

DATA USABILITY SUMMARY REPORT (DUSR)

**Site: Zip Zip Mini Mart ERP
1410 Erie Blvd. East
Syracuse, NY
NYS DEC Site No.: B-00075**

**SDGs: J147988-1, J147994-1, J148126-1, and J148884-1
29 Soil and Water Samples**

Prepared for:

**C&S Companies
499 Colonel Eileen Collins Blvd.
Syracuse, NY 13212
Attention: Matt Walker**

April 2019



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REVIEWER'S NARRATIVE

C & S Companies Zip Zip Mini Mart ERP

The data associated with these Sample Delivery Groups (SDGs), analyzed by TestAmerica Buffalo, NY have been reviewed in accordance with assessment criteria provided by the New York State Department of Environmental Conservation following the review procedures provided in the USEPA Functional Guidelines for evaluating organic and inorganic data.

All analytical results reported by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).

Two facts should be noted by all data users. First, the "R" qualifier means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Values qualified with an "R" should not appear on the final data tables because they cannot be relied upon, even as the last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Reviewer's Signature: Michael K. Perry Date: 4/29/19
Michael K. Perry
Chemist

1.0 SUMMARY

SITE:	Zip Zip Mini Mart ERP 1410 Erie Blvd. East Syracuse, NY NYS DEC Site No. B-00075
SAMPLING DATE:	January - February, 2019
SAMPLE TYPE:	29 soil and water samples
LABORATORY:	TestAmerica Buffalo, NY
SDG No.:	4 SDGs

2.0 INTRODUCTION

This data usability summary report (DUSR) was prepared in accordance with guidance provided by the New York State Department of Environmental Conservation (NYSDEC). The DUSR is based on a review and evaluation of the laboratory analytical data package. Specifically, the NYSDEC guidance recommends review and evaluation of the following elements of the data package:

- Completeness of the data package as defined under the requirements of the NYSDEC Analytical Services Protocols (ASP) Category B or the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) deliverables,
- Compliance with established analyte holding times,
- Adherence to quality control (QC) limits and specifications for blanks, instrument tuning and calibration, surrogate recoveries, spike recoveries, laboratory duplicate analyses, and other QC criteria,
- Adherence to established analytical protocols,
- Conformance of data summary sheets with raw analytical data, and
- Use of correct data qualifiers.

Data deficiencies, analytical protocol deviations, and quality control problems identified using the review criteria above and their effect on the analytical results are discussed in this report.

3.0 SAMPLE AND ANALYSIS SUMMARY

A summary of the laboratory data deliverables is provided in Table 3-1. The data were supplied on a thumb drive for all of the sample delivery groups (SDGs). The information provided in Table 3-1 is categorized according to SDG to provide a quick reference to the data by any data user.

As shown in Table 3-1, the laboratory deliverables consisted of 4 SDGs that contained the analytical results for 29 total soil and water samples collected from January to February 2019. Samples were analyzed for some or all of the following volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, herbicides, polychlorinated biphenyls (PCBs), and metals.

The sample IDs associated with each SDG are provided with the validated analytical results in Appendix A.

All analyses were performed by TestAmerica, Buffalo, NY. The analytical results were provided in NYSDEC ASP Category B format, which includes all raw analytical data and laboratory QC data.

4.0 GUIDANCE DOCUMENTS AND DATA REVIEW CRITERIA

The guidance documents used for reviewing laboratory quality control (QC) data and assigning data qualifiers (flags) to analytical results are listed in Table 4-1. The QC limits established in the documents applicable to this data review were used to assess the quality of the analytical results. In some cases, however, QC limits established internally by the laboratory were taken into account to determine data quality.

The QC criteria considered for assessing the usability of the reported analytical results provided for each analyte type (i.e. VOCs, SVOCs, metals, etc.) are listed in Table 4-2. These criteria may vary with the analytical method utilized by the laboratory. These criteria comply with the guidance recommended in Section 2.0 above.

Table 3-1
Summary of Laboratory Deliverables
Zip Zip Mini Mart ERP Site No. B-00075

Data SDG No.	SDG	Sample Date	No. of Samples	Matrix	Analysis
1	J147988-1	01/15/19	2	soil	VOCs,SVOCs,Pesticides,Herbicides,Metals
2	J147994-1	01/16/19	12	soil	VOCs,SVOCs,Metals
3	J148126-1	01/18/19	7	water	VOCs,SVOCs>Total Metals, Dissolved Metals
4	J148334-1	02/07-08/19	8	soil	VOCs,SVOCs,Pesticides,PCBs,Herbicides,Metals

TOTALS

SDGs
4

SAMPLES
29

ANALYTES
3173

REJECTS
0

% USABILITY
100%

TABLE 4-1

DATA VALIDATION GUIDANCE DOCUMENTS

Analyte Type	Validation Guidance
VOCs	USEPA, 2008, Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry; SW-846 Method 8260B; SOP # HW-24, Rev. 2. USEPA, 2008, Statement of Work for Organic Analysis of Low/Medium Concentration of Volatile Organic Compounds SOM01.2; SOP HW-33, Rev. 2.
SVOCs	USEPA, 2007, Statement of Work for Organic Analysis of Low/Medium Concentration of Semivolatile Organic Compounds SOM01.2; SOP HW-35, Rev. 1.
Pesticides/PCBs	USEPA, 2006, CLP Organics Data Review and Preliminary Review (CLP/SOW OLMO 4.3); SOP # HW-6, Rev. 14, Part C.
Metals	USEPA, 2006, Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILMO 5.3 (SOP Revision 13), SOP # HW-2, Rev. 13.
Gen Chemistry	NYSDEC, 2005, Analytical Services Protocols (ASP)
VOCs (Ambient air)	USEPA, 2006, Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canister by Method TO-15; SOP # HW-31, Rev. 4.
Perfluoroalkyl Substances (PFASs)	USEPA, 2018, Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537

TABLE 4-2

**QUALITY CONTROL CRITERIA USED FOR VALIDATING
LABORATORY ANALYTICAL DATA**

VOCs	SVOCs	Pesticides/PCBs	Metals	Gen Chemistry	Method TO-15
Completeness of Pkg Sample Preservation Holding Time System Monitoring Compounds Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Time Surrogate Recoveries Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Time Surrogate Recoveries Matrix Spikes Blanks Instrument Calibration & Verification Analyte ID Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Time Initial/Continuing Calibration CRDL Standards Blanks Interference Check Sample Spike Recoveries Lab Duplicate Lab Control Sample ICP Serial Dilutions Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Times Calibration Lab Control Samples Blanks Spike Recoveries Lab Duplicates	Completeness of Pkg Sample Preservation Holding Time Canister Certification Lab Control Sample Instrument Tuning Blanks Initial Calibration & System Performance Daily Calibration Field Duplicate

PFASs
Completeness of Pkg Sample Preservation Holding Time Instr Performance Check Initial Calibration Continuing Calibration Blanks Surrogates Lab Fortified Blank Matrix Spikes Internal Standards

5.0 DATA VALIDATION QUALIFIERS

The letter qualifiers (flags) used to define data usability are described briefly below. These letters are assigned by the data validator to analytical results having questionable accuracy and/or precision as determined by reviewing the laboratory QC data associated with the analytical results.

The laboratory may also use various letters and symbols to flag analytical results generated when QC limits were exceeded. The meanings of these flags may differ from those used by the independent data validator. Those used by the laboratory are provided with the analytical results.

NOTE: The assignment of data qualifiers by the data reviewer (validator) to laboratory analytical results should not necessarily be interpreted by the data user as a measure of laboratory ability or proficiency. Rather, the qualifiers are intended to provide a measure of data accuracy and precision to the data user, which, for example, may provide a level of confidence in determining whether or not standards or cleanup objectives have been met.

- U** The analyte was analyzed for but was not detected at or above the sample quantitation limit.
- J** The analyte was positively identified; the associated numerical value is the *approximate* concentration of the analyte in the sample. (The magnitude of any \pm value associated with the result is not determined by data validation).
- UJ** The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is *approximate* and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R** The sample result is rejected (i.e., is unusable) due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
- JN** The analyte is considered to be "presumptively present." The associated numerical value represents its *approximate* concentration.

The validated analytical results are attached to this report. Validation qualifiers (flags) are indicated using red ink. Data sheets having qualified data are signed and dated by the data reviewer.

6.0 RESULTS OF THE DATA REVIEW

The results of the data review are summarized in Tables 6-1 through 6-4, which correspond to the data and SDGs listed in Table 3-1. The tables provide the sample IDs in each SDG where QC criteria were found to exceed acceptable limits and the actions taken to qualify the affected sample results.

Listings of the sample IDs included with each SDG and the sample results (Form 1s) that required qualification are provided in Appendix A. Only the Form 1s that required qualification are included.

Appendix B provides the QC documentation that identifies the specific QC criteria that were found to be outside acceptable limits.

7.0 TOTAL USABLE DATA

For the Zip Zip Mini Mart ERP project, 29 samples were analyzed and results were reported for 3173. Even though some results were flagged with a "J" as estimated, all results (100 %) are considered usable. See the summary tables for the analyses that have been flagged and the associated QC reasons.

Table 6-1

SUMMARY OF DATA VALIDATION RESULTS**SDG J147988-1**

SDG	Sample Date	Analysis	Sample ID	Analyte	Qualifier	Code
J147988-1	01/15/19	8260C	All Samples	Toluene	CRQL-U	11
		8270D	All Samples	SVOCs		0
		8081B	All Samples	Pests		0
		8151A	All Samples	Herbs		0
		6010C/7471B	All Samples	Na	J detects	11

Validation Codes

- 0 No analytical results were qualified
- 1 % recovery in spike sample > control limit results may be biased high
- 2 % recovery in spike sample < control limit results may be biased low
- 3 Relative percent difference between duplicate lab samples > control limit
- 4 Relative percent difference between field duplicate and sample > control limit
- 5 Surrogate recoveries > QC control limit
- 6 Surrogate recoveries < QC control limit
- 7 Minimum RF of 0.005 not met
- 8 %D for CCV exceeded for various compounds:
- 9 ICAL was not a minimum of 5 calibration points
- 10 %D for dual column analysis was exceeded
- 11 Laboratory Blank contamination
- 12 LCS Recovery > QC limit
- 13 Internal Standard area IS2 < 50 % of the 12 hour standard. The following Compounds: Chlorobenzene, 1,1,2,2-Tetrachloroethane, Ethylbenzene, m,p-Xylene, Styrene, Bromoform, Isopropylbenzene, n-Propylbenzene, Tert-Butylbenzene, sec-Butylbenzene, and p-Isopropyltoluene are affected.
- 14 Internal Standard area IS3 < 50 % of the 12 hour standard. The following Compounds: 1,2-DCB, 1,3-DCB, 1,4-DCB, DBCP, 1,2,4-TCB, 1,2,3-TCB, N-Butylbenzene and Naphthalene are affected.
- 15 Possible cross contamination from sample storage
- 16 Serial dilution > 10 % J detects
- 17 Extracted/Analyzed outside holding time

Table 6-2

SUMMARY OF DATA VALIDATION RESULTS**SDG J147994-1**

SDG	Sample Date	Analysis	Sample ID	Analyte	Qualifier	Code
J147994-1	01/16/19	8280C	SB-6 (10-15')	Many Analytes	UJJ	2
		8270D	All Samples	SVOCs		0
		6010CA/7471B	SB-2 (0-5')	Sb	CRQL-U	11
			SB-3 (0-5')	Sb	CRQL-U	11
			All Samples	Na	J detects	11

Validation Codes

- 0 No analytical results were qualified
- 1 % recovery in spike sample > control limit results may be biased high
- 2 % recovery in spike sample < control limit results may be biased low
- 3 Relative percent difference between duplicate lab samples > control limit
- 4 Relative percent difference between field duplicate and sample > control limit
- 5 Surrogate recoveries > QC control limit
- 6 Surrogate recoveries < QC control limit
- 7 Minimum RF of 0.005 not met
- 8 %D for CCV exceeded for various compounds:
- 9 ICAL was not a minimum of 5 calibration points
- 10 %D for dual column analysis was exceeded
- 11 Laboratory Blank contamination
- 12 LCS Recovery > QC limit
- 13 Internal Standard area IS2 < 50 % of the 12 hour standard. The following Compounds: Chlorobenzene, 1,1,2,2-Tetrachloroethane, Ethylbenzene, m,o,p-Xylene, Styrene, Bromoform, Isopropylbenzene, n-Propylbenzene, Tert-Butylbenzene, sec-Butylbenzene, and p-Isopropyltoluene are affected.
- 14 Internal Standard area IS3 < 50 % of the 12 hour standard. The following Compounds: 1,2-DCB, 1,3-DCB, 1,4-DCB, DBCP, 1,2,4-TCB, 1,2,3-TCB, N-Butylbenzene and Naphthalene are affected.
- 15 Possible cross contamination from sample storage
- 16 Serial dilution > 10 % J detects
- 17 Extracted/Analyzed outside holding time
- 18 Samples were analyzed from unpreserved container

Table 6-3

SUMMARY OF DATA VALIDATION RESULTS**SDG J148126-1**

SDG	Sample Date	Analysis	Sample ID	Analyte	Qualifier	Code
J147994-1	01/18/19	8260C	MW-4	Many Analytes (see Form I)	UJJ	2
		8270D	MW-4	3,3'-DiCB	UJJ	2
				3-Nitroaniline	UJJ	2
				4-Nitroaniline	UJJ	2
		8010C/7470B	All Samples	Diss. Zn	CRQL-U	11
			MW-4	Fe	J	2,3
			MW-4	Mn	J	2,3
			MW-4	Al	J	1
			MW-4	Ca	J	1
			MW-4	Mg	J	1
			MW-4	K	J	1

Validation Codes

- 0 No analytical results were qualified
- 1 % recovery in spike sample > control limit results may be biased high
- 2 % recovery in spike sample < control limit results may be biased low
- 3 Relative percent difference between duplicate lab samples > control limit
- 4 Relative percent difference between field duplicate and sample > control limit
- 5 Surrogate recoveries > QC control limit
- 6 Surrogate recoveries < QC control limit
- 7 Minimum RF of 0.005 not met
- 8 %D for CCV exceeded for various compounds:
- 9 ICAL was not a minimum of 5 calibration points
- 10 %D for dual column analysis was exceeded
- 11 Laboratory Blank contamination
- 12 LCS Recovery outside QC limit
- 13 Internal Standard area IS2 < 50 % of the 12 hour standard. The following Compounds: Chlorobenzene, 1,1,2,2-Tetrachloroethane, Ethylbenzene, m,o,p-Xylene, Styrene, Bromoform, Isopropylbenzene, n-Propylbenzene, Tert-Butylbenzene, sec-Butylbenzene, and p-Isopropyltoluene are affected.
- 14 Internal Standard area IS3 < 50 % of the 12 hour standard. The following Compounds: 1,2-DCB, 1,3-DCB, 1,4-DCB, DBCP, 1,2,4-TCB, 1,2,3-TCB, N-Butylbenzene and Naphthalene are affected.
- 15 Possible cross contamination from sample storage
- 16 Serial dilution > 10 % J detects
- 17 Extracted/Analyzed outside holding time

Table 6-4

SUMMARY OF DATA VALIDATION RESULTS**SDG J148884-1**

SDG	Sample Date	Analysis	Sample ID	Analyte	Qualifier	Code
J148884-1	02/07-08/19	8260C	SS-2 (6-12')	Chloroethane	UJJ	12
			SS-4 (6-12')	Chloroethane	UJJ	12
			SS-3 (6-12')	MeCl2	CRQL-U	11
			SS-4 (6-12')	All analytes	UJJ	16
			SS-3 (6-12')	All analytes	UJJ	16
		8270D	All Samples	SVOCs		0*
		8081B	All Samples	Pesticides		0*
		8082A	All Samples	PCBs		0
		8151A	All Samples	Herbicides		0
		6010C/7471B	SS-1 (0-2')	Na	J	11
			SS-2 (0-2')	Na	J	11
			SS-2 (6-12')	Na	J	11

Validation Codes

- 0 No analytical results were qualified
 - 1 % recovery in spike sample > control limit results may be biased high
 - 2 % recovery in spike sample < control limit results may be biased low
 - 3 Relative percent difference between duplicate lab samples > control limit
 - 4 Relative percent difference between field duplicate and sample > control limit
 - 5 Surrogate recoveries > QC control limit
 - 6 Surrogate recoveries < QC control limit
 - 7 Minimum RF of 0.005 not met
 - 8 %D for CCV exceeded for various compounds:
 - 9 ICAL was not a minimum of 5 calibration points
 - 10 %O for dual column analysis was exceeded
 - 11 Laboratory Blank contamination
 - 12 LCS Recovery outside QC limit
 - 13 Possible cross contamination from sample storage
 - 14 Serial dilution > 10 % J detects
 - 15 Extracted/Analyzed outside holding time
 - 16 Method 5035A prep extracted outside 48 hour holding time
- * Many surrogate recoveries were diluted out due to matrix interference and no determination could be made

ACRONYMS

BSP	Blank Spike
CCAL	Continuing Calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
ICAL	Initial Calibration
ICB	Initial Calibration Blank
IS	Internal Standard
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA	Quality Assurance
QC	Quality Control
%R	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
%RSD	Percent Relative Standard Deviation
TAL	Target Analyte List (metals)
TCL	Target Compound List (organics)

Appendix A

*Validated
Analytical
Results*

ANALYTICAL REPORT

Job Number: 480-148126-1

SDG Number: 119.412.009

Job Description: Former Zip Zip Mini Mart Site

For:

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Attention: Matt Walker



Approved for Release:
Judy L. Stone
Senior Project Manager
1/29/2019 4:50 AM

Judy L. Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
01/29/2019

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the 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. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NYDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1



**Job Narrative
480-148126-1**

Receipt

The samples were received on 1/19/2019 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0° C.

Receipt Exceptions

The chain was not clear, but the client was contacted and the following samples do not get analyzed for dissolved metals: MW-4 (480-148126-2[MS]) and MW-4 (480-148126-2[MSD]).

GC/MS VOA

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: TW-1 (480-148126-1), MW-2 (480-148126-3) and DUPE (480-148126-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: MW-2 (480-148126-3), DUPE (480-148126-4) and TW-2 (480-148126-5). The samples were analyzed within 7 days per EPA recommendation.

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

GC/MS Semi VOA

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 480-456111 recovered above the upper control limit for 2,4-Dinitrophenol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: MW-4 (480-148126-2).

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-455841 and analytical batch 480-456111 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270D: The following sample was diluted due to the nature of the sample matrix: TW-3 (480-148126-6). Elevated reporting limits (RLs) are provided.

