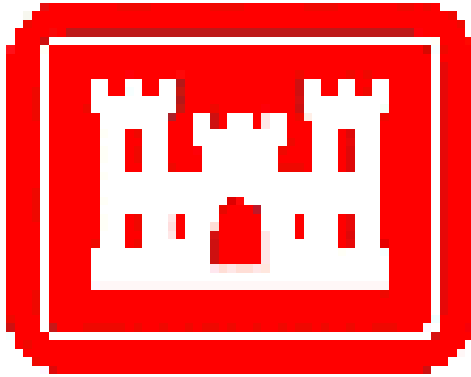


***GROUNDWATER SAMPLING REPORT  
FOR  
MW-9 AT AREA OF CONCERN 3  
FORMER SCHENECTADY ARMY DEPOT - VOORHEESVILLE AREA  
GUILDERLAND, NEW YORK***

Prepared For:



**U.S. ARMY CORPS OF ENGINEERS  
Contract No. W912DY-08-D-0003**

**Task Order No. 0007**

Prepared By:

**PARSONS**

**November 2011**

## ***Table of Contents***

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1.0	INTRODUCTION .....	1
2.0	SITE HISTORY AND BACKGROUND .....	2
3.0	SAMPLING AND ANALYTICAL METHODOLOGY .....	4
4.0	RESULTS .....	5
5.0	CONCLUSIONS.....	7

## ***Tables***

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Table 1 Summary of Detected Compounds in MW-9

## ***Figures***

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Figure 1 Site Plan

## ***Appendices***

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Appendix A Data Quality Review Report

Appendix B Laboratory Analytical Data Report

## ***1.0 INTRODUCTION***

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This Groundwater Sampling Report has been prepared by Parsons for the U.S. Army Corps of Engineers (USACE) – New York District in compliance with the Contract No. W912DY-08-D-0003, Task Order No. 0007 with the USACE – Huntsville Center.

This is the fifth year of a five-year groundwater monitoring program that was started by Shaw Environmental, Inc. (Shaw) at the completion of the interim removal action for the former burn pit area known as Area of Concern (AOC) 3 at the Former Schenectady Army Depot – Voorheesville Area (SADVA). The purpose of this sampling effort is to monitor groundwater quality at MW-9, where the concentration of trichloroethene has been slightly above the New York State Class GA groundwater quality standard.

This report presents the results of groundwater sampling at MW-9 conducted in June 2011.

## 2.0 *SITE HISTORY AND BACKGROUND*

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AOC 3 is the designation given to a former burn pit area that was used for burning of wastes during Department of Defense operation of the SADVA. Department of Defense operation of SADVA began in 1941 and continued for a period of 28 years. The burn pit area was used to burn a multitude of depot waste materials in several small depressions. AOC 3 was less than 10 acres in size, and was located in the north end of the SADVA. SADVA was closed in 1969 and the property was subsequently sold. Since that time, the property has been used as an industrial park, and is now known as the Northeastern Industrial Park. In addition, the nearby Guilderland School District facilities previously utilized the groundwater in the vicinity of AOC 3 for irrigation and lawn sprinkling purposes.

From the Fall of 2002 to the Spring of 2003, an interim removal action was completed within AOC 3. This removal action, performed by Shaw under USACE direction, consisted of the excavation and disposal of waste materials and impacted soils followed by restoration to grade. The removal action resulted in the excavation and off-site disposal of approximately 4,000 cubic yards of waste and impacted soils. As part of the investigations leading up to and during the interim removal action, several wells were installed within and around the AOC 3 area. These wells were utilized following completion of the excavation activities to monitor groundwater quality and site impacts.

In 2006, USACE agreed to conduct a single-well groundwater monitoring program to develop a data set for groundwater quality located downgradient of AOC 3, within the Guilderland High School grounds. This well, MW-9 (Figure 1) was found to be impacted by volatile organic compounds during the previously completed AOC 3 groundwater monitoring program and is being monitored for five annual events to determine any applicable course of action. The results for all the MW-9 sampling events are summarized in the text and table below:

<b>Detected Compound</b> (ND = not detected)	<b>Class GA Standard (ug/l)</b>	<b>2007 Results (ug/l)</b>	<b>2008 Results (ug/l)</b>	<b>2009 Results (ug/l)</b>	<b>2010 Results (ug/l)</b>	<b>2011 Results (ug/l)</b>
Trichloroethene	5	5.4	5.5	5.4	6.9	7.5
cis-1,2-Dichloroethene	5	ND	1.1	1.0	1.2	1.3
Tetrachloroethene	5	ND	ND	ND	ND	0.38

The first of the five scheduled events was completed in June 2007, and the concentration of trichloroethene was 5.4 micrograms per liter (ug/l), slightly above the New York State Class GA groundwater standard of 5 ug/l. No other volatile organic compounds were detected in 2007.

Results for the June 2008 event can be summarized as follows:

- Trichloroethylene was detected at 5.5 ug/l, slightly above the New York State Class GA standard of 5 ug/l, and slightly above the 2007 concentration of 5.4 ug/l.
- cis-1,2-Dichloroethene was the only other volatile organic compound detected, at a concentration of 1.1 ug/l, well below the New York State Class GA standard of 5 ug/l. cis-1,2-Dichloroethene is a breakdown product of trichloroethene.

Results for the June 2009 event can be summarized as follows:

- Trichloroethylene was detected at 5.4 ug/l, slightly above the New York State Class GA standard of 5 ug/l, and slightly below the 2008 concentration of 5.5 ug/l and the same as the 2007 concentration of 5.4 ug/l.
- cis-1,2-Dichloroethene was the only other volatile organic compound detected, at a concentration of 1.0 ug/l, well below the New York State Class GA standard of 5 ug/l. cis-1,2-Dichloroethene is a breakdown product of trichloroethene. The 2008 concentration of cis-1,2-dichloroethene was 1.1 ug/l. It was not detected in 2007.

Results for the April 2010 event can be summarized as follows:

- Trichloroethylene was detected at 6.9 ug/l, slightly above the New York State Class GA standard of 5 ug/l, and slightly above the 2009 concentration of 5.4 ug/l, the 2008 concentration of 5.5 ug/l, and the same as the 2007 concentration of 5.4 ug/l.
- cis-1,2-Dichloroethene was the only other volatile organic compound detected, at a concentration of 1.2 ug/l, well below the New York State Class GA standard of 5 ug/l. cis-1,2-Dichloroethene is a breakdown product of trichloroethene. The 2009 concentration of cis-1,2-dichloroethene was 1.0 ug/l. The 2008 concentration of cis-1,2-dichloroethene was 1.1 ug/l. It was not detected in 2007.

