Granville Solvents SRM Group, LLC
10805 Cahill Road
Raleigh, North Carolina 27164

Bill Brewer
Site Manager

PHONE: (919) 668-3218
FAX: 919-684-2422
e-mail - brewe029@mc.duke.edu

JOINT DEFENSE COMMUNICATION - PRIVILEGED AND CONFIDENTIAL

July 12, 2013

Sheila Sullivan,
Project Manager
US Environmental Protection Agency
Region 5
SR-6J
77 W. Jackson Blvd.
Chicago, IL 60604

Re: Granville Solvents Site Addendum to the Post-RAC Report

Sheila:

I have enclosed one copy of the addendum to the Post-RAC Report regarding vertical profile drilling at the site. Please let me know if you will need additional copies or if you have any questions regarding the report.

Regards,

Bill Brewer

Bill Brewer, PhD
Site Project Manager
Granville Solvents SRM Group, LLC

c: Fred Myers, OEPA
Granville Solvents Site Technical Committee
Ron Roelker, AECOM

AECOM

AECOM
4219 Malsbary Road
Cincinnati, Ohio 45242
www.aecom.com

513 878 6880 tel
513 878 6848 fax

July 11, 2013

Mr. Bill Brewer
Granville Solvents SRM Group, LLC
10805 Cahill Road
Raleigh, North Carolina

Subject: Post RAC Report Addendum
Vertical Groundwater Profiling
Granville Solvents Site
Granville, Licking County, Ohio
USEPA ID: OHD004495412

Dear Mr. Brewer,

AECOM is submitting this report as an addendum to the Post Remedial Action Completion (RAC) report dated September 14, 2012. The work was conducted in general accordance with the Post-RAC Work Plan addendum dated March 13, 2013. The purpose of this addendum is to describe results of additional vertical profiling of groundwater quality as described below.

Background

In order to obtain information on VOC concentrations with depth between the site and the Granville Well-field, vertical profiling was conducted on June 6, 2012 using direct-push drilling equipment as specified in the Post Remedial Action Completion Work Plan (PRACWP) dated February 29, 2012. Using procedures currently described in Section 2.0 of the PRACWP, the direct-push drilling equipment was able to push the sampler 119 ft below ground surface (bgs), but due to bent rods and heaving sands, discrete groundwater samples could only be collected from a depth of 25 ft bgs at 10-ft intervals to a depth of 65 ft bgs. Groundwater samples were not able to be obtained to the target depth of 120 ft bgs as specified in the PRACWP. For this reason, a Post-RAC Work Plan addendum dated March 13, 2013 was submitted to USEPA and implemented as described below.

Methods

In order to obtain groundwater samples at 10-ft. intervals from a depth of 75 ft. to 120 ft. bgs, the sonic-casing method was used near the same location as specified in the PRACWP. The work activities commenced on April 30, 2013 and were completed on May 1, 2013. In order to reach the targeted intervals for groundwater sampling, four-inch-diameter drill casing was first advanced followed by six-inch-diameter override casing. Soils were visually classified in the field and described on a boring log using the Unified Soil Classification System. This method continued down to 70 ft bgs at which a four-inch-diameter, three-foot-long screen point was advanced ahead of the override casing. The center of the screen point was advanced about 5 ft below the override casing into the

water-bearing formation. Excess drilling water was removed via the annulus by injecting air into the 4-inch casing. A 12-Volt submersible pump and tubing was lowered into the screen point through the 4-inch casing. Initially, each targeted zone was purged at a rate of approximately 4-gallons per minute until the groundwater became less turbid. Purge volumes ranged from 15-42 gallons and were dependent on water clarity. Flow rates were then reduced to 500-600 milliliters per minute to obtain a discrete groundwater sample which was obtained when the field parameters stabilized as outlined in the PRACWP. The field parameters were collected using a Troll 9500 water quality instrument with flow through cell. The submersible pump was decontaminated between intervals using a Liquinox™ and potable water wash followed by a potable water rinse. New tubing was used for each discrete groundwater sample.

The groundwater samples were stored and shipped on ice under chain-of-custody and delivered to Test America for analysis of VOCs using USEPA SW-846 Method 524.2 in accordance with procedures outlined in the PRACWP.

Results

The location of vertical profile boring VG-2 is shown on Figure 1, with the boring shown in profile with respect to the geologic cross-section A-A provided on Figure 2. The boring log for sample location VG-2 is provided in Attachment 1.

Subsurface conditions at boring location VG-2 were found to be consistent with previous borings advanced at the project site as illustrated on Figure 2. A shallow clay layer overlying silty sand was encountered prior to the main sand and gravel aquifer media. Specifically, the lean clay layer was found to be about 15 ft thick before grading to a well-graded silty gravel with sand to about 20 ft below grade. The gravel layer is underlain by the main buried valley aquifer media consisting of a well-graded sand with gavel to a depth of 120 ft below grade. At 120 ft bgs, a thin 3-ft thick layer of gray glacial till was encountered atop the bedrock surface at 123 ft bgs. The bedrock consisted of dry siltstone and was cored using the rotary sonic drilling rig to a depth of 127 ft bgs where the boring was terminated. The bedrock encountered is consistent with the literature, which indicates bedrock consists of Mississippian-age shales, siltstone, sandstone and limestone of the Waverly and Maxville units. The approximate top-of-bedrock elevation shown on Figure 7 of the Post-RAC report was adjusted from elevation 750 to near Elevation 800 based on this new information which indicates a flatter bedrock valley bottom than originally anticipated.

Results of the groundwater sampling conducted for this sampling event shown with a summary of test results from the vertical sampling conducted previously is provided in Table 1 with the analytical laboratory reports provided in Attachment 2. The results indicate that the typical chlorinated compounds found in groundwater at the site including tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene(DCE), cis-1,2-dichloroethene, trans-1,2-dichloroethene and 1,1,1-Trichloroethane (TCA) were not detected above detection limits below 65 ft. bgs. Low levels of methyl tertiary butyl ether (MTBE) and toluene were detected with MTBE having a maximum concentration of 7.7 ug/L from groundwater obtained from 106.5 ft bgs and toluene having a maximum concentration of 19 ug/L from groundwater obtained from 116.5 ft bgs.

Results of both the 2012 and 2013 vertical sampling events indicate that VOCs are present at very low concentrations within 65 ft of the surface at this area of the site and within the current monitoring well network screen depths of 20 to 65 ft bgs. MTBE has never been detected in the Granville Solvent Site monitoring well network; however, toluene was detected in 2002 and 2003 in

groundwater samples collected from monitoring well GSSMW-08 at concentrations of 34 ug/L and 1.8 ug/L, respectively.

Conclusions

In order to respond to the USEPA review comments dated April 6, 2011 regarding the 2010 Removal Action Completion report, vertical profiling of groundwater was conducted at the site on June 6, 2012 and April 30, 2013 between the MW-07 and MW-08 well clusters to determine if the current monitoring well network monitors the appropriate aquifer depths as outlined in Item 6(a) of the USEPA comments. Based on these results, it appears that the current monitoring well network screens are deep enough to monitor compounds associated with the Granville Solvents Site and such compounds have neither migrated below 65 ft. bgs nor to depths where village wells are screened.