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

Metals

Method(s) 6010C: The following samples were diluted due to the presence of Calcium which interferes with Total Copper: TW-1 (480-148126-1) and TW-2 (480-148126-5). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The following samples were diluted due to the presence of Silicon which interferes with Total Lead: TW-1 (480-148126-1), MW-2 (480-148126-3), DUPE (480-148126-4), TW-2 (480-148126-5) and TW-3 (480-148126-6). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-456665/39) recovered Dissolved Arsenic at 66%, which is below the quality control limits of 70-130%. Dissolved Arsenic results for samples MW-2 (480-148126-3), TW-2 (480-148126-5), TW-3 (480-148126-6), (480-148126-B-2-F MS), (480-148126-B-2-G MSD), (480-148126-B-2-E PDS) and (480-148126-B-2-E SD ^5) may be biased low, however Continuing Calibration Verifications (CCVs) associated with these samples are compliant.

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

Organic Prep

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

Sample Summary

Client: C&S Engineers, Inc.
Project/Site: Former Zip Zip Mini Mart Site

TestAmerica Job ID: 480-148126-1
SDG: 119.412.009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-148126-1	TWA-1	Water	01/18/19 09:45	01/19/19 01:00
480-148126-2	MW-4	Water	01/18/19 10:35	01/19/19 01:00
480-148126-3	MW-2	Water	01/18/19 11:54	01/19/19 01:00
480-148126-4	DUPE	Water	01/18/19 12:10	01/19/19 01:00
480-148126-5	TVA-2	Water	01/18/19 12:55	01/19/19 01:00
480-148126-6	TVA-3	Water	01/18/19 13:40	01/19/19 01:00
480-148126-7	TRIP BLANK	Water	01/18/19 00:00	01/19/19 01:00

TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14226-2298
 Phone (716) 691-2800 Fax (716) 691-7901


Syracuse
 #225

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: <u>Angel Alejandro</u>	Lab P#: <u>Stone, Judy L</u>	Center Tracking No(s):	COE No: <u>480-122676-25124.1</u>
Client Contact: Matt Walker	Phone: <u>(315) 726 5335</u>	E-Mail: <u>judy.stone@testamericainc.com</u>		Page: <u>Page 1 of 1</u>

Company: C&S Engineers, Inc.	Due Date Requested:
Address: 499 Col. Eileen Collins Blvd	TAT Requested (days): <u>Standard</u>
City: Syracuse	PO #:
State, Zip: NY, 13212	Purchase Order Requested
Phone: 315-708-4223(Tel)	W/O #:
Email: mwalker@csos.com	Project #: 48018328
Project Name: Former Zip Mini Mart Site	SECURE:
Site:	

Analysis Requested	
 400-145126 Chain of Custody	
I - Ice J - DI Water K - EDTA L - BDA Other:	M - Metals N - Nona O - As/As2 P - Ni2O4S Q - Ni2SO3 R - Ni2SO3 S - H2SO4 T - TSP Dodecylsulfate U - Acetone V - MCAA W - pH 4-S Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=grab, A=air)	Printed Filtered Sample (Yes or No)					Total Number of Containers	Special Instructions/Note:
					Perform MS/MSD (Yes or No)	8010B - TEL SYRAC - 04/04/04	8010C - TEL SYRAC - 04/04/04	8010D - TEL SYRAC - 04/04/04	8010E - TEL SYRAC - 04/04/04		
TW-1	1/18/19	9:46	Water	Water	X	X	X	X			
MW-4	1/18/19	10:35	Water	Water	X	X	X	X			
MW-Z	1/18/19	11:54	Water	Water	X	X	X	X			
Dupe	1/18/19	12:10	Water	Water	X	X	X				
TW-Z	1/18/19	12:55	Water	Water	X	X	X	X			
TW-3	1/18/19	13:40	Water	Water	X	X	X	X			
Trip Blank	1/18/19		Water	Water							
			Water	Water							
			Water	Water							

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
<input 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	<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <u>Angel Alejandro</u>	Date/Time: <u>1/18/19 14:30</u>	Company: <u>C&S</u>	Received by: <u>[Signature]</u> Date/Time: <u>1/18/19 14:30</u> Company: <u>SYR</u>
Relinquished by: <u>RENFLESH</u>	Date/Time: <u>1-18-19, 19:00</u>	Company: <u>SYR</u>	Received by: <u>[Signature]</u> Date/Time: <u>01/18/19 0100</u> Company: <u>[Signature]</u>
Relinquished by:	Date/Time:	Company:	Received by:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: <u>1.0</u>	#/

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Client Sample ID: MW-4

Lab Sample ID: 480-148126-2

Matrix: Water

Lab File ID: S0556.D

Analysis Method: 8260C

Date Collected: 01/18/2019 10:35

Sample wt/vol: 5(mL)

Date Analyzed: 01/19/2019 17:31

Soil Aliquot Vol: _____

Dilution Factor: 1

Soil Extract Vol.: _____

GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: _____

Level: (low/med) Low

Analysis Batch No.: 455760

Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	F1 <i>WJ</i>	1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1 <i>WJ</i>	1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND	F1 <i>WJ</i>	1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND	F1 <i>WJ</i>	1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	5.9	J	10	3.0
71-43-2	Benzene	0.63	J	1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.60
75-15-0	Carbon disulfide	ND	F2 <i>WJ</i>	1.0	0.19
56-23-5	Carbon tetrachloride	ND	F2 F1 <i>WJ</i>	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	1.0	F2 F1 <i>J</i>	1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND	F1 <i>WJ</i>	1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Buffalo</u>	Job No.: <u>480-148126-1</u>
SDG No.: <u>119.412.009</u>	
Client Sample ID: <u>MW-4</u>	Lab Sample ID: <u>480-148126-2</u>
Matrix: <u>Water</u>	Lab File ID: <u>S0556.D</u>
Analysis Method: <u>8260C</u>	Date Collected: <u>01/18/2019 10:35</u>
Sample wt/vol: <u>5(mL)</u>	Date Analyzed: <u>01/19/2019 17:31</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>ZB-624 (20)</u> ID: <u>0.18(mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>455760</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	35		1.0	0.16
108-87-2	Methylcyclohexane	0.19	J F1 F2	1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
756-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND	F1	1.0	0.46
75-69-4	Trichlorofluoromethane	ND	F1	1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	108		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		77-120
460-90-4	4-Bromofluorobenzene (Surr)	101		75-120
1868-53-7	Dibromofluoromethane (Surr)	113		75-123

MW/2019

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Client Sample ID: MW-4

Lab Sample ID: 480-148126-2

Matrix: Water

Lab File ID: W0327.D

Analysis Method: 8270D

Date Collected: 01/18/2019 10:35

Extract. Method: 3510C

Date Extracted: 01/21/2019 07:56

Sample wt/vol: 250(mL)

Date Analyzed: 01/23/2019 01:18

Con. Extract Vol.: 1(mL)

Dilution Factor: 1

Injection Volume: 2(uL)

Level: (low/med) Low

% Moisture: _____

GPC Cleanup: (Y/N) N

Analysis Batch No.: 456111

Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RT	MDL
92-52-4	Biphenyl	ND		5.0	0.65
108-60-1	bis (2-chloroisopropyl) ether	ND		5.0	0.52
95-95-4	2,4,5-Trichlorophenol	ND		5.0	0.48
88-06-2	2,4,6-Trichlorophenol	ND		5.0	0.61
126-83-2	2,4-Dichlorophenol	ND		5.0	0.51
105-67-9	2,4-Dimethylphenol	ND		5.0	0.50
51-28-5	2,4-Dinitrophenol	ND		10	2.2
121-14-2	2,4-Dinitrotoluene	ND		5.0	0.45
606-20-2	2,6-Dinitrotoluene	ND		5.0	0.40
91-58-7	2-Chloronaphthalene	ND		5.0	0.46
95-57-8	2-Chlorophenol	ND		5.0	0.53
95-48-7	2-Methylphenol	ND		5.0	0.40
91-57-6	2-Methylnaphthalene	ND		5.0	0.60
88-74-4	2-Nitroaniline	ND		10	0.42
88-75-5	2-Nitrophenol	ND		5.0	0.48
91-94-1	3,3'-Dichlorobenzidine	ND	F1 F2	5.0	0.40
99-09-2	3-Nitroaniline	ND	F1	10	0.48
534-52-1	4,6-Dinitro-2-methylphenol	ND		10	2.2
101-55-3	4-Bromophenyl phenyl ether	ND		5.0	0.45
59-50-7	4-Chloro-3-methylphenol	ND		5.0	0.45
106-47-8	4-Chloroaniline	ND		5.0	0.59
7005-72-3	4-Chlorophenyl phenyl ether	ND		5.0	0.35
105-44-5	4-Methylphenol	ND		10	0.36
109-01-6	4-Nitroaniline	ND	F1	10	0.25
109-02-7	4-Nitrophenol	ND		10	1.5
83-32-9	Acenaphthene	ND		5.0	0.41
206-96-8	Acenaphthylene	ND		5.0	0.38
98-86-2	Acetophenone	ND		5.0	0.54
129-12-7	Anthracene	ND		5.0	0.28
1912-24-9	Atrazine	ND		5.0	0.46
100-52-7	Benzaldehyde	ND		5.0	0.27
56-55-3	Benzo[a]anthracene	ND		5.0	0.36
50-32-8	Benzo[a]pyrene	ND		5.0	0.47
205-99-2	Benzo[b]fluoranthene	ND		5.0	0.34

MW 01/26/19

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Client Sample ID: MW-4

Lab Sample ID: 480-148126-2

Matrix: Water

Lab File ID: W8327.D

Analysis Method: 8270D

Date Collected: 01/18/2019 10:35

Extract. Method: 3510C

Date Extracted: 01/21/2019 07:56

Sample wt/vol: 250(mL)

Date Analyzed: 01/23/2019 01:18

Con. Extract Vol.: 1(mL)

Dilution Factor: 1

Injection Volume: 2(uL)

Level: (low/med) Low

% Moisture: _____

GPC Cleanup: (Y/N) N

Analysis Batch No.: 456111

Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
191-24-2	Benzo[g,h,i]perylene	ND		5.0	0.35
207-08-9	Benzo[k]fluoranthene	ND		5.0	0.73
111-91-1	Bis(2-chlorooctoxy)methane	ND		5.0	0.35
111-44-4	Bis(2-chloroethyl)ether	ND		5.0	0.40
117-81-7	Bis(2-ethylhexyl) phthalate	ND		5.0	2.2
85-68-7	Butyl benzyl phthalate	ND		5.0	1.0
105-50-2	Caprolactam	ND		5.0	2.2
86-74-8	Carbazole	ND		5.0	0.30
218-01-9	Chrysene	ND		5.0	0.33
53-76-3	Dibenz[a,h]anthracene	ND		5.0	0.42
84-74-2	Di-n-butyl phthalate	ND		5.0	0.31
117-84-0	Di-n-octyl phthalate	ND		5.0	0.47
732-64-9	Dibenzofuran	ND		10	0.51
84-66-2	Diethyl phthalate	ND		5.0	0.22
131-11-3	Dimethyl phthalate	ND		5.0	0.36
206-44-0	Fluoranthene	ND		5.0	0.40
86-73-7	Fluorene	ND		5.0	0.36
118-74-1	Hexachlorobenzene	ND		5.0	0.51
87-68-3	Hexachlorobutadiene	ND		5.0	0.68
77-47-4	Hexachlorocyclopentadiene	ND		5.0	0.59
67-72-1	Hexachloroethane	ND		5.0	0.59
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.0	0.47
78-59-1	Isophorone	ND		5.0	0.43
621-64-7	N-Nitrosodi-n-propylamine	ND		5.0	0.54
86-30-6	N-Nitrosodiphenylamine	ND		5.0	0.51
91-20-3	Naphthalene	ND		5.0	0.76
98-95-3	Nitrobenzene	ND		5.0	0.29
87-86-5	Pentachlorophenol	ND		10	2.2
85-01-8	Phenanthrene	ND		5.0	0.44
109-95-2	Phenol	ND		5.0	0.39
129-00-0	Pyrene	ND		5.0	0.34

1A-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - TOTAL RECOVERABLE

Client Sample ID: MW-2

Lab Sample ID: 480-148126-2

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG ID.: 119.412.009

Matrix: Water

Date Sampled: 01/18/2019 10:35

Reporting Basis: WET

Date Received: 01/19/2019 01:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	13.9	J 0.20	0.060	mg/L		F2 F1	1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	3.4	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	0.00049	0.0020	0.00030	mg/L	J		1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	290	J 0.50	0.10	mg/L		F2	1	6010C
7440-47-3	Chromium	0.036	0.0040	0.0010	mg/L		F2	1	6010C
7440-48-4	Cobalt	0.0060	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	0.019	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	15.9	J 0.050	0.019	mg/L		F2 F1 B	1	6010C
7439-92-1	Lead	0.017	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	164	J 0.20	0.043	mg/L		F2	1	6010C
7439-96-5	Manganese	0.41	J 0.0030	0.00040	mg/L		F2 F1	1	6010C
7440-02-0	Nickel	0.030	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	13.7	J 0.50	0.10	mg/L		F2 F1	1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	292	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	0.026	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.032	0.010	0.0015	mg/L			1	6010C

MW 4/26/19

IA-IN
 INORGANIC ANALYSIS DATA SHEET
 METALS - DISSOLVED

Client Sample ID: TW-1

Lab Sample ID: 480-148126-1

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG ID.: 119.412.009

Matrix: Water

Date Sampled: 01/16/2019 09:46

Reporting Basis: WET

Date Received: 01/19/2019 01:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	1.2	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	152	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	ND	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	ND	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	ND	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	0.0048	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	53.1	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	0.016	0.0030	0.00049	mg/L			1	6010C
7440-02-0	Nickel	0.013	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	12.3	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	684	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.0104	0.010	0.0015	mg/L	J	R	1	6010C
7439-97-6	Mercury	ND	0.00020	0.00012	mg/L			1	7470A

mp 4/26/19

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-2

Lab Sample ID: 480-148126-3

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDS ID.: 119-412-009

Matrix: Water

Date Sampled: 01/18/2019 11:54

Reporting Basis: #BT

Date Received: 01/19/2019 01:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIF.	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	0.97	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	205	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0034	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	ND	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	0.0035	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	105	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	0.25	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.022	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	9.1	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	386	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.0030	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.0101	0.010	0.0015	mg/L	J	R	1	6010C
7439-97-6	Mercury	ND	0.00020	0.00012	mg/L			1	7470A

mwpa/26/19

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: TW-2

Lab Sample ID: 480-148126-5

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG ID.: 119,412,009

Matrix: Water

Date Sampled: 01/18/2019 12:55

Reporting Basis: WET

Date Received: 01/19/2019 01:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DTL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	0.84	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	174	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0032	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	ND	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	0.0030	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	92.6	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	0.15	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.020	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	0.3	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	224	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.010	0.010	0.0015	mg/L	J	B	1	6010C
7439-97-6	Mercury	ND	0.00020	0.00012	mg/L			1	7470A

MEP 4/26/19

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: TQ-3

Lab Sample ID: 480-148126-6

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG ID.: 119.412.009

Matrix: Water

Date Sampled: 01/18/2019 13:40

Reporting Basis: WBT

Date Received: 01/19/2019 01:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0055	mg/L			1	6010C
7440-39-3	Barium	0.59	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	371	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0013	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	ND	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	32.5	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	0.26	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0068	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	9.2	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	1040	5.0	1.6	mg/L			5	6010C
7440-29-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.0104	0.010	0.0015	mg/L		B	1	6010C
7439-97-6	Mercury	ND	0.00020	0.00012	mg/L			1	7470A

01/19/19

ANALYTICAL REPORT

Job Number: 480-147988-1

Job Description: Former Zip Zip Mini Mart Site

For:

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, NY 13212
Attention: Matt Walker



Approved for release
Judy L. Stone
Senior Project Manager
1/25/2019 12:20 PM

Judy L. Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
01/25/2019

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the 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. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NYDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1



Job Narrative
480-147988-1

Receipt

The samples were received on 1/16/2019 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC/MS VOA

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

GC/MS Semi VOA

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base surrogate to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SB-1 (5-10) (480-147988-2). These results have been reported and qualified.

Method(s) 8270D: The Method Blank (MB) for preparation batch 480-455529 and analytical batch 480-455688 recovered outside control limits for the following surrogate: p-Terphenyl-d14. This surrogate is biased high and no detections were found for associated analytes in the following affected samples: SB-1 (5-10) (480-147988-2). Therefore, the data has been reported.

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

GC Semi VOA

Method(s) 8081B: The continuing calibration verification (CCV 480-455656/B) associated with batch 480-455659 recovered above the upper control limit for Toxaphene. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: SB-1 (5-10) (480-147988-2).

Method(s) 8081B: All primary data for analytical batch 455659 are reported from the RTX-CLPII column.

Method(s) 8151A: The continuing calibration verification (CCV 480-455991/9) recovered above the upper control limit for the surrogate 2,4-Dichlorophenylacetic acid. The samples associated with this CCV were non-detect for any target analytes and the surrogate results are not adversely affected; therefore, the data have been reported. The following sample is impacted: SB-1 (5-10) (480-147988-2).

Method(s) 8151A: All primary data for analytical batch 455991 are reported from the RTX-CLPI column.

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

Metals

Method(s) 8010C: The method blank for preparation batch 480-455541 and analytical batch 480-455926 contained Total Potassium above the reporting limit (RL). Associated samples SB-1 (5-10) (480-147988-2) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

Organic Prep

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

Sample Summary

Client: C&S Engineers, Inc.