### **3.0 SAMPLING AND ANALYTICAL METHODOLOGY**

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Monitoring well MW-9 was sampled on June 21, 2011 in accordance with the procedures previously used for the AOC 3 groundwater monitoring program. These procedures included the following:

- Prior to sample collection, the well was gauged for depth to water, depth to non-aqueous phase liquids, and depth to bottom of well.
- The well was purged and sampled using low-flow techniques to ensure that the samples were collected from representative groundwater with minimal disturbance. During purging activities, a continuous flow-through water quality meter was used to measure the temperature, conductivity, and turbidity of the water. Purging continued until there was no more than a ten percent variation in the field measured water quality parameters between each measuring point. More than three well volumes (about 8 gallons) were purged from MW-9.
- The sample was packaged, shipped overnight and delivered under Chain of Custody for analysis at a DoD Environmental Laboratory Accreditation Program (ELAP) subcontract laboratory (Alpha Analytical in Westborough, Massachusetts) for volatile organic compounds, pH, color, coliforms, odor, turbidity, and total dissolved solids.

A data usability report is provided in Appendix A, and the Alpha Analytical data report is provided in Appendix B.

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## **4.0 RESULTS**

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### **4.1 Groundwater Quality**

Results for the June 2011 sampling are summarized on Table 1. The laboratory report is attached as Appendix B. Results for pH, total dissolved solids, color, turbidity and odor were within the applicable New York State Class GA quality criteria, as follows:

- pH was 6.9; Class GA criterion is 6.5 to 8.5.
- Color was not detected (< 5 units); the Class GA standard is 15 units.
- Total dissolved solids were 340,000 micrograms per liter (ug/l); Class GA criterion is 500,000 ug/l.
- Odor was not present; Class GA criterion is 3 units.
- Turbidity was 0.27 nephelometric units; the Class GA criterion is 5 units.
- Total coliforms were at 29 in the sample; the Class GA standard is 50.

### **4.2 Chemical Constituent Concentrations**

The MW-9 sample was analyzed for volatile organic compounds. Table 1 presents a summary of the analytical results for MW-9. Results for the June 2011 event can be summarized as follows:

- Trichloroethylene was detected at 7.5 ug/l, slightly above the New York State Class GA standard of 5 ug/l, and slightly above the 2010 concentration of 6.9, 2009 concentration of 5.4 ug/l, the 2008 concentration of 5.5 ug/l, and the 2007 concentration of 5.4 ug/l.
- cis-1,2-Dichloroethene was detected at a concentration of 1.3 ug/l, well below the New York State Class GA standard of 5 ug/l. cis-1,2-Dichloroethene is a breakdown product of trichloroethene. The 2010 concentration was 1.2 ug/l, the 2009 concentration was 1.0 ug/l, and the 2008 concentration of cis-1,2-dichloroethene was 1.1 ug/l. It was not detected in 2007.
- Tetrachloroethene was detected at 0.38 ug/l, far below the Class GA standard of 5 ug/l. Tetrachloroethene is a solvent, commonly used in dry cleaning operations. This is the first time tetrachloroethene has been detected in MW-9.

### **4.3     *Quality Control Results***

Field Quality Control consisted of the submittal of a Trip Blank, which had only methylene chloride, a common laboratory contaminant, detected. The laboratory report, attached as Appendix B, was reviewed for data usability and the sample results meet all applicable criteria with regards to data quality necessary for project usability. The data usability report can be found in Appendix A.



## **5.0 CONCLUSIONS and RECOMMENDATIONS**

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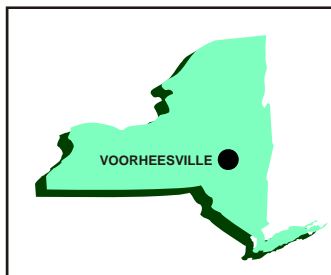
- The concentration of trichloroethene increased slightly from 2010, and remains slightly above the New York State Class GA standard.
- A breakdown product of trichloroethene, cis-1,2-dichloroethene, and tetrachloroethene were present at a concentrations below the New York State Class GA standard.
- A feasibility study will be conducted to evaluate alternatives to address the concentrations of TCE related to AOC 3.

Table 1  
Summary of Compounds Detected in MW-9

SAMPLE ID:	NYS		MW-9	TRIP BLANK	
SAMPLING DATE:	Class GA		6/21/2011	6/21/2011	
LAB SAMPLE ID:	L1109044-06			L1109044-07	
	Standard	Units		Qual	Qual
General Chemistry					
Turbidity	5	NTU	0.27		
Odor	1	TON		NO	
Color, Apparent	15	A.P.C.U.	5	U	
Solids, Total Dissolved	500,000	ug/l	340,000		
pH	6.5-8.5	SU	6.9		
Microbiological Analysis					
Coliform, Total (MF)	50	col/100ml	29		
Volatile Organics					
1,1,1,2-Tetrachloroethane	5	ug/l	0.5	U	0.5 U
1,1,1-Trichloroethane	5	ug/l	0.5	U	0.5 U
1,1,2,2-Tetrachloroethane	5	ug/l	0.5	U	0.5 U
1,1,2-Trichloroethane	1	ug/l	0.5	U	0.5 U
1,1-Dichloroethane	5	ug/l	0.5	U	0.5 U
1,1-Dichloroethene	5	ug/l	0.5	U	0.5 U
1,1-Dichloropropene	NS	ug/l	0.5	U	0.5 U
1,2,3-Trichlorobenzene	5	ug/l	0.5	U	0.5 U
1,2,3-Trichloropropane	0.04	ug/l	0.5	U	0.5 U
1,2,4-Trichlorobenzene	5	ug/l	0.5	U	0.5 U
1,2,4-Trimethylbenzene	5	ug/l	0.5	U	0.5 U
1,2-Dibromo-3-chloropropane	0.04	ug/l	2	U	2 U
1,2-Dibromoethane	NS	ug/l	0.5	U	0.5 U
1,2-Dichlorobenzene	3	ug/l	0.5	U	0.5 U
1,2-Dichloroethane	0.6	ug/l	0.5	U	0.5 U
1,2-Dichloropropane	1	ug/l	0.5	U	0.5 U
1,3,5-Trimethylbenzene	5	ug/l	0.5	U	0.5 U
1,3-Dichlorobenzene	3	ug/l	0.5	U	0.5 U
1,3-Dichloropropane	5	ug/l	0.5	U	0.5 U
1,4-Dichlorobenzene	3	ug/l	0.5	U	0.5 U
2,2-Dichloropropane	5	ug/l	0.5	U	0.5 U
Benzene	1	ug/l	0.5	U	0.5 U
Bromobenzene	5	ug/l	0.5	U	0.5 U
Bromochloromethane	5	ug/l	0.5	U	0.5 U
Bromodichloromethane	NS	ug/l	0.5	U	0.5 U
Bromoform	NS	ug/l	0.5	U	0.5 U
Bromomethane	5	ug/l	0.5	U	0.5 U
Carbon tetrachloride	5	ug/l	0.5	U	0.5 U
Chlorobenzene	5	ug/l	0.5	U	0.5 U
Chloroethane	5	ug/l	0.5	U	0.5 U
Chloroform	7	ug/l	0.5	U	0.5 U
Chloromethane	NS	ug/l	0.5	U	0.5 U
cis-1,2-Dichloroethene	5	ug/l	1.3		0.5 U
cis-1,3-Dichloropropene	0.4	ug/l	0.5	U	0.5 U
Dibromochloromethane	NS	ug/l	0.5	U	0.5 U