If you have any questions regarding this proposed work plan addendum, please contact me at (513) 878-6844 or e-mail me at ron.roelker@aecom.com.

Sincerely yours,

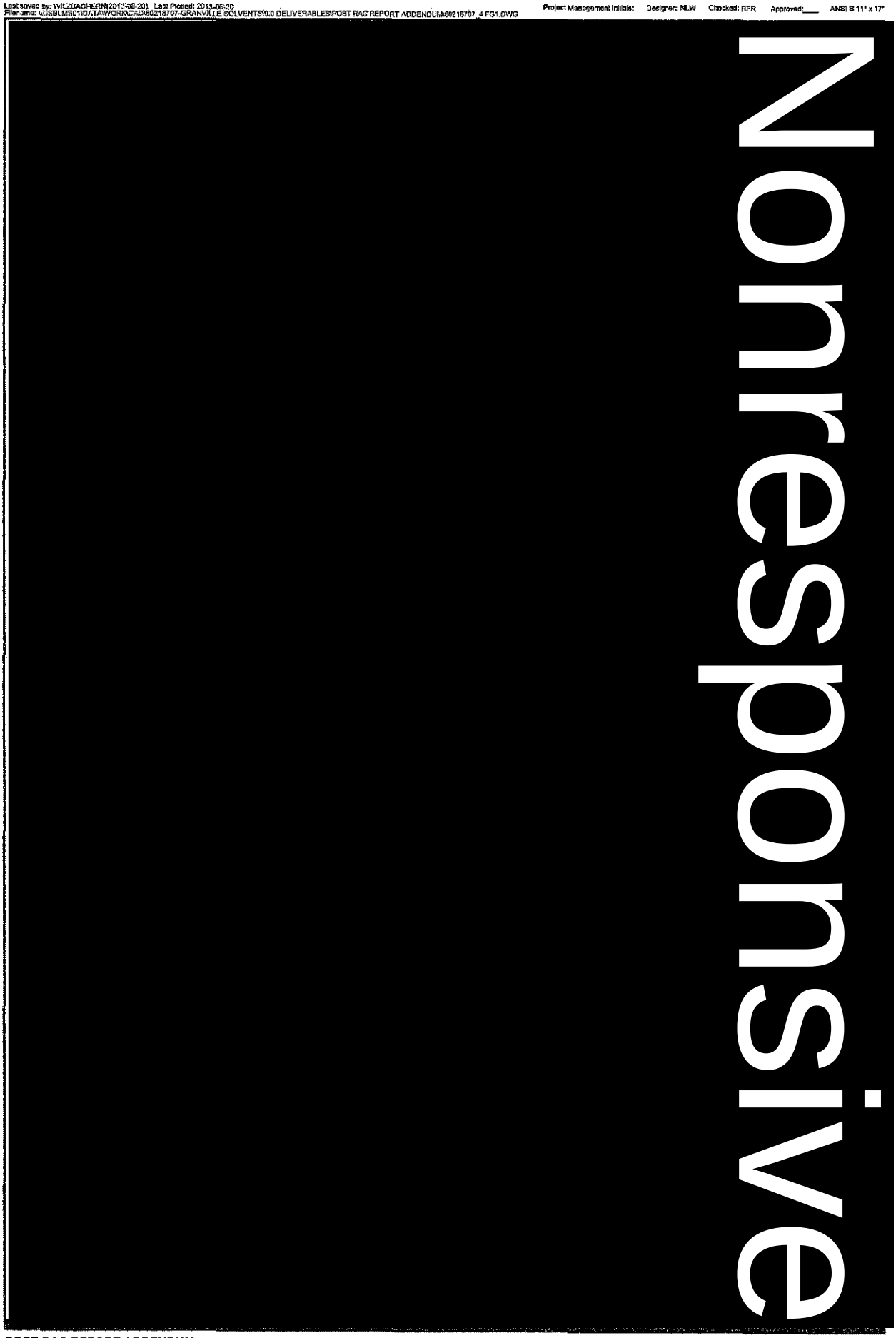
Ron Roelker, PE
Senior Project Manager

Mike Papp
Project Geologist

Attachments

Last saved by: WILZBACHERN(2013-06-20) Last Plotted: 2013-06-20
Filename: \\USBLM5010\DATAWORK\CAD\60218707-GRANVILLE SOLVENTS\9.0 DELIVERABLES\POST RAC REPORT ADDENDUM\60218707_4 FG1.DWG

Project Management Initials: Designer: NLW Checked: RFR Approved:___ ANSI B 11" x 17"



POST RAC REPORT ADDENDUM
GRANVILLE SOLVENTS SITE
GRANVILLE, OHIO
Project No.: 60218707 Date: 2013-06-20

SAMPLE LOCATION MAP

AECOM

Figure: 1

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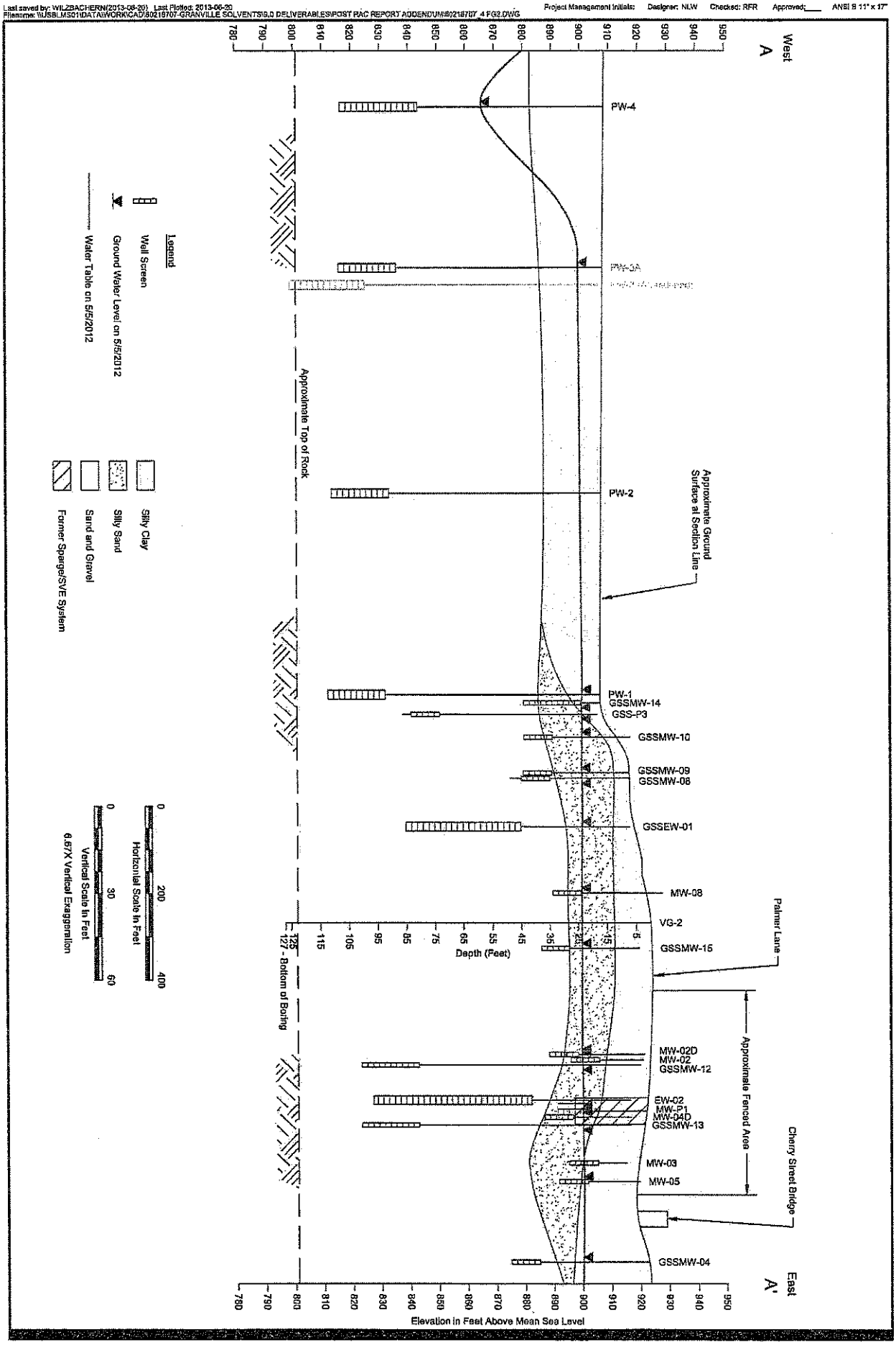
Filename: \\USBLMS01\DATA\WORK\CAD\60218707-GRANVILLE SOLVENTS\9.0 DELIVERABLES\POST RAC REPORT ADDENDUM\60218707_4 FIG2.DWG

