed for GCMS VOC parameter(s).

Sample/MS/MSD Surrogate Recovery and Hold Time Exception were reviewed as part of our verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at <http://clms.cadenaco.com/index.cfm>.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Inc, 1099 Highland Drive, Suite E, Ann Arbor, MI 48108 517-819-0356

## CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminants) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminants) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

## SAMPLING AND ANALYSIS SUMMARY

**CADENA Project ID:** E203631

**Laboratory:** TestAmerica-North Canton

**Laboratory Submittal:** 106467-3

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	8260B with Single Ion Monitoring	Comment
2401064672	MW-128S_122718	12/27/2018	9:55:00	X	X	
2401064673	DUP-03_122718	12/27/2018	12:00:00	X	X	