Table 1  
Summary of Compounds Detected in MW-9

SAMPLE ID: SAMPLING DATE: LAB SAMPLE ID:		MW-9 6/21/2011 L1109044-06			TRIP BLANK 6/21/2011 L1109044-07	
		NYS Class GA Standard	Units	Qual	Qual	
Dibromomethane	5	ug/l	0.5	U	0.5	U
Dichlorodifluoromethane	5	ug/l	0.5	U	0.5	U
Ethylbenzene	5	ug/l	0.5	U	0.5	U
Hexachlorobutadiene	0.5	ug/l	0.5	U	0.5	U
Isopropylbenzene	5	ug/l	0.5	U	0.5	U
Methyl tert butyl ether	NS	ug/l	0.5	U	0.5	U
Methylene chloride	5	ug/l	0.5	U	0.32	J
n-Butylbenzene	5	ug/l	0.5	U	0.5	U
n-Propylbenzene	5	ug/l	0.5	U	0.5	U
Naphthalene	NA	ug/l	0.5	U	0.5	U
o-Chlorotoluene	5	ug/l	0.5	U	0.5	U
o-Xylene	5	ug/l	0.5	U	0.5	U
p-Chlorotoluene	5	ug/l	0.5	U	0.5	U
p-Isopropyltoluene	5	ug/l	0.5	U	0.5	U
p/m-Xylene	5	ug/l	1	U	1	U
sec-Butylbenzene	5	ug/l	0.5	U	0.5	U
Styrene	5	ug/l	0.5	U	0.5	U
tert-Butylbenzene	5	ug/l	0.5	U	0.5	U
Tetrachloroethene	5	ug/l	0.38	J	0.5	U
Toluene	5	ug/l	0.5	U	0.5	U
trans-1,2-Dichloroethene	5	ug/l	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	ug/l	0.5	U	0.5	U
Trichloroethene	5	ug/l	7.5		0.5	U
Trichlorofluoromethane	5	ug/l	0.5	U	0.5	U
Vinyl chloride	2	ug/l	0.5	U	0.5	U
Qual: data qualifier						
U - not detected at the reporting limit provided						
J - estimated value (concentration is below the reporting limit but above the method detection level)						
7.5	concentration is above the Class GA standard					
	compound present at concentration below Class GA standard					
NTU - nephelometric turbidity units						
TON - threshold odor number						
A.P.C.U. Apparent color units						
ug/l - micrograms per liter						
NS - no Class GA standard						



New York  
Quadrangle

LATITUDE: N42° 15' 20"  
LONGITUDE: W75° 14' 38"

2000 1000 0

Approximate Scale in Feet



## FIGURE 1

SADVA  
GUILDERLAND, NEW YORK

## Site Plan

**PARSONS**

290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560

# ***APPENDIX A***

## ***Data Usability Report***

**DATA QUALITY REVIEW REPORT**  
**Former Schenectady Army Depot AOC-3**  
**Guilderland, New York**

**DATA QUALITY REVIEW AND ASSESSMENT**

**Data Quality Review Process**

A Parsons Corporation project-specific data quality review was performed on 100% of the sample results and associated QA/QC data reported in the analytical report for Alpha Analytical Project ID L110904, Parsons Project ID SADVA-Schenectady Depot. The data review results in this report are for one water sample and one trip blank collected at the AOC-3 site by Parsons' personnel. The samples were analyzed for the parameters listed in the Sample Summary Table. The data review pertained to the method EPA 524.2 volatile organic compounds (VOCs), method SM21-2540C total dissolved solids (TDS), method SM18-2120B color, method SM18-2150 odor, method SM21-4500H+-B pH, method EPA 180.1 turbidity, and method SM18-922B total coliform. The laboratory met all turnaround commitments and the final report was dated June 30, 2011.

Sample Summary Table				
Parsons Sample ID	Laboratory Sample ID	Sample Collection Date	Sample Matrix	Analyses Performed (as listed on Chain of Custody record)
MW-9	L110904-06	06/21/11	Water	VOCs (EPA 524.2), TDS (SM18-2540C), Color (SM18 2120-B), Odor (SM18 2150), pH (SM21 4500H+-B), Total Coliform, (SM18 9222B), Turbidity (EPA 180.1)
Trip Blank TB-1	1006452-004	04/27/2010	Water	VOCs (EPA 524.2)

All of the samples were properly preserved and analyzed within the holding time. The sample coolers were received with temperature of 2.2°C, which is within the acceptance range of 2-6 degrees Celsius. Chain-of-custody documentation was accurate and complete.

The data quality review consisted of manually examining the analytical data report to compare the laboratory QC sample results with the established laboratory QC limits, and with established USEPA sample preservation and analytical holding time requirements, in order to evaluate impacts, if any, on data quality and usability of the reported sample results. The data quality review addressed analytical data associated with the following, as applicable to the analytical method: sample preservation and shipping cooler temperatures, analytical holding times, method blanks, trip blanks, surrogate spike recoveries, laboratory duplicate results, laboratory control sample results, and matrix spike/matix spike duplicate results.

The following sections describe the overall QA/QC indicators.

### **Volatile Organics in Water by EPA Method 524.2**

All samples were analyzed on 06/27/2011, which is within the holding time. Evaluation results for specific QC samples results are as follows:

- Laboratory method blank: The method blank contained no reported analytes at concentrations above the reporting limit.
- Laboratory control sample (spike) (LCS): The LCS recoveries for all analytes were within project criteria.
- Surrogate compounds: All surrogate recoveries were within acceptance limits for samples and QC samples.
- Matrix spike/matrix spike duplicate (MS/MSD): Sample MW-9 was used for MS/MSD analyses; results met QC acceptance criteria.
- Field QC: Methylene chloride was reported as detected (0.32 µg/L) in the trip blank, but was not detected in any of the associated samples.