Project Management Initials: Designer: NLW Checked: RFR Approved:____ ANSI B 11" x 17"



POST RAC REPORT ADDENDUM
GRANVILLE SOLVENTS SITE
GRANVILLE, OHIO
Project No.: 60218707 Date: 2013-06-20

GEOLOGIC CROSS SECTION A - A'

AECOM

Figure: 2

Table 1
Summary of Vertical Profiling Results
Granville Solvents Site
Granville, Ohio

Sample Location	Depth	Sample Date	PCE (µg/L)	TCE (µg/L)	DCE (µg/L)	cis- 1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1,1-TCA (µg/L)	MTBE (µg/L)	Toluene (µg/L)
VG-1	25	6-Jun-12	1.1	14	0.58	4.5	---	15	---	---
	35	6-Jun-12	---	0.60	9.2	72	3.6	---	---	---
	45	6-Jun-12	---	---	---	0.81	---	---	---	---
	55	6-Jun-12	---	0.56	---	1.2	---	---	---	---
	65	6-Jun-12	---	0.60	---	1.5	---	---	---	---
VG-2	75	30-Apr-13	---	---	---	---	---	---	1.1	---
	85	30-Apr-13	---	---	---	---	---	---	4.2	---
	96.5	1-May-13	---	---	---	---	---	---	5.1	5.0
	106.5	1-May-13	---	---	---	---	---	---	7.7	11
	116.5	1-May-13	---	---	---	---	---	---	2.5	19

All results expressed in ug/l (parts per billion)
--- Not detected above reporting limit.
PCE - Tetrachloroethene
TCE - Trichloroethene
DCE - cis-1,2-Dichloroethene
trans-1,2-DCE - trans-1,2-Dichloroethene
1,1,1-TCA - 1,1,1-Trichloroethane
MTBE - methyl tertiary butyl ether

ATTACHMENT 1

BORING NUMBER VG-2

AECOM

CLIENT Granville Solvents Site SRM
PROJECT NAME Granville Solvents Site
PROJECT NUMBER 60218707
PROJECT LOCATION 300 Palmer Lane, Granville, OH
DRILLING CONTRACTOR Frontz Drilling
GROUND ELEVATION _____ **HOLE SIZE** 8 in
DRILLING METHOD Rotary Sonic
DATE STARTED 4/30/2013 11:55:00 AM
LOGGED BY M. Papp **CHECKED BY** _____
COMPLETED 5/1/2013 6:10:00 PM
NOTES Vertical Profiling
GROUND WATER LEVEL: ▽ **TIME OF DRILLING** 17.00 ft

DEPTH (ft)	RECOVERY %	GROUNDWATER SAMPLE	GRAPHIC LOG	Layer Depth (Ft)	MATERIAL DESCRIPTION
0				0.5	Topsoil
2				2.0	Moist, brown, SANDY SILT.
4	100			5.0	Damp to moist, SANDY CLAY.
6, 8, 10, 12, 14	100			15.0	Moist, brown, SANDY CLAY.
16, 18, 20	100			20.0	Damp to moist, brown, WELL GRADED GRAVEL WITH SAND. Wet at 17ft. ▽
22, 24, 26, 28, 30	100			25.0	Saturated, brown, WELL GRADED SAND WITH GRAVEL.
				29.5	Wet, brown, WELL GRADED SAND.
				30.0	Moist, gray to brown, SANDY CLAY.
				30.5	Saturated, brown, WELL GRADED SAND.
32, 34				34.0	Saturated, gray to brown, WELL GRADED SAND WITH GRAVEL.
				35.0	Saturated, gray to brown, POORLY GRADED SAND.
36, 38, 40, 42, 44	100				Saturated, gray to brown, WELL GRADED SAND WITH GRAVEL.

*All Soil Classifications based on field observations.

(Continued Next Page)

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AECOM

CLIENT Granville Solvents Site SRM **PROJECT NAME** Granville Solvents Site

PROJECT NUMBER 60218707 **PROJECT LOCATION** 300 Palmer Lane, Granville, OH

DEPTH (ft)	RECOVERY %	GROUNDWATER SAMPLE	GRAPHIC LOG	Layer Depth (Ft)	MATERIAL DESCRIPTION
44					
46	100				Saturated, gray to brown, WELL GRADED SAND WITH GRAVEL. *(continued)*
48				48.0	
50					Saturated, gray to brown, WELL GRADED SAND.
52				52.0	
54					Wet, gray to brown, WELL GRADED SAND WITH GRAVEL.
56	100				
58					
60				60.0	
62					Wet, gray to brown, WELL GRADED SAND.
64				64.0	
66	100			66.0	Wet, gray to brown, WELL GRADED SAND WITH GRAVEL.
68					Wet, gray to brown, WELL GRADED SAND.
70					
72				72.0	
				73.0	Wet, gray to brown, WELL GRADED SAND WITH GRAVEL.
74					Wet, gray to brown, WELL GRADED SAND.
76	100	VG2-75-043013			
78				78.0	
80					Saturated, gray, WELL GRADED SAND WITH GRAVEL, with trace cobbles.
82					
84					
86	100	VG2-85-043013			
88					
				89.0	
90				90.0	Saturated, gray, WELL GRADED SAND WITH CLAY AND GRAVEL.
92					In order to prevent further heaving of sediment into borehole, soil samples for logging purposes were not collected.
94					

GSS SRM - GINT STD US.GDT - 6/18/13 07:19 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\GSS SRM.GPJ

*All Soil Classifications based on field observations.

