Aztech Technologies, Inc.

Supplemental Site Characterization Report

for the

Owego Heat Treat Inactive Hazardous Waste Disposal Site

1646 Marshland Road
Appalachin, Tioga County, New York

NYSDEC Site Number: 754011
NYSDEC Callout Number: 121757

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Prepared for:
New York State Department of Environmental Conservation
Division of Environmental Remediation
Region 7

REMEDIATION SOLUTIONS

ENVIRONMENTAL CONSULTING

DRILLING APPLICATIONS

5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383
f 518.885.5385

aztechtech.com

Table of Contents

List of Figures

List of Tables

Appendices

1.0 INTRODUCTION

On May 8, 2013, New York State Department of Environmental Conservation (NYSDEC) issued a callout (Callout No. 121757) to Aztech Technologies, Inc. (Aztech) for conducting a variety of investigatory tasks at the Owego Heat Treat site (the site), an inactive hazardous waste disposal site located at 1646 Marshland Road in Appalachin, Town of Owego, Tioga County, New York (**Figure 1**). The main focus of Aztech's work assignment was to supplement historic investigations previously conducted at the site.

Aztech completed their initial phase of investigations at the site in the spring and summer of 2013 and provided their findings to NYSDEC in a November 20, 2013 Site Characterization Report. In that report, Aztech recommended additional investigations in order to supplement the information available for the site. Completing these supplemental investigations would help NYSDEC to further clarify the existing environmental conditions at the site and conduct remedial system optimization. The results of these supplemental investigations are presented herein.

1.2 Site Background and Investigation/Remedial History

The site occupies approximately 37-acres on Marshland Road that is bounded by the Susquehanna River to the north; New York State Route 17 to the south, a golf course to the east and residential/agricultural property to the west. As shown in **Figure 2**, the site is bisected by Marshland Road. The northern portion of the site is primarily vacant land, with a residential structure in the area adjacent to Marshland Road. The southern portion of the site includes two (2) buildings and two (2) sheds associated with the former heat treating operation. The buildings and sheds associated with the former heat treating operation are generally located in the area adjacent to Marshland Road. Farther to the south, the property is undeveloped and a pond, approximately 2.0 acres in size, is present. The supplemental investigations reported herein were conducted on the southern portion of the site in the area adjacent to Marshland Road.

Owego Heat Treat conducted several phases of investigation and remediation at the site beginning in 1988. These include subsurface investigations, groundwater sampling events, soil vapor studies and operation of a groundwater extraction and treatment system. The findings of these investigations identified a 30 to 40 foot thick sequence of alluvial deposits composed of silt, sand and gravel underlying the site. Historically, the water table within this material is anywhere between 8.0 and 15 feet below grade and groundwater flow is to the north toward the Susquehanna River. The upper saturated unit is underlain by lower permeability silt and clay which serves as a confining layer for underlying saturated sand, gravel, and bedrock.

NYSDEC and Owego Heat Treat entered into an Order and Administrative Settlement (Index # R7-0803-13-01) in February, 2013. Pursuant to the order, NYSDEC will continue to take response actions at the Site to remedy the release of hazardous substances into the

environment. NYSDEC retained Aztech (under Callout No. 121757) to conduct an initial phase of investigation that included inventory and assessment of the existing site monitoring wells; verification of top of well casing elevations; groundwater sampling and, conducting a membrane interface probe (MIP) study (with groundwater sampling from selected MIP borings) within and around the suspected source area.

The primary findings of the initial investigations identified a suspected source area of soil impacted with tetrachloroethene (PCE), and the degradation by-products trichloroethene (TCE), dichloroethene (DCE) and vinyl chloride (VC), beneath former building B-2. Groundwater moving through that source area becomes impacted with dissolved concentrations of site-related volatile organic compounds (VOCs). Natural attenuation degrades the PCE into TCE, DCE and VC as groundwater movement continues generally toward the north, away from the source area. Evidence for natural attenuation is supported by the decreasing relative percentage of PCE to total VOCs in the groundwater with distance hydraulically downgradient from the source area.

2.0 SUPPLEMENTAL SCOPE OF WORK

The findings of the initial investigations identified certain data gaps that would need to be addressed in order to evaluate remedial options for the site. This included:

- Correlating the findings of the MIP investigation with respect to soil type and quality;
- Evaluating groundwater quality within the suspected source area; evaluating soil permeability via hydraulic conductivity testing of two (2) existing wells, and;
- Evaluating the infiltration capacity of soil within the suspected source area.

These data gaps were addressed by conducting a drilling program at selected locations within and around the suspected source area; soil sampling; installation of temporary monitoring/application wells; groundwater sampling; infiltration testing, and; hydraulic conductivity testing. Aztech completed the supplemental scope of work in February and March, 2014.

2.1 Drilling Program

The MIP investigation identified a central core of VOC-impacted soil surrounded by a "halo" of less VOC impacted soil. Based on the fact that soil samples were not obtained during the initial investigation to quantify the concentrations of VOCs within this source area soil, several soil borings were advanced at the eight (8) locations shown on **Figure 3**. The purpose of the soil borings was to characterize the composition of soil within and around the source area with respect to soil type and grain size, as well as to screen the soil headspace for total VOC concentration via a photoionization detector. One soil sample was also collected from each borehole, in the depth interval demonstrating the highest total VOC concentration based on headspace screening. Analytical results of these soil samples would help to identify the horizontal and vertical limits of soil quality with respect to the soil cleanup objectives in accordance with NYSDEC policy.

Soil boring locations were selected based on spatial distribution and their proximity to the suspected source area identified during the MIP study. The scope of the drilling program was to install soil borings at seven (7) locations with two (2) optional locations that would be included based on observations made during advancement of the initial seven (7) soil borings. Soil borings were advanced at a total of eight (8) locations.

The drilling program commenced on February 3, 2013 with the collection of continuous depth-discrete soil samples via the direct push method. The anticipated depth for the soil borings was estimated to be in the 30-to-35 foot depth range. This is because a resistant layer (originally thought to be the top of a glacial till) was encountered at this approximate depth throughout the site during the MIP investigation and, from previous investigation borings conducted on the north side of Marshland Road. However, the first soil boring installed (SB-1) was advanced to a total depth of 45 feet below grade. This borehole penetrated various mixtures of silt and fine grained sand, with occasional thin layers of fine-grained gravel. The borehole was terminated in a dense mixture of fine-grained sand and silt; glacial till was not encountered. Each of the other seven (7)

boreholes was advanced to a depth of 35 feet below grade based on observations made at each location.

2.1.1 Headspace Screening

Continuous, depth-discrete soil cores were retrieved from each drilled location. Each soil core was evaluated for composition, grain size, moisture content and visual/olfactory evidence of VOC impact. Headspace screening was conducted by placing a portion of each soil core into a re-sealable plastic bag and allowing it to equilibrate with atmospheric conditions. After allowing sufficient time for equilibration, the headspace inside of each bag was screened with a 10.6 electron-volt (eV) photoionization detector (PID) that was calibrated to a 100 part per million (ppm) isobutylene calibrant gas. Headspace screening, in general, indicated "background" total VOC concentrations that were less than 1.0 ppm. Total VOC concentrations generally ranged between 10 ppm and 70 ppm within impacted intervals. One interval (SB-9; 8'-10') indicated a total VOC concentration of 1,630 ppm via headspace screening. It is interesting to note that none of the intervals where headspace screening indicated total VOC concentrations in excess of 10 ppm (including the 1,630 ppm recorded in SB-9) were associated with visual or olfactory evidence of impact. Headspace screening results are included in the soil boring/well construction logs presented in **Appendix A**.

After completing the soil evaluation/headspace screening, one soil sample was collected from each borehole and submitted to Test America's analytical laboratory located in Buffalo, New York (NELAC – NY455) for analysis of the full target compound list of VOCs via method 8260. Samples were collected from the interval exhibiting the highest total VOC concentration determined via headspace screening. Soil samples were transferred into laboratory-supplied glassware, placed on ice and submitted to the lab under chain-of-custody protocols.

2.1.2 Monitoring/Application Well Installation

After completing the eight (8) soil borings, each location was evaluated for installation of temporary 1.0-inch inside diameter (ID) monitoring/application wells. Nested ("shallow" and "deep") wells were installed in proximity to borings SB-4 (SB-4S and SB-4D) and SB-9 (SB-9S and SB-9D), and single completions were installed in the area between SB-1 and SB-2 (SB-1 (TW)) and in proximity to SB-7 (SB-7 (TW)). The "deep" well completions specified for locations SB-1 (TW) and SB-4D were selected in order to target a zone of suspected high permeability based on the presence of a sand and gravel component noted at depth in the soil borings installed in proximity to those locations. This was to evaluate whether the sand and gravel were acting as a preferential flow pathway to carry impacted groundwater from the suspected source area. Each of the other wells installed during the drilling program was completed within material described as silt with "little" to "some" (i.e. 10 to 35 percent) clay.

Each well (except well SB-4D) was advanced using a sacrificial steel end-point driven by flush-threaded steel casing to a pre-determined depth. Well SB-4D was installed via 2-¼ inch ID hollow stem augers (equipped with a wooden end plug) advanced to a pre-determined depth. Well depths were determined via prior evaluation of the stratigraphy encountered at each location.

Wells were constructed to target an anticipated high permeability mix of silt, sand and gravel or, target a mixture of silt and fine-grained sand of anticipated low to moderate permeability. The mixture of silt and fine-grained sand of anticipated low to moderate permeability is the predominant soil present within the suspected source area.

Once the sacrificial steel end-point and casing were advanced to the appropriate depth, the casing was separated from the end-point and a 5.0 foot length of 1.0-inch ID PVC screen (no. 20-slot) and riser pipe was installed. The annular space around the well screen was backfilled with graded (no. 1) well sand to extend above the screened interval as the casing was incrementally withdrawn from the borehole. The graded well sand was subsequently sealed with bentonite that generally extends to within 18-inches of grade. The remainder of the borehole was topped-off with well sand to grade. Each well was finished approximately 3.0 feet above grade with an expandable plug and later developed by over-pumping to remove particulates. Well SB-4D was installed in a similar fashion with the exception that hollow stem augers were used to advance the borehole to the appropriate depth. The specifications for the newly installed monitoring/application wells are included in **Table 1**; stratigraphic and construction details are included in the attached soil boring/well construction logs (Appendix A).

Table 1
Temporary Monitoring/Application Well Specifications

Well ID	Soil Type	Total Depth	Screen Interval	Sand Pack Interval	Bentonite Seal
SB-1 (TW)	SILT/SAND/GRAVEL	30’	25’ – 30’	24’ – 30’	1.5’ – 24’
SB-4S	SILT, little/some clay	21’	16’ – 21’	14’ – 21’	0.5’ – 14’
SB-4D	SILT/SAND/GRAVEL	30’	25’ – 30’	24’ – 30’	9.0’ – 24’
SB-7 (TW)	SILT, little sand & clay	17’	12’ – 17’	11’ – 17’	1.0’ – 11’
SB-9S	SILT, little sand & clay	11’	6.0’ – 11’	5.0’ – 11’	1.5’ – 5.0’
SB-9D	SILT, trace/some clay	20’	15’ – 20’	14’ – 20’	1.5’ – 14’

NOTES:
All depth intervals given in feet below grade.

Soil cuttings generated during the drilling program (and water generated during subsequent well development/purging activities) were stored on-site in 55-gallon drums pending disposal by Op-Tech Environmental Services, Inc. under contract with NYSDEC.

2.2 Soil Analytical Results

As indicated previously, one soil sample was collected from each borehole in the interval exhibiting the highest total VOC concentration based on headspace screening. The predominant compounds identified in the soil samples are PCE, TCE, VC and, the cis-1,2 and trans-1,2 isomers of DCE.

The soil analytical results, which are summarized on **Table 2**, indicate that the sample from SB-5 (13’ – 14’) was the only sample that did not contain VOCs at concentrations in excess of any of

the Soil Cleanup Objectives (SCOs) as defined by NYSDEC in 6 NYCRR Part 375-6.8. The most impacted sample (SB-4; 18'-20') contained PCE at a concentration of 140 milligrams per kilogram (mg/kg). This concentration is in excess of the 1.3 mg/kg Unrestricted SCO but, below the 150 mg/kg Commercial SCO. Five (5) of the six (6) other samples (SB-1: 29'-30'; SB-2: 29'-30', SB-3: 20'; SB-7: 14'-15' & SB-9: 8'-10') were also in excess of the Unrestricted SCO for PCE. Additional compounds were also present in these samples at concentrations in excess of the Unrestricted SCOs. Laboratory analytical reports are included in **Appendix B**.