### **TDS in Water by Method SM21-2540C**

All samples were analyzed on 06/24/2011, which is within the holding time.

Evaluation results for specific QC samples results are as follows:

- Laboratory method blank: The method blank contained no TDS at a concentration above the reporting limit.
- Laboratory control sample (spike) (LCS): The LCS recoveries for all analytes were within project criteria.
- Laboratory duplicate sample: Sample MW-9 was used for laboratory duplicate analysis; results met QC acceptance criteria.

### **pH in Water by Method SM18-4500H+-B**

All samples were analyzed on 06/22/2011, which is within the holding time.

Evaluation results for specific QC samples results are as follows:

- Laboratory control sample (spike) (LCS): The LCS recoveries for all analytes were within project criteria.
- Laboratory duplicate sample: Sample Well#1 was used for laboratory duplicate analysis; results met QC acceptance criteria.

### **Coliform in Water by Method SM18-9222B**

All samples were analyzed on 06/22/2011, which is within the holding time.

Evaluation results for specific QC samples results are as follows:



- Laboratory method blank: The method blank contained no TDS at a concentration above the reporting limit.

### **Turbidity in Water by Method EPA 180.1**

All samples were analyzed on 06/24/2011, which is within the holding time.

Evaluation results for specific QC samples results are as follows:

- Laboratory method blank: The method blank contained no TDS at a concentration above the reporting limit.
- Laboratory control sample (spike) (LCS): The LCS recoveries for all analytes were within project criteria.
- Laboratory duplicate sample: results met QC acceptance criteria.

### **Odor in Water by Method SM18-2520**

All samples were analyzed on 06/22/2011, which is within the holding time.

Evaluation results for specific QC samples results are as follows:

- Laboratory method blank: The method blank contained no TDS at a concentration above the reporting limit.
- Laboratory duplicate sample: results met QC acceptance criteria.

### **Color in Water by Method SM18-2520C**

All samples were analyzed on 06/23/2011, which is within the holding time.

Evaluation results for specific QC samples results are as follows:

- Laboratory duplicate sample: results met QC acceptance criteria.

### **Data Quality Summary**

Based on evaluation of the results of the data quality review, the overall quality control data for methods EPA 524.2 VOCs, SM18-2540C TDS, SM18-2120B Color, SM18-2150B Odor, EPA 180.1 Turbidity, SM18-4500H+-B pH, and Coliform SM18-9222B provided in the laboratory report are representative of adequate method accuracy, precision, representativeness, and comparability with regard to project objectives. The reported data should be utilized, without reservation, in the intended project decision-making process.



## ***APPENDIX B***

### ***Laboratory Analytical Report***



## ANALYTICAL REPORT

Lab Number:	L1109044
Client:	Parsons 301 Plainfield Road Suite 350 Syracuse, NY 13212
ATTN:	George Moreau
Phone:	(315) 552-9715
Project Name:	SADVA
Project Number:	Not Specified
Report Date:	06/30/11

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

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### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.2, where applicable.

Note: When manual integrations are performed, they are assigned one of the following codes, and can be found on the raw data provided within the data deliverable package.

#### Manual Integration Codes

M1 Split or tailing peak, auto integration stopped early resulting in false low area count.

M2 Peak not found by automatic integration algorithm.

M3 Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

### Case Narrative (continued)

misidentification from 2 partially resolved peaks not being split.

M4 Poor automated baseline construction.

M5 Manual integration over a retention time range required, i.e. for hydrocarbon range methods.

M6 Misassignment of peak valley by automated integration (poor split of 2 peaks).

M7 A qualifier ion was manually integrated (only for GC/MS data).

M8 Integration of individual analyte eluting on top of an unresolved complex.


M9 Other: Explain on chromatogram.

Coliform, Fecal (MF)

L1109044-04 through -06: All presumptive and atypical colonies were confirmed in MPN phase for the presence of Total Coliform.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Lisa Westerlind

Title: Technical Director/Representative

Date: 06/30/11

# ORGANICS

# **VOLATILES**

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**SAMPLE RESULTS**

Lab ID: L1109044-06  
 Client ID: MW-9  
 Sample Location: ALBANY, NY  
 Matrix: Dw  
 Analytical Method: 16,524.2  
 Analytical Date: 06/27/11 10:21  
 Analyst: TT

Date Collected: 06/21/11 14:30  
 Date Received: 06/22/11  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	0.50	0.12	1
1,1-Dichloroethane	ND		ug/l	0.50	0.11	1
Chloroform	ND		ug/l	0.50	0.13	1
Carbon tetrachloride	ND		ug/l	0.50	0.05	1
1,2-Dichloropropane	ND		ug/l	0.50	0.12	1
Dibromochloromethane	ND		ug/l	0.50	0.11	1
1,1,2-Trichloroethane	ND		ug/l	0.50	0.11	1
Tetrachloroethene	0.38	J	ug/l	0.50	0.12	1
Chlorobenzene	ND		ug/l	0.50	0.12	1
Trichlorofluoromethane	ND		ug/l	0.50	0.10	1
1,2-Dichloroethane	ND		ug/l	0.50	0.12	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.09	1
Bromodichloromethane	ND		ug/l	0.50	0.13	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.11	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.12	1
Bromoform	ND		ug/l	0.50	0.12	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.07	1
Toluene	ND		ug/l	0.50	0.06	1
Ethylbenzene	ND		ug/l	0.50	0.08	1
p/m-Xylene	ND		ug/l	1.0	0.19	1
Chloromethane	ND		ug/l	0.50	0.13	1
Bromomethane	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	0.50	0.08	1
Chloroethane	ND		ug/l	0.50	0.12	1
1,1-Dichloroethene	ND		ug/l	0.50	0.09	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.12	1
cis-1,2-Dichloroethene	1.3		ug/l	0.50	0.13	1
Trichloroethene	7.5		ug/l	0.50	0.09	1
1,2-Dichlorobenzene	ND		ug/l	0.50	0.11	1
1,3-Dichlorobenzene	ND		ug/l	0.50	0.11	1