(Continued Next Page)

AECOM

CLIENT Granville Solvents Site SRM **PROJECT NAME** Granville Solvents Site

PROJECT NUMBER 60218707 **PROJECT LOCATION** 300 Palmer Lane, Granville, OH

DEPTH (ft)	RECOVERY %	GROUNDWATER SAMPLE	GRAPHIC LOG	Layer Depth (Ft)	MATERIAL DESCRIPTION
96					In order to prevent further heaving of sediment into borehole, soil samples for logging purposes were not collected. *(continued)*
98		VG2-96.5-050113			
100					
102					
104					
106					
108		VG2-106.5-050113			
110					
112					
114					
116					
118		VG2-116.5-050113			
120				120.0	
122				123.0	Moist, gray, SANDY CLAY with trace larges sub-rounded gravel.
124	100				Dry, gray, bedrock (siltstone).
126				127.0	

Termination of borehole at 127.0 feet.

*All Soil Classifications based on field observations.

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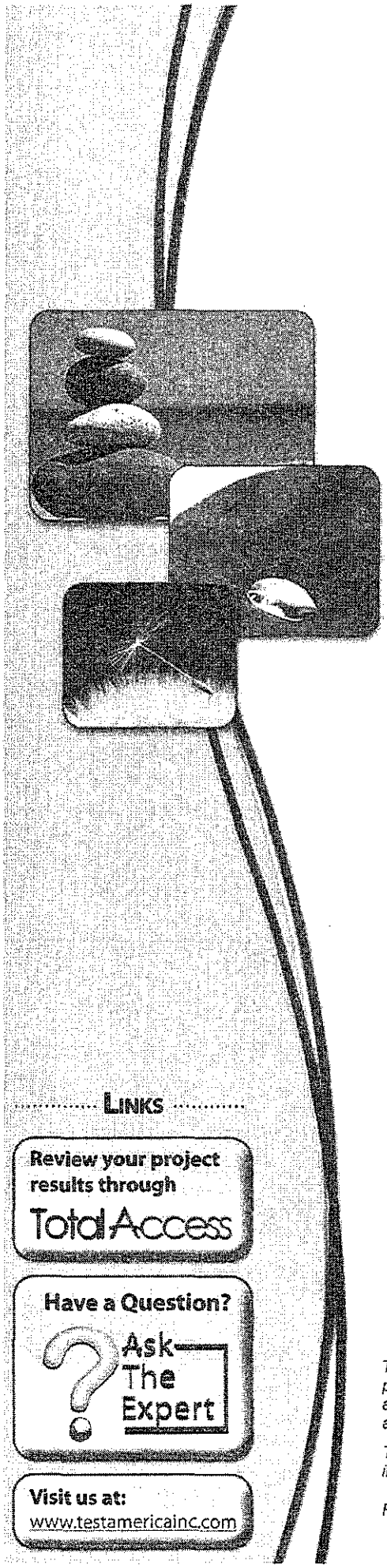
ATTACHMENT 2



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-89964-1
Client Project/Site: Granville Solvents

For:
AECOM, Inc.
4219 Malasbary Road
Cincinnati, Ohio 45242

Attn: Michael Papp

Authorized for release by:
5/10/2013 2:46:18 PM

Lidya Gulizia, Project Manager II
lidya.gulizia@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Results relate only to the items tested and the sample(s) as received by the laboratory.

Job ID: 680-89964-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: AECOM, Inc.

Project: Granville Solvents

Report Number: 680-89964-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

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

RECEIPT

The samples were received on 05/03/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.2 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples VG2-75-043013 (680-89964-1), VG2-85-043013 (680-89964-2), VG2-96.5-050113 (680-89964-3), VG2-106.5-050113 (680-89964-4), VG2-116.5-050113 (680-89964-5), VG2-Dupe01-050113 (680-89964-6) and Trip Blank (Lot # 031813) (680-89964-7) were analyzed for Volatile organic Compounds (GC-MS) in accordance with EPA Method 524.2. The samples were analyzed on 05/07/2013.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 275913 were outside control limits: VG2-96.5-050113 (680-89964-3 MS), VG2-96.5-050113 (680-89964-3 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

Surrogate recovery for the following sample(s) was outside control limits: VG2-75-043013 (680-89964-1). Re-extraction and/or re-analysis was performed with concurring results. The original analysis has been reported.

No other difficulties were encountered during the volatiles analyses.

All other quality control parameters were within the acceptance limits.

Sample Summary

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-89964-1	VG2-75-043013	Water	04/30/13 15:10	05/03/13 09:44
680-89964-2	VG2-85-043013	Water	04/30/13 17:15	05/03/13 09:44
680-89964-3	VG2-96.5-050113	Water	05/01/13 10:00	05/03/13 09:44
680-89964-4	VG2-106.5-050113	Water	05/01/13 11:32	05/03/13 09:44
680-89964-5	VG2-116.5-050113	Water	05/01/13 12:50	05/03/13 09:44
680-89964-6	VG2-Dupe01-050113	Water	05/01/13 10:00	05/03/13 09:44
680-89964-7	Trip Blank (Lot # 031813)	Water	05/01/13 00:00	05/03/13 09:44

Method Summary

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	TAL SAV

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Definitions/Glossary

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits

Glossary

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

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-75-043013
Date Collected: 04/30/13 15:10
Date Received: 05/03/13 09:44

Lab Sample ID: 680-89964-1
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 15:34	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
Bromoform	<0.50		0.50		ug/L			05/07/13 15:34	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 15:34	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 15:34	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 15:34	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 15:34	1
Chloroform	<0.50		0.50		ug/L			05/07/13 15:34	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 15:34	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 15:34	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 15:34	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 15:34	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 15:34	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 15:34	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 15:34	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 15:34	1
Methyl tert-butyl ether	**1.1**		0.50		ug/L			05/07/13 15:34	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 15:34	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 15:34	1
Styrene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 15:34	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 15:34	1
Toluene	<0.50		0.50		ug/L			05/07/13 15:34	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 15:34	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 15:34	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 15:34	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 15:34	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 15:34	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 15:34	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*73*		*70 - 130*		*05/07/13 15:34*	*1*
1,2-Dichlorobenzene-d4	*61*	*X*	*70 - 130*		*05/07/13 15:34*	*1*

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-85-043013

Lab Sample ID: 680-89964-2

Date Collected: 04/30/13 17:15

Matrix: Water

Date Received: 05/03/13 09:44

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 16:28	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
Bromoform	<0.50		0.50		ug/L			05/07/13 16:28	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 16:28	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 16:28	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 16:28	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 16:28	1
Chloroform	<0.50		0.50		ug/L			05/07/13 16:28	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 16:28	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 16:28	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 16:28	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 16:28	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 16:28	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 16:28	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 16:28	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 16:28	1
Methyl tert-butyl ether	**4.2**		0.50		ug/L			05/07/13 16:28	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 16:28	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 16:28	1
Styrene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 16:28	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 16:28	1
Toluene	<0.50		0.50		ug/L			05/07/13 16:28	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 16:28	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 16:28	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 16:28	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 16:28	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 16:28	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 16:28	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*81*		*70 - 130*		*05/07/13 16:28*	*1*
1,2-Dichlorobenzene-d4	*73*		*70 - 130*		*05/07/13 16:28*	*1*

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-96.5-050113
Date Collected: 05/01/13 10:00
Date Received: 05/03/13 09:44