Project/Site: Former Zip Zip Mini Mart Site

TestAmerica Job ID: 480-147988-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
480-147988-1	SB-1 (3-5)	Solid	01/15/19 15:00	01/16/19 01:00
480-147988-2	SB-1 (5-10)	Solid	01/15/19 15:00	01/16/19 01:00
480-147988-3	SB-1 (5-10)	Solid	01/15/19 15:00	01/16/19 01:00
480-147988-4	SB-1 (5-10)	Solid	01/15/19 15:00	01/16/19 01:00

TestAmerica Barrels
 10 Hazwood Drive
 Arden, NY 14229-4298
 Phone (716) 581-5800 Fax (716) 581-7991

Syracuse
 Chain of Custody Record



#225

Client Information
 Client Name: URS Engineers, Inc.
 Client Address: 458 Oak Eason Collins Blvd
 City: NY 13212
 Phone: 315-706-4839 (Toll)
 Fax: 315-706-4839 (Toll)
 Project Name: Project # 48078228
 Project Address: 48078228
 Project City: 315706

Sample Information
 Sample ID: SB-1 (3-5)
 Sample Description: SB-1 (3-5)
 Sample Date: 11/5/15
 Sample Time: 1000
 Sample Type: C
 Sample Quantity: 1500
 Sample Container: C
 Sample Location: 1500
 Sample Matrix: Soil
 Sample Matrix Description: Soil

Sample ID	Sample Description	Sample Date	Sample Time	Sample Type	Sample Quantity	Sample Container	Sample Location	Sample Matrix	Sample Matrix Description
SB-1 (3-5)	SB-1 (3-5)	11/5/15	1000	C	1500	C	1500	Soil	Soil
SB-1 (5-10)	SB-1 (5-10)	11/5/15	1500	C	1500	C	1500	Soil	Soil
SB-1 (5-10)	SB-1 (5-10)	11/5/15	1500	C	1500	C	1500	Soil	Soil
SB-1 (5-10)	SB-1 (5-10)	11/5/15	1500	C	1500	C	1500	Soil	Soil

Special Instructions/Notes
 1-15-15 Re-
 1-15-15 15:45
 1-15-15 19:00
 1-15-15 19:00

Signature and Date
 Prepared by: William Scobell Date: 1-15-15
 Submitted by: William Scobell Date: 1-15-15
 Analyzed by: William Scobell Date: 1-15-15
 Certified by: William Scobell Date: 1-15-15

Quality Assurance
 Quality Score: 100
 A Yes A No

Special Instructions/Notes
 Sample Description (A few may be requested if necessary after retention longer than 1 month)
 Return To Client Analyzed By Lab Archived For Retention

Special Instructions/Notes
 Sample Description (A few may be requested if necessary after retention longer than 1 month)
 Return To Client Analyzed By Lab Archived For Retention

Special Instructions/Notes
 Sample Description (A few may be requested if necessary after retention longer than 1 month)
 Return To Client Analyzed By Lab Archived For Retention

FORM 1
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147988-1
 SDG No.: _____
 Client Sample ID: SB-1 (3-5) Lab Sample ID: 480-147988-1
 Matrix: Solid Lab File ID: F8000.D
 Analysis Method: 8260C Date Collected: 01/15/2019 15:00
 Sample wt/vol: 6.23(g) Date Analyzed: 01/17/2019 14:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 10.7 Level: (low/med) low
 Analysis Batch No.: 455409 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.5	0.33
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.5	0.73
79-00-5	1,1,2-Trichloroethane	ND		4.5	0.58
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5	1.0
75-34-3	1,1-Dichloroethane	ND		4.5	0.55
75-35-4	1,1-Dichloroethene	ND		4.5	0.55
120-82-1	1,2,4-Trichlorobenzene	ND		4.5	0.27
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.5	2.2
95-50-1	1,2-Dichlorobenzene	1.7	J	4.5	0.35
107-06-2	1,2-Dichloroethane	ND		4.5	0.23
78-87-5	1,2-Dichloropropane	ND		4.5	2.2
541-73-1	1,3-Dichlorobenzene	ND		4.5	0.23
106-46-7	1,4-Dichlorobenzene	2.1	J	4.5	0.63
78-93-3	2-Butanone (MEK)	18	J	22	1.6
591-78-6	2-Hexanone	ND		22	2.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		22	1.5
67-64-1	Acetone	86		22	3.8
71-43-2	Benzene	ND		4.5	0.22
75-27-4	Bromodichloromethane	ND		4.5	6.60
75-25-2	Bromoform	ND		4.5	2.2
74-83-9	Bromomethane	ND		4.5	0.40
75-15-0	Carbon disulfide	ND		4.5	2.2
56-23-5	Carbon tetrachloride	ND		4.5	0.44
108-90-7	Chlorobenzene	5.7		4.5	0.59
124-48-1	Dibromochloromethane	ND		4.5	0.58
75-00-3	Chloroethane	ND		4.5	1.0
67-66-3	Chloroform	ND		4.5	0.28
74-87-3	Chloromethane	ND		4.5	0.27
156-59-2	cis-1,2-Dichloroethene	ND		4.5	0.58
10061-01-5	cis-1,3-Dichloropropene	ND		4.5	0.65
110-82-7	Cyclohexane	ND		4.5	0.63
75-71-8	Dichlorodifluoromethane	ND		4.5	0.37
100-41-4	Ethylbenzene	ND		4.5	0.31
106-93-4	1,2-Dibromoethane	ND		4.5	0.58
98-82-8	Isopropylbenzene	ND		4.5	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147988-1
 SDG No.: _____
 Client Sample ID: SB-1 (3-5) Lab Sample ID: 480-147988-1
 Matrix: Solid Lab File ID: F8000.D
 Analysis Method: 8260C Date Collected: 01/15/2019 15:00
 Sample wt/vol: 6.23(g) Date Analyzed: 01/17/2019 14:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZR-624 (30) VOA ID: 0.25(mm)
 % Moisture: 10.7 Level: (low/med) Low
 Analysis Batch No.: 455409 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		22	2.7
1634-04-4	Methyl tert-butyl ether	ND		4.5	0.44
108-87-2	Methylcyclohexane	ND		4.5	0.68
75-09-2	Methylene Chloride	4.2 J		4.5	2.1
106-42-5	Styrene	ND		4.5	0.22
127-18-4	Tetrachloroethene	ND		4.5	0.60
108-88-3	Toluene	4.54 0.82 J B		4.5	0.34
156-60-5	trans-1,2-Dichloroethene	MD		4.5	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		4.5	2.0
79-01-6	Trichloroethene	ND		4.5	0.99
75-69-4	Trichlorofluoromethane	ND		4.5	0.43
75-01-4	Vinyl chloride	ND		4.5	0.55
1330-20-7	Xylenes, Total	ND		9.0	0.76

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		71-125
17050-07-0	1,2-Dichloroethane-d4 (Surr)	106		64-126
460-00-4	4-Bromofluorobenzene (Surr)	96		72-126
1868-53-7	Dibromofluoromethane (Surr)	101		60-140

map 1/28/19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo

Job No.: 480-147988-1

SDG No.: _____

Client Sample ID: SB-1 (5-10)

Lab Sample ID: 480-147988-4

Matrix: Solid

Lab File ID: F8001.D

Analysis Method: 8260C

Date Collected: 01/15/2019 15:00

Sample wt/vol: 5.77(g)

Date Analyzed: 01/17/2019 15:17

Soil Aliquot Vol: _____

Dilution Factor: 1

Soil Extract Vol.: _____

GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 9.2

Level: (low/med) Low

Analysis Batch No.: 455409

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.8	0.35
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.8	0.77
79-00-5	1,1,2-Trichloroethane	ND		4.8	0.62
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8	1.1
75-34-3	1,1-Dichloroethane	ND		4.8	0.58
75-35-4	1,1-Dichloroethene	ND		4.8	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		4.8	0.29
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.8	2.4
95-50-1	1,2-Dichlorobenzene	ND		4.8	0.37
107-06-2	1,2-Dichloroethane	ND		4.8	0.24
78-87-5	1,2-Dichloropropane	ND		4.8	2.4
541-73-1	1,3-Dichlorobenzene	ND		4.8	0.25
106-46-7	1,4-Dichlorobenzene	ND		4.8	0.67
78-93-3	2-Butanone (MEK)	ND		24	1.7
591-78-6	2-Hexanone	ND		24	2.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		24	1.6
67-64-1	Acetone	52		24	4.0
71-43-2	Benzene	ND		4.8	0.23
75-27-4	Bromodichloromethane	ND		4.8	0.64
75-25-2	Bromoform	ND		4.8	2.4
74-83-9	Bromomethane	ND		4.8	0.43
75-15-0	Carbon disulfide	ND		4.8	2.4
56-23-5	Carbon tetrachloride	ND		4.8	0.46
708-90-7	Chlorobenzene	ND		4.8	0.63
124-48-1	Dibromochloromethane	ND		4.8	0.67
75-00-3	Chloroethane	ND		4.8	1.1
67-66-3	Chloroform	ND		4.8	0.29
74-87-3	Chloromethane	ND		4.8	0.29
156-59-2	cis-1,2-Dichloroethene	ND		4.8	0.61
14067-01-5	cis-1,3-Dichloropropene	ND		4.8	0.69
110-82-7	Cyclohexane	ND		4.8	0.67
75-71-8	Dichlorodifluoromethane	ND		4.8	0.39
100-41-4	Ethylbenzene	ND		4.8	0.33
106-93-4	1,2-Dibromoethane	ND		4.8	0.61
98-82-8	Isopropylbenzene	ND		4.8	0.72

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147988-1
 SDG No.: _____
 Client Sample ID: SB-1 (5-10) Lab Sample ID: 480-147988-4
 Matrix: Solid Lab File ID: F8061.D
 Analysis Method: 8260C Date Collected: 01/15/2019 15:00
 Sample wt/vol: 5.77(g) Date Analyzed: 01/17/2019 15:17
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 9.2 Level: (low/med) Low
 Analysis Batch No.: 455409 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDE
79-20-9	Methyl acetate	ND		24	2.9
1634-04-4	Methyl tert-butyl ether	ND		4.8	0.47
108-87-2	Methylcyclohexane	ND		4.8	0.73
75-09-2	Methylene Chloride	ND		4.8	2.2
100-42-5	Styrene	ND		4.8	0.24
127-18-4	Tetrachloroethene	ND		4.8	0.64
108-88-3	Toluene	4.84 0.65	J B	4.8	0.36
156-60-5	trans-1,2-Dichloroethene	ND		4.8	0.49
10061-02-6	trans-1,3-Dichloropropene	ND		4.8	2.1
79-01-6	Trichloroethene	ND		4.8	1.0
75-69-4	Trichlorofluoromethane	ND		4.8	0.15
75-01-4	Vinyl chloride	ND		4.8	0.58
1330-20-7	Xylenes, Total	ND		9.5	0.80

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		71-125
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-126
460-90-4	4-Bromofluorobenzene (Surr)	98		72-126
1868-53-7	Dibromofluoromethane (Surr)	101		60-140

WBP 4/26/19

1A-IM
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 88-1 (5-10)

Lab Sample ID: 460-147988-3

Lab Name: TestAmerica Buffalo

Job No.: 480-147988-1

SDG ID: _____

Matrix: Solid

Date Sampled: 01/15/2019 15:00

Reporting Basis: DRY

Date Received: 01/16/2019 01:00

% Solids: 69.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7829-90-5	Aluminum	14400	14.5	6.4	mg/kg		A	1	6010C
7440-36-0	Antimony	ND	21.8	0.58	mg/kg			1	6010C
7440-39-2	Arsenic	2.9	2.9	0.58	mg/kg			1	6010C
7440-39-3	Barium	71.4	0.73	0.16	ug/kg			1	6010C
7440-41-7	Beryllium	0.54	0.29	0.041	mg/kg			1	6010C
7440-43-9	Cadmium	0.17	0.29	0.044	mg/kg	J		1	6010C
7440-70-2	Calcium	111000	72.7	4.8	ug/kg		B	1	6010C
7440-47-3	Chromium	21.1	0.73	0.29	mg/kg			1	6010C
7440-48-4	Cobalt	8.7	0.73	0.073	mg/kg			1	6010C
7440-50-8	Copper	25.2	1.5	0.31	ug/kg			1	6010C
7439-89-6	Iron	15500	14.5	5.1	mg/kg			1	6010C
7439-92-1	Lead	7.5	1.5	0.35	mg/kg			1	6010C
7439-95-4	Magnesium	62900	29.1	1.3	mg/kg		B	1	6010C
7439-96-5	Manganese	350	0.29	0.047	mg/kg			1	6010C
7440-02-0	Nickel	33.8	7.3	0.33	mg/kg		B	1	6010C
7440-09-7	Potassium	6070	43.6	29.1	mg/kg		B	1	6010C
7782-49-2	Selenium	ND	5.8	0.58	mg/kg			1	6010C
7440-22-4	Silver	ND	0.87	0.29	mg/kg			1	6010C
7440-23-5	Sodium	296	204	19.0	mg/kg		B	1	6010C
7440-28-0	Thallium	ND	8.7	0.44	mg/kg			1	6010C
7440-62-2	Vanadium	24.1	0.73	0.16	mg/kg			1	6010C
7440-66-6	Zinc	30.8	2.9	0.93	mg/kg			1	6010C
7439-97-6	Mercury	0.021	0.029	0.012	mg/kg	J		1	7471B

Handwritten signature/initials and date: 1/25/19

ANALYTICAL REPORT

Job Number: 480-147994-1

Job Description: Former Zip Zip Mini Mart Site

For:

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Attention: Matt Walker



Approved for release:
Judy L. Stone
Senior Project Manager
1/24/2019 2:45 PM

Judy L. Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
01/24/2019

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the 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. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NYDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

**Job Narrative
480-147994-1**

Receipt

The samples were received on 1/17/2019 12:16 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

GC/MS VOA

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-455567 and analytical batch 480-455581 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The following samples are impacted: SB - 6 (10' - 15') (480-147994-20[MS]) and SB - 6 (10' - 15') (480-147994-20[MSD]).

Method(s) 8260C: The following sample was analyzed using medium level soil analysis due to the nature of the sample matrix: SB - 4 (10' - 15') (480-147994-10). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: SB - 3 (15' - 20') (480-147994-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was analyzed using medium level soil analysis to bring the concentration of target analytes within the calibration range: SB - 3 (10' - 15') (480-147994-7). Elevated reporting limits (RLs) are provided.

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

GC/MS Semi VOA

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base surrogate to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SB - 6 (5' - 10') (480-147994-18). These results have been reported and qualified.

Method(s) 8270D: The following sample was diluted due to color and appearance: SB - 4 (5' - 10') (480-147994-12). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The Method Blank (MB) for preparation batch 480-455529 and analytical batch 480-455898 recovered outside control limits for the following surrogate: p-Terphenyl-d14. This surrogate is biased high and no detections were found for associated analytes in the following affected samples: SB - 2 (0' - 5') (480-147994-2), SB - 3 (0' - 5') (480-147994-6), SB - 4 (5' - 10') (480-147994-12), SB - 5 (5' - 10') (480-147994-14) and SB - 6 (5' - 10') (480-147994-18). Therefore, the data has been reported.

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

Metals

Method(s) 6010C: The method blank for preparation batch 480-455541 and analytical batch 480-455928 contained Total Potassium above the reporting limit (RL). Associated samples SB - 2 (0' - 5') (480-147994-1), SB - 3 (0' - 5') (480-147994-5), SB - 4 (5' - 10') (480-147994-11), SB - 5 (5' - 10') (480-147994-13) and SB - 6 (5' - 10') (480-147994-17) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

Organic Prep

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

Sample Summary

Client: C&S Engineers, Inc.
Project/Site: Former Zip Zip Mini Mart Site

TestAmerica Job ID: 480-147994-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-147994-1	SB-2 (0' - 5')	Solid	01/16/19 09:00	01/17/19 00:16
480-147994-2	SB-2 (0' - 5')	Solid	01/16/19 09:00	01/17/19 00:16
480-147994-3	SB-2 (5' - 10')	Solid	01/16/19 09:10	01/17/19 00:16
480-147994-4	SB-2 (10' - 15')	Solid	01/16/19 09:20	01/17/19 00:16
480-147994-5	SB-3 (0' - 5')	Solid	01/16/19 10:00	01/17/19 00:16
480-147994-6	SB-3 (0' - 5')	Solid	01/16/19 10:00	01/17/19 00:16
480-147994-7	SB-3 (10' - 15')	Solid	01/16/19 10:20	01/17/19 00:16
480-147994-8	SB-3 (15' - 20')	Solid	01/16/19 10:20	01/17/19 00:16
480-147994-9	SB-4 (0' - 5')	Solid	01/16/19 11:45	01/17/19 00:16
480-147994-10	SB-4 (10' - 15')	Solid	01/16/19 11:50	01/17/19 00:16
480-147994-11	SB-4 (5' - 10')	Solid	01/16/19 12:00	01/17/19 00:16
480-147994-12	SB-4 (5' - 10')	Solid	01/16/19 12:00	01/17/19 00:16
480-147994-13	SB-5 (5' - 10')	Solid	01/16/19 13:45	01/17/19 00:16
480-147994-14	SB-5 (5' - 10')	Solid	01/16/19 13:45	01/17/19 00:16
480-147994-15	SB-5 (5' - 10')	Solid	01/16/19 14:00	01/17/19 00:16
480-147994-16	SB-5 (10' - 15')	Solid	01/16/19 14:15	01/17/19 00:16
480-147994-17	SB-6 (5' - 10')	Solid	01/16/19 14:30	01/17/19 00:16
480-147994-18	SB-6 (5' - 10')	Solid	01/16/19 14:30	01/17/19 00:16
480-147994-19	SB-6 (5' - 10')	Solid	01/16/19 15:00	01/17/19 00:16
480-147994-20	SB-6 (10' - 15')	Solid	01/16/19 14:45	01/17/19 00:16

TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst, NY 14228-2288
 Phone (716) 891-2600 Fax (716) 891-7961

Syracuse
 #225

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sample: <u>Wayne Rock 11</u>		Lab #	Order Tracking #	COC No:	
Client Contact: Matt Walker		Phone: <u>(315) 794-8362</u>		Lab # Stone, Judy L.		480-122675-28123.1	
Company: C&S Engineers, Inc.		Address: 499 Col. Eileen Collins Blvd		E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 2	
City: Syracuse		State, Zip: NY, 13212		Analysis Requested		Job #:	
Phone: 315-708-4323(Tel)		Fax #: Purchase Order Requested		Preservation Codes:		A - HCL B - KOH C - Zn Acetate D - Nitric Acid E - H2SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	
Email: mwalker@cscos.com		Project #: 4801A228		W- Murex N - None O - AsNaO2 P - H2O2 Q - H2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCA W - pH 4.5 Z - other (specify)		Other:	
Form: Zip Zip (Mind Mail Site)		SOW#:		Total Number of Containers		Special Instructions/Note:	
Soil:		SOW#:		Perform MS&SD (Yes or No)			
				8010C, 8010B			
				8070D - TOL, ENVM - OL/DMR			
				8080C - TOL, list 04/02/02			
				8091B, 8151A, 8270D			
Sample Identification		Sample Date		Sample Time		Sample Type (C=cont, G=grab)	
						Matrix (W=water, S=solid, D=dredge, G=grab, B=bulk, A=air)	
						Preservation Code:	
<u>SB-2 (0-5')</u>		<u>1-16-19</u>		<u>9:00</u>		<u>Solid</u>	
<u>SB-2 (0'-5')</u>		<u>1-16-19</u>		<u>09:08</u>		<u>Solid</u>	
<u>SD-2 (5-10')</u>		<u>1-16-19</u>		<u>9:10</u>		<u>Solid</u>	
<u>SB-2 (10'-15')</u>		<u>1-16-19</u>		<u>9:20</u>		<u>Solid</u>	
<u>SD-3 (15-5')</u>		<u>1-16-19</u>		<u>10:00</u>		<u>Solid</u>	
<u>SB-3 (0'-5')</u>		<u>1-16-19</u>		<u>10:00</u>		<u>Solid</u>	
<u>SB-3 (10'-15')</u>		<u>1-16-19</u>		<u>10:20</u>		<u>Solid</u>	
<u>SD-3 (15-20')</u>		<u>1-16-19</u>		<u>10:20</u>		<u>Solid</u>	
<u>SB-4 (5-10')</u>		<u>1-16-19</u>		<u>11:45</u>		<u>Solid</u>	
<u>SB-4 (10-15')</u>		<u>1-16-19</u>		<u>11:50</u>		<u>Solid</u>	
<u>SD-4 (15-10')</u>		<u>1-16-19</u>		<u>12:00</u>		<u>Solid</u>	
Possible Hazard Identification		<input 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	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		<input type="checkbox"/> Return To Client		<input type="checkbox"/> Disposal By Lab		<input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: 1, II, III, (X) Other (specify)		Special Instructions/QC Requirements:					
Empty Kit Requisitioned by:		Date:		Time:		Method of Requisition:	
Requisitioned by: <u>Angel Alexa</u>		Date/Time: <u>1/16/19 15:35</u>		Company: <u>CS</u>		Received by: <u>Michelle</u>	
Requisitioned by: <u>RE: 1/16/19</u>		Date/Time: <u>1-16-19, 19:00</u>		Company: <u>Syr</u>		Date/Time: <u>1/16/19 15:35</u>	
Requisitioned by:		Date/Time:		Company:		Date/Time: <u>01/17/19 09:00</u>	
Custody Seals Intact:		Custody Seal No.:		Excess Temperature(s) °C and Other Remarks:			
<input type="checkbox"/> Yes <input type="checkbox"/> No				<u>1.8</u>		<u>A/</u>	