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**SAMPLE RESULTS**

**Lab ID:** L1109044-06  
**Client ID:** MW-9  
**Sample Location:** ALBANY,NY

**Date Collected:** 06/21/11 14:30  
**Date Received:** 06/22/11  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	0.50	0.11	1
Styrene	ND		ug/l	0.50	0.07	1
o-Xylene	ND		ug/l	0.50	0.08	1
1,1-Dichloropropene	ND		ug/l	0.50	0.07	1
2,2-Dichloropropane	ND		ug/l	0.50	0.09	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11	1
Bromochloromethane	ND		ug/l	0.50	0.16	1
n-Butylbenzene	ND		ug/l	0.50	0.09	1
Dichlorodifluoromethane	ND		ug/l	0.50	0.09	1
Hexachlorobutadiene	ND		ug/l	0.50	0.13	1
Isopropylbenzene	ND		ug/l	0.50	0.12	1
p-Isopropyltoluene	ND		ug/l	0.50	0.11	1
Naphthalene	ND		ug/l	0.50	0.05	1
n-Propylbenzene	ND		ug/l	0.50	0.11	1
sec-Butylbenzene	ND		ug/l	0.50	0.12	1
tert-Butylbenzene	ND		ug/l	0.50	0.10	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.14	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.09	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.10	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.11	1
Bromobenzene	ND		ug/l	0.50	0.13	1
o-Chlorotoluene	ND		ug/l	0.50	0.18	1
p-Chlorotoluene	ND		ug/l	0.50	0.10	1
Dibromomethane	ND		ug/l	0.50	0.11	1
1,2-Dibromoethane	ND		ug/l	0.50	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.18	1
1,3-Dichloropropane	ND		ug/l	0.50	0.13	1
Methyl tert butyl ether	ND		ug/l	0.50	0.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	105		70-130
4-Bromofluorobenzene	91		70-130



**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**SAMPLE RESULTS**

Lab ID: L1109044-07  
 Client ID: TRIP BLANK  
 Sample Location: ALBANY,NY  
 Matrix: Dw  
 Analytical Method: 16,524.2  
 Analytical Date: 06/27/11 14:05  
 Analyst: TT

Date Collected: 06/21/11 00:00  
 Date Received: 06/22/11  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	0.32	J	ug/l	0.50	0.12	1
1,1-Dichloroethane	ND		ug/l	0.50	0.11	1
Chloroform	ND		ug/l	0.50	0.13	1
Carbon tetrachloride	ND		ug/l	0.50	0.05	1
1,2-Dichloropropane	ND		ug/l	0.50	0.12	1
Dibromochloromethane	ND		ug/l	0.50	0.11	1
1,1,2-Trichloroethane	ND		ug/l	0.50	0.11	1
Tetrachloroethene	ND		ug/l	0.50	0.12	1
Chlorobenzene	ND		ug/l	0.50	0.12	1
Trichlorofluoromethane	ND		ug/l	0.50	0.10	1
1,2-Dichloroethane	ND		ug/l	0.50	0.12	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.09	1
Bromodichloromethane	ND		ug/l	0.50	0.13	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.11	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.12	1
Bromoform	ND		ug/l	0.50	0.12	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.07	1
Toluene	ND		ug/l	0.50	0.06	1
Ethylbenzene	ND		ug/l	0.50	0.08	1
p/m-Xylene	ND		ug/l	1.0	0.19	1
Chloromethane	ND		ug/l	0.50	0.13	1
Bromomethane	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	0.50	0.08	1
Chloroethane	ND		ug/l	0.50	0.12	1
1,1-Dichloroethene	ND		ug/l	0.50	0.09	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.12	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.09	1
1,2-Dichlorobenzene	ND		ug/l	0.50	0.11	1
1,3-Dichlorobenzene	ND		ug/l	0.50	0.11	1

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**SAMPLE RESULTS**

**Lab ID:** L1109044-07  
**Client ID:** TRIP BLANK  
**Sample Location:** ALBANY,NY

**Date Collected:** 06/21/11 00:00  
**Date Received:** 06/22/11  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	0.50	0.11	1
Styrene	ND		ug/l	0.50	0.07	1
o-Xylene	ND		ug/l	0.50	0.08	1
1,1-Dichloropropene	ND		ug/l	0.50	0.07	1
2,2-Dichloropropane	ND		ug/l	0.50	0.09	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11	1
Bromochloromethane	ND		ug/l	0.50	0.16	1
n-Butylbenzene	ND		ug/l	0.50	0.09	1
Dichlorodifluoromethane	ND		ug/l	0.50	0.09	1
Hexachlorobutadiene	ND		ug/l	0.50	0.13	1
Isopropylbenzene	ND		ug/l	0.50	0.12	1
p-Isopropyltoluene	ND		ug/l	0.50	0.11	1
Naphthalene	ND		ug/l	0.50	0.05	1
n-Propylbenzene	ND		ug/l	0.50	0.11	1
sec-Butylbenzene	ND		ug/l	0.50	0.12	1
tert-Butylbenzene	ND		ug/l	0.50	0.10	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.14	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.09	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.10	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.11	1
Bromobenzene	ND		ug/l	0.50	0.13	1
o-Chlorotoluene	ND		ug/l	0.50	0.18	1
p-Chlorotoluene	ND		ug/l	0.50	0.10	1
Dibromomethane	ND		ug/l	0.50	0.11	1
1,2-Dibromoethane	ND		ug/l	0.50	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.18	1
1,3-Dichloropropane	ND		ug/l	0.50	0.13	1
Methyl tert butyl ether	ND		ug/l	0.50	0.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	105		70-130
4-Bromofluorobenzene	89		70-130

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 16,524.2  
**Analytical Date:** 06/27/11 07:52  
**Analyst:** TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG475672-2					
Methylene chloride	ND		ug/l	0.50	0.12
1,1-Dichloroethane	ND		ug/l	0.50	0.11
Chloroform	ND		ug/l	0.50	0.13
Carbon tetrachloride	ND		ug/l	0.50	0.05
1,2-Dichloropropane	ND		ug/l	0.50	0.12
Dibromochloromethane	ND		ug/l	0.50	0.11
1,1,2-Trichloroethane	ND		ug/l	0.50	0.11
Tetrachloroethene	ND		ug/l	0.50	0.12
Chlorobenzene	ND		ug/l	0.50	0.12
Trichlorofluoromethane	ND		ug/l	0.50	0.10
1,2-Dichloroethane	ND		ug/l	0.50	0.12
1,1,1-Trichloroethane	ND		ug/l	0.50	0.09
Bromodichloromethane	ND		ug/l	0.50	0.13
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.11
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.12
Bromoform	ND		ug/l	0.50	0.12
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.07
Toluene	ND		ug/l	0.50	0.06
Ethylbenzene	ND		ug/l	0.50	0.08
p/m-Xylene	ND		ug/l	1.0	0.19
Chloromethane	ND		ug/l	0.50	0.13
Bromomethane	ND		ug/l	0.50	0.18
Vinyl chloride	ND		ug/l	0.50	0.08
Chloroethane	ND		ug/l	0.50	0.12
1,1-Dichloroethene	ND		ug/l	0.50	0.09
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.12
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.09
1,2-Dichlorobenzene	ND		ug/l	0.50	0.11
1,3-Dichlorobenzene	ND		ug/l	0.50	0.11