Table 2
Summary of Soil Analytical Results
February, 2014

Compound		PCE	TCE	DCE (Total)	VC	Other	Total
SCO	U	1.3	0.47	0.19	0.020	NA	NA
	R	5.5	10	50	0.21	NA	NA
	RR	19	21	100	0.90	NA	NA
	Com	150	200	500	13	NA	NA
	Ind	300	400	1,000	27	NA	NA
SB-1 (29' – 30')		46	6.7	0.98	0.003	0.01	53.7
SB-2 (29' – 30')		9.5	1.3	0.17	0.002	0.02	11
SB-3 (20')		23	0.11	0.08		0.01	23.2
SB-4 (18' – 20')		140	3.5	0.13		0.02	143.6
SB-5 (13' – 14')		0.002				0.01	0.01
SB-7 (14' – 15')		11	0.10	3.41	0.005	0.02	14.5
SB-8 (19' – 20')		0.02	1.9	2.5		0.03	4.5
SB-9 (8' – 10')		56	0.03	0.04			56.1

Notes:
SCO = Soil Cleanup Objective as defined by 6 NYCRR Part 375-6.8
U = Unrestricted Use
R = Residential Use
RR = Restricted Residential Use
Com = Commercial Use
Ind = Industrial Use
Concentrations given in milligrams per kilogram (mg/kg)
Analysis for the Full list of VOCs via EPA Method 8260
DCE = Combined total of the cis-1,2 & trans-1,2 isomers
NA = Not Applicable
Blank space indicates that compound was not detected

The distribution of VOC concentrations in soil, shown on **Figure 4**, indicates an area of VOC-impacted soil centered about boring SB-4. This area extends radially in all directions from SB-4. It is important to note that the information presented on Figure 4 is a two-dimensional representation of samples collected from a variety of depths, ranging from 8.0-to-10 feet below grade at one location (SB-9) to 29-to-30 feet below grade at two locations (SB-1 and SB-2).

2.3 Groundwater Sampling and Analytical Results

Groundwater samples were collected from each temporary monitoring/application well (and existing monitoring well MW-2) on March 10, 2014. This date is approximately one month after completing well installation and development. Groundwater sampling commenced by first removing the expandable plugs from each of the wells and allowing water levels within the wells to equilibrate with atmospheric conditions. Depth to water measurements (approximately 14-feet below grade) were subsequently obtained and the volume of water stored in the well casing was

determined. Three (3) well volumes were evacuated using dedicated, disposable bailers; purge water was stored on-site in a 55-gallon drum pending disposal. The wells were allowed to recharge prior to sample collection. Groundwater samples were transferred into laboratory supplied sampling containers, placed on ice, and delivered to Test America where they were analyzed for the full list of VOCs via analytical method 8260. After completing the groundwater sampling, water quality field parameters (including temperature, specific conductance (SC), pH, dissolved oxygen (DO) and, oxidation-reduction potential (ORP or eH)) were collected from selected wells.

The analytical results for the seven (7) groundwater samples collected on March 10, 2014 are summarized below on **Table 3**. As indicated, PCE was identified in each sample at concentrations that exceed the 5.0 microgram per liter (ug/l) standard for Class GA groundwater (as defined by the June, 1998 reissuance of the NYSDEC Technical and Operational Guidance Series (TOGS) Memorandum 1.1.1). In fact, each of the groundwater samples collected during the March 10, 2014 sampling event also contained concentrations of TCE, DCE and/or VC in excess of their respective groundwater standard.

Table 3
Summary of Groundwater Analytical Results
March 10, 2014

Compound	PCE	TCE	DCE	VC	Other	Total
GW STND	5.0	5.0	5.0	2.0	NA	NA
MW-2	**6,500**	**3,900**	**937**	**41**	137	11,515
SB-1 (TW)	**150,000**	**5,000**	**1,332**	**73**	93	156,498
SB-4S	**100,000**	**2,500**	**12**	**20**	27	102,559
SB-4D	**110,000**	**6,000**	**3,225**	**210**	46	119,481
SB-7	**3,500**	**570**	**3,928**	**35**	43	8,041
SB-9S	**46,000**	**45**	**44**	< 1.0	32	46,121
SB-9D	**16,000**	**150**	**123**	**17**	65	16,355

Notes:
Concentrations in micrograms per liter (ug/l)
Concentrations in Bold exceed Groundwater Standard
Groundwater Standard from NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1
Samples collected March 10, 2014.

It is also interesting to note that the historic groundwater analytical results for well MW-2 (**Table 4**), which typically contains the highest dissolved total VOC concentrations in groundwater on the site, indicate that the March 10, 2014 total VOC concentrations for well MW-2 (11,515 ug/l) are just below the historic high total VOC concentration for this well (11,600 ug/l). Well MW-2, which screens an interval from 15-feet to 30-feet below grade, is located approximately 50 feet hydraulically downgradient from the suspected source area. By comparison, the total VOC concentrations identified in wells SB-1 (TW), SB-4S and, SB-4D are an order-of-magnitude higher than those identified in well MW-2. Wells SB-4S and SB-4D are located within the suspected source area; well SB-1 (TW) is located between well MW-2 and the suspected source area. These data, in combination with the soil analytical results presented herein, verify that the source for the VOCs identified in groundwater is located within the area in proximity to boring SB-4.

Table 4
Summary of Historic Groundwater Analytical Results
Well MW-2

Compound	PCE	TCE	DCE	VC	Other	Total
GW STND	5.0	5.0	5.0	2.0	NA	NA
12/14/06						2,365
3/15/07						31
6/22/07						63
9/17/07						825
12/31/07						223
3/24/08						31
9/29/28						41
3/6/09	4.6	**16**	**70**	< 1.0	0.4	91
3/23/11	**5,100**	**1,300**	< 500	< 500	ND	6,400
6/25/12	**3,600**	**1,100**	< 500	< 500	ND	4,700
9/17/12	**7,700**	**2,700**	**1,200**	< 200	ND	11,600
06/05/13	**200**	**260**	**240**	**4.0**	5.0	709
3/10/14	**6,500**	**3,900**	**937**	**41**	137	11,515

Notes:
Concentrations in micrograms per liter (ug/l)
Groundwater Standard from NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1
Concentrations in Bold exceed Groundwater Standard
Blank Spaces indicate that this data was not available
ND indicates that "other" compounds were not detected

The distribution of total VOCs in groundwater, shown on **Figure 5**, indicates a northwesterly trending area of impacted groundwater extending from the suspected source area and into the area between Building B-1 and Building B-5. A comparison of the VOC distribution in groundwater (Figure 5) with the VOC distribution in soil (Figure 4) indicates that the highest concentrations in both media are in proximity to SB-4 and decline toward the east and south. Additional discussion of groundwater quality as it relates to possible preferential flow pathways via gravel enriched intervals is provided in Section 2.5.2 of this report.

The laboratory analytical report for the groundwater samples collected on March 10, 2014 is included in Appendix B; a summary of historic analytical results that includes all available results is included in **Appendix C**.

2.4 Hydraulic Conductivity and Infiltration Testing

Two variations of testing were conducted at the site in order to evaluate the capacity of the soil to accept the application of various water-based reagents for the purpose of boosting natural biological activity or, for implementing in-situ chemical oxidation (ISCO). This testing includes: hydraulic conductivity testing of two (2) existing wells, and; evaluating the infiltration capacity of soil within the suspected source area via the six (6) newly installed 1.0-inch ID micro-wells.

2.4.1 Hydraulic Conductivity Testing

Hydraulic conductivity tests were conducted on existing wells MW-1 and MW-2. These wells were selected for testing based primarily on their depth of completion (approximately 23 feet and 29 feet below grade, respectively, which is similar to the completion depths for the newly

installed application/monitoring wells) and, the material in which they are completed. Well MW-1 is located in the area south of the former heat treating operation and north of the pond. The soil boring log describing the soil encountered at this location is not available at this time. As such, the results of the testing will help to evaluate the nature of the materials in which well MW-1 is completed. Likewise, the soil boring log describing the soil in which well MW-2 is completed is also not available. However, the soil encountered in SB-1 and SB-2 suggests that the soil in proximity to well MW-2 is primarily silt, with "little" to "some" clay.

The testing was conducted by equipping both wells with pressure transducers set approximately 10 feet below the static water level. After setting-up and activating the pressure transducers, a solid slug was introduced into each well in order to displace the water level. The pressure transducers were programmed to collect depth to water measurements every 2.0 seconds during the testing. Three (3) different slugs, constructed to displace 1.0 foot, 1.5 feet and 2.0 feet of water-column within a 2.0-inch ID well casing, were used for displacement. Rising head and falling head tests were conducted via each displacement slug.

Once the hydraulic conductivity testing was completed, the data collected by the pressure transducers was downloaded into an Excel spreadsheet file. Rising head and falling head data were normalized in order to evaluate data quality. A subset of the data was subsequently prepared and used as input into the modeling program Aqtesolv for Windows (Version 4.5) where the data were analyzed via the Bouwer-Rice method. A total of eight (8) tests were conducted on each well: four (4) falling head tests and four (4) rising head tests.

The results of the hydraulic conductivity testing, which are summarized below in **Table 5**, suggest that well MW-1 is completed within sand and gravel. This is because the average hydraulic conductivity values determined via the testing of that well (1.2×10^{-2} centimeters per second (cm/sec) or 34 feet per day (ft/d)) are consistent with published values for sand and gravel. The average hydraulic conductivity value determined via testing of well MW-2 is 4.25×10^{-4} cm/sec (1.2 ft/d), which is consistent with published hydraulic conductivity values for mixtures containing sand, silt and clay. Data plots for the hydraulic conductivity testing are included in **Appendix D**.

Table 5
Summary of Hydraulic Conductivity Testing

Well/Test ID	Formation	Falling Head (cm/sec)	Rising Head (cm/sec)	Average (cm/sec)	Average (ft/day)
MW-1 (Slug-1)	SAND & GRAVEL (assumed)	0.01323	0.01467	0.012042	34.14
MW-1 (Slug-2)		0.01185	0.01435		
MW-1 (Slug-3, T-1)		0.0115	0.0138		
MW-1 (Slug-3, T-2)		0.008482	0.008454		
		(cm/sec)	**(cm/sec)**	**(cm/sec)**	**(ft/day)**
MW-2 (Slug-1)	SILT, "little" to "some" clay	0.000464	0.0003486	0.000425	1.20
MW-2 (Slug-2)		0.0004524	0.0002091		
MW-2 (Slug-3, T-1)		0.0006214	0.000437		
MW-2 (Slug-3, T-2)		0.0004797	0.000387		

2.4.2 Infiltration Testing

The first step of the infiltration testing was to install pressure transducers in wells MW-2 and temporary monitoring/application well SB-4S. The pressure transducers were programmed to record depth to water measurements every minute for the duration of the testing. Data collection via the transducers commenced at approximately 9:00 AM on Tuesday, March 11, 2014 and was terminated the following morning at approximately 7:30 AM. This period of time would be sufficient to evaluate the amount of time required for water levels to return to static conditions after the testing was completed and, to evaluate trends in water levels that may be attributed to changing barometric conditions.

Infiltration tests were conducted on five (5) of the six (6) 1.0-inch ID monitoring/application wells installed within and around the suspected source area. The infiltration tests were conducted by pumping chlorine-free potable water into the tested wells at various flow rates and pressures while also recording depth to water measurements in nearby wells. The testing (which is summarized below in **Table 6**) commenced with well SB-9D and finished with well SB-1 (TW). In general, each well was tested for a period of approximately one hour.

Table 6
Summary of Infiltration Testing

Well/Step	Time		Flow Rate	Pressure	Volume
	Start	End	(GPM)	(PSI)	(Gallons)
SB-9D					
Step-1:	9:26	10:00	1.65	6.0	146
Step-2:	10:00	10:30	3.0	4.0	
SB-7 (TW)					
Step-1:	10:46	11:20	1.65	0.0	176
Step-2:	11:20	12:00	3.0	0.0	
SB-9S					
Step-1:	13:42	14:12	1.65	0.0	143
Step-2:	14:12	14:43	3.0	0.0	
SB-4D					
Step-1:	16:05	16:25	1.75	5.0	
Step-2:	16:25	16:40	3.0	10	123
Step-3:	16:40	16:49	4.75	12	
SB-1 (TW)					
Step-1:	16:50	17:02	5.0	0.0	60

Notes:
Testing conducted on March 11, 2014
PSI = Pounds per square-inch
GPM = Gallons per minute

During the course of conducting the various infiltration tests, depth to water measurements were collected from nearby monitoring/application wells using an electronic water level tape. Continuous depth to water measurements were also obtained in wells SB-4S and MW-2 every minute for the duration of the infiltration testing. The data collected during the infiltration testing is tabulated and included in **Appendix E**; some notable observations are as follows:

- During the testing of well SB-9D, water levels rose as much as 1.32 feet in well SB-9S, located approximately seven (7) feet away and 0.33 feet in well SB-7 (TW), located approximately 30 feet away. Water levels continued to rise in well SB-9S during the subsequent testing of well SB-7 (TW).
- During the testing of well SB-4D, water levels rose as much as 6.66 feet in well SB-4S, located approximately seven (7) feet away, and continued to rise to 7.07 feet during the subsequent testing of SB-1 (TW). Rising water levels were also noted in well SB-1 (TW), located approximately 40 feet away, and SB-7 (TW, located approximately 55 feet away), during the testing of well SB-4D.
- Rising water levels were noted in well MW-2 during the infiltration testing conducted at wells SB-9D, SB-7 (TW), SB-9S, SB-4D and SB-1 (TW). These wells are located as much as 100 feet from well MW-2.

2.4.3 Guar Testing

During the infiltration testing, an additional test was conducted in order to evaluate whether the soil in which the monitoring/application wells were completed would accept liquids of variable viscosities. This is because several commercially available chemical and/or bioremedial reagents are delivered to the treated formation in a fluid matrix of higher viscosity than water or, water/emulsified vegetable oil mixtures. One possible remedial alternative for the Owego Heat Treat site is the application of a mixture containing water, emulsified vegetable oil and zero-valent iron. This mixture also contains a percentage of guar gum, a natural, biodegradable food product that is used as a thickening agent that helps to keep the material homogenized prior to application.