Page 2914 of 2915

#2295

Client Information
 Client Name: Wynne Rendall
 Client Contact: Wynne Rendall
 Email: wynne.rendall@testamerica.com
 Job Title: Stone, Judy L
 Address: 489 Cox, Elsen Collins Blvd
 City: Syracuse
 State: NY Zip: 13212
 Phone: 315-703-4323(Tel)
 Email: mwalker@ssos.com
 Project Name: Former Zip Mint Mart Site
 Former Zip: 13212
 Site: SSOVP

Analysis Requested

Due Date Requested:
 RT Requested (days): Standard
 Purchase Order Requested: WO#
 Date: 11/16/19
 Time: 15:35

480-147964 Chain of Custody

Preparation Codes:
 A - HCl
 B - HNO3
 C - Zn Acetate
 D - Nitric Acid
 E - Manganese
 F - Boron
 G - Amalloy
 H - Acetic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Helium
 N - Nitro
 O - Vanadoz
 P - ICS205
 Q - H2SO4
 R - H2SO3
 S - H2SO4
 T - TSP Dispersion
 U - Nitro
 V - NiCAA
 W - pH 4.5
 X - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (Concn, Leach, and)	Matrix (Weight, base, organic, etc.)	Preparation Codes	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	MS/MSD Lab	MS/MSD Date	MS/MSD Analyst	MS/MSD Status	MS/MSD Comments	Total Number of Containers	Special Instructions/Notes
SB-4 (5'-10')	1-16-19	7:00		Solid				3700, 74719						
SB-5 (5'-10')	1-16-19	13:45		Solid				3700, 74719						
SB-5 (5'-10')	1-16-19	13:45		Solid				3700, 74719						
SB-5 (5'-10')	1-16-19	14:00		Solid				3700, 74719						
SB-5 (10'-15')	1-16-19	14:15		Solid				3700, 74719						
SB-6 (5'-10')	1-16-19	14:30		Solid				3700, 74719						
SB-6 (5'-10')	1-16-19	14:30		Solid				3700, 74719						
SB-6 (5'-10')	1-16-19	15:00		Solid				3700, 74719						
SB-6 (10'-15')	1-16-19	14:45		Solid				3700, 74719						

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radioactive
 Deliverable Requisite: I, II, III Other (specify)

Empty Kit Returned by: _____ **Date:** _____

Prepared by: James Diere Blago **Date/Time:** 1/16/19 15:35 **Company:** CTS
Received by: Wynne Rendall **Date/Time:** 01/17/19 09:00 **Company:** SYR
Refrilled by: Wynne Rendall **Date/Time:** 01/17/19 09:00 **Company:** SYR

Client/Specs/Intact: Catalytic Steel No. **Lab No.:** 15 **Specs:** #1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147994-1
 SDG No.: _____
 Client Sample ID: SB - 6 (10' - 15') Lab Sample ID: 480-147994-20
 Matrix: Solid Lab File ID: F8033.D
 Analysis Method: 8260C Date Collected: 01/16/2019 14:45
 Sample wt/vol: 6.83(g) Date Analyzed: 01/18/2019 06:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: 78-624 (30) VOA ID: 0.25(mm)
 % Moisture: 9.5 Level: (low/med) Low
 Analysis Batch No.: 455561 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RT	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.0	0.29
79-34-5	1,1,2,2-Tetrachloroethane	ND	F1	4.0	0.66
79-00-5	1,1,2-Trichloroethane	ND	F1	4.0	0.53
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	0.92
75-24-3	1,1-Dichloroethane	ND		4.0	0.49
75-35-4	1,1-Dichloroethene	ND		4.0	0.49
120-82-1	1,2,4-Trichlorobenzene	ND	F1	4.0	0.25
96-12-8	1,2-Dibromo-3-Chloropropane	ND	F1	4.0	2.0
95-50-1	1,2-Dichlorobenzene	ND	F1	4.0	0.32
107-06-2	1,2-Dichloroethane	ND	F1	4.0	0.20
78-87-5	1,2-Dichloropropane	ND		4.0	2.0
541-73-1	1,3-Dichlorobenzene	ND	F1	4.0	0.21
106-46-7	1,4-Dichlorobenzene	ND	F1	4.0	0.57
78-93-3	2-Butanone (MEK)	ND	F1	20	1.5
591-78-6	2-Hexanone	ND	F1	20	2.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	F1	20	1.3
67-64-1	Acetone	25		20	3.4
71-43-2	Benzene	ND	F1	4.0	0.20
75-27-4	Bromodichloromethane	ND	F1	4.0	0.54
75-25-2	Bromoform	ND	F1	4.0	2.0
74-83-9	Bromomethane	ND		4.0	0.36
75-15-0	Carbon disulfide	ND		4.0	2.0
56-23-5	Carbon tetrachloride	ND		4.0	0.39
108-90-7	Chlorobenzene	ND	F1	4.0	0.53
124-48-1	Dibromochloromethane	ND	F1	4.0	0.52
75-00-3	Chloroethane	ND		4.0	0.91
67-66-3	Chloroform	ND		4.0	0.25
74-87-3	Chloromethane	ND		4.0	0.24
156-59-2	cis-1,2-Dichloroethene	ND	F1	4.0	0.52
10061-01-5	cis-1,3-Dichloropropene	ND	F1	4.0	0.58
116-82-7	Cyclohexane	ND	F1	4.0	0.57
75-71-8	Dichlorodifluoromethane	ND		4.0	0.33
100-41-1	Ethylbenzene	ND	F1	4.0	0.28
106-93-4	1,2-Dibromoethane	ND	F1	4.0	0.52

01/26/19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147994-1
 SDG No.: _____
 Client Sample ID: SB - 6 (10' - 15') Lab Sample ID: 480-147994-20
 Matrix: Solid Lab File ID: F8023.D
 Analysis Method: 8260C Date Collected: 01/16/2019 14:45
 Sample wt/vol: 6.83(g) Date Analyzed: 01/18/2019 06:15
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25 (mm)
 % Moisture: 9.5 Level: (low/med) Low
 Analysis Batch No.: 455561 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RT	MDL
98-82-8	Isopropylbenzene	ND	F1	4.0	0.61
79-20-9	Methyl acetate	ND		20	2.4
1634-04-4	Methyl tert-butyl ether	5.2		4.0	0.40
108-87-2	Methylcyclohexane	ND	F1	4.0	0.61
75-09-2	Methylene Chloride	ND		4.0	1.9
106-42-6	Styrene	ND	F1	4.0	0.20
127-18-4	Tetrachloroethene	ND	F1	4.0	0.54
108-88-3	Toluene	ND	F1	4.0	0.31
156-60-5	trans-1,2-Dichloroethene	ND	F1	4.0	0.42
10061-02-6	trans-1,3-Dichloropropene	ND	F1	4.0	1.8
79-01-6	Trichloroethene	ND	F1	4.0	0.89
75-69-4	Trichlorofluoromethane	ND		4.0	0.38
75-01-4	Vinyl chloride	ND		4.0	0.49
1330-20-7	Xylenes, Total	ND	F1	8.1	0.68

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	103		71-125
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		64-126
460-00-4	4-Bromofluorobenzene (Surr)	92		72-126
1868-53-7	Dibromofluoromethane (Surr)	102		60-140

map 4/20/19

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SB - 2 (0' - 5')

Lab Sample ID: 480-147994-1

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG ID:

Matrix: Solid

Date Sampled: 01/16/2019 09:00

Reporting Basis: DRY

Date Received: 01/17/2019 00:16

% Solids: 89.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	11600	11.4	5.0	mg/Kg		B	1	6010C
7440-36-0	Antimony	0.23 17.1	17.1	0.46	mg/Kg	J		1	6010C
7440-38-2	Arsenic	6.4	2.3	0.46	mg/Kg			1	6010C
7440-39-3	Barium	95.2	0.57	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.46	0.23	0.032	mg/Kg			1	6010C
7440-43-9	Cadmium	0.15	0.23	0.034	mg/Kg	J		1	6010C
7440-70-2	Calcium	76100	57.0	3.8	mg/Kg		B	1	6010C
7440-47-3	Chromium	19.2	0.57	0.23	mg/Kg			1	6010C
7440-48-4	Cobalt	8.4	0.57	0.057	mg/Kg			1	6010C
7440-50-8	Copper	19.0	1.1	0.24	mg/Kg			1	6010C
7439-89-6	Iron	14700	11.4	4.0	mg/Kg			1	6010C
7439-92-1	Lead	15.2	1.1	0.27	mg/Kg			1	6010C
7439-95-4	Magnesium	43600	22.8	1.1	mg/Kg		B	1	6010C
7439-96-5	Manganese	313	0.23	0.036	mg/Kg			1	6010C
7440-02-0	Nickel	31.3	5.7	0.26	mg/Kg		B	1	6010C
7440-09-7	Potassium	4600	34.2	22.8	mg/Kg		B	1	6010C
7782-49-2	Selenium	ND	4.6	0.46	mg/Kg			1	6010C
7440-22-4	Silver	ND	0.68	0.23	mg/Kg			1	6010C
7440-23-5	Sodium	236	160	14.6	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.3	0.34	mg/Kg			1	6010C
7440-62-2	Vanadium	20.8	0.57	0.13	mg/Kg			1	6010C
7440-65-6	Zinc	30.1	2.3	0.73	mg/Kg			1	6010C
7439-97-6	Mercury	0.19	0.022	0.0090	mg/Kg			1	7471B

Handwritten: 4/28/19

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SB - 3 (0' - 5')

Lab Sample ID: 480-147994-5

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG ID.: _____

Matrix: Solid

Date Sampled: 01/16/2019 10:00

Reporting Basis: DRY

Date Received: 01/17/2019 00:16

% Solids: 91.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	11900	10.8	4.7	mg/Kg		B	1	6010C
7440-36-0	Antimony	57.14	16.1	0.43	ug/Kg	J		1	6010C
7440-38-2	Arsenic	3.3	2.2	0.43	mg/Kg			1	6010C
7440-39-3	Barium	85.4	0.54	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.44	0.22	0.030	ug/Kg			1	6010C
7440-43-9	Cadmium	0.17	0.22	0.032	mg/Kg	J		1	6010C
7440-70-2	Calcium	66900	53.8	3.5	mg/Kg		B	1	6010C
7440-47-3	Chromium	17.3	0.54	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	7.5	0.54	0.054	mg/Kg			1	6010C
7440-50-8	Copper	18.8	1.1	0.23	mg/Kg			1	6010C
7439-89-6	Iron	13600	10.8	3.8	mg/Kg			1	6010C
7439-92-1	Lead	10.0	1.1	0.26	ug/Kg			1	6010C
7439-95-4	Magnesium	36300	21.5	1.0	mg/Kg		B	1	6010C
7439-96-5	Manganese	303	0.22	0.034	ug/Kg			1	6010C
7440-02-0	Nickel	26.7	5.4	0.25	ug/Kg		B	1	6010C
7440-09-7	Potassium	4090	32.3	21.5	mg/Kg		B	1	6010C
7782-49-2	Selenium	ND	4.3	0.43	mg/Kg			1	6010C
7440-22-4	Silver	ND	0.65	0.22	ug/Kg			1	6010C
7440-23-5	Sodium	318	151	14.0	ug/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.5	0.32	mg/Kg			1	6010C
7440-62-2	Vanadium	20.1	0.54	0.12	mg/Kg			1	6010C
7440-66-5	Zinc	26.1	2.2	0.69	mg/Kg			1	6010C
7439-97-6	Mercury	0.032	0.021	0.0086	mg/Kg			1	7471B

4/26/19

IA-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SB - 4 (5' - 10')

Lab Sample ID: 480-147994-11

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/16/2019 12:09

Reporting Basis: DRY

Date Received: 01/17/2019 00:16

% Solids: 92.1

CAS No.	Analyte	Result	RT	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	10500	10.8	4.8	mg/Kg		B	1	6010C
7440-36-0	Antimony	ND	15.3	0.43	mg/Kg			1	6010C
7440-38-2	Arsenic	3.1	2.2	0.43	mg/Kg			1	6010C
7440-39-3	Barium	114	0.54	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.40	0.22	0.030	mg/Kg			1	6010C
7440-43-9	Cadmium	0.16	0.22	0.033	mg/Kg	J		1	6010C
7440-70-2	Calcium	85100	54.2	3.6	mg/Kg		B	1	6010C
7440-47-3	Chromium	20.3	0.54	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	8.6	0.54	0.054	mg/Kg			1	6010C
7440-50-8	Copper	25.8	1.1	0.23	mg/Kg			1	6010C
7439-89-6	Iron	12100	10.8	3.8	mg/Kg			1	6010C
7439-92-1	Lead	19.3	1.1	0.26	mg/Kg			1	6010C
7439-95-9	Magnesium	60900	108	5.0	mg/Kg		B	5	6010C
7439-96-5	Manganese	279	0.22	0.035	mg/Kg			1	6010C
7440-02-0	Nickel	43.2	5.4	0.25	mg/Kg		B	1	6010C
7440-09-7	Potassium	4200	32.5	21.7	mg/Kg		B	1	6010C
7782-49-2	Selenium	ND	4.3	0.43	mg/Kg			1	6010C
7440-22-4	Silver	ND	0.65	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	227	152	14.1	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.5	0.33	mg/Kg			1	6010C
7440-52-2	Vanadium	19.5	0.54	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	53.3	2.2	0.69	mg/Kg			1	6010C
7439-97-8	Mercury	0.015	0.021	0.0085	mg/Kg	J		1	7471B

IA-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SB - 5 (5' - 10')

Lab Sample ID: 480-147994-13

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG ID:

Matrix: Solid

Date Sampled: 01/16/2019 13:45

Reporting Basis: DRY

Date Received: 01/17/2019 00:16

% Solids: 90.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	D/L	Method
7429-90-5	Aluminum	10300	11.1	4.9	mg/Kg		B	1	6010C
7440-36-0	Antimony	ND	16.7	0.14	mg/Kg			1	6010C
7440-38-2	Arsenic	4.4	2.2	0.44	mg/Kg			1	6010C
7440-39-3	Barium	98.9	0.56	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.40	0.22	0.031	mg/Kg			1	6010C
7440-43-9	Cadmium	0.12	0.22	0.033	mg/Kg	J		1	6010C
7440-70-2	Calcium	87900	55.5	3.7	mg/Kg		B	1	6010C
7440-47-3	Chromium	16.0	0.56	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	5.3	0.56	0.056	mg/Kg			1	6010C
7440-50-8	Copper	15.2	1.1	0.23	mg/Kg			1	6010C
7439-89-6	Iron	12300	11.1	3.9	mg/Kg			1	6010C
7439-92-1	Lead	4.6	1.1	0.27	mg/Kg			1	6010C
7439-95-4	Magnesium	49200	22.2	1.0	mg/Kg		B	1	6010C
7439-96-5	Manganese	279	0.22	0.036	mg/Kg			1	6010C
7440-02-0	Nickel	25.2	5.6	0.26	mg/Kg		B	1	6010C
7440-09-7	Potassium	4240	33.3	22.2	mg/Kg		B	1	6010C
7782-49-2	Selenium	ND	4.4	0.44	mg/Kg			1	6010C
7440-22-4	Silver	ND	0.67	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	211	156	14.4	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.7	0.33	mg/Kg			1	6010C
7440-62-2	Vanadium	17.4	0.56	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	24.8	2.2	0.71	mg/Kg			1	6010C
7439-97-6	Mercury	0.016	0.022	0.0089	mg/Kg	J		1	7471B

used 1/20/19

IA-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SB - 6 (S' -10')

Lab Sample ID: 480-147994-17

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDS ID.:

Matrix: Solid

Date Sampled: 01/16/2019 14:30

Reporting Basis: DRY

Date Received: 01/17/2019 00:16

% Solids: 89.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DLL	Method
7429-90-5	Aluminum	11300	10.8	4.8	mg/Kg		B	1	6010C
7440-36-0	Antimony	ND	16.3	0.43	mg/Kg			1	6010C
7440-38-2	Arsenic	2.5	2.2	0.43	mg/Kg			1	6010C
7440-39-3	Barium	91.8	0.54	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.43	0.22	0.030	mg/Kg			1	6010C
7440-43-9	Cadmium	0.13	0.22	0.033	mg/Kg	J		1	6010C
7440-70-2	Calcium	90600	54.2	3.6	mg/Kg		B	1	6010C
7440-47-3	Chromium	20.2	0.54	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	6.8	0.54	0.054	mg/Kg			1	6010C
7440-50-8	Copper	11.5	1.1	0.23	mg/Kg			1	6010C
7439-89-6	Iron	12100	10.8	3.8	mg/Kg			1	6010C
7439-92-1	Lead	5.2	1.1	0.26	mg/Kg			1	6010C
7439-95-4	Magnesium	61100	108	5.0	mg/Kg		B	5	6010C
7439-96-5	Manganese	265	0.22	0.035	mg/Kg			1	6010C
7440-02-0	Nickel	29.1	5.4	0.25	mg/Kg		B	1	6010C
7440-09-7	Potassium	4690	32.5	21.7	mg/Kg		B	1	6010C
7782-49-2	Selenium	ND	4.3	0.43	mg/Kg			1	6010C
7440-22-4	Silver	ND	0.65	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	413	152	14.1	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.5	0.33	mg/Kg			1	6010C
7440-62-2	Vanadium	20.5	0.54	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	25.7	2.2	0.69	mg/Kg			1	6010C
7439-97-6	Mercury	0.020	0.022	0.0091	mg/Kg	J		1	7471B

ANALYTICAL REPORT

Job Number: 480-148884-1

Job Description: Former Zip Zip Mini Mart Site

For:

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Attention: Matt Walker



Approved for release,
Judy L. Stone
Senior Project Manager
2/15/2019 4:05 PM

Judy L. Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
02/15/2019

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TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive, Amherst, NY 14228-2298

Tel (716) 691-2600 Fax (716) 691-7991 www.testamericainc.com



**Job Narrative
480-148884-1**

Receipt

The samples were received on 2/9/2019 4:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

GC/MS VOA

Method(s) 8260C: The laboratory control sample (LCS) for preparation batch 480-458613 and analytical batch 480-458609 recovered outside control limits for the following analyte: Chloroethane. Chloroethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-analysis was not performed. The following samples are affected: SS-2 (6 - 1 2) (480-148884-4) and SS-4 (6 - 12) (480-148884-8).