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 16,524.2  
**Analytical Date:** 06/27/11 07:52  
**Analyst:** TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG475672-2					
1,4-Dichlorobenzene	ND		ug/l	0.50	0.11
Styrene	ND		ug/l	0.50	0.07
o-Xylene	ND		ug/l	0.50	0.08
1,1-Dichloropropene	ND		ug/l	0.50	0.07
2,2-Dichloropropane	ND		ug/l	0.50	0.09
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.14
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11
Bromochloromethane	ND		ug/l	0.50	0.16
n-Butylbenzene	ND		ug/l	0.50	0.09
Dichlorodifluoromethane	ND		ug/l	0.50	0.09
Hexachlorobutadiene	ND		ug/l	0.50	0.13
Isopropylbenzene	ND		ug/l	0.50	0.12
p-Isopropyltoluene	ND		ug/l	0.50	0.11
Naphthalene	ND		ug/l	0.50	0.05
n-Propylbenzene	ND		ug/l	0.50	0.11
sec-Butylbenzene	ND		ug/l	0.50	0.12
tert-Butylbenzene	ND		ug/l	0.50	0.10
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.14
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.09
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.10
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.11
Bromobenzene	ND		ug/l	0.50	0.13
o-Chlorotoluene	ND		ug/l	0.50	0.18
p-Chlorotoluene	ND		ug/l	0.50	0.10
Dibromomethane	ND		ug/l	0.50	0.11
1,2-Dibromoethane	ND		ug/l	0.50	0.16
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.18
1,3-Dichloropropane	ND		ug/l	0.50	0.13
Methyl tert butyl ether	ND		ug/l	0.50	0.09

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 16,524.2  
Analytical Date: 06/27/11 07:52  
Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG475672-2					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	105		70-130
4-Bromofluorobenzene	93		70-130

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG475672-1								
Methylene chloride	110		-		70-130	-		
1,1-Dichloroethane	120		-		70-130	-		
Chloroform	113		-		70-130	-		
Carbon tetrachloride	117		-		70-130	-		
1,2-Dichloropropane	109		-		70-130	-		
Dibromochloromethane	96		-		70-130	-		
1,1,2-Trichloroethane	103		-		70-130	-		
Tetrachloroethene	123		-		70-130	-		
Chlorobenzene	110		-		70-130	-		
Trichlorofluoromethane	114		-		70-130	-		
1,2-Dichloroethane	101		-		70-130	-		
1,1,1-Trichloroethane	121		-		70-130	-		
Bromodichloromethane	103		-		70-130	-		
trans-1,3-Dichloropropene	87		-		70-130	-		
cis-1,3-Dichloropropene	103		-		70-130	-		
Bromoform	87		-		70-130	-		
1,1,2,2-Tetrachloroethane	92		-		70-130	-		
Benzene	117		-		70-130	-		
Toluene	121		-		70-130	-		
Ethylbenzene	111		-		70-130	-		
p/m-Xylene	110		-		70-130	-		

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG475672-1								
Chloromethane	112		-		70-130	-		
Bromomethane	109		-		70-130	-		
Vinyl chloride	128		-		70-130	-		
Chloroethane	121		-		70-130	-		
1,1-Dichloroethene	119		-		70-130	-		
trans-1,2-Dichloroethene	122		-		70-130	-		
cis-1,2-Dichloroethene	119		-		70-130	-		
Trichloroethene	122		-		70-130	-		
1,2-Dichlorobenzene	99		-		70-130	-		
1,3-Dichlorobenzene	100		-		70-130	-		
1,4-Dichlorobenzene	96		-		70-130	-		
Styrene	102		-		70-130	-		
o-Xylene	106		-		70-130	-		
1,1-Dichloropropene	126		-		70-130	-		
2,2-Dichloropropane	108		-		70-130	-		
1,1,1,2-Tetrachloroethane	101		-		70-130	-		
1,2,3-Trichloropropane	96		-		70-130	-		
Bromochloromethane	106		-		70-130	-		
n-Butylbenzene	115		-		70-130	-		
Dichlorodifluoromethane	109		-		70-130	-		
Hexachlorobutadiene	119		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG475672-1								
Isopropylbenzene	97		-		70-130	-		
p-Isopropyltoluene	108		-		70-130	-		
Naphthalene	99		-		70-130	-		
n-Propylbenzene	111		-		70-130	-		
sec-Butylbenzene	114		-		70-130	-		
tert-Butylbenzene	112		-		70-130	-		
1,2,3-Trichlorobenzene	99		-		70-130	-		
1,2,4-Trichlorobenzene	113		-		70-130	-		
1,2,4-Trimethylbenzene	108		-		70-130	-		
1,3,5-Trimethylbenzene	114		-		70-130	-		
Bromobenzene	101		-		70-130	-		
o-Chlorotoluene	112		-		70-130	-		
p-Chlorotoluene	104		-		70-130	-		
Dibromomethane	97		-		70-130	-		
1,2-Dibromoethane	95		-		70-130	-		
1,2-Dibromo-3-chloropropane	85		-		70-130	-		
1,3-Dichloropropane	106		-		70-130	-		
Methyl tert butyl ether	88		-		70-130	-		



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG475672-1

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichlorobenzene-d4	100				70-130
4-Bromofluorobenzene	100				70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG475672-3 WG475672-4 QC Sample: L1109044-06 Client ID: MW-9

Methylene chloride	ND	4	4.3	108		4.4	111		70-130	2		30
1,1-Dichloroethane	ND	4	4.5	113		4.5	113		70-130	0		30
Chloroform	ND	4	4.4	109		4.4	109		70-130	0		30
Carbon tetrachloride	ND	4	4.5	113		4.5	113		70-130	0		30
1,2-Dichloropropane	ND	4	4.2	106		4.3	108		70-130	2		30
Dibromochloromethane	ND	4	3.8	95		4.0	99		70-130	5		30
1,1,2-Trichloroethane	ND	4	3.9	98		4.2	105		70-130	7		30
Tetrachloroethene	0.38J	4	5.0	125		5.0	124		70-130	0		30
Chlorobenzene	ND	4	4.2	104		4.2	106		70-130	0		30
Trichlorofluoromethane	ND	4	4.2	105		4.2	105		70-130	0		30
1,2-Dichloroethane	ND	4	4.0	101		4.1	102		70-130	2		30
1,1,1-Trichloroethane	ND	4	4.5	114		4.5	113		70-130	0		30
Bromodichloromethane	ND	4	4.0	99		4.1	103		70-130	2		30
trans-1,3-Dichloropropene	ND	4	3.4	85		3.4	86		70-130	0		30
cis-1,3-Dichloropropene	ND	4	4.0	100		4.1	102		70-130	2		30
Bromoform	ND	4	3.2	82		3.4	86		70-130	6		30
1,1,2,2-Tetrachloroethane	ND	4	3.5	87		3.6	91		70-130	3		30
Benzene	ND	4	4.5	112		4.5	113		70-130	0		30
Toluene	ND	4	4.5	112		4.5	113		70-130	0		30
Ethylbenzene	ND	4	4.1	103		4.1	104		70-130	0		30
p/m-Xylene	ND	8	8.3	104		8.2	103		70-130	1		30