The initial guar testing was conducted by mixing one (1) pound of dry powdered guar with 10 gallons of chlorine-free water. This “full strength” mixture was subsequently applied to well SB-9D using a small, 1.0-inch diameter centrifugal pump; the same apparatus used for conducting the previously described infiltration tests. Approximately 2.5 gallons of the mixture was pumped into the well at a delivery pressure of 5.0 pounds per square inch (psi) before any discernible flow of the mixture ceased. This volume is approximately equivalent to the volume of the well casing and sand pack, and the centrifugal pump cavity and hoses. Additionally, the 5.0 psi was the maximum pressure that could be developed by that pump when handling a material of that thickness and viscosity. The test was subsequently terminated when flow into the well/formation ceased. Aztech believes that the pump used to deliver the guar mixture to the well was not able to develop a sufficient pressure to be able to force the “full strength” mixture into the formation.

The remaining volume of guar mixture (approximately 7.5 gallons) was subsequently diluted with an additional 7.5 gallons of chlorine-free potable water. This resulted in a “50-percent” mixture that was notably thinner and less viscous. This mixture was added to the formation via

well SB-9S at a delivery pressure that fluctuated between 10 psi and 15 psi. The formation readily accepted the full 15 gallons of the "50-percent" mix over an approximate two (2) minute duration. After completing the guar application, the formation freely accepted 15 gallons of chlorine-free water in order to flush the "50-percent" mix from the well.

After flushing the "50-percent" mixture from well SB-9S, the "full strength" mixture was flushed from well SB-9D and into the formation. The pump was primed with water and connected to well SB-9D. The pump was activated and cavitated for approximately 15 seconds while building pressure to approximately 20 psi on the wellhead. Once the pressure built, the formation freely accepted the "full strength" guar mixture remaining in the well followed by the approximate 15 gallons of chlorine-free water.

2.5 Discussion

The goals of the supplemental investigations reported herein are to address site characterization data gaps that would help to evaluate remedial options for the site. This includes correlating the findings of the MIP investigation with respect to soil type and quality; evaluating groundwater quality within the suspected source area; evaluating soil permeability via hydraulic conductivity testing and testing the infiltration capacity of soil within the suspected source area.

2.5.1 Correlating Soil Type and Quality with the MIP Investigation

The MIP investigation conducted in July, 2013, included advancement of MIP tooling at several locations within and around the suspected source area. The MIP includes a heated probe that is advanced into the subsurface that volatilizes compounds contained by the soil and transfers them through a semi-permeable membrane into an inert nitrogen carrier gas. The carrier gas is subsequently analyzed via a variety of detectors including a PID, a Flame Ionization Detector (FID) and, an Electron Capture Detector (ECD). The PID ionizes most aromatics such as benzene, toluene, xylene via ultra-violet light; the FID utilizes a hydrogen flame to combust VOCs and responds to any molecule with a carbon-hydrogen bond. The ECD utilizes radioactive Nickel-63 for ionization and is extremely sensitive for the detection of common chlorinated compounds such as PCE and TCE. The MIP tooling also includes a component that can measure the electrical conductivity (EC) of the soil through which it is driven. The electrical conductivity of soil can give an indication of its composition. This is because clay-rich soil typically has a relatively high electrical conductivity whereas sand and gravel soils have a relatively low electrical conductivity.

During the MIP investigation, several borings were advanced that identified discrete vertical zones where elevated PID and FID responses were noted. In most cases, the ECD response (representing chlorinated solvents such as PCE and/or TCE) indicated sensor saturation in the depth interval between 10 feet and 15 feet below grade that continued down to the total depth of the borehole (typically between 30 feet and 35 feet below grade). The eight (8) soil borings,

advanced in February, 2014 as part of the supplemental site characterization, were spatially located so that the laboratory analysis could be correlated with both headspace screening and, the ECD results from the MIP study.

Table 7 presents a summary that compares headspace screening during the drilling program with the total VOC concentrations of corresponding soil samples. Observations during the drilling program indicate that none of the soil samples submitted to the laboratory for analysis exhibited any distinguishing color changes or odors. However, soil samples collected from the intervals exhibiting elevated total VOC concentrations (based on headspace screening) did indicate concentrations of selected VOCs in excess of regulatory standards. Additionally, a comparison of the headspace screening noted in the soil boring/well completion logs with the PID responses in the corresponding MIP logs (included in Appendix A) indicates a good correlation between the MIP log and, the observations and logging conducted by the geologist during the drilling program.

Table 7
Summary of Headspace Screening with Soil Analytical Results
February, 2014 Drilling Program

Soil Sample ID	Borehole Depth	Headspace PID at Base	Headspace PID at Sampled Interval	Total VOC Concentration	Nearest MIP Boring
SB-1 (29' – 30')	45	0.2	60	53.7	MIP-17
SB-2 (29' – 30')	35	0.1	67	11	MIP-5, MIP-16, MIP-17
SB-3 (20')	35	1.5	9.0	23.2	MIP-16
SB-4 (18' – 20')	35	0.4	57	143.6	MIP-12
SB-5 (13' – 14')	35	0.2	0.5	0.01	MIP-3
SB-7 (14' – 15')	35	0.0	17	14.5	MIP-7
SB-8 (19' – 20')	35	0.2	3.7	4.5	MIP-13, MIP-14
SB-9 (8' – 10')	35	0.2	1,630	56.1	MIP-2

Notes:
Borehole depth in feet below grade
Headspace PID = Total VOC concentration determined via headspace screening in parts per million (PPM)
Total VOC concentration in milligrams per kilogram (ug/kg) as determined via laboratory analysis.

It is also interesting to note that both the PID screening via the July, 2013 MIP investigation and the headspace screening during the February, 2014 drilling program correlate the top and bottom of an interval of elevated total VOC concentrations in each borehole (except SB-5 during the February, 2014 drilling program). In fact, in February, 2014, the headspace screening at the base of each borehole was typically 0.2 ppm and did not exceed 1.5 ppm. The headspace total VOC concentration of the soil sample collected from SB-5 (13'–14') was 0.5 ppm. This headspace concentration is consistent with the headspace concentrations recorded at the base of the other soil borings advanced as part of the supplemental site characterization. The total VOC concentration in that sample (SB-5: 13'-14') was 0.010 mg/kg based on laboratory analysis. The concentrations of the compounds identified were well within the SCO for Unrestricted use as defined by NYSDEC in 6 NYCRR Part 375-6.8. This suggests that where headspace screening indicates diminished or background concentrations of total VOCs, it is likely that the degree of soil impact is negligible. This supports the idea that the elevated ECD

response noted at several locations during the MIP investigation may reflect residual saturation of the detector (after the detector had been passed through an impacted interval) rather than impacts to soil in excess of regulatory limits for the full depth of the borehole. As such, the bottom of the impacted zone, as identified via the ECD during the MIP investigation, is not considered reliable.

2.5.1.1 Distribution of Impacted Soil

The analytical results of the soil samples collected at various depths within and around the suspected source area indicate that regulatory standards were exceeded in seven (7) of the eight (8) samples analyzed. As such, the distribution of VOC concentrations in soil (presented previously in Figure 4) does not define the lateral extent of soil impacted by VOC concentrations in excess of regulatory standards to the north, south and west of the suspected source area. It is, however, important to note that none of the VOCs identified in the soil samples were present at concentrations in excess of the SCO's established for Commercial use by 6 NYCRR Part 375-6.8. As such, it appears that the current soil quality is consistent with commercial (non-residential) use of the property.

Based on the fact that this is a commercial/industrial property located within a residential area, NYSDEC may wish to establish cleanup goals for site soil that are protective of groundwater and are more stringent than the SCOs established for Commercial use by 6 NYCRR Part 375-6.8 (i.e. Unrestricted SCOs). This is because the impacted soil present on the site acts as a source of VOCs that are dissolving into groundwater, which is mobile and able to migrate off of the site. In fact, site related VOCs have been identified in excess of groundwater standards in groundwater samples obtained from well MW-10, located on the north side of Marshland Road and approximately 500 feet hydraulically downgradient of the suspected source area. On that basis, additional soil characterization and sampling would be beneficial to further evaluate the horizontal and vertical extent of VOC-impacted soil extending from the suspected source area. This information will help to further document current conditions and, to develop remedial alternatives for the site.

2.5.2 Groundwater Quality within the Suspected Source Area

The supplemental site characterization reported herein included installation of six (6) monitoring/application wells within, and in proximity to the suspected source area. Prior to the supplemental investigations reported herein, the nearest monitoring wells to the suspected source area were well MW-6, located adjacent to the suspected source area, and well MW-2, located approximately 50 feet hydraulically downgradient from the suspected source area.

Historically, well MW-2 has typically contained the highest dissolved total VOC concentrations in groundwater on the site. During the March 10, 2014 groundwater sampling, well MW-2 indicated a total VOC concentration of 11,515 ug/l, which is just below the recent historic high total VOC concentration for this well (11,600 ug/l). During the same sampling event, three (3) of the newly

installed wells (SB-1 (TW), SB-4S and SB-4D) identified total VOCs at concentrations approximately an order of magnitude higher than was identified in well MW-2. These include total VOC concentrations of 119,481 ug/l (SB-1 (TW)), 102,559 ug/l (SB-4S), and; 119,481 ug/l (SB-4D). The total VOC concentrations identified in wells SB-9S and SB-9D (46,121 ug/l and 16,355 ug/l, respectively) were also identified in excess of those identified in well MW-2.

The distribution of total VOCs in groundwater on March 10, 2014 (presented previously in Figure 5) indicates a northwesterly trending area of impacted groundwater extending from the suspected source area into the area between Building B-1 and Building B-5. It is important to note that the total VOC distribution depicted on Figure 5 includes 1,000 ug/l and 10,000 ug/l isoconcentration contours that are open-ended to the northwest; the 100,000 ug/l isoconcentration contour is also an inferred closed contour in that direction. Based on a lack of groundwater quality data in the "on-site" area northwest of the suspected source area, NYSDEC may wish to consider installation of additional groundwater monitoring locations in the lawn area north of Building B-5. NYSDEC may also wish to consider installation of additional up gradient and cross-gradient monitoring wells peripheral to the northeast, east and or south sides of the suspected source area.

2.5.3 Preferential Flow Pathways

Additional consideration was also given to the possibility that the gravel-enriched intervals encountered in soil boring locations SB-1, SB-2 and SB-4 (generally, in the 28.5 foot to 31.5 foot depth range) were acting as a preferential flow pathway to carry impacted groundwater from the suspected source area. Based on the total VOC concentration identified in the groundwater sample from well SB-1 (TW) during the March 10, 2014 sampling event (156,498 ug/l), and its position outside of the suspected source area, it does appear that that the gravel enriched interval intercepted by this well may be acting as a preferential flow pathway. However, it should be noted that well SB-1 (TW) was not nested with a shallow counterpart so that groundwater quality can be compared between samples collected from the gravelly interval with that of the shallower, more silty zone. However, nearby well MW-2 (which is likely screened above the gravelly interval intercepted by well SB-1 (TW)) can serve this purpose. The total VOC concentration for well MW-2 (11,515 ug/l) is an approximate order of magnitude lower than that of well SB-1 (TW) on the same date.

Observations made during the drilling program and the total VOC concentrations identified in wells SB-1 (TW), SB-4D, SB-4S and MW-2 (Table 3) suggest that preferential flow pathways are present beneath the site. NYSDEC may wish to consider additional investigation in order to further evaluate their location and influence on groundwater movement and quality.

2.5.4 Hydraulic Conductivity and Infiltration Testing

The hydraulic conductivity and infiltration testing conducted at the site in March, 2014 reveal that the soil within the suspected source area will readily accept application of chemical or bioremedial reagents of variable viscosities. The infiltration testing demonstrated that application of low

viscosity reagents, such as aqueous mixtures of emulsified vegetable oil or other water-based mixtures of chemical reagents, could be applied to the subsurface at rates between 2.0 gallons per minute (gpm) and 3.0 gpm with application pressures ranging from 0.0 psi to approximately 10 psi. Additionally, the guar testing demonstrated that the "50-percent" guar mixture (0.5 pounds of dry powdered guar to 10 gallons of chlorine free water) was readily accepted by the soil at a delivery pressure between 10 psi and 15 psi.

Observations made in nearby wells during the infiltration testing indicate that a significant rise in the water table was recorded in wells SB-9S and SB-4S during the testing of wells SB-9D and SB-4D, respectively. In fact, over 7.0 feet of rise was recorded in well SB-4S during the testing of SB-4D. Additionally, rising water levels were noted in several wells throughout the testing. In several instances, these observations can be correlated with testing conducted in wells more than 50 feet away. On that basis, Aztech believes that any remedial approach selected for this site that involves application of chemical or bioremedial reagents can be accomplished using an application well spacing of 30 feet. This well spacing conservatively estimates a horizontal radius of influence of 15 feet for each application well.