Lab Sample ID: 680-89964-3
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 17:25	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
Bromoform	<0.50		0.50		ug/L			05/07/13 17:25	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 17:25	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 17:25	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 17:25	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 17:25	1
Chloroform	<0.50		0.50		ug/L			05/07/13 17:25	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 17:25	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 17:25	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 17:25	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 17:25	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 17:25	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 17:25	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 17:25	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 17:25	1
Methyl tert-butyl ether	**5.1**		0.50		ug/L			05/07/13 17:25	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 17:25	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 17:25	1
Styrene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 17:25	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 17:25	1
Toluene	**5.0**		0.50		ug/L			05/07/13 17:25	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 17:25	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 17:25	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 17:25	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 17:25	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 17:25	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 17:25	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*83*		*70 - 130*		*05/07/13 17:25*	*1*
1,2-Dichlorobenzene-d4	*75*		*70 - 130*		*05/07/13 17:25*	*1*

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-106.5-050113

Lab Sample ID: 680-89964-4

Date Collected: 05/01/13 11:32

Matrix: Water

Date Received: 05/03/13 09:44

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 16:01	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
Bromoform	<0.50		0.50		ug/L			05/07/13 16:01	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 16:01	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 16:01	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 16:01	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 16:01	1
Chloroform	<0.50		0.50		ug/L			05/07/13 16:01	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 16:01	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 16:01	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 16:01	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 16:01	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 16:01	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 16:01	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 16:01	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 16:01	1
Methyl tert-butyl ether	**7.7**		0.50		ug/L			05/07/13 16:01	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 16:01	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 16:01	1
Styrene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 16:01	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 16:01	1
Toluene	**11**		0.50		ug/L			05/07/13 16:01	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 16:01	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 16:01	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 16:01	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 16:01	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 16:01	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 16:01	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*05/07/13 16:01*	*1*
1,2-Dichlorobenzene-d4	*78*		*70 - 130*		*05/07/13 16:01*	*1*

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-116.5-050113

Lab Sample ID: 680-89964-5

Date Collected: 05/01/13 12:50

Matrix: Water

Date Received: 05/03/13 09:44

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 18:19	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
Bromoform	<0.50		0.50		ug/L			05/07/13 18:19	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 18:19	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 18:19	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 18:19	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 18:19	1
Chloroform	<0.50		0.50		ug/L			05/07/13 18:19	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 18:19	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 18:19	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 18:19	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 18:19	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 18:19	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 18:19	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 18:19	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 18:19	1
Methyl tert-butyl ether	**2.5**		0.50		ug/L			05/07/13 18:19	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 18:19	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 18:19	1
Styrene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 18:19	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 18:19	1
Toluene	**19**		0.50		ug/L			05/07/13 18:19	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 18:19	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 18:19	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 18:19	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 18:19	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 18:19	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 18:19	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*84*		*70 - 130*		*05/07/13 18:19*	*1*
1,2-Dichlorobenzene-d4	*77*		*70 - 130*		*05/07/13 18:19*	*1*

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-Dupe01-050113
Date Collected: 05/01/13 10:00
Date Received: 05/03/13 09:44

Lab Sample ID: 680-89964-6
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 19:13	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
Bromoform	<0.50		0.50		ug/L			05/07/13 19:13	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 19:13	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 19:13	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 19:13	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 19:13	1
Chloroform	<0.50		0.50		ug/L			05/07/13 19:13	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 19:13	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 19:13	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 19:13	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 19:13	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 19:13	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 19:13	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 19:13	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 19:13	1
Methyl tert-butyl ether	**4.9**		0.50		ug/L			05/07/13 19:13	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 19:13	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 19:13	1
Styrene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 19:13	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 19:13	1
Toluene	**7.9**		0.50		ug/L			05/07/13 19:13	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 19:13	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 19:13	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 19:13	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 19:13	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 19:13	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 19:13	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*83*		*70 - 130*		*05/07/13 19:13*	*1*
1,2-Dichlorobenzene-d4	*78*		*70 - 130*		*05/07/13 19:13*	*1*

Client Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: Trip Blank (Lot # 031813)

Lab Sample ID: 680-89964-7

Date Collected: 05/01/13 00:00
Date Received: 05/03/13 09:44

Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 15:07	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
Bromoform	<0.50		0.50		ug/L			05/07/13 15:07	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 15:07	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 15:07	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 15:07	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 15:07	1
Chloroform	<0.50		0.50		ug/L			05/07/13 15:07	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 15:07	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 15:07	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 15:07	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 15:07	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 15:07	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 15:07	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 15:07	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 15:07	1
Methyl tert-butyl ether	<0.50		0.50		ug/L			05/07/13 15:07	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 15:07	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 15:07	1
Styrene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 15:07	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 15:07	1
Toluene	<0.50		0.50		ug/L			05/07/13 15:07	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 15:07	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 15:07	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 15:07	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 15:07	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 15:07	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 15:07	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*82*		*70 - 130*		*05/07/13 15:07*	*1*
1,2-Dichlorobenzene-d4	*74*		*70 - 130*		*05/07/13 15:07*	*1*

QC Sample Results

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-275913/6
Matrix: Water
Analysis Batch: 275913

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			05/07/13 11:58	1
Bromobenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
Bromoform	<0.50		0.50		ug/L			05/07/13 11:58	1
Bromomethane	<1.0		1.0		ug/L			05/07/13 11:58	1
Carbon tetrachloride	<0.50		0.50		ug/L			05/07/13 11:58	1
Chlorobenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
Chlorodibromomethane	<0.50		0.50		ug/L			05/07/13 11:58	1
Chloroethane	<1.0		1.0		ug/L			05/07/13 11:58	1
Chloroform	<0.50		0.50		ug/L			05/07/13 11:58	1
Chloromethane	<0.50		0.50		ug/L			05/07/13 11:58	1
2-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 11:58	1
4-Chlorotoluene	<0.50		0.50		ug/L			05/07/13 11:58	1
cis-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 11:58	1
cis-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 11:58	1
Dibromomethane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
Dichlorobromomethane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1-Dichloroethane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,2-Dichloroethane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1-Dichloroethene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,3-Dichloropropane	<0.50		0.50		ug/L			05/07/13 11:58	1
2,2-Dichloropropane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1-Dichloropropene	<0.50		0.50		ug/L			05/07/13 11:58	1
Ethylbenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
Methylene Chloride	<0.50		0.50		ug/L			05/07/13 11:58	1
Methyl tert-butyl ether	<0.50		0.50		ug/L			05/07/13 11:58	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			05/07/13 11:58	1
o-Xylene	<0.50		0.50		ug/L			05/07/13 11:58	1
Styrene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1,1,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			05/07/13 11:58	1
Tetrachloroethene	<0.50		0.50		ug/L			05/07/13 11:58	1
Toluene	<0.50		0.50		ug/L			05/07/13 11:58	1
trans-1,2-Dichloroethene	<0.50		0.50		ug/L			05/07/13 11:58	1
trans-1,3-Dichloropropene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			05/07/13 11:58	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			05/07/13 11:58	1
Trichloroethene	<0.50		0.50		ug/L			05/07/13 11:58	1
1,2,3-Trichloropropane	<0.50		0.50		ug/L			05/07/13 11:58	1
Vinyl chloride	<0.50		0.50		ug/L			05/07/13 11:58	1
Xylenes, Total	<0.50		0.50		ug/L			05/07/13 11:58	1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-275913/6
Matrix: Water
Analysis Batch: 275913