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG475672-3 WG475672-4 QC Sample: L1109044-06 Client ID: MW-9

Chloromethane	ND	4	4.3	107		4.1	102		70-130	5		30
Bromomethane	ND	4	4.0	100		3.8	94		70-130	5		30
Vinyl chloride	ND	4	5.1	127		5.0	126		70-130	2		30
Chloroethane	ND	4	4.6	115		4.5	114		70-130	2		30
1,1-Dichloroethene	ND	4	4.6	114		4.6	115		70-130	0		30
trans-1,2-Dichloroethene	ND	4	4.6	116		4.7	119		70-130	2		30
cis-1,2-Dichloroethene	1.3	4	5.6	109		5.8	113		70-130	4		30
Trichloroethene	7.5	4	12	109		12	111		70-130	0		30
1,2-Dichlorobenzene	ND	4	3.9	97		3.9	98		70-130	0		30
1,3-Dichlorobenzene	ND	4	3.9	98		3.9	98		70-130	0		30
1,4-Dichlorobenzene	ND	4	3.8	95		3.8	95		70-130	0		30
Styrene	ND	4	3.8	95		3.9	98		70-130	3		30
o-Xylene	ND	4	3.9	98		4.0	100		70-130	3		30
1,1-Dichloropropene	ND	4	4.7	117		4.8	120		70-130	2		30
2,2-Dichloropropane	ND	4	3.9	97		3.8	95		70-130	3		30
1,1,1,2-Tetrachloroethane	ND	4	3.8	96		4.0	99		70-130	5		30
1,2,3-Trichloropropane	ND	4	3.6	89		3.7	93		70-130	3		30
Bromochloromethane	ND	4	4.2	105		4.4	109		70-130	5		30
n-Butylbenzene	ND	4	4.4	110		4.3	107		70-130	2		30
Dichlorodifluoromethane	ND	4	4.0	99		3.7	94		70-130	8		30
Hexachlorobutadiene	ND	4	4.6	114		4.6	114		70-130	0		30

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG475672-3 WG475672-4 QC Sample: L1109044-06 Client ID: MW-9

Isopropylbenzene	ND	4	3.6	90		3.6	90		70-130	0		30
p-Isopropyltoluene	ND	4	4.0	100		4.0	100		70-130	0		30
Naphthalene	ND	4	3.9	98		4.0	101		70-130	3		30
n-Propylbenzene	ND	4	4.1	102		4.1	102		70-130	0		30
sec-Butylbenzene	ND	4	4.2	106		4.2	106		70-130	0		30
tert-Butylbenzene	ND	4	4.1	103		4.1	104		70-130	0		30
1,2,3-Trichlorobenzene	ND	4	4.0	101		4.1	103		70-130	2		30
1,2,4-Trichlorobenzene	ND	4	4.5	113		4.6	114		70-130	2		30
1,2,4-Trimethylbenzene	ND	4	4.0	100		4.0	101		70-130	0		30
1,3,5-Trimethylbenzene	ND	4	4.2	105		4.2	105		70-130	0		30
Bromobenzene	ND	4	3.8	96		3.9	98		70-130	3		30
o-Chlorotoluene	ND	4	4.2	105		4.2	105		70-130	0		30
p-Chlorotoluene	ND	4	3.8	96		3.9	97		70-130	3		30
Dibromomethane	ND	4	3.8	94		4.0	101		70-130	5		30
1,2-Dibromoethane	ND	4	3.7	93		3.8	95		70-130	3		30
1,2-Dibromo-3-chloropropane	ND	4	3.6	90		3.3	82		70-130	9		30
1,3-Dichloropropane	ND	4	4.1	103		4.2	104		70-130	2		30
Methyl tert butyl ether	ND	4	3.4	86		3.5	87		70-130	3		30

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG475672-3 WG475672-4 QC Sample: L1109044-06 Client ID: MW-9

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1,2-Dichlorobenzene-d4	102		101		70-130
4-Bromofluorobenzene	98		98		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**SAMPLE RESULTS**

**Lab ID:** L1109044-06  
**Client ID:** MW-9  
**Sample Location:** ALBANY,NY  
**Matrix:** Dw

**Date Collected:** 06/21/11 14:30  
**Date Received:** 06/22/11  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Microbiological Analysis - Westborough Lab</b>										
Coliform, Total (MF)	29		col/100ml	1.0	NA	1	-	06/22/11 17:45	30,9222B	DW
<b>General Chemistry - Westborough Lab</b>										
Turbidity	0.27		NTU	0.20	0.20	1	-	06/22/11 23:00	44,180.1	KK
ODOR	NO ODOR		TON	1	1.0	1	-	06/22/11 21:00	30,2150B	KK
Color, Apparent	ND		A.P.C.U.	5.0	5.0	1	-	06/22/11 21:00	30,2120B	KK
Solids, Total Dissolved	340		mg/l	10	4.4	1	-	06/24/11 21:00	30,2540C	DW
pH (H)	6.9		SU	-	NA	1	-	06/22/11 21:40	30,4500H+-B	KK



**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04,06 Batch: WG474787-1										
ODOR	NO ODOR		TON	1	1.0	1	-	06/22/11 21:00	30,2150B	KK
General Chemistry - Westborough Lab for sample(s): 01-04,06 Batch: WG474798-1										
Turbidity	ND		NTU	0.20	0.20	1	-	06/22/11 23:00	44,180.1	KK
Microbiological Analysis - Westborough Lab for sample(s): 01-06 Batch: WG474840-1										
Coliform, Total (MF)	ND		col/100ml	1.0	NA	1	-	06/22/11 17:45	30,9222B	DW
General Chemistry - Westborough Lab for sample(s): 01-04,06 Batch: WG475260-1										
Solids, Total Dissolved	ND		mg/l	10	4.4	1	-	06/24/11 21:00	30,2540C	DW