3.0 SUMMARY AND CONCLUSIONS

The purpose for completing the supplemental investigations reported herein was to further characterize the site in order to help NYSDEC evaluate the existing environmental conditions to conduct remedial system optimization. The investigations conducted during the supplemental site characterization included a drilling program at selected locations within and around the suspected source area; soil sampling; installation of temporary monitoring/application wells; groundwater sampling; infiltration testing, and; hydraulic conductivity testing. The findings of these investigations are summarized as follows:

- A layer of glacial till was anticipated between 30 feet and 35 feet below grade during the drilling program. That glacial till layer was not encountered during the supplemental site characterization.
- The soil type encountered during the drilling program was primarily silt with “little” to “some” (i.e. 10 to 35 percent) clay. At two (2) locations, a zone of suspected high permeability (based on the presence of a sand and gravel component noted at depth) was also encountered.
- Soil analytical results suggest that where headspace screening indicates diminished or background concentrations of total VOCs (i.e. 0.5 ppm via PID), it is likely that the degree of soil impact is negligible.
- The soil analytical results suggesting negligible VOC impact (based on headspace screening) supports the idea that the elevated ECD response during the MIP investigation (noted at several locations) may reflect residual saturation of the detector (after the detector has been passed through an impacted interval) rather than impacts to soil in excess of regulatory limits for the full depth of the borehole.
- Where headspace screening indicates total VOC concentrations are above background, laboratory analytical results suggest that VOC concentrations in soil are in excess of SCOs for Unrestricted use (depending on location and depth) as defined by NYSDEC in 6 NYCRR Part 375-6.8.
- The analytical results of all the soil samples collected as part of the supplemental site characterization were within the SCOs for Commercial use.
- The distribution of VOCs in soil does not define the extent of soil impacted in excess of regulatory standards to the north, south and west of the suspected source area.
- The highest dissolved total VOC concentrations in groundwater have historically been identified in well MW-2, located approximately 50 feet hydraulically downgradient of the suspected source area. On March 10, 2014, the concentration in this well was 11,515 ug/l.
- Monitoring wells installed within the suspected source area, and sampled on March 10, 2014 during the supplemental site characterization, indicated total VOC concentrations as high as

119,481 ug/l (SB-4D). Well SB-1 (TW), located between the suspected source area and well MW-2, indicated a total VOC concentration of 156,498 ug/l.

- Groundwater, which is mobile and able to migrate off of the site, is passing through the suspected source area and appears to be dissolving site-related VOCs from the source area soil.
- Observations made during the drilling program and the total VOC concentrations identified in wells SB-1 (TW), SB-4D, SB-4S and MW-2 suggest that preferential flow pathways are present beneath the site.
- VOC-impacted groundwater has been identified in excess of groundwater standards in samples obtained from well MW-10, located on the north side of Marshland Road and approximately 500 feet hydraulically downgradient of the suspected source area.
- The hydraulic conductivity and infiltration testing conducted at the site in March, 2014 reveal that the soil within the suspected source area will readily accept application of chemical and/or bioremedial reagents of various viscosities.
- Infiltration testing demonstrated that application of low viscosity reagents, such as aqueous mixtures of emulsified vegetable oil or other water-based mixtures of chemical reagents, could be applied to the subsurface at rates between 2.0 gpm and 3.0 gpm with application pressures ranging from 0.0 psi to approximately 10 psi.
- Guar testing demonstrated that a mixture in the ratio of 0.5 pounds of dry powdered guar to 10 gallons of water will be readily accepted by the soil at a delivery pressure between 10 psi and 15 psi.
- Observations made in nearby wells during the infiltration testing indicated rising water levels in several wells. These observations can be correlated with testing conducted in wells more than 50 feet away. On that basis, Aztech believes that any remedial approach involving application of chemical or bioremedial reagents can be accomplished using an application well spacing of 30 feet. This well spacing conservatively estimates a horizontal radius of influence of 15 feet for each application well.

4.0 RECOMMENDATIONS

The purpose for gathering the information presented herein was to help NYSDEC to optimize their remedial approach for the site. Based on the information available, Aztech believes that the depth of soil present on the site that is impacted with site-related compounds at concentrations in excess of regulatory standards precludes any further consideration of excavation, removal and transport of soil from the suspected source area to an appropriately permitted waste disposal facility. Rather, Aztech believes that in-situ remedial approaches would be beneficial for the site. On that basis, Aztech believes that additional characterization should be implemented, prior to (or, concurrent with) development of a detailed remedial plan, in order to better define the nature and extent of impacted soil and groundwater. To that end, Aztech offers the following recommendations for NYSDEC to consider:

- Select Cleanup Criteria: As indicated, much of the soil located within (and, in proximity-to) the suspected source area contains PCE at concentrations that are below the SCO for Commercial use but, in excess of the SCO for unrestricted use. Based on the fact that these impacted soils are likely serving as the source of VOCs identified in groundwater (at concentrations as high as 150,000 ug/l in well SB-1 (TW)), Aztech is recommending that the SCO for Unrestricted use be the target cleanup criteria for the site soil. This is because the Unrestricted use SCO has been established to be protective of groundwater and, residential water supply wells are present in the area. **Figure 6** includes a representation of a possible lateral distribution of soil in excess of the Unrestricted SCO within the suspected source area.

- Additional Soil Characterization: Soil screening and analytical results from the soil borings and soil samples collected at locations SB-3, SB-5, SB-7 and SB-9 helps to identify the eastern extent of soil exceeding the unrestricted SCOs identified by 6 NYCRR Part 375-6.8 in proximity to the suspected source area. However, the lateral extent of soil in excess of the unrestricted SCOs in the area north, northwest and west of borings SB-1 and SB-8 and, the area north, northeast and east of SB-3 is presently unknown. As such, Aztech is recommending installation of 11 soil borings in the area around the periphery of the suspected source area (Figure 6). The purpose of the soil borings will be to characterize the composition of soil within and around the source area with respect to soil type and to screen the soil headspace for total VOC concentration via a photoionization detector. Additionally, analytical results of soil samples will help to identify the horizontal and vertical limits of soil quality with respect to the selected SCO for the site. Data obtained as part of this effort will help with remedial system optimization.

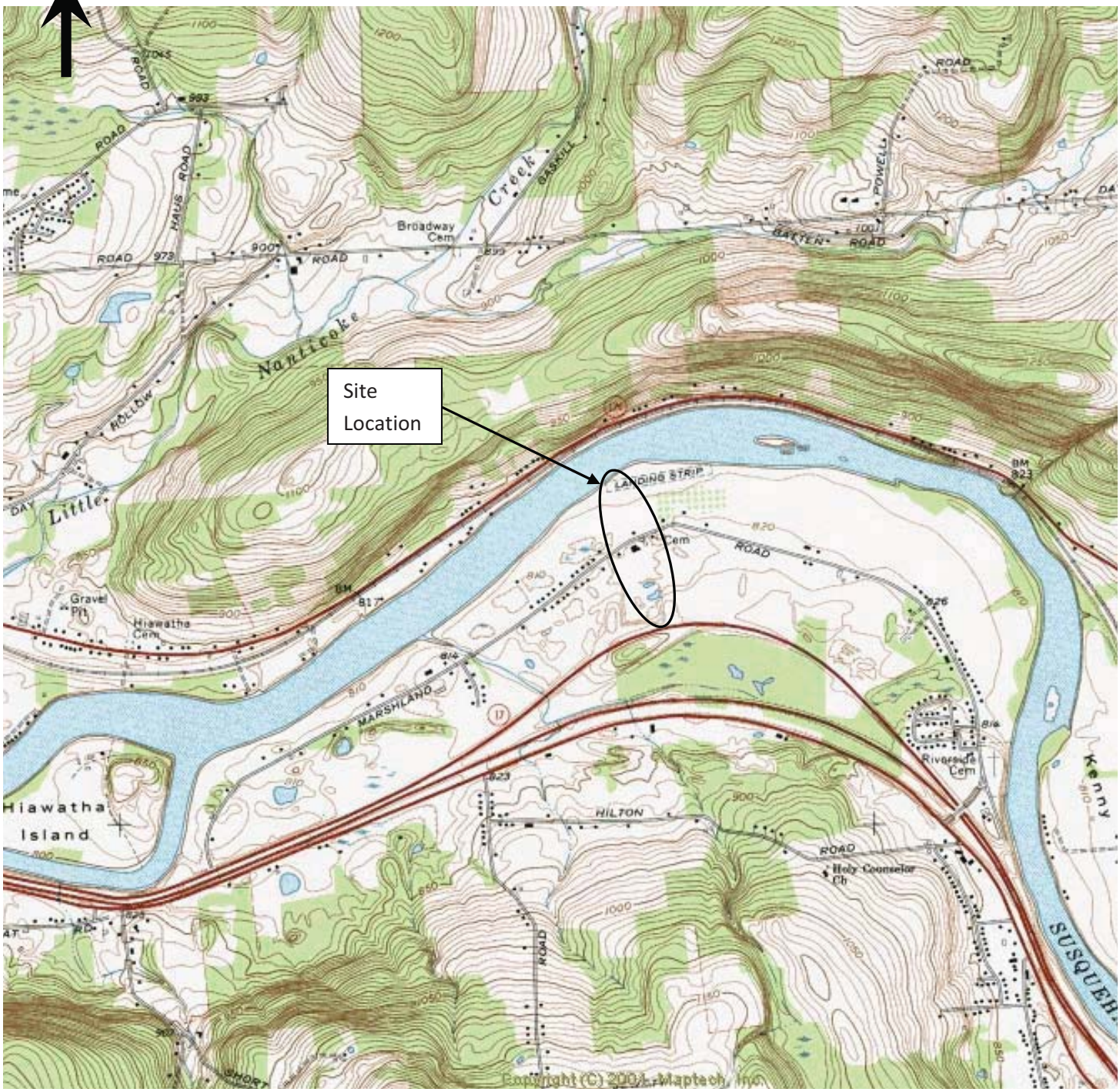
- Install Additional Monitoring Wells: Groundwater sampling conducted during the supplemental site characterization indicates that dissolved total VOC concentrations within the suspected source area are in excess of 100,000 ug/l (SB-4S, SB-4D & SB-1 (TW)). The extent of this impacted groundwater has not been defined. As such, Aztech is recommending that selected soil boring locations previously proposed be converted into 1.0-inch ID monitoring wells. Aztech is proposing that two (2) of these wells be positioned

in the area south of the suspected source area and, that one location be used to replace existing shallow monitoring well MW-11. This is because shallow well MW-11, at an approximate completion depth of 12 feet below grade, does not appear penetrate the water table by a depth that is comparable to other shallow wells at the site. As such, this well does not appear to be providing depth to water information that is consistent with other shallow wells at the site.

The screened interval and construction specifications of the monitoring wells proposed for this additional phase of site characterization should be based on the stratigraphy and distribution of VOC impact at the selected locations. In particular, well screens should be set within the vertical interval that is most impacted within each borehole. Consideration for well screen placement should also be given to zones of expected high (or, low) permeability. The 1.0-inch ID monitoring wells proposed for installation are to be constructed of machine-slotted schedule 40 PVC screen and riser pipe. Well depths and screened intervals will be determined based on field conditions but, are anticipated to be comparable to those installed during the February, 2014 drilling program.

- Groundwater Sampling: Once the new "on-site" monitoring well network is established, the top of well casing elevations and locations should be incorporated into the existing site survey. This will help to establish the direction of groundwater flow through the suspected source area. Additionally, groundwater samples can be obtained from each of the newly installed wells and selected existing wells located within the source area. This initial sampling of the on-site monitoring well network will establish the magnitude and distribution of baseline groundwater quality conditions prior to implementing on-site remedial activities.

FIGURES



USGS Topographic Quadrangle Map - Appalachin, NY

Approximate Scale 1" = 2,200'

Aztech Technologies, Inc.
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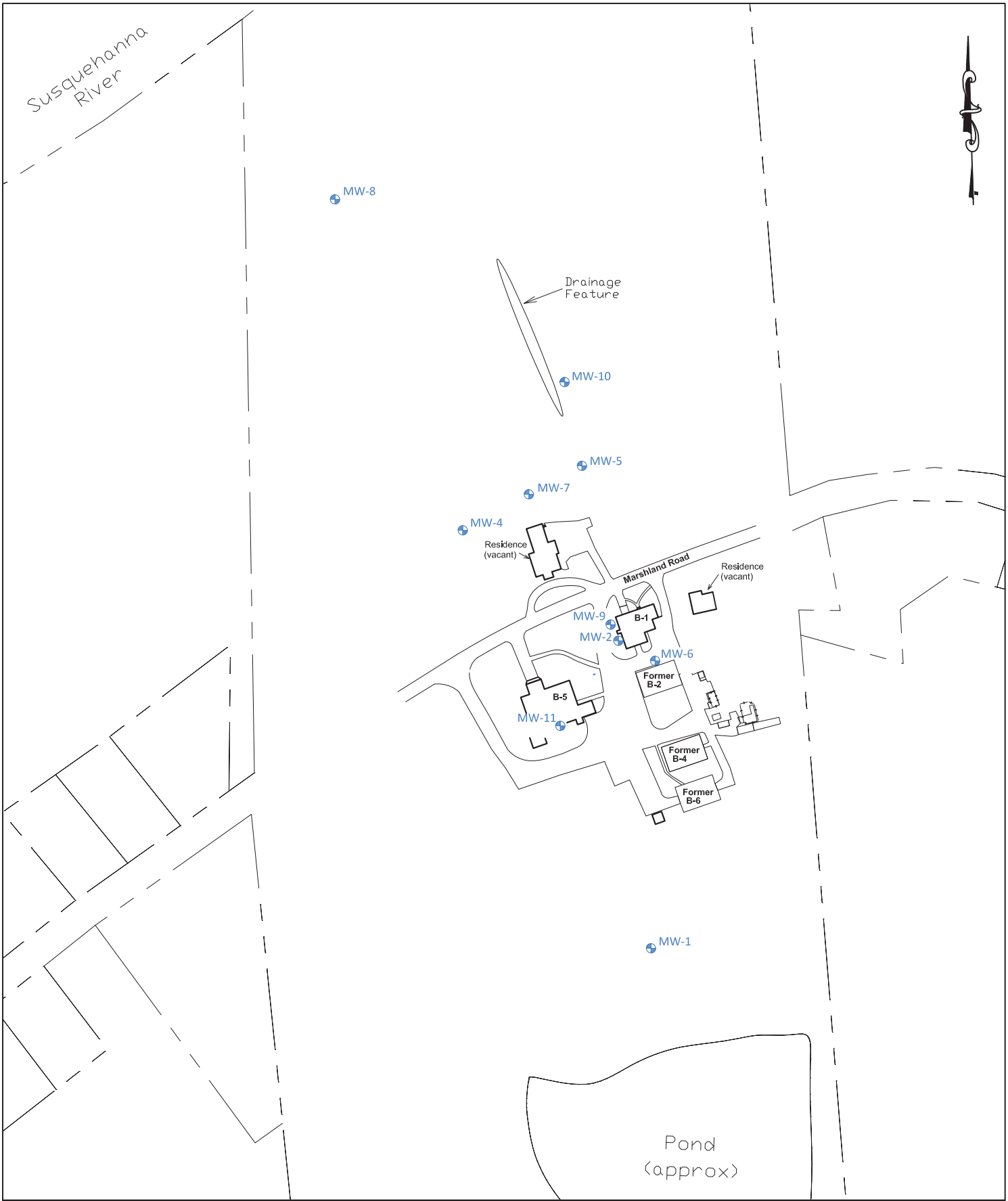
Remediation Environmental Drilling