Method(s) 8260C: The following samples were analyzed outside of preparation holding time but within analytical holding time: SS-3 (6 - 12) (480-148884-6) and SS-4 (5 - 12) (480-148884-8).

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

GC/MS Semi VOA

Method(s) 8270D: The following samples required a dilution due to the nature of the sample matrix (color and viscosity): SS-1 (0 - 2) (480-148884-1), SS-3 (0 - 2) (480-148884-5), SS-3 (6 - 12) (480-148884-6), SS-4 (0 - 2) (480-148884-7) and SS-4 (6 - 12) (480-148884-8). Because of this dilution, the surrogate spike concentrations in the samples were reduced to a level where the recovery calculation does not provide useful information. Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 480-458953 recovered outside acceptance criteria, low biased, for pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: SS-1 (0 - 2) (480-148884-1), SS-1 (6 - 12) (480-148884-2), SS-2 (0 - 2) (480-148884-3), SS-2 (6 - 1 2) (480-148884-4), SS-3 (0 - 2) (480-148884-5), SS-3 (6 - 12) (480-148884-6), SS-4 (0 - 2) (480-148884-7) and SS-4 (6 - 12) (480-148884-8).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 480-458953 recovered above the upper control limit for 2-Nitrophenol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: SS-1 (0 - 2) (480-148884-1), SS-1 (6 - 12) (480-148884-2), SS-2 (0 - 2) (480-148884-3), SS-2 (6 - 1 2) (480-148884-4), SS-3 (0 - 2) (480-148884-5), SS-3 (6 - 12) (480-148884-6), SS-4 (0 - 2) (480-148884-7) and SS-4 (6 - 12) (480-148884-8).

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

GC Semi VOA

Method(s) 8081B: The following samples were diluted due to the nature of the sample matrix: SS-1 (6 - 12) (480-148884-2), SS-2 (6 - 1 2) (480-148884-4), SS-3 (6 - 12) (480-148884-6) and SS-4 (6 - 12) (480-148884-8). As such, surrogate recoveries are below the calibration range, estimated and not representative. Elevated reporting limits (RLs) are provided.

Method(s) 8081B: All primary data for analytical batches 458894 and 459062 are reported from the RTX-CLPII column.

Method(s) 8082A: The continuing calibration verification (CCV 480-459092/7) associated with analytical batch 480-459092 recovered above the upper control limit for PCB-1254. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: SS-1 (6 - 12) (480-148884-2), SS-2 (6 - 1 2) (480-148884-4), SS-3 (6 - 12) (480-148884-6) and SS-4 (6 - 12) (480-148884-8).

Method(s) 8082A: All primary data for analytical batch 459092 are reported from the ZB-35 column.

Method(s) 8082A: The percent difference in a multi-component continuing calibration verification is assessed on the basis of the total amount, individual peak calculations are only listed for completeness.

Method(s) 8151A: The continuing calibration verifications (CCV 480-459243/4) and (CCV 480-459243/31) associated with analytical batch 459243 recovered above the upper control limit for the surrogate 2,4-Dichlorophenylacetic acid. The samples associated with these CCVs were non-detects for all target analytes and the surrogate recoveries were not adversely affected; therefore, the data have been reported. The following samples are impacted: SS-1 (6 - 12) (480-148884-2), SS-2 (6 - 1 2) (480-148884-4), SS-3 (6 - 12) (480-148884-6) and SS-4 (6 - 12) (480-148884-8).

Method(s) 8151A: All primary data for analytical batch 459027 are reported from the RTX-CLPI column, while all primary data for analytical batch 459243 are reported from the RTX-CLPII column.

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

Metals

Method(s) 6010C: The following samples were diluted due to the presence of Calcium which interferes with Total Copper: SS-1 (0 - 2)

(480-148884-1), SS-2 (0 - 2) (480-148884-3), SS-2 (6 - 12) (480-148884-4), SS-3 (0 - 2) (480-148884-5), SS-3 (6 - 12) (480-148884-6) and SS-4 (0 - 2) (480-148884-7). Elevated reporting limits (RLs) are provided.

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

Organic Prep

Method(s) 3550C: The following samples required a Florisil clean-up, via 3620C, to reduce matrix interferences: SS-1 (6 - 12) (480-148884-2), SS-2 (6 - 12) (480-148884-4), SS-3 (6 - 12) (480-148884-6) and SS-4 (6 - 12) (480-148884-8).

Method(s) 3550C: Due to the matrix, the following samples could not be concentrated to the final method required volume: SS-1 (0 - 2) (480-148884-1), SS-3 (0 - 2) (480-148884-5), SS-3 (6 - 12) (480-148884-6), SS-4 (0 - 2) (480-148884-7) and SS-4 (6 - 12) (480-148884-8). The reporting limits (RLs) are elevated proportionately.

Method(s) 3550C: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: SS-4 (6 - 12) (480-148884-8).

Method(s) 8151A: Sample SS-1 (6 - 12) (480-148884-2) was decanted prior to preparation.

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

Sample Summary


Client: C&S Engineers, Inc.

Project/Site: Former Zip Zip Mini Mart Site

TestAmerica Job ID: 480-148884-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-148884-1	SS-1 (0-2)	Solid	02/07/19 13:30	02/08/19 04:00
480-148884-2	SS-1 (6-12)	Solid	02/07/19 13:45	02/08/19 04:00
480-148884-3	SS-2 (0-2)	Solid	02/07/19 14:15	02/08/19 04:00
480-148884-4	SS-2 (6-12)	Solid	02/07/19 14:30	02/08/19 04:00
480-148884-5	SS-3 (0-2)	Solid	02/07/19 08:30	02/08/19 04:00
480-148884-6	SS-3 (6-12)	Solid	02/07/19 08:50	02/08/19 04:00
480-148884-7	SS-4 (0-2)	Solid	02/07/19 09:30	02/08/19 04:00
480-148884-8	SS-4 (6-12)	Solid	02/07/19 09:50	02/08/19 04:00

Chain of Custody Record

Client Information		Sampler: <u>None</u>	Lab PM: <u>Stone, Judy L.</u>	Carrier Tracking No(s):	CCC No: <u>480-122676-28123.2</u>		
Client Contact: Matt Walker		Phone: <u>315-720-5335</u>	E-Mail: <u>judy.stone@testamericainc.com</u>		Page: <u>Page 2 of 3</u>		
Company: C&S Engineers, Inc.		Address: 499 Col. Elean Collins Blvd	City: Syracuse	State, Zip: NY, 13212	Phone: 315-703-4323(Tel)		
E-mail: mwalker@cscos.com		Project Name: Former Zip Mini Mart Site	Site:	Project #: 48019328	DOB#: 		
Dus Date Requested:		EAT Requested (days): <u>Standard</u>		 480-148864 Chain of Custody			
PO #: Purchase Order Requested		IWO #:					
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - 2n Acetic O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - H2S2O3 G - Acetylal S - H2SO4 H - Ascorbic Acid T - TSP Dodecylsulfate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EPA Z - other (specify)			
Sample Identification		Sample Date	Sample Time			Sample Type (Comp, Grab)	Matrix (Water, Soil, Gas, etc.)
						Preservation Code:	
SS-1 (0-2)		2/7	11:30 AM			Solid	
SS-1 (6-12)		2/7	1:45 PM			Solid	
SS-2 (0-2)		2/7	2:15 PM			Solid	
SS-2 (6-12)		2/7	2:30 PM			Solid	
SS-3 (0-2)		2/8	8:30 AM			Solid	
SS-3 (6-12)		2/8	8:50 AM			Solid	
SS-4 (0-2)		2/8	9:30 AM			Solid	
SS-4 (6-12)		2/8	9:50 AM	Solid			
2-8-19 RE							
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input 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		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, <input checked="" type="checkbox"/> Other (specify)		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:			
Relinquished by: <u>Anna Arejo</u>	Date/Time: <u>2/8/19</u>	Company: <u>C&S</u>	Received by: <u>REHAGH</u>	Date/Time: <u>2-8-19, 10:22</u>	Company: <u>PA</u>		
Relinquished by: <u>REHAGH</u>	Date/Time: <u>2-8-19, 19:00</u>	Company: <u>PA</u>	Received by: <u>REHAGH</u>	Date/Time: <u>02-09-19 04:00</u>	Company: <u>PA</u>		
Custody Seals Intact: A Yes A No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>0.7 #3</u>			

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: SS-2 (6 -1 2) Lab Sample ID: 480-148884-4
 Matrix: Solid Lab File ID: F8514.D
 Analysis Method: 8260C Date Collected: 02/07/2019 14:30
 Sample wt/vol: 6.48(g) Date Analyzed: 02/12/2019 01:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 6.0 Level: (low/med) Low
 Analysis Batch No.: 458609 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.1	0.30
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.1	0.67
79-00-5	1,1,2-Trichloroethane	ND		4.1	0.53
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.1	0.94
75-34-3	1,1-Dichloroethane	ND		4.1	0.50
75-35-4	1,1-Dichloroethene	ND		4.1	0.50
120-82-1	1,2,4-Trichlorobenzene	ND		4.1	0.25
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.1	2.1
95-50-1	1,2-Dichlorobenzene	ND		4.1	0.32
107-06-2	1,2-Dichloroethane	ND		4.1	0.21
78-87-5	1,2-Dichloropropane	ND		4.1	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.1	0.21
106-46-7	1,4-Dichlorobenzene	ND		4.1	0.57
78-93-3	2-Butanone (MEK)	ND		21	1.5
591-78-6	2-Hexanone	ND		21	2.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		21	1.3
67-64-1	Acetone	ND		21	3.5
71-43-2	Benzene	ND		4.1	0.20
75-27-4	Bromodichloromethane	ND		4.1	0.55
75-25-2	Bromoform	ND		4.1	2.1
74-83-9	Bromomethane	ND		4.1	0.37
75-15-0	Carbon disulfide	ND		4.1	2.1
56-23-5	Carbon tetrachloride	ND		4.1	0.40
108-90-7	Chlorobenzene	ND		4.1	0.54
124-48-1	Dibromochloromethane	ND		4.1	0.53
75-00-3	Chloroethane	ND	0.5	4.1	0.93
67-65-3	Chloroform	ND		4.1	0.25
74-87-3	Chloromethane	ND		4.1	0.25
156-59-2	cis-1,2-Dichloroethene	ND		4.1	0.53
10061-01-5	cis-1,3-Dichloropropane	ND		4.1	0.59
110-82-7	Cyclohexane	ND		4.1	0.57
75-71-8	Dichlorodifluoromethane	ND		4.1	0.34
100-41-4	Ethylbenzene	ND		4.1	0.28
106-93-4	1,2-Dibromoethane	ND		4.1	0.53
98-82-8	Isopropylbenzene	ND		4.1	0.62

mm/26/19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: SS-2 (6 -1 2) Lab Sample ID: 480-148884-4
 Matrix: Solid Lab File ID: F8514.D
 Analysis Method: 8260C Date Collected: 02/07/2019 14:30
 Sample wt/vol: 6.48(g) Date Analyzed: 02/12/2019 01:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 6.0 Level: (low/med) Low
 Analysis Batch No.: 458609 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		27	2.5
1634-04-4	Methyl tert-butyl ether	ND		4.1	0.40
108-87-2	Methylcyclohexane	ND		4.1	0.62
75-09-2	Methylene Chloride	ND		4.1	1.9
100-42-5	Styrene	ND		4.1	0.21
127-18-4	Tetrachloroethene	ND		4.1	0.55
108-88-3	Toluene	ND		4.1	0.31
156-60-3	trans-1,2-Dichloroethene	ND		4.1	0.42
10061-02-6	trans-1,3-Dichloropropene	ND		4.1	1.8
79-01-6	Trichloroethene	ND		4.1	0.90
75-69-4	Trichlorofluoromethane	ND		4.1	0.39
75-01-4	Vinyl chloride	ND		4.1	0.50
1330-20-7	Xylenes, Total	ND		8.2	0.69

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		71-125
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		64-126
460-00-4	4-Bromofluorobenzene (Surr)	94		72-126
1868-53-7	Dibromofluoromethane (Surr)	105		60-140

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: SS-3 (6 - 12) Lab Sample ID: 480-148884-6
 Matrix: Solid Lab File ID: F8542.D
 Analysis Method: 8260C Date Collected: 02/07/2019 08:50
 Sample wt/vol: 6.69(g) Date Analyzed: 02/12/2019 15:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 7.5 Level: (low/med) Low
 Analysis Batch No.: 458665 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	H	4.0	0.29
79-34-5	1,1,2,2-Tetrachloroethane	ND	H	4.0	0.66
79-00-5	1,1,2-Trichloroethane	ND	H	4.0	0.53
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	4.0	0.92
75-34-3	1,1-Dichloroethane	ND	H	4.0	0.49
75-35-4	1,1-Dichloroethene	ND	H	4.0	0.49
120-82-1	1,2,4-Trichlorobenzene	ND	H	4.0	0.25
96-12-3	1,2-Dibromo-3-Chloropropane	ND	H	4.0	2.0
95-50-1	1,2-Dichlorobenzene	ND	H	4.0	0.32
107-06-2	1,2-Dichloroethane	ND	H	4.0	0.20
78-87-5	1,2-Dichloropropane	ND	H	4.0	2.0
541-73-1	1,3-Dichlorobenzene	ND	H	4.0	0.21
106-46-7	1,4-Dichlorobenzene	ND	H	4.0	0.57
78-93-3	2-Butanone (MEK)	ND	H	20	1.5
591-78-6	2-Hexanone	ND	H	20	2.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	H	20	1.3
67-64-1	Acetone	13	J H	20	3.4
71-43-2	Benzene	ND	H	4.0	0.20
75-27-4	Bromodichloromethane	ND	H	4.0	0.54
75-25-2	Bromoform	ND	H	4.0	2.0
74-83-9	Bromomethane	ND	H	4.0	0.36
75-15-0	Carbon disulfide	ND	H	4.0	2.0
56-23-5	Carbon tetrachloride	ND	H	4.0	0.39
100-96-7	Chlorobenzene	ND	H	4.0	0.53
124-48-1	Dibromochloromethane	ND	H	4.0	0.52
75-00-3	Chloroethane	ND	H	4.0	0.91
67-66-3	Chloroform	ND	H	4.0	0.25
74-87-3	Chloromethane	ND	H	4.0	0.24
156-59-2	cis-1,2-Dichloroethene	ND	H	4.0	0.52
10061-01-5	cis-1,3-Dichloropropene	ND	H	4.0	0.58
110-82-7	Cyclohexane	ND	H	4.0	0.57
75-71-8	Dichlorodifluoromethane	ND	H	4.0	0.33
100-41-4	Ethylbenzene	ND	H	4.0	0.28
106-93-4	1,2-Dibromoethane	ND	H	4.0	0.52
98-82-8	Isopropylbenzene	ND	H	4.0	0.61

map 4/27/19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: SS-3 (6 - 12) Lab Sample ID: 480-148884-6
 Matrix: Solid Lab File ID: F8542.D
 Analysis Method: 8260C Date Collected: 02/07/2019 08:50
 Sample mL/vol: 6.69(g) Date Analyzed: 02/12/2019 15:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 7.5 Level: (low/med) Low
 Analysis Batch No.: 458665 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MOL
79-20-9	Methyl acetate	ND	H	20	2.4
1634-04-4	Methyl tert-butyl ether	ND	H	4.0	0.40
108-87-2	Methylcyclohexane	ND	H	4.0	0.61
75-09-2	Methylene Chloride	4.0 UJ	J H R	4.0	1.9
100-42-5	Styrene	ND	H	4.0	0.20
127-18-4	Tetrachloroethene	ND	H	4.0	0.54
108-88-3	Toluene	0.34	J H	4.0	0.31
156-60-6	trans-1,2-Dichloroethene	ND	H	4.0	0.42
10061-02-6	trans-1,3-Dichloropropene	ND	H	4.0	1.8
79-01-6	Trichloroethene	ND	H	4.0	0.89
75-69-4	Trichlorofluoromethane	ND	H	4.0	0.58
75-01-1	Vinyl chloride	ND	H	4.0	0.49
1330-20-7	Xylenes, Total	ND	H	8.1	0.68

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		71-125
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		64-126
460-00-4	4-Bromofluorobenzene (Surr)	99		72-126
1868-53-7	Dibromofluoromethane (Surr)	104		60-140

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: SS-4 (6 - 12) Lab Sample ID: 480-148884-9
 Matrix: Solid Lab File ID: F8516.D
 Analysis Method: 8260C Date Collected: 02/07/2019 09:50
 Sample wt/vol: 5.38(g) Date Analyzed: 02/12/2019 02:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: 7.4 Level: (low/med) Low
 Analysis Batch No.: 458609 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	H	5.0	0.36
79-34-5	1,1,2,2-Tetrachloroethane	ND	H	5.0	0.87
79-00-5	1,1,2-Trichloroethane	ND	H	5.0	0.65
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	5.0	1.1
75-34-3	1,1-Dichloroethane	ND	H	5.0	0.61
75-35-4	1,1-Dichloroethene	ND	H	5.0	0.61
120-82-1	1,2,4-Trichlorobenzene	ND	H	5.0	0.31
96-12-8	1,2-Dibromo-3-Chloropropane	ND	li	5.0	2.5
95-50-1	1,2-Dichlorobenzene	ND	H	5.0	0.39
107-06-2	1,2-Dichloroethane	ND	H	5.0	0.25
78-87-5	1,2-Dichloropropane	ND	li	5.0	2.5
541-73-1	1,3-Dichlorobenzene	ND	H	5.0	0.26
106-46-7	1,4-Dichlorobenzene	ND	H	5.0	0.70
78-93-3	2-Butanone (MEK)	ND	H	25	1.8
591-78-6	2-Hexanone	ND	li	25	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	H	25	1.6
67-64-1	Acetone	56	H B	25	4.2
71-43-2	Benzene	5.2	li	5.0	0.25
75-27-4	Bromodichloromethane	ND	H	5.0	0.67
75-25-2	Bromoform	ND	H	5.0	2.5
74-83-9	Bromomethane	ND	H	5.0	0.45
75-15-0	Carbon disulfide	ND	li	5.0	2.5
56-23-5	Carbon Tetrachloride	ND	H	5.0	0.49
108-90-7	Chlorobenzene	ND	H	5.0	0.66
124-48-1	Dibromochloromethane	ND	li	5.0	0.64
75-00-3	Chloroethane	ND	H *	5.0	1.1
67-66-3	Chloroform	ND	H	5.0	0.37
74-87-3	Chloromethane	ND	H	5.0	0.30
156-59-2	cis-1,2-Dichloroethene	ND	H	5.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND	li	5.0	0.72
110-82-7	Cyclohexane	ND	H	5.0	0.70
75-71-8	Dichlorodifluoromethane	ND	H	5.0	0.71
100-41-4	Ethylbenzene	ND	H	5.0	0.35
106-93-4	1,2-Dibromoethane	ND	li	5.0	0.64
98-82-8	Isopropylbenzene	ND	H	5.0	0.76