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87		70 - 130		05/07/13 11:58	1
1,2-Dichlorobenzene-d4	82		70 - 130		05/07/13 11:58	1

Lab Sample ID: LCS 680-275913/3
Matrix: Water
Analysis Batch: 275913

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	20.8		ug/L		104	70 - 130
Bromobenzene	20.0	21.3		ug/L		106	70 - 130
Bromoform	20.0	19.1		ug/L		96	70 - 130
Bromomethane	20.0	20.1		ug/L		100	70 - 130
Carbon tetrachloride	20.0	21.3		ug/L		107	70 - 130
Chlorobenzene	20.0	20.8		ug/L		104	70 - 130
Chlorodibromomethane	20.0	20.2		ug/L		101	70 - 130
Chloroethane	20.0	22.8		ug/L		114	70 - 130
Chloroform	20.0	20.5		ug/L		102	70 - 130
Chloromethane	20.0	20.0		ug/L		100	70 - 130
2-Chlorotoluene	20.0	21.0		ug/L		105	70 - 130
4-Chlorotoluene	20.0	21.8		ug/L		109	70 - 130
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	70 - 130
cis-1,3-Dichloropropene	20.0	20.7		ug/L		103	70 - 130
Dibromomethane	20.0	20.2		ug/L		101	70 - 130
1,2-Dichlorobenzene	20.0	22.2		ug/L		111	70 - 130
1,3-Dichlorobenzene	20.0	22.2		ug/L		111	70 - 130
1,4-Dichlorobenzene	20.0	19.9		ug/L		99	70 - 130
Dichlorobromomethane	20.0	20.7		ug/L		104	70 - 130
1,1-Dichloroethane	20.0	20.0		ug/L		100	70 - 130
1,2-Dichloroethane	20.0	20.4		ug/L		102	70 - 130
1,1-Dichloroethene	20.0	20.4		ug/L		102	70 - 130
1,2-Dichloropropane	20.0	20.1		ug/L		101	70 - 130
1,3-Dichloropropane	20.0	20.1		ug/L		100	70 - 130
2,2-Dichloropropane	20.0	20.5		ug/L		102	70 - 130
1,1-Dichloropropene	20.0	20.7		ug/L		103	70 - 130
Ethylbenzene	20.0	20.8		ug/L		104	70 - 130
Methylene Chloride	20.0	19.9		ug/L		99	70 - 130
Methyl tert-butyl ether	16.0	15.8		ug/L		99	70 - 130
m-Xylene & p-Xylene	40.0	42.0		ug/L		105	70 - 130
o-Xylene	20.0	21.4		ug/L		107	70 - 130
Styrene	20.0	22.0		ug/L		110	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.0		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.4		ug/L		102	70 - 130
Tetrachloroethene	20.0	20.6		ug/L		103	70 - 130
Toluene	20.0	20.6		ug/L		103	70 - 130
trans-1,2-Dichloroethene	20.0	20.1		ug/L		100	70 - 130
trans-1,3-Dichloropropene	20.0	20.6		ug/L		103	70 - 130
1,2,4-Trichlorobenzene	20.0	20.2		ug/L		101	70 - 130
1,1,1-Trichloroethane	20.0	20.7		ug/L		103	70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-275913/3
Matrix: Water
Analysis Batch: 275913

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	20.0	19.9		ug/L		100	70 - 130
Trichloroethene	20.0	20.5		ug/L		102	70 - 130
1,2,3-Trichloropropane	20.0	20.2		ug/L		101	70 - 130
Vinyl chloride	20.0	19.2		ug/L		96	70 - 130
Xylenes, Total	60.0	63.4		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
1,2-Dichlorobenzene-d4	*106*		*70 - 130*

Lab Sample ID: LCSD 680-275913/4
Matrix: Water
Analysis Batch: 275913

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	21.6		ug/L		108	70 - 130	4	30
Bromobenzene	20.0	21.7		ug/L		108	70 - 130	2	30
Bromoform	20.0	20.0		ug/L		100	70 - 130	4	30
Bromomethane	20.0	23.2		ug/L		116	70 - 130	14	30
Carbon tetrachloride	20.0	22.2		ug/L		111	70 - 130	4	30
Chlorobenzene	20.0	21.6		ug/L		108	70 - 130	4	30
Chlorodibromomethane	20.0	21.1		ug/L		105	70 - 130	4	30
Chloroethane	20.0	22.6		ug/L		113	70 - 130	1	30
Chloroform	20.0	21.5		ug/L		107	70 - 130	5	30
Chloromethane	20.0	21.1		ug/L		105	70 - 130	5	30
2-Chlorotoluene	20.0	21.7		ug/L		109	70 - 130	3	30
4-Chlorotoluene	20.0	22.7		ug/L		113	70 - 130	4	30
cis-1,2-Dichloroethene	20.0	20.8		ug/L		104	70 - 130	5	30
cis-1,3-Dichloropropene	20.0	21.5		ug/L		107	70 - 130	4	30
Dibromomethane	20.0	21.6		ug/L		108	70 - 130	7	30
1,2-Dichlorobenzene	20.0	23.0		ug/L		115	70 - 130	3	30
1,3-Dichlorobenzene	20.0	22.8		ug/L		114	70 - 130	3	30
1,4-Dichlorobenzene	20.0	20.2		ug/L		101	70 - 130	2	30
Dichlorobromomethane	20.0	22.0		ug/L		110	70 - 130	6	30
1,1-Dichloroethane	20.0	21.1		ug/L		105	70 - 130	5	30
1,2-Dichloroethane	20.0	21.3		ug/L		107	70 - 130	4	30
1,1-Dichloroethene	20.0	21.6		ug/L		108	70 - 130	5	30
1,2-Dichloropropane	20.0	21.2		ug/L		106	70 - 130	5	30
1,3-Dichloropropane	20.0	21.0		ug/L		105	70 - 130	5	30
2,2-Dichloropropane	20.0	21.4		ug/L		107	70 - 130	5	30
1,1-Dichloropropene	20.0	21.5		ug/L		108	70 - 130	4	30
Ethylbenzene	20.0	21.6		ug/L		108	70 - 130	4	30
Methylene Chloride	20.0	21.0		ug/L		105	70 - 130	5	30
Methyl tert-butyl ether	16.0	16.8		ug/L		105	70 - 130	6	30
m-Xylene & p-Xylene	40.0	44.1		ug/L		110	70 - 130	5	30
o-Xylene	20.0	21.9		ug/L		110	70 - 130	3	30
Styrene	20.0	22.9		ug/L		115	70 - 130	4	30
1,1,1,2-Tetrachloroethane	20.0	21.9		ug/L		109	70 - 130	4	30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-275913/4
Matrix: Water
Analysis Batch: 275913