5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383 | f 518.885.5383
info@aztechtech.com | ww.aztechtech.com

SITE: NYSDEC – Site # 754011
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

FIGURE 1

Site Location Map



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Aztech Technologies, Inc.
Woman Owned Business

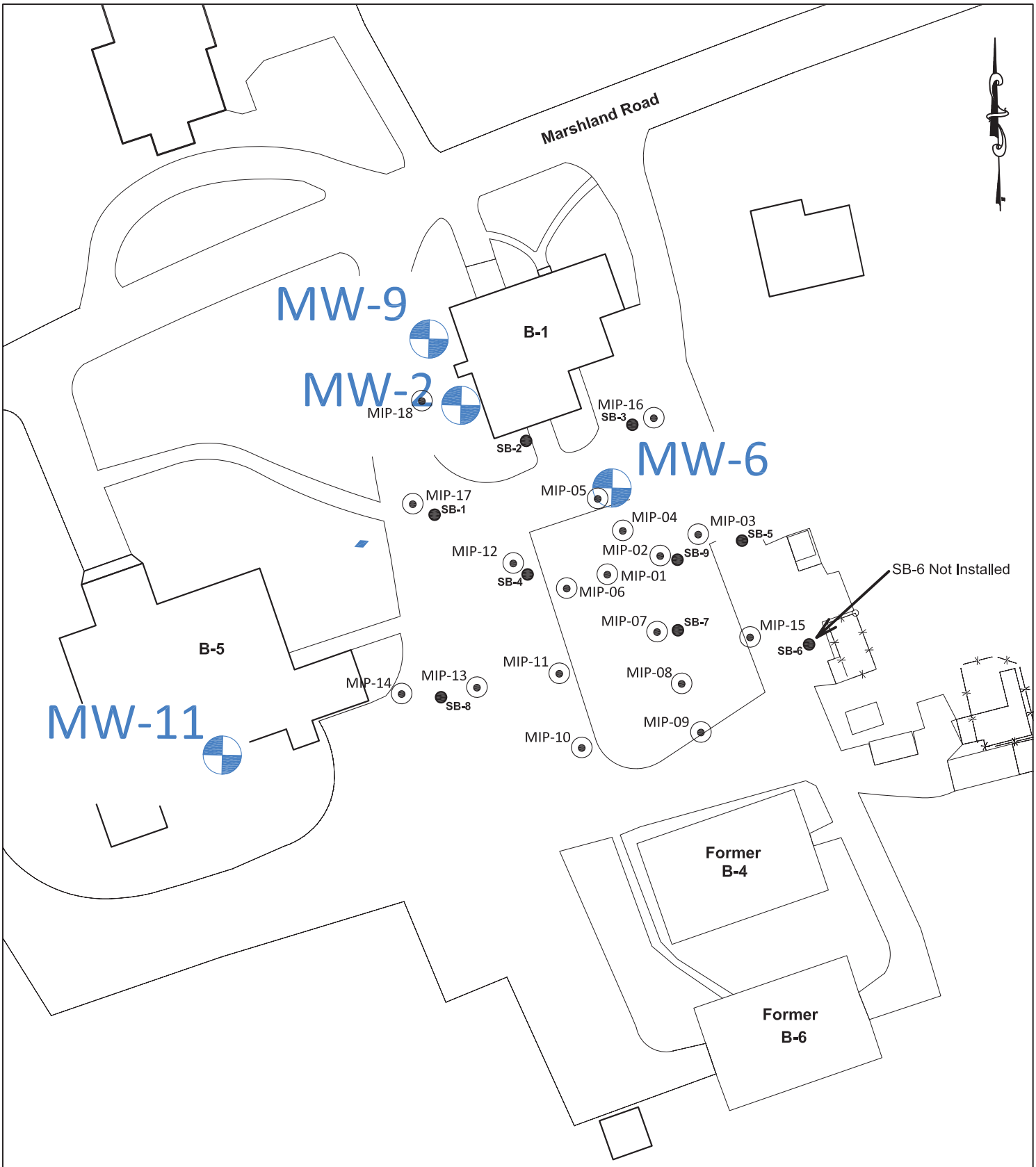
5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383 I f 518.885.5385
info@aztechtech.com I www.aztechtech.com

SITE: **NYSDEC Site # 754011**
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Figure 2

DATE: May, 2013 | Approximate Scale: 1" = 200'

Site Map
Owego Heat Treat



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Aztech Technologies, Inc.
Woman Owned Business

5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383 I f 518.885.5385
info@aztechtech.com I www.aztechtech.com

SITE: **NYSDEC Site # 754011**
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

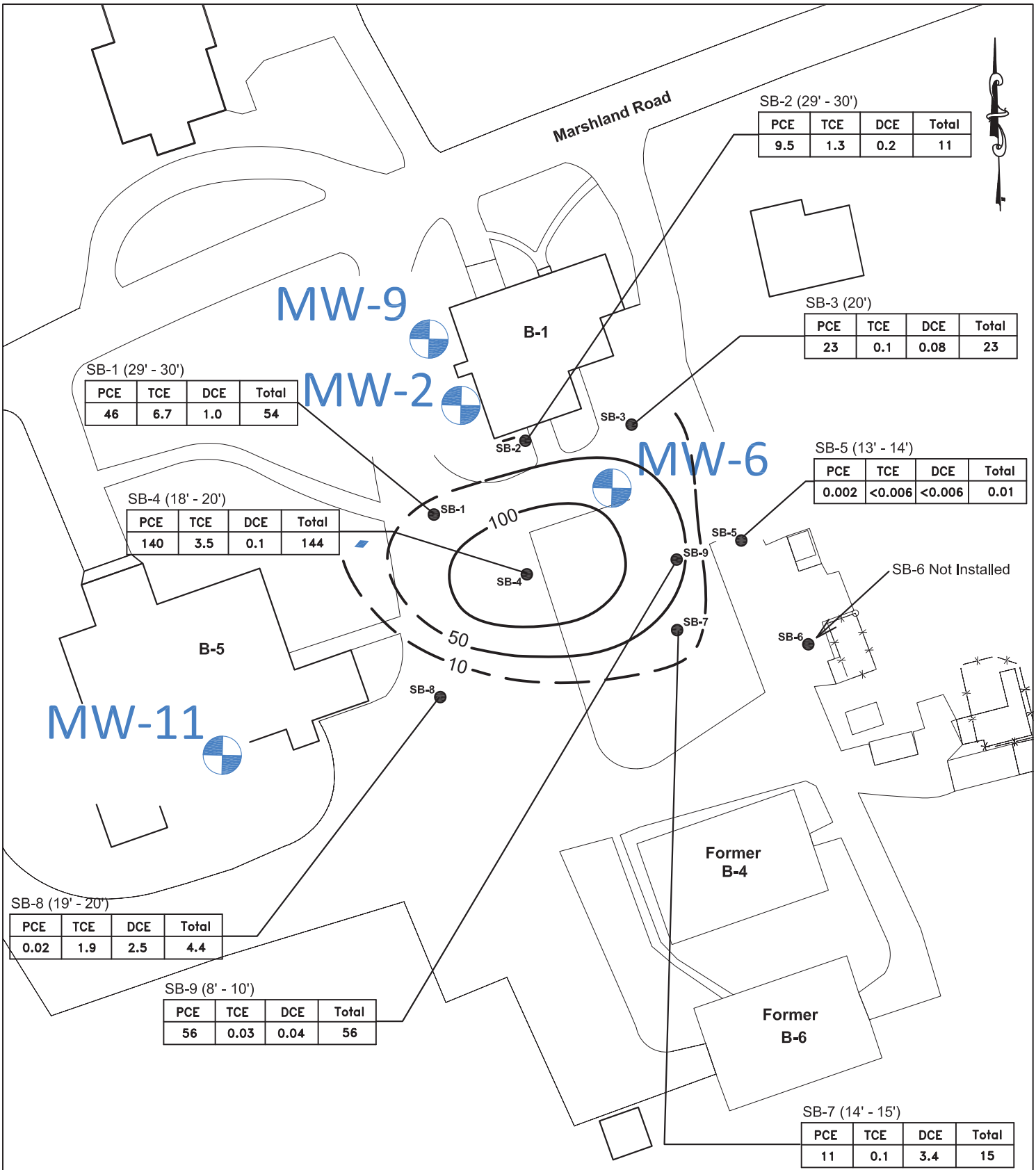
Figure 3

DATE: Feb, 2014 | Approximate Scale: 1" = 50'

Soil Boring Locations
----- On-Site Area -----
(Borings Installed February 3 through February 10, 2014)

MIP-09 MIP Boring Location (July, 2013)

SB-9 Soil Boring Location



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Aztech Technologies, Inc.
Woman Owned Business

5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383 I f 518.885.5385
info@aztechtech.com I www.aztechtech.com

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1646 Marshland Road
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Figure 4

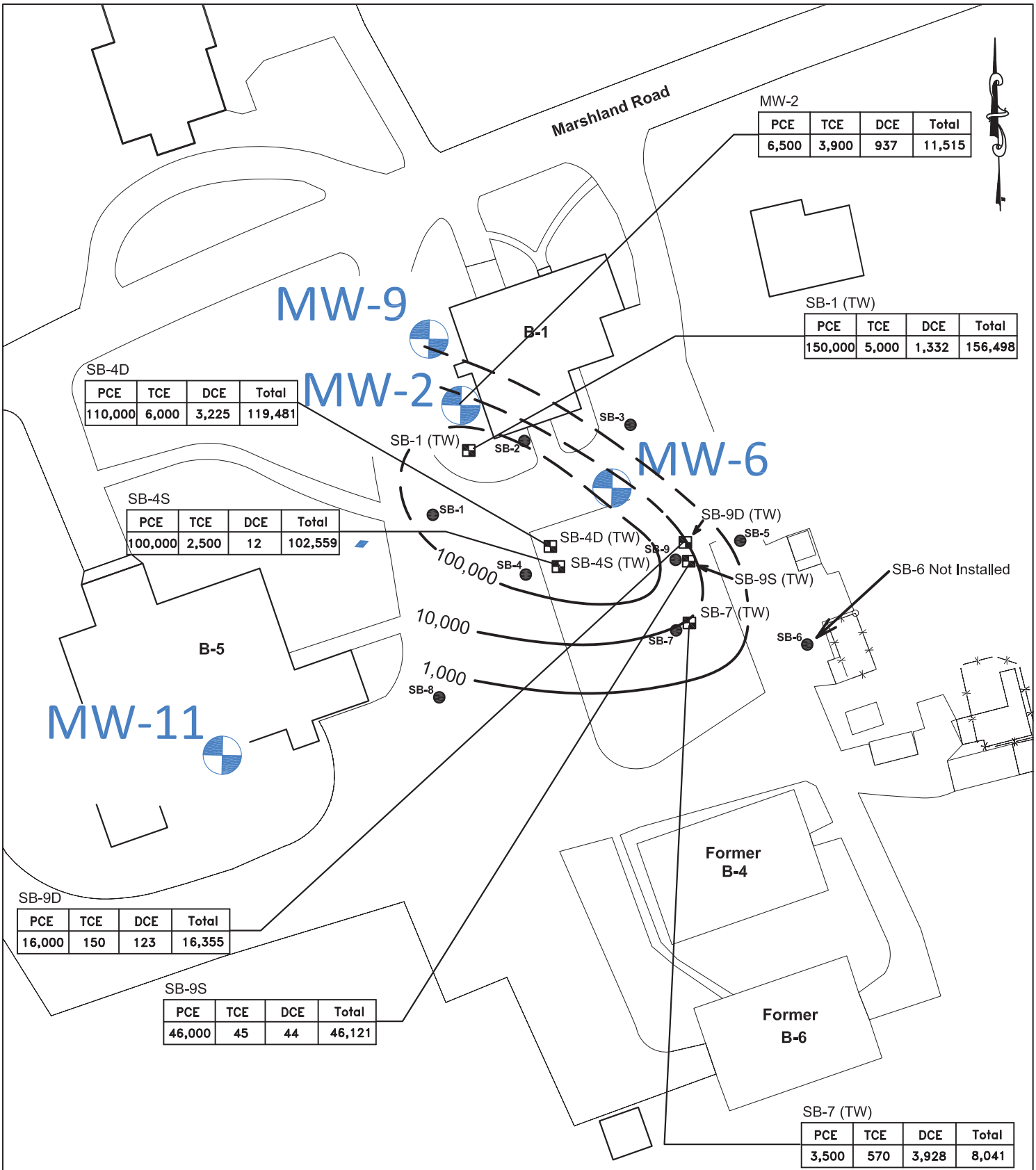
DATE: Feb, 2014 | Approximate Scale: 1" = 50'