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: SS-4 (6 - 12) Lab Sample ID: 480-148884-8
 Matrix: Solid Lab File ID: F8516.D
 Analysis Method: 8260C Date Collected: 02/07/2019 09:50
 Sample wt/vol: 5.38(g) Date Analyzed: 02/12/2019 02:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA TD: 0.25(mm)
 % Moisture: 7.4 Level: (low/med) Low
 Analysis Batch No.: 458609 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-29-9	Methyl acetate	ND	H	25	3.0
1634-04-4	Methyl tert-butyl ether	ND	H	5.0	0.49
108-87-2	Methylcyclohexane	35	H	5.0	0.75
75-09-2	Methylene Chloride	ND	H	5.0	2.3
106-42-5	Styrene	ND	H	5.0	0.25
127-18-4	Tetrachloroethene	ND	H	5.0	0.67
108-88-3	Toluene	0.67	J H	5.0	0.38
156-60-5	trans-1,2-Dichloroethene	ND	H	5.0	0.52
70061-02-6	trans-1,3-Dichloropropene	ND	H	5.0	2.2
79-01-6	Trichloroethene	ND	H	5.0	1.1
75-69-4	Trichlorofluoromethane	ND	H	5.0	0.47
75-07-4	Vinyl chloride	ND	H	5.0	0.61
1330-20-7	Xylenes, Total	ND	H	10	0.84

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		71-125
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		64-126
460-00-4	4-Bromofluorobenzene (Surr)	96		72-126
1868-53-7	Dibromofluoromethane (Surr)	99		60-140

MSMP 4/27/19

1A-1N
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SS-1 (0 - 2)

Lab Sample ID: 480-148884-1

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDG ID.: _____

Matrix: Solid

Date Sampled: 02/07/2019 13:30

Reporting Basis: DW

Date Received: 02/09/2019 04:00

% Solids: 84.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	1150	11.9	5.2	mg/Kg			1	6010C
7440-36-0	Antimony	0.50	17.9	0.48	mg/Kg	J		1	6010C
7440-38-2	Arsenic	3.1	2.4	0.46	mg/Kg			1	6010C
7440-39-3	Barium	47.2	0.60	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.24	0.24	0.033	mg/Kg			1	6010C
7440-43-9	Cadmium	0.76	0.24	0.036	mg/Kg			1	6010C
7440-70-2	Calcium	150000	119	7.9	mg/Kg		B	2	6010C
7440-47-3	Chromium	13.4	0.60	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	4.8	0.60	0.060	mg/Kg			1	6010C
7440-50-8	Copper	19.8	2.4	0.50	mg/Kg			2	6010C
7439-89-6	Iron	7840	11.9	4.2	mg/Kg			1	6010C
7439-92-1	Lead	93.3	1.2	0.29	mg/Kg			1	6010C
7439-95-4	Magnesium	26400	23.8	1.1	mg/Kg		B	1	6010C
7439-96-5	Manganese	252	0.24	0.038	mg/Kg		B	1	6010C
7440-02-0	Nickel	13.7	6.0	0.27	mg/Kg			1	6010C
7440-09-7	Potassium	1620	35.8	23.8	mg/Kg			1	6010C
7782-49-2	Selenium	0.78	4.8	0.48	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.72	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	223	167	15.5	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	7.2	0.36	mg/Kg			1	6010C
7440-62-2	Vanadium	20.0	0.60	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	569	2.4	0.76	mg/Kg			1	6010C
7439-97-5	Mercury	0.050	0.023	0.0094	ug/Kg			1	7471B

meubel

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SS-1 (6 - 12)

Lab Sample ID: 480-148884-2

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDG ID.:

Matrix: Solid

Date Sampled: 02/07/2019 13:45

Reporting Basis: DRY

Date Received: 02/09/2019 04:00

% Solids: 83.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	GLL	Method
7429-90-5	Aluminum	10900	11.6	5.1	mg/Kg			1	6010C
7440-36-0	Antimony	0.69	17.5	0.47	mg/Kg	J		1	6010C
7440-38-2	Arsenic	6.0	2.3	0.47	mg/Kg			1	6010C
7440-39-3	Barium	74.3	0.58	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.43	0.23	0.033	mg/Kg			1	6010C
7440-43-9	Cadmium	0.55	0.23	0.035	mg/Kg			1	6010C
7440-70-2	Calcium	79800	58.2	3.8	mg/Kg		B	1	6010C
7440-47-3	Chromium	18.1	0.58	0.23	mg/Kg			1	6010C
7440-48-4	Cobalt	7.5	0.58	0.058	mg/Kg			1	6010C
7440-50-8	Copper	28.7	1.2	0.24	mg/Kg			1	6010C
7439-89-6	Iron	17000	71.6	4.1	mg/Kg			1	6010C
7439-92-1	Lead	77.0	1.2	0.28	mg/Kg			1	6010C
7439-95-4	Magnesium	41000	23.3	1.1	mg/Kg		B	1	6010C
7439-96-5	Manganese	275	0.23	0.037	mg/Kg		B	1	6010C
7440-02-0	Nickel	24.6	5.8	0.27	mg/Kg			1	6010C
7440-09-7	Potassium	3570	34.9	23.3	mg/Kg			1	6010C
7782-49-2	Selenium	0.50	4.7	0.47	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.70	0.23	mg/Kg			1	6010C
7440-23-5	Sodium	721	163	15.1	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	7.0	0.35	mg/Kg			1	6010C
7440-62-2	Vanadium	22.1	0.58	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	107	2.3	0.74	mg/Kg			1	6010C
7439-97-6	Mercury	0.079	0.024	0.0095	mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SS-2 (0 - 2)

Lab Sample ID: 480-148884-3

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDG ID.:

Matrix: Solid

Date Sampled: 02/07/2019 14:15

Reporting Basis: DRY

Date Received: 02/09/2019 04:00

% Solids: 95.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIV	Method
7429-90-5	Aluminum	3650	10.3	4.6	mg/Kg			1	6010C
7440-36-0	Antimony	ND	15.5	0.41	ug/Kg			1	6010C
7440-38-2	Arsenic	1.4	2.1	0.41	mg/Kg	J		1	6010C
7440-39-3	Barium	68.0	0.52	0.11	mg/Kg			1	6010C
7440-41-7	Beryllium	0.18	0.21	0.029	mg/Kg	J		1	6010C
7440-43-9	Cadmium	0.16	0.21	0.031	mg/Kg	J		1	6010C
7440-70-2	Calcium	145000	103	6.8	mg/Kg		B	2	6010C
7440-47-3	Chromium	10	0.52	0.21	mg/Kg			1	6010C
7440-48-4	Cobalt	2.3	0.52	0.052	mg/Kg			1	6010C
7440-50-8	Copper	6.1	2.1	0.43	mg/Kg			2	6010C
7439-89-6	Iron	5290	10.3	3.6	mg/Kg			1	6010C
7439-92-1	Iodine	10.8	1.0	0.25	ug/Kg			1	6010C
7439-95-4	Magnesium	44700	20.7	0.96	mg/Kg		B	1	6010C
7439-96-5	Manganese	135	0.21	0.033	mg/Kg		B	1	6010C
7440-02-0	Nickel	7.0	5.2	0.24	mg/Kg			1	6010C
7440-09-7	Potassium	1430	31.0	20.7	mg/Kg			1	6010C
7782-49-2	Selenium	ND	4.1	0.41	ug/Kg			1	6010C
7440-22-4	Silver	ND	0.62	0.21	mg/Kg			1	6010C
7440-23-5	Sodium	285	145	13.5	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.2	0.31	mg/Kg			1	6010C
7440-62-2	Vanadium	14.5	0.52	0.11	mg/Kg			1	6010C
7440-66-6	Zinc	20.2	2.1	0.66	mg/Kg			1	6010C
7439-97-6	Mercury	0.020	0.020	0.0079	mg/Kg			1	7471B

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1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SS-2 (6 -1 2)

Lab Sample ID: 480-148884-4

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDC ID.: _____

Matrix: Solid

Date Sampled: 02/07/2019 14:30

Reporting Basis: DRY

Date Received: 02/09/2019 04:00

% Solids: 94.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DTL	Method
7429-90-5	Aluminum	2770	10.4	4.6	mg/Kg			1	6010C
7440-36-0	Antimony	0.48	15.7	0.42	mg/Kg	J		1	6010C
7440-38-2	Arsenic	1.3	2.1	0.42	mg/Kg	J		1	6010C
7440-39-3	Barium	41.4	0.52	0.11	mg/Kg			1	6010C
7440-41-7	Beryllium	0.16	0.21	0.029	mg/Kg	J		1	6010C
7440-43-5	Cadmium	0.14	0.21	0.031	mg/Kg	J		1	6010C
7440-70-2	Calcium	253000	261	17.2	mg/Kg		B	5	6010C
7440-47-3	Chromium	6.5	0.52	0.21	mg/Kg			1	6010C
7440-48-4	Cobalt	2.0	0.52	0.052	mg/Kg			1	6010C
7440-50-8	Copper	4.3	5.2	1.1	mg/Kg	J		5	6010C
7439-88-6	Iron	4740	10.4	3.7	mg/Kg			1	6010C
7439-92-1	Lead	13.0	1.0	0.25	mg/Kg			1	6010C
7439-95-4	Magnesium	22200	20.9	0.97	mg/Kg		B	1	6010C
7439-96-5	Manganese	175	0.21	0.033	mg/Kg		B	1	6010C
7440-02-0	Nickel	6.4	5.2	0.24	mg/Kg			1	6010C
7440-09-7	Potassium	1420	31.3	20.9	mg/Kg			1	6010C
7782-49-2	Selenium	ND	4.2	0.42	mg/Kg			1	6010C
7440-22-4	Silver	ND	0.63	0.21	mg/Kg			1	6010C
7440-23-5	Sodium	249	J 146	13.6	mg/Kg		B	1	6010C
7440-28-0	Thallium	ND	6.3	0.31	mg/Kg			1	6010C
7440-62-2	Vanadium	0.0	0.52	0.11	mg/Kg			1	6010C
7440-66-6	Zinc	22.7	2.1	0.67	mg/Kg			1	6010C
7439-97-6	Mercury	6.020	0.021	0.008E	mg/Kg	J		1	7471B

msy 4/26/19

Appendix B

*Laboratory
QC
Documentation*

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Matrix: Water

Level: Low

Lab File ID: S0613.D

Lab ID: 480-148126-2 MS

Client ID: MM-4 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	25.0	ND	19.5	78	73-126	
1,1,2,2-Tetrachloroethane	25.0	ND	23.4	94	76-120	
1,1,2-Trichloroethane	25.0	ND	23.6	95	76-122	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	ND	16.6	66	61-148	
1,1-Dichloroethane	25.0	ND	21.9	88	77-120	
1,1-Dichloroethene	25.0	ND	18.3	73	66-127	
1,2,4-Trichlorobenzene	25.0	ND	19.8	79	79-122	
1,2-Dibromo-3-Chloropropane	25.0	ND	22.2	89	56-134	
1,2-Dichlorobenzene	25.0	ND	22.5	90	80-124	
1,2-Dichloroethane	25.0	ND	22.7	91	75-120	
1,2-Dichloropropane	25.0	ND	21.5	86	76-120	
1,3-Dichlorobenzene	25.0	ND	21.7	87	77-120	
1,4-Dichlorobenzene	25.0	ND	21.6	86	78-124	
2-Butanone (MEK)	125	ND	134	107	57-140	
2-Hexanone	125	ND	130	104	65-127	
4-Methyl-2-pentanone (MIBK)	125	ND	138	110	71-125	
Acetone	125	5.9 J	135	103	56-142	
Benzene	25.0	0.63 J	22.5	88	71-124	
Bromodichloromethane	25.0	ND	22.3	89	80-122	
Bromoform	25.0	ND	24.2	97	61-132	
Bromomethane	25.0	ND	20.5	82	55-144	
Carbon disulfide	25.0	ND	20.0	80	59-134	
Carbon tetrachloride	25.0	ND	19.3	77	72-134	
Chlorobenzene	25.0	ND	21.8	87	80-120	
Dibromochloromethane	25.0	ND	23.8	95	75-129	
Chloroethane	25.0	ND	20.6	83	69-136	
Chloroform	25.0	ND	23.2	93	73-127	
Chloromethane	25.0	ND	22.9	92	68-124	
cis-1,2-Dichloroethene	25.0	ND	23.0	92	74-124	
cis-1,3-Dichloropropene	25.0	ND	21.0	84	74-124	
Cyclohexane	25.0	1.0	16.8	63	59-135	
Dichlorodifluoromethane	25.0	ND	18.6	74	59-135	
Ethylbenzene	25.0	ND	21.8	87	77-123	
1,2-Dibromoethane	25.0	ND	24.2	97	77-120	
Isopropylbenzene	25.0	ND	20.6	83	77-122	
Methyl acetate	50.0	ND	47.9	96	74-133	
Methyl tert-butyl ether	25.0	35	55.9	82	77-120	
Methylcyclohexane	25.0	0.19 J	16.0	63	68-134	F1
Methylene Chloride	25.0	ND	24.0	96	75-124	
Styrene	25.0	ND	20.2	81	60-120	
Tetrachloroethene	25.0	ND	20.8	83	74-122	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SIX No.: 119.412.009

Matrix: Water

Level: Low

Lab File ID: S0614.D

Lab ID: 480-148126-2 MSD

Client ID: MW-4 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD		QC LIMITS		#
			% REC	% RPD	RPD	REC	
1,1,1-Trichloroethane	25.0	17.0	68	14	15	73-126	F1
1,1,2,2-Tetrachloroethane	25.0	24.4	98	4	15	76-120	
1,1,2-Trichloroethane	25.0	23.7	95	0	15	76-122	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	13.7	55	19	20	61-148	F1
1,1-Dichloroethane	25.0	20.4	82	7	20	77-120	
1,1-Dichloroethene	25.0	15.9	63	14	16	66-127	F1
1,2,4-Trichlorobenzene	25.0	18.7	75	6	20	79-122	F1
1,2-Dibromo-3-Chloropropane	25.0	21.7	87	2	15	56-134	
1,2-Dichlorobenzene	25.0	21.2	85	6	20	80-124	
1,2-Dichloroethane	25.0	22.8	91	0	20	75-120	
1,2-Dichloropropane	25.0	21.3	85	1	20	76-120	
1,3-Dichlorobenzene	25.0	20.5	82	6	20	77-120	
1,4-Dichlorobenzene	25.0	20.2	81	6	20	78-124	
2-Butanone (MEK)	125	139	111	3	20	57-140	
2-Hexanone	125	140	112	7	15	65-127	
4-Methyl-2-pentanone (MIBK)	125	140	112	2	35	71-125	
Acetone	125	141	108	4	15	56-142	
Benzene	25.0	21.0	82	7	13	71-124	
Bromodichloromethane	25.0	21.7	87	3	15	80-122	
Bromoform	25.0	24.1	96	1	15	61-132	
Bromomethane	25.0	21.5	86	5	15	55-144	
Carbon disulfide	25.0	16.8	67	18	15	59-134	F2
Carbon tetrachloride	25.0	15.6	63	21	15	72-134	F1 F2
Chlorobenzene	25.0	21.1	85	3	25	80-120	
Dibromochloromethane	25.0	24.1	96	1	15	75-125	
Chloroethane	25.0	20.6	82	0	15	69-136	
Chloroform	25.0	21.8	87	6	20	73-127	
Chloromethane	25.0	23.4	94	2	15	68-124	
cis-1,2-Dichloroethene	25.0	21.5	86	7	15	74-124	
cis-1,3-Dichloropropene	25.0	20.9	83	1	15	74-124	
Cyclohexane	25.0	12.9	47	26	20	59-135	F1 F2
Dichlorodifluoromethane	25.0	15.7	63	17	20	59-135	
Ethylbenzene	25.0	19.7	79	10	15	77-123	
1,2-Dibromoethane	25.0	24.1	97	0	15	77-120	
Isopropylbenzene	25.0	18.4	74	12	20	77-122	F1
Methyl acetate	50.0	48.7	97	2	20	74-133	
Methyl tert-butyl ether	25.0	51.5	77	2	37	77-120	
Methylcyclohexane	25.0	12.1	47	28	20	68-134	F1 F2
Methylene Chloride	25.0	22.9	92	5	15	75-124	
Styrene	25.0	20.6	82	2	20	80-120	
Tetrachloroethene	25.0	18.6	74	11	20	74-122	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Buffalo Job No.: 480-148126-1
 SDG No.: 119.412.009
 Matrix: Water Level: Low Lab File ID: S0614.D
 Lab ID: 480-148126-2 MSD Client ID: MW-4 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD		QC LIMITS		#
			% REC	% RPD	RDD	REC	
Toluene	25.0	20.3	81	10	15	80-122	
trans-1,2-Dichloroethene	25.0	18.2	73	12	20	73-127	
trans-1,3-Dichloropropene	25.0	21.6	87	2	15	80-120	
Trichloroethene	25.0	18.3	73	9	16	74-123	F1
Trichlorofluoromethane	25.0	14.7	59	12	20	62-150	F1
Vinyl chloride	25.0	18.5	74	6	15	65-133	