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 Batch: WG474789-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 Batch: WG474798-2								
Turbidity	97		-		95-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 Batch: WG475260-2								
Solids, Total Dissolved	92		-		72-121	-		

# Lab Duplicate Analysis

## Batch Quality Control

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 QC Batch ID: WG474785-1 QC Sample: L1109044-01 Client ID: WELL #1						
Color, Apparent	15.	15	A.P.C.U.	0		
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 QC Batch ID: WG474787-2 QC Sample: L1109044-01 Client ID: WELL #1						
ODOR	NO ODOR	NO ODOR	TON	NC		
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 QC Batch ID: WG474789-2 QC Sample: L1109044-01 Client ID: WELL #1						
pH (H)	7.4	7.4	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 QC Batch ID: WG474798-3 QC Sample: L1109044-01 Client ID: WELL #1						
Turbidity	3.1	3.1	NTU	0		13
General Chemistry - Westborough Lab Associated sample(s): 01-04,06 QC Batch ID: WG475260-3 QC Sample: L1109044-06 Client ID: MW-9						
Solids, Total Dissolved	340	340	mg/l	0		11

**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

**Reagent H2O Preserved Vials Frozen on:** NA

#### Cooler Information Custody Seal

##### Cooler

A Absent  
 B Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1109044-01A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-01B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-01C	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-01D	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-01E	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-02A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-02B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-02C	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-02D	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-02E	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-03A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-03B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-03C	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-03D	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-03E	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-04A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-04B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-04C	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-04D	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-04E	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-05A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-05B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)

\*Values in parentheses indicate holding time in days



**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1109044-05D	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-05E	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-06B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-06C	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-06D	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06E	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06F	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-06G	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-06H	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-06I	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-06J	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06K	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06L	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06M	Bacteria Cup Na2S2O3 preserved	A	N/A	2.2	Y	Absent	T-COLI-MF(1.25)
L1109044-06N	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-06O	Amber 1000ml unpreserved	B	7	2.1	Y	Absent	COLOR-A-2120(2),TURB-180(2),PH-4500(.01),TDS-2540(7),ODOR-2150(1)
L1109044-07A	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)
L1109044-07B	Vial Ascorbic Acid/HCl preserved	A	N/A	2.2	Y	Absent	DOD-524.2(14)

\*Values in parentheses indicate holding time in days



**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

## GLOSSARY

### Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

**Report Format:** DU Report with "J" Qualifiers



**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

**Data Qualifiers**

than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL). This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**ND** - Not detected at the method detection limit (MDL) for the sample.

*Report Format:* DU Report with "J" Qualifiers

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**Project Name:** SADVA  
**Project Number:** Not Specified

**Lab Number:** L1109044  
**Report Date:** 06/30/11

## REFERENCES

- 16 Methods for the Determination of Organic Compounds in Drinking Water - Supplement II. EPA/600/R-92/129, August 1992.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

The analyses performed on the sample(s) within this report are in accordance with the minimum established guidelines set forth in the Department of Defense Quality Systems Manual, Version 4.2, issued October 25, 2010.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certificate/Approval Program Summary

Last revised June 7, 2011 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.  
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

*Drinking Water* (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

*Wastewater/Non-Potable Water* (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

*Solid Waste/Soil* (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons. )

### Maine Department of Human Services Certificate/Lab ID: 2009024.

*Drinking Water* (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

*Solid Waste/Soil* (Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

### Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

*Drinking Water* (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water* (Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl, V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.



Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

**New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO<sub>3</sub>-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, 9050A, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH<sub>3</sub>-H, 4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3580A, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

**New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO<sub>3</sub>-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH<sub>3</sub>-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270C-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846, 6010B, 7196A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 8270C-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

**New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO<sub>3</sub>-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH<sub>3</sub>-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

**North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.**

**Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

*Drinking Water* (Organic Parameters: EPA 524.2)

*Non-Potable Water* (Inorganic Parameters: EPA 1312. Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH<sub>3</sub>-H. Organic Parameters: 3540C, 3545, 3546, 3550B,

3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.*

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

**Texas Commissoon on Environmental Quality** Certificate/Lab ID: T104704476-09-1. *NELAP Accredited.*

*Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S<sup>2-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)*

*Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)*

**Department of Defense** Certificate/Lab ID: L2217.

*Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)*

*Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)*

*Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)*

**The following analytes are not included in our current NELAP/TNI Scope of Accreditation:**

**EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO<sub>2</sub> in a soil matrix, NO<sub>3</sub> in a soil matrix, SO<sub>4</sub> in a soil matrix.

## CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 6/22/11

ALPHA Job #: L1109044



WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

## Client Information

Client: PerseusAddress: 301 Plainfield RoadPhone: 315-451-3550Fax: 315-451-3570

Email:

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

## Project Information

Project Name: SAQUAProject Location: Albany, NYProject #: 747152Project Manager: George MorvanALPHA Quote #: 74715 EO4 6-21-11

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)Date Due: 6/29/11 Time:

## Report Information - Data Deliverables

☐ FAX ☐ EMAIL☐ ADEX ☐ Add'l Deliverables

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

VOCs - 524.2  
TDS - SM 18-254W  
Color - SM 18-2120B  
pH - SM 18-4500HB  
Total Solids - 180.1  
Total Coliform - 9222B

## SAMPLE HANDLING

Filtration \_\_\_\_\_  
☐ Done  
☐ Not needed  
☐ Lab to do  
☐ Preservation  
☐ Lab to do  
(Please specify below)

## Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	Container Type Preservative	Relinquished By:	Date/Time	Received By:	Date/Time	Sample Specific Comments
09044-01	W211 #1	6-21-11	1135	water	EO4	✓	✓	✓	✓	✓	
-02	W211 #2	6-21-11	1146	water	EO4	✓	✓	✓	✓	✓	
-03	W211 #3	6-21-11	1158	water	EO4	✓	✓	✓	✓	✓	
-04	W211 #4	6-21-11	1208	water	EO4	✓	✓	✓	✓	✓	
-05	W211 #5	6-21-11	1218	water	EO4	✓	✓	✓	✓	✓	MS 6/23/11
-06	W211 #6	6-21-11	1430	water	EO4	✓	✓	✓	✓	✓	
-07	W211 #7	6-21-11	1430	water	EO4	✓	✓	✓	✓	✓	
-08	W211 #8	6-21-11	1430	water	EO4	✓	✓	✓	✓	✓	
-09	W211 #9	6-21-11	1430	water	EO4	✓	✓	✓	✓	✓	

## PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.