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2,2-Tetrachloroethane	20.0	21.4		ug/L		107	70 - 130	5	30
Tetrachloroethene	20.0	21.2		ug/L		106	70 - 130	3	30
Toluene	20.0	21.3		ug/L		106	70 - 130	3	30
trans-1,2-Dichloroethene	20.0	20.6		ug/L		103	70 - 130	2	30
trans-1,3-Dichloropropene	20.0	21.8		ug/L		109	70 - 130	5	30
1,2,4-Trichlorobenzene	20.0	20.1		ug/L		101	70 - 130	0	30
1,1,1-Trichloroethane	20.0	21.7		ug/L		109	70 - 130	5	30
1,1,2-Trichloroethane	20.0	20.9		ug/L		104	70 - 130	5	30
Trichloroethene	20.0	21.2		ug/L		106	70 - 130	3	30
1,2,3-Trichloropropane	20.0	21.1		ug/L		105	70 - 130	4	30
Vinyl chloride	20.0	20.5		ug/L		103	70 - 130	7	30
Xylenes, Total	60.0	66.0		ug/L		110	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*70 - 130*
1,2-Dichlorobenzene-d4	*107*		*70 - 130*

Lab Sample ID: 680-89964-3 MS
Matrix: Water
Analysis Batch: 275913

Client Sample ID: VG2-96.5-050113
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.50		20.0	20.4		ug/L		102	70 - 130
Bromobenzene	<0.50		20.0	18.9		ug/L		95	70 - 130
Bromoform	<0.50		20.0	16.4		ug/L		82	70 - 130
Bromomethane	<1.0		20.0	22.2		ug/L		111	70 - 130
Carbon tetrachloride	<0.50		20.0	20.1		ug/L		101	70 - 130
Chlorobenzene	<0.50		20.0	19.3		ug/L		97	70 - 130
Chlorodibromomethane	<0.50		20.0	18.1		ug/L		91	70 - 130
Chloroethane	<1.0		20.0	20.6		ug/L		103	70 - 130
Chloroform	<0.50		20.0	19.8		ug/L		99	70 - 130
Chloromethane	<0.50		20.0	20.1		ug/L		101	70 - 130
2-Chlorotoluene	<0.50		20.0	18.1		ug/L		91	70 - 130
4-Chlorotoluene	<0.50		20.0	18.5		ug/L		92	70 - 130
cis-1,2-Dichloroethene	<0.50		20.0	19.4		ug/L		97	70 - 130
cis-1,3-Dichloropropene	<0.50		20.0	19.4		ug/L		97	70 - 130
Dibromomethane	<0.50		20.0	19.6		ug/L		98	70 - 130
1,2-Dichlorobenzene	<0.50		20.0	18.4		ug/L		92	70 - 130
1,3-Dichlorobenzene	<0.50		20.0	17.7		ug/L		89	70 - 130
1,4-Dichlorobenzene	<0.50		20.0	16.0		ug/L		80	70 - 130
Dichlorobromomethane	<0.50		20.0	19.3		ug/L		96	70 - 130
1,1-Dichloroethane	<0.50		20.0	20.2		ug/L		101	70 - 130
1,2-Dichloroethane	<0.50		20.0	19.8		ug/L		99	70 - 130
1,1-Dichloroethene	<0.50		20.0	20.7		ug/L		103	70 - 130
1,2-Dichloropropane	<0.50		20.0	19.2		ug/L		96	70 - 130
1,3-Dichloropropane	<0.50		20.0	19.2		ug/L		96	70 - 130
2,2-Dichloropropane	<0.50		20.0	16.6		ug/L		83	70 - 130
1,1-Dichloropropene	<0.50		20.0	19.8		ug/L		99	70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-89964-3 MS
Matrix: Water
Analysis Batch: 275913

Client Sample ID: VG2-96.5-050113
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.50		20.0	19.4		ug/L		97	70 - 130
Methylene Chloride	<0.50		20.0	19.5		ug/L		97	70 - 130
Methyl tert-butyl ether	5.1		16.0	20.6		ug/L		97	70 - 130
m-Xylene & p-Xylene	<0.50		40.0	38.8		ug/L		97	70 - 130
o-Xylene	<0.50		20.0	19.8		ug/L		99	70 - 130
Styrene	<0.50		20.0	20.0		ug/L		100	70 - 130
1,1,1,2-Tetrachloroethane	<0.50		20.0	20.2		ug/L		101	70 - 130
1,1,2,2-Tetrachloroethane	<0.50		20.0	19.3		ug/L		97	70 - 130
Tetrachloroethene	<0.50		20.0	18.2		ug/L		91	70 - 130
Toluene	5.0		20.0	28.6		ug/L		118	70 - 130
trans-1,2-Dichloroethene	<0.50		20.0	19.7		ug/L		98	70 - 130
trans-1,3-Dichloropropene	<0.50		20.0	18.6		ug/L		93	70 - 130
1,2,4-Trichlorobenzene	<0.50		20.0	10.8	F	ug/L		54	70 - 130
1,1,1-Trichloroethane	<0.50		20.0	20.1		ug/L		100	70 - 130
1,1,2-Trichloroethane	<0.50		20.0	19.0		ug/L		95	70 - 130
Trichloroethene	<0.50		20.0	19.6		ug/L		98	70 - 130
1,2,3-Trichloropropane	<0.50		20.0	19.0		ug/L		95	70 - 130
Vinyl chloride	<0.50		20.0	19.4		ug/L		97	70 - 130
Xylenes, Total	<0.50		60.0	58.6		ug/L		98	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*70 - 130*
1,2-Dichlorobenzene-d4	*90*		*70 - 130*

Lab Sample ID: 680-89964-3 MSD
Matrix: Water
Analysis Batch: 275913

Client Sample ID: VG2-96.5-050113
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.50		20.0	20.9		ug/L		105	70 - 130	2	30
Bromobenzene	<0.50		20.0	18.8		ug/L		94	70 - 130	1	30
Bromoform	<0.50		20.0	16.1		ug/L		81	70 - 130	2	30
Bromomethane	<1.0		20.0	22.6		ug/L		113	70 - 130	2	30
Carbon tetrachloride	<0.50		20.0	20.0		ug/L		100	70 - 130	1	30
Chlorobenzene	<0.50		20.0	19.5		ug/L		98	70 - 130	1	30
Chlorodibromomethane	<0.50		20.0	18.3		ug/L		91	70 - 130	1	30
Chloroethane	<1.0		20.0	21.2		ug/L		106	70 - 130	3	30
Chloroform	<0.50		20.0	20.2		ug/L		101	70 - 130	2	30
Chloromethane	<0.50		20.0	20.4		ug/L		102	70 - 130	1	30
2-Chlorotoluene	<0.50		20.0	18.5		ug/L		93	70 - 130	2	30
4-Chlorotoluene	<0.50		20.0	18.3		ug/L		92	70 - 130	1	30
cis-1,2-Dichloroethene	<0.50		20.0	19.8		ug/L		99	70 - 130	2	30
cis-1,3-Dichloropropene	<0.50		20.0	19.2		ug/L		96	70 - 130	1	30
Dibromomethane	<0.50		20.0	19.9		ug/L		100	70 - 130	2	30
1,2-Dichlorobenzene	<0.50		20.0	18.7		ug/L		94	70 - 130	2	30
1,3-Dichlorobenzene	<0.50		20.0	17.5		ug/L		88	70 - 130	1	30
1,4-Dichlorobenzene	<0.50		20.0	15.9		ug/L		79	70 - 130	1	30
Dichlorobromomethane	<0.50		20.0	19.4		ug/L		97	70 - 130	1	30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-89964-3 MSD
Matrix: Water
Analysis Batch: 275913