Column to be used to flag recovery and RPD values

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Matrix: Water

Level: Low

Lab File ID: W8325.D

Lab ID: 480-148126-2 MS

Client ID: MW-4 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Biphenyl	32.0	ND	31.2	98	57-120	
bis (2-chloroisopropyl) ether	32.0	ND	27.5	86	28-121	
2,4,5-Trichlorophenol	32.0	ND	36.2	113	65-126	
2,4,6-Trichlorophenol	32.0	ND	35.8	112	64-120	
2,4-Dichlorophenol	32.0	ND	31.0	97	48-132	
2,4-Dimethylphenol	32.0	ND	25.3	79	39-130	
2,4-Dinitrophenol	64.0	ND	87.8	137	21-150	
2,4-Dinitrotoluene	32.0	ND	35.9	112	54-138	
2,6-Dinitrotoluene	32.0	ND	34.4	108	17-150	
2-Chloronaphthalene	32.0	ND	29.0	91	52-124	
2-Chlorophenol	32.0	ND	27.9	87	48-120	
2-Methylphenol	32.0	ND	27.8	87	46-120	
2-Methylnaphthalene	32.0	ND	28.1	88	34-140	
2-Nitroaniline	32.0	ND	25.4	79	44-136	
2-Nitrophenol	32.0	ND	32.1	100	38-141	
3,3'-Dichlorobenzidine	64.0	ND	2.22 J	3	10-150	F1
3-Nitroaniline	32.0	ND	8.20 J	26	32-150	F1
4,6-Dinitro-2-methylphenol	64.0	ND	80.4	126	38-150	
4-Bromophenyl phenyl ether	32.0	ND	32.7	102	63-126	
4-Chloro-3-methylphenol	32.0	ND	34.1	106	64-127	
4-Chloroaniline	32.0	ND	10.8	34	16-124	
4-Chlorophenyl phenyl ether	32.0	ND	32.2	101	61-120	
4-Methylphenol	32.0	ND	28.1	88	36-120	
4-Nitroaniline	32.0	ND	9.86 J	31	32-150	F1
4-Nitrophenol	64.0	ND	62.4	98	23-132	
Acenaphthene	32.0	ND	30.0	94	48-120	
Acenaphthylene	32.0	ND	31.0	97	63-120	
Acetophenone	32.0	ND	29.9	94	53-120	
Anthracene	32.0	ND	30.1	94	65-122	
Atrazine	64.0	ND	75.8	118	50-150	
Benzaldehyde	64.0	ND	57.2	80	10-150	
Benzo[a]anthracene	32.0	ND	31.6	99	43-124	
Benzo[a]pyrene	32.0	ND	30.3	95	23-125	
Benzo[b]fluoranthene	32.0	ND	32.9	103	27-127	
Benzo[g,h,i]perylene	32.0	ND	31.5	98	16-147	
Benzo[k]fluoranthene	32.0	ND	32.6	102	20-124	
Bis(2-chloroethoxy)methane	32.0	ND	29.4	92	44-128	
Bis(2-chloroethyl)ether	32.0	ND	28.5	89	45-120	
Bis(2-ethylhexyl) phthalate	32.0	ND	32.9	103	16-150	
Butyl benzyl phthalate	32.0	ND	35.8	112	51-140	
Caprolactam	64.0	ND	25.3	40	10-120	
Carbazole	32.0	ND	34.1	107	16-148	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMT VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDS No.: 119.412.009

Matrix: Water

Level: Low

Lab File ID: WB326.D

Lab ID: 480-148126-2 MSD

Client ID: MW-4 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD		QC LIMITS		#
			% REC	% RPD	RPD	REC	
Biphenyl	32.0	29.8	93	5	20	57-120	
bis (2-chloroisopropyl) ether	32.0	28.5	89	3	24	28-121	
2,4,5-Trichlorophenol	32.0	36.2	113	0	18	65-126	
2,4,6-Trichlorophenol	32.0	37.0	116	3	19	64-120	
2,4-Dichlorophenol	32.0	32.0	100	3	19	48-132	
2,4-Dimethylphenol	32.0	27.4	86	8	42	39-130	
2,4-Dinitrophenol	64.0	88.2	138	0	22	21-150	
2,4-Dinitrotoluene	32.0	35.5	111	1	20	54-138	
2,6-Dinitrotoluene	32.0	34.4	107	0	15	17-150	
2-Chloronaphthalene	32.0	28.1	88	3	21	52-124	
2-Chlorophenol	32.0	28.7	90	3	25	48-120	
2-Methylphenol	32.0	28.3	89	2	27	46-120	
2-Methylnaphthalene	32.0	27.8	87	1	21	34-140	
2-Nitroaniline	32.0	27.2	85	7	15	44-136	
2-Nitrophenol	32.0	33.1	103	3	18	38-141	
3,3'-Dichlorobenzidine	64.0	3.50 J	5	45	25	10-150	F1 F2
3-Nitroaniline	32.0	9.13 J	29	11	19	32-150	F1
4,6-Dinitro-2-methylphenol	64.0	81.0	126	1	15	38-150	
4-Bromophenyl phenyl ether	32.0	32.2	101	1	15	63-126	
4-Chloro-3-methylphenol	32.0	34.0	106	0	27	64-127	
4-Chloroaniline	32.0	13.1	41	19	22	16-124	
4-Chlorophenyl phenyl ether	32.0	31.5	98	2	16	61-120	
4-Methylphenol	32.0	27.8	87	1	24	36-120	
4-Nitroaniline	32.0	11.3	35	14	24	32-150	
4-Nitrophenol	64.0	60.9	95	3	48	23-132	
Acenaphthene	32.0	29.6	92	1	24	48-120	
Acenaphthylene	32.0	30.9	97	0	18	63-120	
Acetophenone	32.0	30.7	96	2	20	53-120	
Anthracene	32.0	30.3	95	1	15	65-122	
Atrazine	64.0	75.0	117	1	20	50-150	
Benzaldehyde	64.0	52.6	82	3	20	10-150	
Benzo[a]anthracene	32.0	31.0	97	2	15	43-124	
Benzo[a]pyrene	32.0	31.2	98	3	15	23-125	
Benzo[b]fluoranthene	32.0	33.4	104	1	15	27-127	
Benzo[g,h,i]perylene	32.0	32.2	101	2	15	16-147	
Benzo[k]fluoranthene	32.0	32.8	102	1	22	20-124	
Bis(2-chloroethoxy)methane	32.0	30.9	94	2	17	44-128	
Bis(2-chloroethyl) ether	32.0	29.8	93	4	21	45-120	
Bis(2-ethylhexyl) phthalate	32.0	32.8	102	0	15	16-150	
Butyl benzyl phthalate	32.0	34.8	109	3	16	51-140	
Caprolactam	64.0	24.8	39	2	20	10-120	
Carbazole	32.0	33.7	105	1	20	16-148	

Column to be used to flag recovery and RPD values

FORM III 8270D

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Concentration Units: mg/L

Lab Sample ID: MB 480-455768/1-A

Instrument Code: ICAP1

Batch No.: 455999

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	ND			6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	ND			6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	0.0214	J		6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	ND			6010C
7439-96-5	Manganese	ND			6010C
7440-02-0	Nickel	ND			6010C
7440-09-7	Potassium	ND			6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-23-5	Sodium	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	ND			6010C

3-TN
METHOD BLANK
METALS - DISSOLVED

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Concentration Units: mg/L

Lab Sample ID: MB 480-456292/1-D

Instrument Code: LCAP1

Batch No.: 456665

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	ND			6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	ND			6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	ND			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	ND			6010C
7439-96-5	Manganese	ND			6010C
7440-02-0	Nickel	ND			6010C
7440-09-7	Potassium	ND			6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-23-5	Sodium	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	0.00511	J		6010C

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: MW-4 MS

Lab ID: 480-148126-2 MS

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	25.28	13.9	10.0	114	75-125		6010C
Antimony	0.189	ND	0.200	95	75-125		6010C
Arsenic	0.207	ND	0.200	103	75-125		6010C
Barium	3.42	3.4	0.200	33	75-125	4	6010C
Beryllium	0.195	0.00049	0.200	97	75-125		6010C
Cadmium	0.190	ND	0.200	95	75-125		6010C
Calcium	261.1	290	10.0	-290	75-125	4	6010C
Chromium	0.211	0.036	0.200	87	75-125		6010C
Cobalt	0.194	0.0060	0.200	94	75-125		6010C
Copper	0.213	0.079	0.200	97	75-125		6010C
Iron	21.98	15.9	10.0	61	75-125	F1	6010C
Lead	0.206	0.017	0.200	95	75-125		6010C
Magnesium	153.2	164	10.0	-110	75-125	4	6010C
Manganese	0.500	0.41	0.200	47	75-125	F1	6010C
Nickel	0.225	0.030	0.200	98	75-125		6010C
Potassium	25.68	13.7	10.0	120	75-125		6010C
Selenium	0.195	ND	0.200	98	75-125		6010C
Silver	0.0492	ND	0.0500	98	75-125		6010C
Sodium	293.5	292	10.0	16	75-125	4	6010C
Thallium	0.198	ND	0.200	99	75-125		6010C
Vanadium	0.216	0.026	0.200	95	75-125		6010C
Zinc	0.224	0.032	0.200	96	75-125		6010C

SSR - Spiked Sample Result

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

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS - TOTAL RECOVERABLE

Client ID: MW-4 MSD

Lab ID: 480-148126-2 MSD

Lab Name: TestAmerica Buffalo

Job No.: 480-148126-1

SDG No.: 119.412.009

Matrix: Water

Concentration Units: mg/L

% Solids: _____

Analyte	(SDR)	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	51.79	10.0	379	75-125	69	20	4 F2	6010C
Antimony	0.178	0.200	89	75-125	6	20		6010C
Arsenic	0.204	0.200	102	75-125	1	20		6010C
Barium	3.57	0.200	107	75-125	4	20	4	6010C
Beryllium	0.189	0.200	94	75-125	3	20		6010C
Cadmium	0.188	0.200	94	75-125	1	20		6010C
Calcium	441.1	10.0	1510	75-125	51	20	4 F2	6010C
Chromium	0.267	0.200	115	75-125	23	20	F2	6010C < 25
Cobalt	0.205	0.200	99	75-125	6	20		6010C
Copper	0.230	0.200	106	75-125	8	20		6010C
Iron	47.47	10.0	316	75-125	73	20	4 F2	6010C
Lead	0.228	0.200	106	75-125	10	20		6010C
Magnesium	250.1	10.0	860	75-125	48	20	4 F2	6010C
Manganese	1.04	0.200	318	75-125	70	20	4 F2	6010C
Nickel	0.271	0.200	121	75-125	18	20		6010C
Potassium	35.33	10.0	216	75-125	32	20	F1 F2	6010C
Selenium	0.193	0.200	97	75-125	1	20		6010C
Silver	0.0496	0.0500	99	75-125	1	20		6010C
Sodium	295.9	10.0	40	75-125	1	20	4	6010C
Thallium	0.193	0.200	97	75-125	3	20		6010C
Vanadium	0.258	0.200	116	75-125	18	20		6010C
Zinc	0.268	0.200	118	75-125	18	20		6010C

SDR = Sample Duplicate Result

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147988-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 480-455426/2-A
 Matrix: Solid Lab File ID: F7993.D
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5(g) Date Analyzed: 01/17/2019 11:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 455409 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		5.0	0.36
79-34-5	1,1,2,2-Tetrachloroethane	ND		5.0	0.81
79-00-5	1,1,2-Trichloroethane	ND		5.0	0.65
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1
75-34-3	1,1-Dichloroethane	ND		5.0	0.61
75-35-4	1,1-Dichloroethene	ND		5.0	0.67
120-82-1	1,2,4-Trichlorobenzene	ND		5.0	0.30
96-12-8	1,2-Dibromo-3-Chloropropane	ND		5.0	2.5
95-50-1	1,2-Dichlorobenzene	ND		5.0	0.39
707-06-2	1,2-Dichloroethane	ND		5.0	0.25
78-87-5	1,2-Dichloropropane	ND		5.0	2.5
541-73-1	1,3-Dichlorobenzene	ND		5.0	0.26
106-46-7	1,4-Dichlorobenzene	ND		5.0	0.70
78-93-3	2-Butanone (MEK)	ND		25	1.8
591-78-6	2-Hexanone	ND		25	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		25	1.6
67-64-1	Acetone	ND		25	4.2
71-43-2	Benzene	ND		5.0	0.25
75-27-4	Bromodichloromethane	ND		5.0	0.67
75-25-2	Bromoform	ND		5.0	2.5
74-83-9	Bromomethane	ND		5.0	0.45
75-15-0	Carbon disulfide	ND		5.0	2.5
56-23-5	Carbon tetrachloride	ND		5.0	0.48
108-90-7	Chlorobenzene	ND		5.0	0.66
124-48-1	Dibromochloromethane	ND		5.0	0.64
75-00-3	Chloroethane	ND		5.0	1.1
67-66-3	Chloroform	ND		5.0	0.31
74-87-3	Chloromethane	ND		5.0	0.30
156-59-2	cis-1,2-Dichloroethene	ND		5.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		5.0	0.72
110-82-7	Cyclohexane	ND		5.0	0.70
75-71-8	Dichlorodifluoromethane	ND		5.0	0.41
100-41-4	Ethylbenzene	ND		5.0	0.35
106-93-4	1,2-Dibromoethane	ND		5.0	0.64
98-82-8	Isopropylbenzene	ND		5.0	0.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147988-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: ME 480-455426/2-A
 Matrix: Solid Lab File ID: F7993.D
 Analysis Method: B260C Date Collected: _____
 Sample wt/vol: 5(g) Date Analyzed: 01/17/2019 11:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: ZB-624 (30) VOA ID: 0.25(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 455409 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		25	3.0
1634-04-4	Methyl tert-butyl ether	ND		5.0	0.49
108-87-2	Methylcyclohexane	ND		5.0	0.76
75-09-2	Methylene Chloride	ND		5.0	2.3
100-42-5	Styrene	ND		5.0	0.25
127-18-4	Tetrachloroethane	ND		5.0	0.67
108-88-3	Toluene	0.638	J	5.0	0.38
156-60-5	trans-1,2-Dichloroethene	ND		5.0	0.52
10061-02-6	trans-1,3-Dichloropropene	ND		5.0	2.2
79-01-6	Trichloroethene	ND		5.0	1.1
78-69-4	Trichlorofluoromethane	ND		5.0	0.47
75-01-4	Vinyl chloride	ND		5.0	0.61
1330-20-7	Xylenes, Total	ND		10	0.84

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		71-125
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		64-126
460-00-4	4-Bromofluorobenzene (Surr)	98		72-126
1868-53-7	Dibromofluoromethane (Surr)	101		60-140

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-147988-1

SDG No.:

Matrix: Solid

Level: Low

GC Column (1): RXI-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHd14 #
3B-1 (5-10)	480-147988-2	83	84	90	97	86	125 X
	MB 480-455529/1-A	83	86	89	97	82	128 X
	LCS	81	82	86	95	87	112
	480-455529/2-A						

2FP = 2-Fluorophenol (Surr)
 PHL = Phenol-d5 (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 FBP = 2-Fluorobiphenyl
 TBP = 2,4,6-Tribromophenol (Surr)
 TPHd14 = p-Terphenyl-d14 (Surr)

QC LIMITS

52-120
 54-120
 53-120
 60-120
 54-120
 65-121

† Column to be used to flag recovery values

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo

Job No.: 480-147988-1

SDG No.: _____

Concentration Units: mg/Kg

Lab Sample ID: MB 480-455541/1-A

Instrument Code: ICAP1

Batch No.: 455926

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	0.409	J		6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	10.19	J		6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	ND			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	2.97	J		6010C
7439-96-5	Manganese	ND			6010C
7440-02-0	Nickel	0.323	J		6010C
7440-09-7	Potassium	30.08			6010C
7702-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	ND			6010C

3-TN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo Job No.: 480-147988-1
SDG No.: _____
Concentration Units: mg/Kg Lab Sample ID: MB 480-455541/1-A
Instrument Code: ICAP2 Batch No.: 455934

CAS No.	Analyte	Concentration	C	Q	Method
7440-23-5	Sodium	50.10	J		6010C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG No.:

Matrix: Solid

Level: Low

Lab File ID: F8038.D

Lab ID: 480-147994-20 MS

Client ID: SB - 6

(10' - 15') MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	42.7	ND	33.6	79	77-121	
1,1,2,2-Tetrachloroethane	42.7	ND	25.4	69	80-120	F1
1,1,2-Trichloroethane	42.7	ND	27.9	65	78-122	F1
1,1,2-Trichloro-1,2,2-trifluoroethane	42.7	ND	31.3	73	60-140	
1,1-Dichloroethane	42.7	ND	34.5	81	73-126	
1,1-Dichloroethene	42.7	ND	30.6	72	59-125	
1,2,4-Trichlorobenzene	42.7	ND	5.11	12	64-120	F1
1,2-Dibromo-3-Chloropropane	42.7	ND	17.8	42	63-124	F1
1,2-Dichlorobenzene	42.7	ND	17.1	40	75-120	F1
1,2-Dichloroethane	42.7	ND	32.5	76	77-122	F1
1,2-Dichloropropane	42.7	ND	31.9	75	75-124	
1,3-Dichlorobenzene	42.7	ND	15.2	36	74-120	F1
1,4-Dichlorobenzene	42.7	ND	15.1	35	73-120	F1
2-Butanone (MEK)	213	ND	140	65	70-134	F1
2-Hexanone	213	ND	117	55	59-130	F1
4-Methyl-2-pentanone (MIBK)	213	ND	130	61	65-133	F1
Acetone	213	25	157	62	61-137	
Benzene	42.7	ND	32.9	77	79-127	F1
Bromodichloromethane	42.7	ND	32.3	76	80-122	F1
Bromoform	42.7	ND	23.8	56	68-126	F1
Bromomethane	42.7	ND	41.1	96	37-149	
Carbon disulfide	42.7	ND	29.9	70	64-131	
Carbon tetrachloride	42.7	ND	32.3	76	75-135	
Chlorobenzene	42.7	ND	24.6	58	76-124	F1
Dibromochloromethane	42.7	ND	28.4	66	76-125	F1
Chloroethane	42.7	ND	37.9	89	69-135	
Chloroform	42.7	ND	34.6	81	80-120	
Chloromethane	42.7	ND	39.5	93	63-127	
cis-1,2-Dichloroethene	42.7	ND	31.9	75	80-120	F1
cis-1,3-Dichloropropene	42.7	ND	27.7	65	80-120	F1
Cyclohexane	42.7	ND	27.5	64	65-120	F1
Dichlorodifluoromethane	42.7	ND	32.3	76	57-142	
Ethylbenzene	42.7	ND	24.2	57	80-120	F1
1,2-Dibromoethane	42.7	ND	23.8	56	78-120	F1
Isopropylbenzene	42.7	ND	23.9	56	72-120	F1
Methyl acetate	85.4	ND	57.3	67	55-136	
Methyl tert-butyl ether	42.7	5.2	44.0	91	63-125	
Methylcyclohexane	42.7	ND	23.5	55	60-140	F1
Methylene Chloride	42.7	ND	32.0	75	61-127	
Styrene	42.7	ND	20.5	48	80-120	F1
Tetrachloroethene	42.7	ND	24.3	57	74-122	F1

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Buffalo Job No.: 480-147994-1
 SDG No.: _____
 Matrix: Solid Level: Low Lab File ID: 88038.D
 Lab ID: 480-147994-20 MS Client ID: SB - 6 (10' - 15') MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Toluene	42.7	ND	28.4	67	74-128	FI
trans-1,2-Dichloroethene	42.7	ND	30.8	72	78-126	FI
trans-1,3-Dichloropropene	42.7	ND	24.4	51	73-123	FI
Trichloroethene	42.7	ND	28.2	66	77-129	FI
Trichlorofluoromethane	42.7	ND	35.4	83	65-146	
Vinyl chloride	42.7	ND	37.4	88	61-133	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG No.:

Matrix: Solid

Level: Low

Lab File ID: F8039.D

Lab ID: 480-147994-20 MSD

Client ID: SB - 6

(10' - 15') MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD		QC LIMITS		#
			% REC	% RPD	RPD	REC	
1,1,1-Trichloroethane	48.7	38.6	79	14	30	77-121	
1,1,2,2-Tetrachloroethane	48.7	32.1	66	23	30	80-120	F1
1,1,2-Trichloroethane	48.7	34.2	70	20	30	78-122	F1
1,1,2-Trichloro-1,2,2-Trifluoroethane	48.7	35.0	72	11	30	60-140	
1,1-Dichloroethane	48.7	39.7	81	14	30	73-126	
1,1-Dichloroethene	48.7	34.5	71	12	30	59-125	
1,2,4-Trichlorobenzene	48.7	5.62	12	10	30	64-120	F1
1,2-Dibromo-3-Chloropropane	48.7	22.5	46	23	30	63-124	F1
1,2-Dichlorobenzene	48.7	21.2	44	22	30	75-120	F1
1,2-Dichloroethane	48.7	38.7	79	18	30	77-122	
1,2-Dichloropropane	48.7	38.1	78	18	30	75-124	
1,3-Dichlorobenzene	48.7	18.9	39	22	30	74-120	F1
1,4-Dichlorobenzene	48.7	18.9	39	22	30	73-120	F1
2-Butanone (MEK)	244	166	68	18	30	70-134	F1
2-Hexanone	244	146	60	22	30	59-130	
4-Methyl-2-pentanone (MIBK)	244	159	65	20	30	65-133	
Acetone	244	178	63	13	30	61-137	
Benzene	48.7	38.3	79	15	30	79-127	
Bromodichloromethane	48.7	38.7	79	18	30	80-122	F1
Bromoform	48.7	29.9	61	23	30	68-126	F1
Bromomethane	48.7	45.1	93	9	30	37-149	
Carbon disulfide	48.7	34.0	70	13	30	64-131	
Carbon tetrachloride	48.7	37.0	76	13	30	75-135	
Chlorobenzene	48.7	30.4	62	21	30	76-124	F1
Dibromochloromethane	48.7	35.0	72	21	30	76-125	F1
Chloroethane	48.7	41.2	85	8	30	69-135	
Chloroform	48.7	39.8	82	14	30	80-120	
Chloromethane	48.7	43.3	89	9	30	63-127	
cis-1,2-Dichloroethene	48.7	37.7	77	17	30	80-120	F1
cis-1,3-Dichloropropene	48.7	34.3	70	21	30	80-120	F1
Cyclohexane	48.7	31.4	65	13	30	65-120	
Dichlorodifluoromethane	48.7	32.7	67	1	30	57-142	
Ethylbenzene	48.7	29.1	60	18	30	80-120	F1
1,2-Dibromoethane	48.7	29.8	61	22	30	78-120	F1
Isopropylbenzene	48.7	28.5	59	18	30	72-120	F1
Methyl acetate	97.4	68.1	70	17	30	55-136	
Methyl tert-butyl ether	48.7	49.5	91	12	30	63-125	
Methylcyclohexane	48.7	26.9	55	14	30	60-140	F1
Methylene Chloride	48.7	36.9	76	14	30	61-127	
Styrene	48.7	25.4	52	21	30	80-120	F1
Tetrachloroethene	48.7	29.1	60	18	30	74-122	F1

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Buffalo Job No.: 480-147994-1
 SDG No.: _____
 Matrix: Solid Level: Low Lab File ID: F8039.D
 Lab ID: 480-147994-20 MSD Client ID: SB - 6 (10' - 15') MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD		QC LIMITS		#
			% REC	% RPD	RPD	REC	
Toluene	48.7	33.6	69	17	30	74-128	F1
trans-1,2-Dichloroethene	48.7	35.9	74	15	30	78-126	F1
trans-1,3-Dichloropropene	48.7	30.6	63	22	30	73-123	F1
Trichloroethene	48.7	33.8	69	18	30	77-129	F1
Trichlorofluoromethane	48.7	38.7	79	9	30	65-146	
Vinyl chloride	48.7	40.6	83	8	30	61-133	

Column to be used to flag recovery and RPD values

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-147994-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 480-455862/2-A
 Matrix: Solid Lab File ID: N7645.D
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5(g) Date Analyzed: 01/21/2019 11:48
 Soil Aliquot Vol: 100 (uL) Dilution Factor: 1
 Soil Extract Vol.: 10(mL) GC Column: ZB-624 (20) ID: 0.18(mm)
 % Moisture: _____ Level: (low/med) Medium
 Analysis Batch No.: 455839 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	84.7	5	500	48
1634-04-4	Methyl tert-butyl ether	ND		100	38
108-87-2	Methylcyclohexane	ND		100	47
75-09-2	Methylene Chloride	ND		100	20
100-42-5	Styrene	ND		100	24
127-18-4	Tetrachloroethane	ND		100	13
106-88-3	Toluene	ND		100	27
156-60-5	trans-1,2-Dichloroethane	ND		100	24
10061-02-6	trans-1,3-Dichloropropene	ND		100	9.8
79-01-6	Trichloroethene	ND		100	28
75-69-4	Trichlorofluoromethane	ND		100	47
75-01-4	Vinyl chloride	ND		100	34
1330-20-7	Xylenes, Total	ND		200	55

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		50-149
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		53-146
460-00-4	4-Bromofluorobenzene (Surr)	103		49-148
1868-53-7	Dibromofluoromethane (Surr)	93		60-140

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDB No.:

Matrix: Solid

Level: Low

GC Column (1): RX1-5S11 MS ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	ZFP II	PHL #	NBZ #	PBP #	TBL #	TPHD #
SB - 2 (-5%)	480-147994-2	87	88	93	101	94	119
SB - 3 (-5%)	480-147994-6	86	90	91	98	93	120
SB - 4 (-10%)	480-147994-12	86	86	85	99	72	118
SB - 5 (-10%)	480-147994-14	84	86	88	97	86	118
SB - 6 (-10%)	480-147994-18	85	88	91	98	90	126
SB - 7 (-10%)	480-455529/1-A	83	86	89	97	92	128 X
SB - 8 (-10%)	480-455529/2-A	81	84	86	95	97	112
SB - 9 (-5%) MS	480-147994-6 MS	76	79	83	93	98	111
SB - 10 (-5%) MSD	480-147994-6 MSD	77	80	84	92	99	111

QC LIMITS

ZFP = 2-Fluorophenol (Surr)
 PHL = Phenol-d5 (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PBP = 2-Fluorobiphenyl
 TBP = 2,4,6-Tribromophenol (Surr)
 TPHD14 = p-Terphenyl-d14 (Surr)

Column to be used to flag recovery values

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG No.:

Concentration Units: mg/Kg

Lab Sample ID: MB 480-455541/i-A

Instrument Code: ICAP1

Batch No.: 455926

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	0.409	J		6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	10.19	J		6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	ND			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	2.97	J		6010C
7439-96-5	Manganese	ND			6010C
7440-02-0	Nickel	0.323	J		6010C
7440-09-7	Potassium	30.08			6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-86-6	Zinc	ND			6010C

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG No.: _____

Concentration Units: µg/Kg

Lab Sample ID: MB 480-455541/1-A

Instrument Code: ICAP2

Batch No.: 455934

CAS No.	Analyte	Concentration	C	Q	Method
7440-23-5	Sodium	50.10	J		6010C

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo

Job No.: 480-147994-1

SDG No.:

Concentration Units: mg/Kg

Lab Sample ID: MB 480-456040/1-A

Instrument Code: LEEMAN4

Batch No.: 456102

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			7471B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDC No.: _____

Matrix: Solid

Level: Low

Lab File ID: FB506.D

Lab ID: ICS 480-458613/1-A

Client ID: _____

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	50.0	50.2	100	77-121	
1,1,2,2-Tetrachloroethane	50.0	45.9	92	80-120	
1,1,2-Trichloroethane	50.0	47.1	94	78-122	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	50.0	100	60-140	
1,1-Dichloroethane	50.0	48.0	96	73-126	
1,1-Dichloroethene	50.0	48.1	96	59-125	
1,2,4-Trichlorobenzene	50.0	47.1	94	64-120	
1,2-Dibromo-3-Chloropropane	50.0	41.5	83	63-124	
1,2-Dichlorobenzene	50.0	46.1	92	75-120	
1,2-Dichloroethane	50.0	48.0	96	77-122	
1,2-Dichloropropane	50.0	46.4	93	75-124	
1,3-Dichlorobenzene	50.0	47.2	94	74-120	
1,4-Dichlorobenzene	50.0	46.9	94	73-120	
2-Butanone (MEK)	250	237	95	70-134	
2-Hexanone	250	230	92	59-130	
4-Methyl-2-pentanone (MTRK)	250	232	93	65-133	
Acetone	250	232	93	61-137	
Benzene	50.0	48.9	98	79-127	
Bromodichloromethane	50.0	48.1	96	80-122	
Bromoform	50.0	48.6	97	68-126	
Bromomethane	50.0	39.8	80	37-149	
Carbon disulfide	50.0	45.1	90	62-131	
Carbon tetrachloride	50.0	52.1	104	75-135	
Chlorobenzene	50.0	48.4	97	76-124	
Dibromochloromethane	50.0	49.1	98	76-125	
Chloroethane	50.0	31.5	63	69-135	*
Chloroform	50.0	49.1	98	80-120	
Chloromethane	50.0	46.9	94	63-127	
cis-1,2-Dichloroethene	50.0	48.7	97	81-120	
cis-1,3-Dichloropropene	50.0	47.4	95	80-120	
Cyclohexane	50.0	44.3	89	65-120	
Dichlorodifluoromethane	50.0	55.6	111	57-122	
Ethylbenzene	50.0	47.6	95	80-120	
1,2-Dibromoethane	50.0	47.9	96	78-120	
Isopropylbenzene	50.0	46.1	92	72-120	
Methyl acetate	100	94.7	95	55-136	
Methyl tert-butyl ether	50.0	49.1	98	63-125	
Methylcyclohexane	50.0	47.5	95	60-140	
Methylene Chloride	50.0	45.4	91	61-127	
Styrene	50.0	45.9	92	80-120	
Tetrachloroethene	50.0	50.1	100	74-122	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDG No.:

Lab Sample ID: CCVIS 480-458609/3

Calibration Date: 02/11/2019 20:47

Instrument ID: HP5973F

Calib Start Date: 01/11/2019 11:17

GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Calib End Date: 01/11/2019 13:52

Lab File ID: F8504.D

Conc. Units: ug/L Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	SD	MAX %D
Dichlorodifluoromethane	Ave	1.188	1.371	0.1000	57.7	50.0	15.4	50.0
Chloromethane	Ave	1.325	1.395	0.1000	52.6	50.0	5.3	20.0
Vinyl chloride	Ave	1.203	1.384	0.1000	57.5	50.0	15.0	20.0
Butadiene	Ave	1.195	1.298		54.3	50.0	8.6	20.0
Bromomethane	Ave	0.7005	0.6118	0.1000	43.7	50.0	-12.7	50.0
Chloroethane	Ave	0.6699	0.4839	0.1000	36.1	50.0	-27.7	50.0
Dichlorofluoromethane	Ave	1.535	1.427		46.5	50.0	-7.0	20.0
Trichlorofluoromethane	Ave	1.623	1.610	0.1000	49.6	50.0	-0.6	20.0
Ethyl ether	Ave	1.345	1.379		51.3	50.0	2.5	20.0
Acrolein	Ave	0.2523	0.2301		237	250	-5.2	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.078	1.218	0.1000	56.5	50.0	12.9	20.0
1,1-Dichloroethene	Ave	1.148	1.237	0.1000	53.9	50.0	7.7	20.0
Acetone	Ave	0.5474	0.5379	0.1000	246	250	-1.7	50.0
Iodomethane	Ave	1.947	2.154		55.3	50.0	10.7	20.0
Carbon disulfide	Ave	3.873	4.026	0.1000	52.0	50.0	4.0	20.0
Methyl acetate	Ave	1.509	1.533	0.1000	102	100	1.6	50.0
Allyl chloride	Ave	2.439	2.381		48.8	50.0	-2.8	20.0
Methylsulfon chloride	Ave	1.526	1.510	0.1000	49.5	50.0	-1.1	20.0
2-Methyl-2-propanol	Ave	0.1981	0.1929		487	500	-2.6	50.0
Methyl tert-butyl ether	Ave	4.237	4.452	0.1000	52.5	50.0	5.1	20.0
Acrylonitrile	Ave	0.6243	0.6330		507	500	1.4	20.0
Trans-1,2-Dichloroethene	Ave	1.350	1.489	0.1000	55.2	50.0	10.3	20.0
Hexane	Ave	2.677	2.648		49.4	50.0	-1.1	20.0
Vinyl acetate	Ave	3.024	3.036		100	100	0.4	20.0
1,1-Dichloroethane	Ave	2.484	2.653	0.2000	53.4	50.0	6.8	20.0
2-Butanone (MEK)	Ave	0.9024	0.9031	0.1000	250	250	0.0	20.0
2,2-Dichloropropane	Ave	1.900	2.063		54.3	50.0	8.6	20.0
cis-1,2-Dichloroethene	Ave	1.548	1.672	0.1000	54.0	50.0	8.7	20.0
Chlorobromomethane	Ave	0.7382	0.8265		56.0	50.0	12.0	20.0
Tetrahydrofuran	Ave	0.5101	0.5811		95.2	100	-4.8	20.0
Chloroform	Ave	2.291	2.436	0.2000	51.5	50.0	9.0	20.0
1,1,1-Trichloroethane	Ave	1.845	2.051	0.1000	55.6	50.0	11.2	20.0
Cyclohexane	Ave	2.502	2.486	0.1000	49.7	50.0	-0.6	20.0
1,1-Dichloropropene	Ave	1.960	2.169		55.3	50.0	10.7	20.0
Carbon tetrachloride	Ave	1.656	1.926	0.1000	58.2	50.0	16.3	20.0
Isobutyl alcohol	Ave	0.0947	0.0979		1290	1250	3.4	50.0
Benzene	Ave	5.721	6.184	0.5000	54.0	50.0	8.1	20.0
1,2-Dichloroethane	Ave	1.879	1.963	0.1000	52.2	50.0	4.5	20.0
n-Heptane	Ave	2.672	2.676		50.1	50.0	0.1	20.0
Trichloroethene	Ave	1.424	1.548	0.2000	54.4	50.0	6.8	20.0

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Buffalo Job No.: 480-148884-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 480-458779/1-A
 Matrix: Solid Lab File ID: 25_17-010.D
 Analysis Method: 8081B Date Collected: _____
 Extraction Method: 3550C Date Extracted: 02/12/2019 14:56
 Sample wt/vol: 30.22(g) Date Analyzed: 02/13/2019 12:31
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: RTX-CLPII ID: 0.53(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 458894 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-54-8	4,4'-DDD	0.490	J	1.7	0.32
72-55-9	4,4'-DDE	ND		1.7	0.35
50-29-3	4,4'-DDT	ND		1.7	0.39
309-09-2	Aldrin	ND		1.7	0.41
319-84-6	alpha-BHC	ND		1.7	0.30
5103-71-9	cis-Chlordane	ND		1.7	0.82
319-85-7	beta-BHC	ND		1.7	0.30
319-86-8	delta-BHC	ND		1.7	0.31
60-57-1	Dieldrin	ND		1.7	0.40
959-98-8	Endosulfan I	ND		1.7	0.32
33213-65-9	Endosulfan II	ND		1.7	0.30
1031-07-8	Endosulfan sulfate	ND		1.7	0.31
72-20-8	Endrin	ND		1.7	0.33
7421-93-4	Endrin aldehyde	ND		1.7	0.42
53494-70-5	Endrin ketone	ND		1.7	0.41
58-89-9	gamma-BHC (Lindane)	ND		1.7	0.30
5103-74-2	trans-Chlordane	ND		1.7	0.53
76-44-5	Heptachlor	ND		1.7	0.36
1024-57-3	Heptachlor epoxide	ND		1.7	0.43
72-43-5	Methoxychlor	ND		1.7	0.34
8001-35-2	Toxaphene	ND		1.7	0.36

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	76		45-120
877-09-8	Tetrachloro-m-xylene	38		30-124

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDG No.:

Concentration Units: mg/Kg

Lab Sample ID: MB 480-458775/1-A

Instrument Code: ICAP2

Batch No.: 459070

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	ND			6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	8.93	J		6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	ND			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	0.947	J		6010C
7439-96-5	Manganese	0.184	J		6010C
7440-02-0	Nickel	ND			6010C
7440-09-7	Potassium	ND			6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	ND			6010C

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Buffalo

Job No.: 480-148884-1

SDG No.:

Concentration Units: mg/Kg

Lab Sample ID: MB 480-458775/1-A

Instrument Code: ICAP1

Batch No.: 459277

CAS No.	Analyte	Concentration	C	Q	Method
7440-23-5	Sodium	57.02	J		6010C

Appendix C

Validator Qualifications

KENNETH R. APPLIN
Geochemist/Data Validator

Ph.D., Geochemistry and Mineralogy, The Pennsylvania State University

M.S., Geochemistry and Mineralogy, The Pennsylvania State University

B.A., Geological Sciences, SUNY at Geneseo, NY

Dr. Applin has over 35 years of experience working with the geochemistry of natural waters. His prior experience includes working as an Assistant Professor of Geology at the University of Missouri-Columbia and as Chief Hydrogeologist and Geochemist with a leading engineering firm in Rochester, NY. In 1993, he established KR Applin and Associates, a small consulting business that focuses on the geochemistry of natural waters, especially as applied to problems involving the contamination of groundwater and surface water.

Dr. Applin is also an experienced analytical data validator and has provided data validation services since 1994 to a variety of clients performing brownfield cleanup projects, hazardous waste remediation, groundwater monitoring at solid waste facilities, and other projects requiring third-party data validation. Dr. Applin has several years of hands-on experience with the laboratory analysis of natural waters and has successfully completed the USEPA Region II certification courses for performing inorganic and organic analytical data validation.

MICHAEL K. PERRY
Chemist/Data Validator

B.S. Chemistry, Georgia State University, Atlanta, GA

A.A.S., Chemical Technology, Alfred State College, Alfred, NY

Mr. Perry has over 30 years of experience in the analytical laboratory business. During his early career, he spent several years as a laboratory analyst performing the analysis of soil, water, and air samples for inorganic and organic chemical parameters. During his last 20 years in the environmental laboratory business, he managed and directed two major analytical laboratories in Rochester, NY. His management responsibilities included oversight of the daily operations of the lab, staff training and supervision, the selection, purchase, and maintenance of analytical instruments, the introduction of new laboratory methods, analytical quality assurance and quality control, data acquisition and management, and other business-related activities.

Mr. Perry has an extensive working knowledge of the methods and procedures used for sampling and analyzing both inorganic and organic analytes in soil, water, and air. He is an accomplished laboratory chemist and is familiar with the analytical methods and procedures established under the USEPA Contract Laboratory Protocols (CLP), the NYSDEC Analytical Services Protocols (ASP), and the NYSDOH Environmental Laboratory Approval Program (ELAP).