VOC Distribution in Soil
----- On-Site Area -----

(Samples collected February 3 through February 10, 2014)

Concentrations in milligrams per kilogram (mg/kg)

SB-8 ● Soil Boring Location



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Aztech Technologies, Inc.
Woman Owned Business

5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383 | f 518.885.5385
info@aztechtech.com | www.aztechtech.com

SITE: NYSDEC Site # 754011
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Figure 5

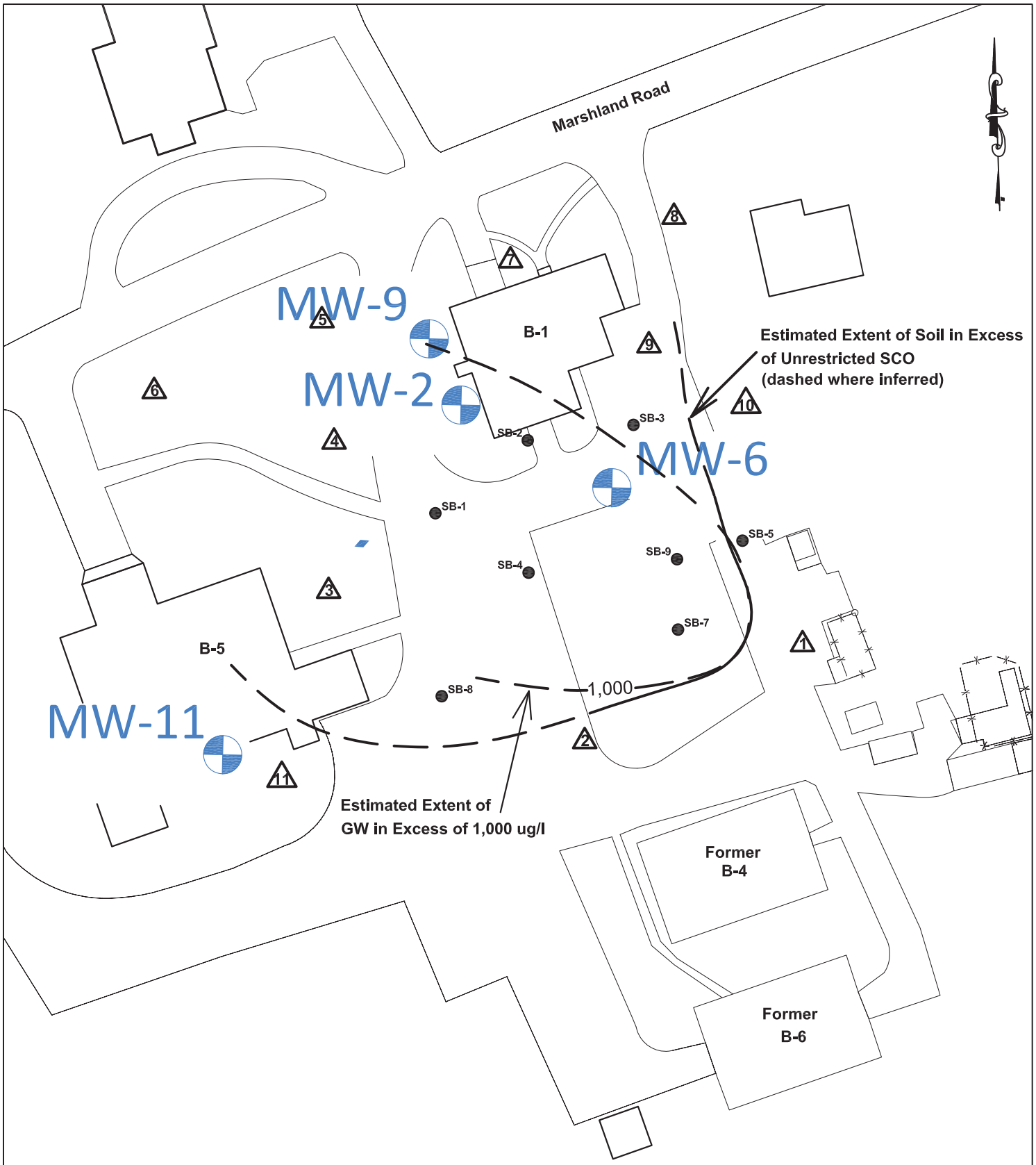
DATE: 3-10-2014 | Approximate Scale: 1" = 50'

VOC Distribution in Groundwater
----- On-Site Area -----
(Samples collected March 10, 2014)

Concentrations in micrograms per liter (ug/l)

SB-8 Soil Boring Location

Monitoring/Application Well Location



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Aztech Technologies, Inc.

Woman Owned Business

5 McCrea Hill Road
Ballston Spa, NY 12020
p 518.885.5383 I f 518.885.5385
info@aztechtech.com I www.aztechtech.com

SITE: NYSDEC Site # 754011
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Figure 6

DATE: April, 2014 | Approximate Scale: 1" = 50'

Proposed Soil Boring and/or Monitoring Well Locations (Aprll, 2014)

SB-8 ● Soil Boring Location (Feb - 2014)

1 Proposed Soil Boring and/or Monitoring Well Location (April - 2014)

APPENDIX A

SOIL BORING/WELL CONSTRUCTION AND SELECTED MIP LOGS

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Ballston Spa, NY 12020
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DRILLING LOG

Well/ Boring No. SB-1

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 3, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

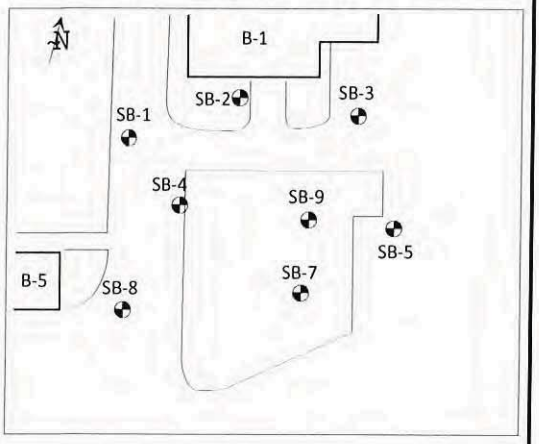
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 45 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0				
	bentonite	SS 0-5' rec=4.25'	0 ppm	asphalt subbase Brown, moist, SILT, some fine Sand, trace fine Gravel
5				Gray, moist-wet, SILT, little fine Sand
		SS 5-10' rec=4'	0 ppm	Gray-brown, wet, SILT, little fine Sand -occ. thin lamina (<1/8") fine SAND
10		SS 10-15' rec=5'	0.2 ppm-11' 0.4 ppm	same as above - 11' = thin lamina of fine SAND 12.5' Gray, wet, SILT, some Clay, trace fine Sand
15		SS 15-20' rec=5'	0.8 ppm 1.7 ppm-19.25'	same as above 17' Gray, wet, fine SAND bed 17.5' Gray, wet, SILT, some Clay, trace fine Sand - 19.25' = lamina of fine-med. SAND w/ organics: wood debris
20		SS 20-25' rec=5'	0.1 ppm 0.4 ppm 12.5 ppm-24.5'	same as above - occ. wood fragments 24.5'
25		SS 25-30' rec=5'	26 ppm 21 ppm 26 ppm 60 ppm	Gray-brown, wet, med.(-) fine SAND 26' Gray-brown, wet, SILT (very loose - "soupy") 27' Gray-brown, wet, SILT, some fine Sand 29' Gray-brown, wet, fine GRAVEL, little coarse-med. Sand ~30'
30		SS 30-35' rec=5'	2.4 ppm 1.0 ppm 0.8 ppm 0.2 ppm	Gray-brown, wet, med.(-) fine SAND, trace Silt 33' Brown, wet, fine GRAVEL, little Sand 33.5' Brown, wet, coarse(-) fine SAND, little fine Gravel 34.75' Brown, wet, fine SAND, some Silt
35		SS 35-40' rec=4.75'	0.1-0.2 ppm	Brown, wet, med.(-) fine SAND, trace Silt
40		SS 40-45' rec=5'	0.2-0.4 ppm	same as above
45			0.2 ppm	44' Brown, wet, dense, fine SAND and SILT EOE=45'

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Ballston Spa, NY 12020
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DRILLING LOG

Well/ Boring No. SB-1 (TW)

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 12, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

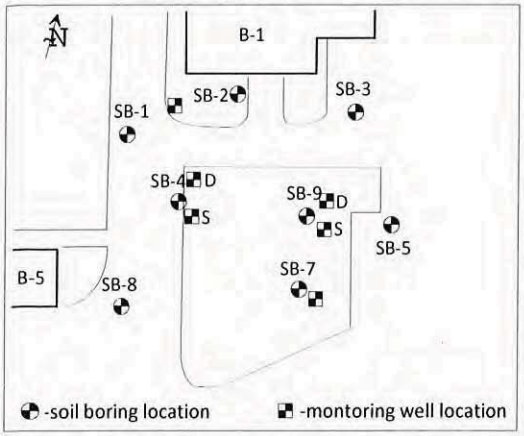
Drilling Method: 3" flush thread casing

Total Depth of Hole: 30 ft. Diameter 3 in.

Screen: Dia.: 1" Length: 5' Slot Size: 0.020"

Casing: Dia.: 1" Length: 25' Type: sch 40 PVC

Sand Pack: #1 Bentonite Seal: Holeplug Protective Casing: stickup



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification Soil description from Macrocore boring SB-1
				Well installed ~15 ft northeast of Macrocore boring
0	sand			asphalt
				subbase
		SS 0-5' rec=4.25'	0 ppm	Brown, moist, SILT, some fine Sand, trace fine Gravel
				Gray, moist-wet, SILT, little fine Sand
5		SS 5-10' rec=4'	0 ppm	Gray-brown, wet, SILT, little fine Sand -occ. thin lamina (<1/8") fine SAND
10	bentonite / riser	SS 10-15' rec=5'	0.2 ppm-11' 0.4 ppm	same as above - 11' = thin lamina of fine SAND 12.5' Gray, wet, SILT, some Clay, trace fine Sand
15		SS 15-20' rec=5'	0.8 ppm 1.7 ppm-19.25'	same as above 17' Gray, wet, fine SAND bed 17.5' Gray, wet, SILT, some Clay, trace fine Sand - 19.25' = lamina of fine-med. SAND w/ organics: wood debris
20		SS 20-25' rec=5'	0.1 ppm 0.4 ppm 12.5 ppm-24.5'	same as above - occ. wood fragments 24.5' Gray-brown, wet, med.(-) fine SAND
25	sand pack / well screen	SS 25-30' rec=5'	26 ppm 21 ppm 26 ppm 60 ppm	26' Gray-brown, wet, SILT (very loose - "soupy") 27' Gray-brown, wet, SILT, some fine Sand 29' Gray-brown, wet, fine GRAVEL, little coarse-med. Sand ~30'
30		SS 30-35' rec=5'	2.4 ppm 1.0 ppm 0.8 ppm 0.2 ppm	Advanced flush-thread casing to 30' below grade and installed 1" microwell Gray-brown, wet, med.(-) fine SAND, trace Silt 33' Brown, wet, fine GRAVEL, little Sand 33.5' Brown, wet, coarse(-) fine SAND, little fine Gravel
35		SS 35-40' rec=4.75'	0.1-0.2 ppm	34.75' Brown, wet, fine SAND, some Silt Brown, wet, med.(-) fine SAND, trace Silt
40		SS 40-45' rec=5'	0.2-0.4 ppm 0.2 ppm	same as above 44' Brown, wet, dense, fine SAND and SILT EOE=45'
45				

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DRILLING LOG

Well/ Boring No. SB-2

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 3-4, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

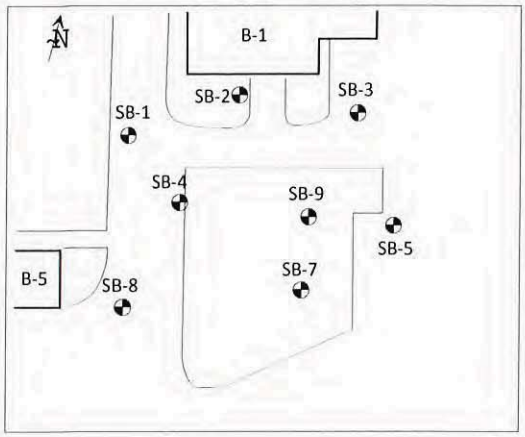
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0				
	bentonite	SS 0-5' rec=3.5'	0 ppm	Topsoil Dk brown, moist, fine SAND and SILT Gray, moist-wet, SILT, little fine Sand
5		SS 5-10' rec=3.5'	0.1 ppm	~5' Lt Brown, wet, SILT, little fine Sand
10		SS 10-15' rec=5'	0.1 ppm 0.1 ppm	same as above 14' Gray, wet, SILT, trace fine Sand - thin lamina med. sand at 14'
15		SS 15-20' rec=5'	0.1 ppm 0.2 ppm	same as above - no sand lamina ~18' Gray, wet, SILT, some Clay
20		SS 20-25' rec=5'	0.4 ppm-20-23' 4.5 ppm-23-25'	~20' Gray-brown, wet, SILT, some fine Sand, trace Clay
25		SS 25-30' rec=4.25'	54 ppm 67ppm-28.5-30'	Gray-brown, wet, SILT, some fine Sand 28.5' Gray-brown, wet, med.(-) fine SAND, some Gravel,trace Silt 29'
30		SS 30-35' rec=5'	1.5 ppm 0.2 ppm 0.1 ppm	Gray-brown, wet, SILT, some fine Sand 31' Brown, wet, fine SAND, trace Silt 33' Brown, wet, fine GRAVEL, little Sand 33.5'
35				Brown, wet, med.(-) fine SAND, little Silt EOE=35'
40				
45				