Client Sample ID: VG2-96.5-050113
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	<0.50		20.0	20.6		ug/L		103	70 - 130	2	30
1,2-Dichloroethane	<0.50		20.0	20.2		ug/L		101	70 - 130	2	30
1,1-Dichloroethene	<0.50		20.0	21.0		ug/L		105	70 - 130	2	30
1,2-Dichloropropane	<0.50		20.0	19.8		ug/L		99	70 - 130	3	30
1,3-Dichloropropane	<0.50		20.0	19.7		ug/L		98	70 - 130	3	30
2,2-Dichloropropane	<0.50		20.0	16.6		ug/L		83	70 - 130	0	30
1,1-Dichloropropene	<0.50		20.0	20.1		ug/L		101	70 - 130	1	30
Ethylbenzene	<0.50		20.0	19.5		ug/L		97	70 - 130	0	30
Methylene Chloride	<0.50		20.0	20.0		ug/L		100	70 - 130	3	30
Methyl tert-butyl ether	5.1		16.0	20.6		ug/L		97	70 - 130	0	30
m-Xylene & p-Xylene	<0.50		40.0	38.8		ug/L		97	70 - 130	0	30
o-Xylene	<0.50		20.0	19.9		ug/L		99	70 - 130	0	30
Styrene	<0.50		20.0	20.2		ug/L		101	70 - 130	1	30
1,1,1,2-Tetrachloroethane	<0.50		20.0	19.9		ug/L		100	70 - 130	1	30
1,1,2,2-Tetrachloroethane	<0.50		20.0	19.7		ug/L		99	70 - 130	2	30
Tetrachloroethene	<0.50		20.0	18.3		ug/L		91	70 - 130	0	30
Toluene	5.0		20.0	27.1		ug/L		111	70 - 130	5	30
trans-1,2-Dichloroethene	<0.50		20.0	20.0		ug/L		100	70 - 130	2	30
trans-1,3-Dichloropropene	<0.50		20.0	19.3		ug/L		96	70 - 130	3	30
1,2,4-Trichlorobenzene	<0.50		20.0	13.2	F	ug/L		66	70 - 130	20	30
1,1,1-Trichloroethane	<0.50		20.0	20.8		ug/L		104	70 - 130	4	30
1,1,2-Trichloroethane	<0.50		20.0	19.5		ug/L		97	70 - 130	3	30
Trichloroethene	<0.50		20.0	19.4		ug/L		97	70 - 130	1	30
1,2,3-Trichloropropane	<0.50		20.0	20.2		ug/L		101	70 - 130	6	30
Vinyl chloride	<0.50		20.0	20.1		ug/L		100	70 - 130	4	30
Xylenes, Total	<0.50		60.0	58.6		ug/L		98	70 - 130	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*70 - 130*
1,2-Dichlorobenzene-d4	*91*		*70 - 130*

QC Association Summary

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

GC/MS VOA

Analysis Batch: 275913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89964-1	VG2-75-043013	Total/NA	Water	524.2	
680-89964-2	VG2-85-043013	Total/NA	Water	524.2	
680-89964-3	VG2-96.5-050113	Total/NA	Water	524.2	
680-89964-3 MS	VG2-96.5-050113	Total/NA	Water	524.2	
680-89964-3 MSD	VG2-96.5-050113	Total/NA	Water	524.2	
680-89964-4	VG2-106.5-050113	Total/NA	Water	524.2	
680-89964-5	VG2-116.5-050113	Total/NA	Water	524.2	
680-89964-6	VG2-Dupe01-050113	Total/NA	Water	524.2	
680-89964-7	Trip Blank (Lot # 031813)	Total/NA	Water	524.2	
LCS 680-275913/3	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-275913/4	Lab Control Sample Dup	Total/NA	Water	524.2	
MB 680-275913/6	Method Blank	Total/NA	Water	524.2	

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: VG2-75-043013 — Lab Sample ID: 680-89964-1

Date Collected: 04/30/13 15:10 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 15:34	AGM	TAL SAV

Client Sample ID: VG2-85-043013 — Lab Sample ID: 680-89964-2

Date Collected: 04/30/13 17:15 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 16:28	AGM	TAL SAV

Client Sample ID: VG2-96.5-050113 — Lab Sample ID: 680-89964-3

Date Collected: 05/01/13 10:00 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 17:25	AGM	TAL SAV

Client Sample ID: VG2-106.5-050113 — Lab Sample ID: 680-89964-4

Date Collected: 05/01/13 11:32 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 18:01	AGM	TAL SAV

Client Sample ID: VG2-116.5-050113 — Lab Sample ID: 680-89964-5

Date Collected: 05/01/13 12:50 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 18:19	AGM	TAL SAV

Client Sample ID: VG2-Dupe01-050113 — Lab Sample ID: 680-89964-6

Date Collected: 05/01/13 10:00 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 19:13	AGM	TAL SAV

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Client Sample ID: Trip Blank (Lot # 031813)

Lab Sample ID: 680-89964-7

Date Collected: 05/01/13 00:00

Matrix: Water

Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	275913	05/07/13 15:07	AGM	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: Granville Solvents Site
PROJECT NO.:
PROJECT LOCATION (STATE): OH
TAL (LAB) PROJECT MANAGER: Lidya Gulizia
P.O. NUMBER:
CONTRACT NO.:
CLIENT (SITE) PM: Ron Roelker
CLIENT PHONE: 513-878-6880
CLIENT FAX:
CLIENT NAME: AECOM
CLIENT E-MAIL: Ron.Roelker@aecom.com
CLIENT ADDRESS: 4219 Malsbary Rd., Cincinnati, OH 45242
COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY
DATE DUE: 2 weeks
EXPEDITED REPORT DELIVERY (SURCHARGE)
DATE DUE:
NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	VOC 524.2 HSCOV HCL	VOC 524.2 HCL								REMARKS
4/30/13	1510	VG2-75-043013		X				X									*Perform straight
4/30/13	1715	VG2-85-043013		X				X									run analysis
5/1/13	1000	VG2-96.5-050113		X				X									first on all
	1132	VG2-106.5-050113		X				X									samples prior
	1250	VG2-116.5-050113		X				X									to any dilution*
	1000	VG2-96.5-050113 MS/MSD		X				X									
	—	VG2-Dupe01-050113		X				X									
	—	Trip Blank		X					X								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	5/2/13	1140	[signature]	5/2/13	14:40			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	5/2/13	1140						

LABORATORY USE ONLY

6800 9518 FES Cincy

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	5/3/13	0944	YES / NO		680-89964	0.2°C

TAL6240-680 (1008)

Login Sample Receipt Checklist

Client: AECOM, Inc.

Job Number: 680-89964-1

Login Number: 89964
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: AECOM, Inc.
Project/Site: Granville Solvents

TestAmerica Job ID: 680-89964-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	06-31-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13 *
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13 *
Kentucky	State Program	4	90084	12-31-12 *
Kentucky (UST)	State Program	4	18	03-31-13 *
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13 *
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13 *
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13 *
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

* Expired certification is currently pending renewal and is considered valid.