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DRILLING LOG

Well/ Boring No. SB-3

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 10, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

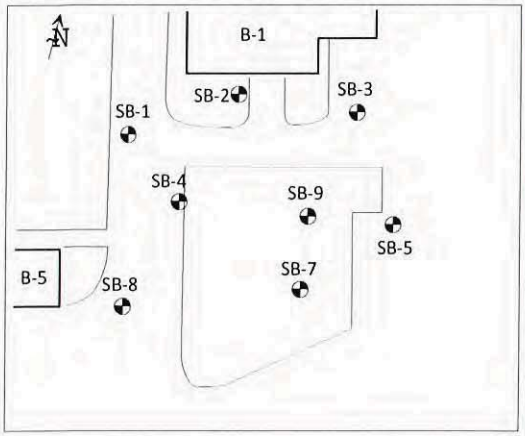
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0	bentonite	SS 0-5' rec=2.5'	0.8 ppm 0.4 ppm	asphalt DK Brown, moist, fine SAND and SILT (mottled)
5		SS 5-10' rec=3'	0.7 ppm 0.9 ppm	same as above 7' Brown-Tan, wet, SILT - some yellow mottling at 10'
10		SS 10-15' rec=3.5'	0.6ppm 0.5 ppm	Tan, wet, SILT and CLAY. Soft to 14.5' 14.5' Gray, wet, SILT, little Clay
15		SS 15-20' rec=5'	1.0 ppm 9.0 ppm	16.5' Brown, wet, SILT and CLAY 17.5' Gray, wet, SILT, little Clay
20		SS 20-25' rec=5'	4.9 ppm 1.7 ppm	same as above 22' Brown, wet, fine0coarse SAND and fine-coarse GRAVEL, some Silt
25		SS 25-30' rec=3.5'	1.5 ppm	Gray, wet, fine-coarse (med) SAND, little Silt
30		SS 30-35' rec=NR	No Sample Recovered	29' Gray, wet, fine-coarse SAND, some fine-med. Gravel No sample
35				EOE=35'
40				
45				

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DRILLING LOG

Well/ Boring No. SB-4

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 7, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

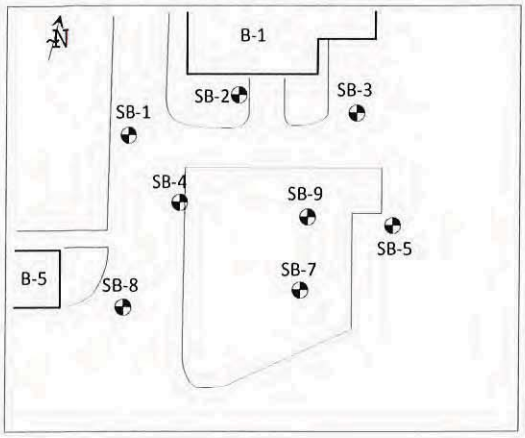
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0				topsoil
	bentonite	SS 0-5' rec=1.25'	0.3 ppm	Brown, moist, SAND and SILT, some Clay
				2'
				Lt Brown, moist, SILT, some Clay
5		SS 5-10' rec=4.25'	0.2 ppm	same as above
10		SS 10-15' rec=4.5'	0.3 ppm	same as above
			0.7 ppm	12'
			1.1 ppm	Gray, wet, SILT, some Clay
15		SS 15-20' rec=4'	16 ppm	same as above
			17 ppm	?? ~18?'
			57 ppm	Gray, wet, SILT, little Clay
20		SS 20-25' rec=1'	1.1 ppm	- poor sample recovery, stone in sampler tip - move south 1' reattempt = poor recovery
25		SS 25-30' rec=5'	19-29 ppm	Gray-brown, wet, SILT, some Clay
			12 ppm	29.5'
30		SS 30-35' rec=5'	4.0 ppm	Gray-Brown, wet, fine GRAVEL and SAND, some Silt
			0.4 ppm	31.25'
			0.2 ppm	Gray-Brown, wet, med.(-) fine GRAVEL, little Sand 31.5'
			0.2 ppm	Brown, wet, med.-fine SAND, little Silt 32.5'
			0.4 ppm	Brown, wet, fine GRAVEL, little Sand 33'
35				Brown, wet, med.-fine SAND, little Silt
				EOE=35'
40				
45				

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DRILLING LOG

Well/ Boring No. SB-4S (TW)

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 11, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

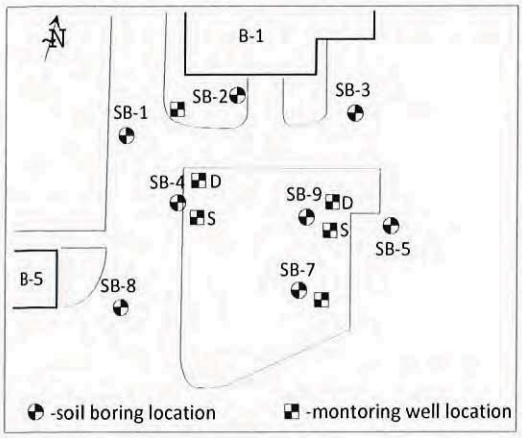
Drilling Method: 3" flush thread casing

Total Depth of Hole: 21 ft. Diameter 3 in.

Screen: Dia.: 1" Length: 5' Slot Size: 0.020"

Casing: Dia.: 1" Length: 16' Type: sch 40 PVC

Sand Pack: #1, Bentonite Seal: Holeplug Protective Casing: stickup



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification Soil description from Macrocore SB-4
				Well SB-4D installed ~5 ft southeast of Macrocore boring
0				topsoil
		SS 0-5' rec=1.25'	0.3 ppm	Brown, moist, SAND and SILT, some Clay 2' Lt Brown, moist, SILT, some Clay
5	bentonite	SS 5-10' rec=4.25'	0.2 ppm	same as above
10	riser	SS 10-15' rec=4.5'	0.3ppm 0.7 ppm 1.1 ppm	same as above 12' Gray, wet, SILT, some Clay
15	sand pack	SS 15-20' rec=4'	16 ppm 17 ppm 57 ppm	same as above ?? ~18?' Gray, wet, SILT, little Clay
20	well screen	SS 20-25' rec=1'	1.1 ppm	- poor sample recovery, stone in sampler tip - move south 1' reattempt = poor recovery
25		SS 25-30' rec=5'	19-29 ppm 12 ppm	Gray-brown, wet, SILT, some Clay 29.5'
30		SS 30-35' rec=5'	4.0 ppm 0.4 ppm 0.2 ppm 0.2 ppm 0.4 ppm	Gray-Brown, wet, fine GRAVEL and SAND, some Silt 31.25' Gray-Brown, wet, med.(-) fine GRAVEL, little Sand 31.5' Brown, wet, med. -fine SAND, little Silt 32.5' Brown, wet, fine GRAVEL, little Sand 33' Brown, wet, med.-fine SAND, little Silt
35				EOE=35' Advanced flush-thread casing to 21' below grade and installed 1" microwell
40				
45				

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DRILLING LOG

Well/ Boring No. SB-4D (TW)

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 10, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

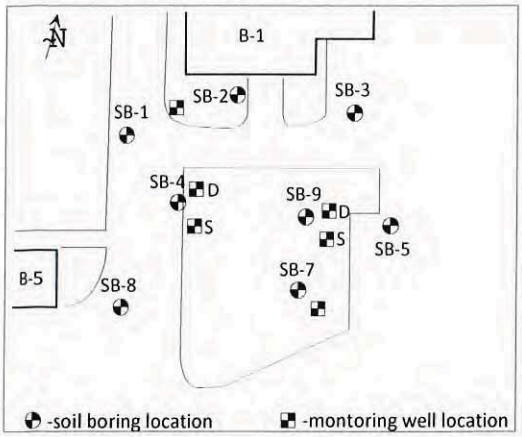
Drilling Method: 2.25" ID HSA

Total Depth of Hole: 30 ft. Diameter 6 in.

Screen: Dia.: 1" Length: 5' Slot Size: 0.020"

Casing: Dia.: 1" Length: 25' Type: sch 40 PVC

Sand Pack: #1, Bentonite Seal: Holeplug Protective Casing: stickup



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification Soil description from Macrocore SB-4
				Well SB-4D installed ~5 ft northeast of Macrocore boring
0	concrete			topsoil
		SS 0-5' rec=1.25'	0.3 ppm	Brown, moist, SAND and SILT, some Clay — 2'
				Lt Brown, moist, SILT, some Clay
5	sand	SS 5-10' rec=4.25'	0.2 ppm	same as above
10	riser	SS 10-15' rec=4.5'	0.3ppm 0.7 ppm 1.1 ppm	same as above — 12' Gray, wet, SILT, some Clay
15	bentonite	SS 15-20' rec=4'	16 ppm 17 ppm 57 ppm	same as above ?? ~18?' Gray, wet, SILT, little Clay
20		SS 20-25' rec=1'	1.1 ppm	- poor sample recovery, stone in sampler tip - move south 1' reattempt = poor recovery
25	sand pack / well screen	SS 25-30' rec=5'	19-29 ppm 12 ppm	Gray-brown, wet, SILT, some Clay — 29.5'
30		SS 30-35' rec=5'	4.0 ppm 0.4 ppm 0.2 ppm 0.2 ppm 0.4 ppm	Gray-Brown, wet, fine GRAVEL and SAND, some Silt — 31.25' Gray-Brown, wet, med.(-) fine GRAVEL, little Sand — 31.5' Brown, wet, med. -fine SAND, little Silt — 32.5' Brown, wet, fine GRAVEL, little Sand — 33' Brown, wet, med. -fine SAND, little Silt
35				EOE=35' Advanced hollow stem augers to 30' below grade and installed 1" microwell
40				
45				

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DRILLING LOG

Well/ Boring No. SB-5

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 4, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

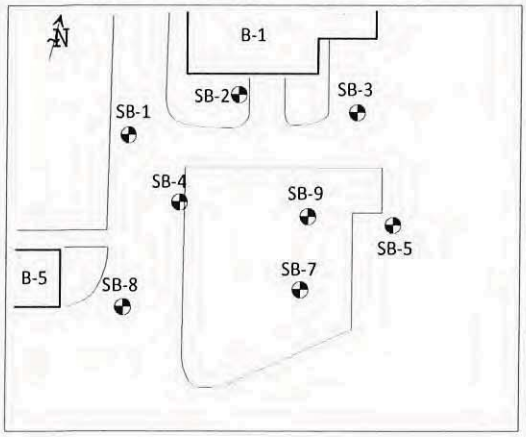
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0				asphalt / subbase
		SS 0-5' rec=4'	0 ppm	Gray-brown, moist, fine SAND and SILT — 1.5'
			0.2 ppm	Lt. Brown, moist, SILT, some Clay
5		SS 5-10' rec=4'	0.2 ppm	Brown, wet, SILT, some Clay, trace fine Sand
10		SS 10-15' rec=4.75'	0.1 ppm	11'
			0.5 ppm	Brown, wet, SILT, little fine Sand, trace Clay
			0.3 ppm	14' Brown, wet, fine SAND, some Silt
15	bentonite	SS 15-20' rec=4'	0.2 ppm	16'
			0.2 ppm	Brown, wet, soft, fine SAND, little Silt — 17'
			0.2 ppm	Brown, wet, SILT, little fine Sand
			0.2 ppm	19' Dk Brown, wet, fine SAND and SILT
20		SS 20-25' rec=3.5'	0.2 ppm	21.5'
			0.4 ppm	Brown, wet, fine GRAVEL and SAND, little Silt
			0.3 ppm	24' Brown, wet, fine SAND and SILT, some fine Gravel
25		SS 25-30' rec=4.75'	0.3 ppm	26' Brown, wet, fine SAND, little Silt
			0.3 ppm	26.25' Brown, wet, fine SAND, little Silt
30		SS 30-35' rec=5'	0.2 ppm	same as above
35				EOE=35'
40				
45				

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DRILLING LOG

Well/ Boring No. SB-7

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 4, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

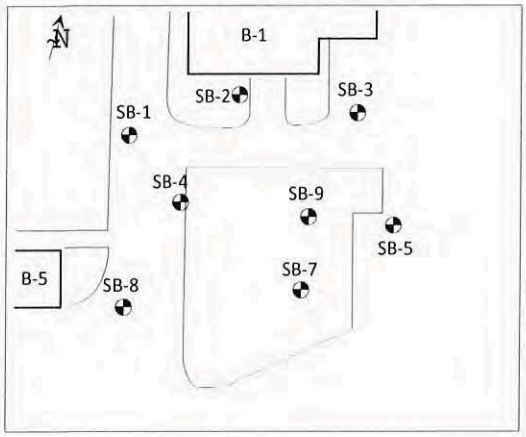
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0				
	bentonite	SS 0-5' rec=1'		topsoil - poor sampler recovery
5		SS 5-10' rec=3.75'	0.3 ppm	Brown, moist-wet, SILT, little fine Sand
10		SS 10-15' rec=2.5'	0.5 ppm 1.5 ppm 8.5 ppm	Brown, wet, SILT, little Clay
15			16.5 ppm	Gray-Brown, wet, SILT, little fine Sand and Clay 14'
		SS 15-20' rec=0.75'		?- poor sampler recovery (stone in sampler tip), moved borehole=poor recovery, stone in tip
20		SS 20-25' rec=4.75'	1.7 ppm 1.1 ppm	Gray-Brown, wet, SILT, little fine Sand
25			1.7 ppm	Gray-Brown, wet, fine GRAVEL and SAND, little Silt 24.75'
		SS 25-30' rec=2.75'	1.0 ppm	Gray-Brown, wet, med.(-) fine SAND, trace Silt
30			0.5 ppm	Gray-Brown, wet, coarse(+) med. SAND, trace Silt 29.25'
		SS 30-35' rec=5'	0 ppm	Brown, wet, med.(+) fine SAND, trace Silt
35				EOE=35'
40				
45				

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DRILLING LOG

Well/ Boring No. SB-7 (TW)

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 11, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

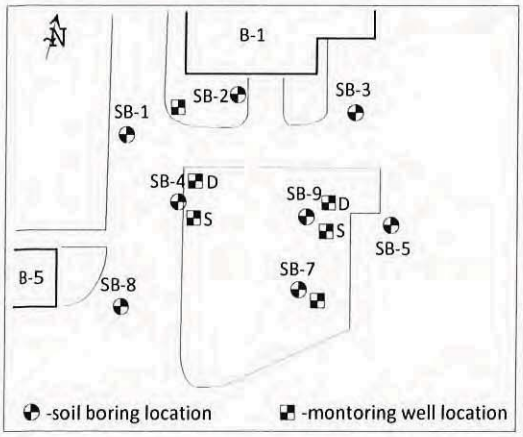
Drilling Method: 3" flush thread casing

Total Depth of Hole: 17 ft. Diameter 3 in.

Screen: Dia.: 1" Length: 5' Slot Size: 0.020"

Casing: Dia.: 1" Length: 12' Type: sch 40 PVC

Sand Pack: #1 Bentonite Seal: Holeplug Protective Casing: stickup



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification Soil description from Macrocore SB-7
				Well SB-& installed ~5 ft southeast of Macrocore boring
0	sand			topsoil
		SS 0-5' rec=1'		- poor sampler recovery
5	bentonite; riser	SS 5-10' rec=3.75'	0.3 ppm 0.5 ppm	Brown, moist-wet, SILT, little fine Sand
10		SS 10-15' rec=2.5'	1.5 ppm 8.5 ppm 16.5 ppm	Brown, wet, SILT, little Clay Gray-Brown, wet, SILT, little fine Sand and Clay — 14'
15	sand pack; well screen	SS 15-20' rec=0.75'		?- poor sampler recovery (stone in sampler tip), moved borehole=poor recovery, stone in tip
20		SS 20-25' rec=4.75'	1.7 ppm 1.1 ppm 1.7 ppm	Gray-Brown, wet, SILT, little fine Sand
25		SS 25-30' rec=2.75'	1.0 ppm 0.5 ppm	Gray-Brown, wet, fine GRAVEL and SAND, little Silt — 24.75' Gray-Brown, wet, med.(-) fine SAND, trace Silt
30		SS 30-35' rec=5'	0 ppm	Gray-Brown, wet, coarse(+) med. SAND, trace Silt — 29.25' Brown, wet, med.(+) fine SAND, trace Silt
35				EOE=35'
40				Advanced flush-thread casing to 17' below grade and installed 1" microwell
45				

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DRILLING LOG

Well/ Boring No. SB-8

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 4, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

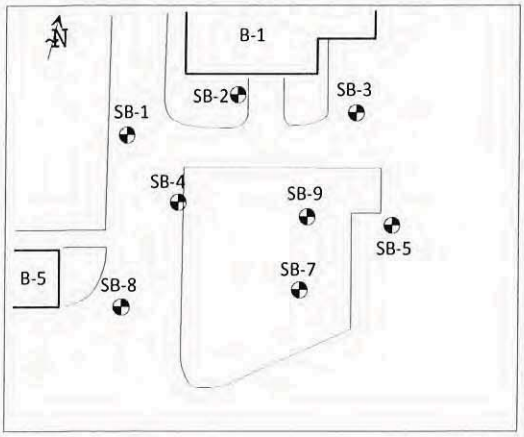
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0				asphalt
		SS 0-5' rec=3.5'	0.2 ppm	Gray-brown, moist, SAND, some fine Gravel and Silt, brick fragments (fill)
				3'
5				Gray-brown, moist, SILT, some fine Sand and Clay
		SS 5-10' rec=3.75'	0.1 ppm 0.2 ppm	6'
				Lt. Gray, moist-wet, SILT, some Clay
			0.1 ppm	Gray, wet, SILT, little Clay
10				9'
		SS 10-15' rec=4.25'	0.2-0.3 ppm	Gray-Brown, wet, SILT, little Clay, trace fine Sand - soft 12-13'
15	bentonite			
		SS 15-20' rec=4.5'	0.1ppm15-18' 3.7ppm19-20'	Gray-Brown, wet, SILT, little Clay
20				
		SS 20-25' rec=4'	1.0-1.3 ppm	same as above
25				
		SS 25-30' rec=4.5'	1.0 ppm 0.8 ppm	same as above - trace fine Gravel at tip of sampler
30				30'
		SS 30-35' rec=3.75'	0.2 ppm 0.2 ppm	Brown, wet, med.(-) fine SAND, trace Silt
				34'
35				Brown, wet, fine GRAVEL and coarse SAND, little med.- fine Sand, trace Silt EOE=35'
40				
45				

REMEDIATION • ENVIRONMENTAL • DRILLING

Aztech Technologies, Inc.
Woman Owned Business
5 McCrea Hill Road
Ballston Spa, NY 12020
518.885.5383
www.aztechtech.com

DRILLING LOG

Well/ Boring No. SB-9

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 7, 2014 Logged by: B. Toran

Drilling Contractor: Aztech Technologies Driller: R. Hammond

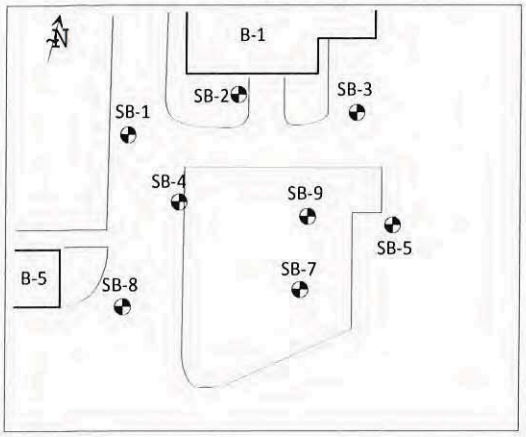
Drilling Method: Geoprobe DT22 Discrete Sampler

Total Depth of Hole: 35 ft. Diameter 2.25 in.

Screen: Dia.: NA Length: NA Slot Size: NA

Casing: Dia.: NA Length: NA Type: NA

Sand Pack: NA Bentonite Seal: Holeplug Protective Casing: NA



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification
0	bentonite	SS 0-5' rec=3.75'	5.1 ppm 0.4 ppm	topsoil Brown, moist-dry, SILT, some fine Sand, trace fine Gravel (fill) 2' Brown, moist, SILT, some Clay. - 1st boring attempt refusal at 4.2' - concrete, moved 2.5'south 4.5'
5		SS 5-10' rec=4.25'	2.4-3.4 ppm 1630ppm@8-10'	Lt Gray, dry, SILT, some fine Gravel and Sand (fill?) 5.5' Brown, moist, fine SAND and SILT 6' Brown, wet, SILT, little Clay - soft 8-9'
10		SS 10-15' rec=4.75'	408 ppm 83 ppm 37 ppm	same as above 13'
15		SS 15-20' rec=4.75'	105 ppm 44 ppm 13 ppm 8.5 ppm	Gray, wet, SILT, trace Clay 16.5' Gray, wet, SILT, some Clay
20		SS 20-25' rec=4.75'	3.1 ppm 1.3 ppm 1.1 ppm	same as above 24.5'
25		SS 25-30' rec=4.75'	3.3 ppm 12 ppm 0.4 ppm 0.2 ppm	Gray, wet, coarse(-) fine SAND, some Silt - 2" coarse SAND layer at 27.5' 28' Brown, wet, med.(-) fine SAND, trace Silt 28.5' Brown, wet, coarse(+) fine SAND, trace Silt 30'
30		SS 30-35' rec=5'	1.7 ppm 0.4 ppm 0.2 ppm	Brown, wet, med(+) fine SAND, trace Silt
35				EOE=35'
40				
45				

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DRILLING LOG

Well/ Boring No. SB-9S (TW)

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 11, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

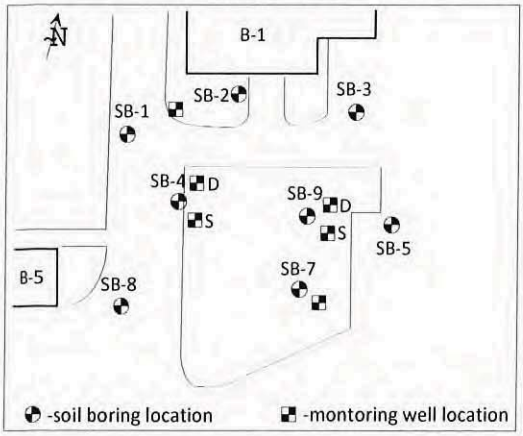
Drilling Method: 3" flush thread casing

Total Depth of Hole: 13 ft. Diameter 3 in.

Screen: Dia.: 1" Length: 5' Slot Size: 0.020"

Casing: Dia.: 1" Length: 6' Type: sch 40 PVC

Sand Pack: #1 Bentonite Seal: Holeplug Protective Casing: stickup



Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification Soil description from Macrocore SB-9
				Well SB-9S installed ~5 ft southeast of Macrocore boring
0	sand			topsoil
	bentonite / riser	SS 0-5' rec=3.75'	5.1 ppm	Brown, moist-dry, SILT, some fine Sand, trace fine Gravel (fill) — 2'
			0.4 ppm	Brown, moist, SILT, some Clay. - 1st boring attempt refusal at 4.2' - concrete, moved 2.5'south — 4.5'
5	sand pack / well screen	SS 5-10' rec=4.25'	2.4-3.4 ppm	Lt Gray, dry, SILT, some fine Gravel and Sand (fill?) — 5.5'
			1630ppm@8-10'	Brown, moist, fine SAND and SILT — 6'
				Brown, wet, SILT, little Clay - soft 8-9'
10	collapse	SS 10-15' rec=4.75'	408 ppm	same as above
			83 ppm	
			37 ppm	— 13'
15		SS 15-20' rec=4.75'	105 ppm	Gray, wet, SILT, trace Clay
			44 ppm	— 16.5'
			13 ppm	Gray, wet, SILT, some Clay
			8.5 ppm	
20		SS 20-25' rec=4.75'	3.1 ppm	same as above
			1.3 ppm	
			1.1 ppm	— 24.5'
25		SS 25-30' rec=4.75'	3.3 ppm	Gray, wet, coarse(-) fine SAND, some Silt - 2" coarse SAND layer at 27.5'
			12 ppm	
			0.4 ppm	— 28'
			0.2 ppm	Brown, wet, med.(-) fine SAND, trace Silt — 28.5'
30		SS 30-35' rec=5'	1.7 ppm	Brown, wet, coarse(+) fine SAND, trace Silt — 30'
			0.4 ppm	Brown, wet, med(+) fine SAND, trace Silt
			0.2 ppm	
35				EOE=35'
				Advanced flush-thread casing to 13' below grade, borehole collapse to 11'; installed 1" microwell
40				
45				

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Woman Owned Business

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DRILLING LOG

Well/ Boring No. SB-9D (TW)

Client: NYSDEC Region 7 Address: 1646 Marshland Rd.

Site.: Owego Heat Treat, #754011 Address: Appalachin, NY

Date Drilled: Feb. 11, 2014 Logged by: R. Hoose

Drilling Contractor: Aztech Technologies Driller: R. Hammond

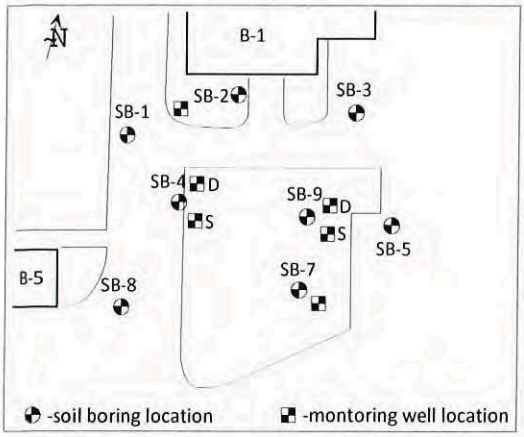
Drilling Method: 3" flush thread casing

Total Depth of Hole: 20 ft. Diameter 3 in.

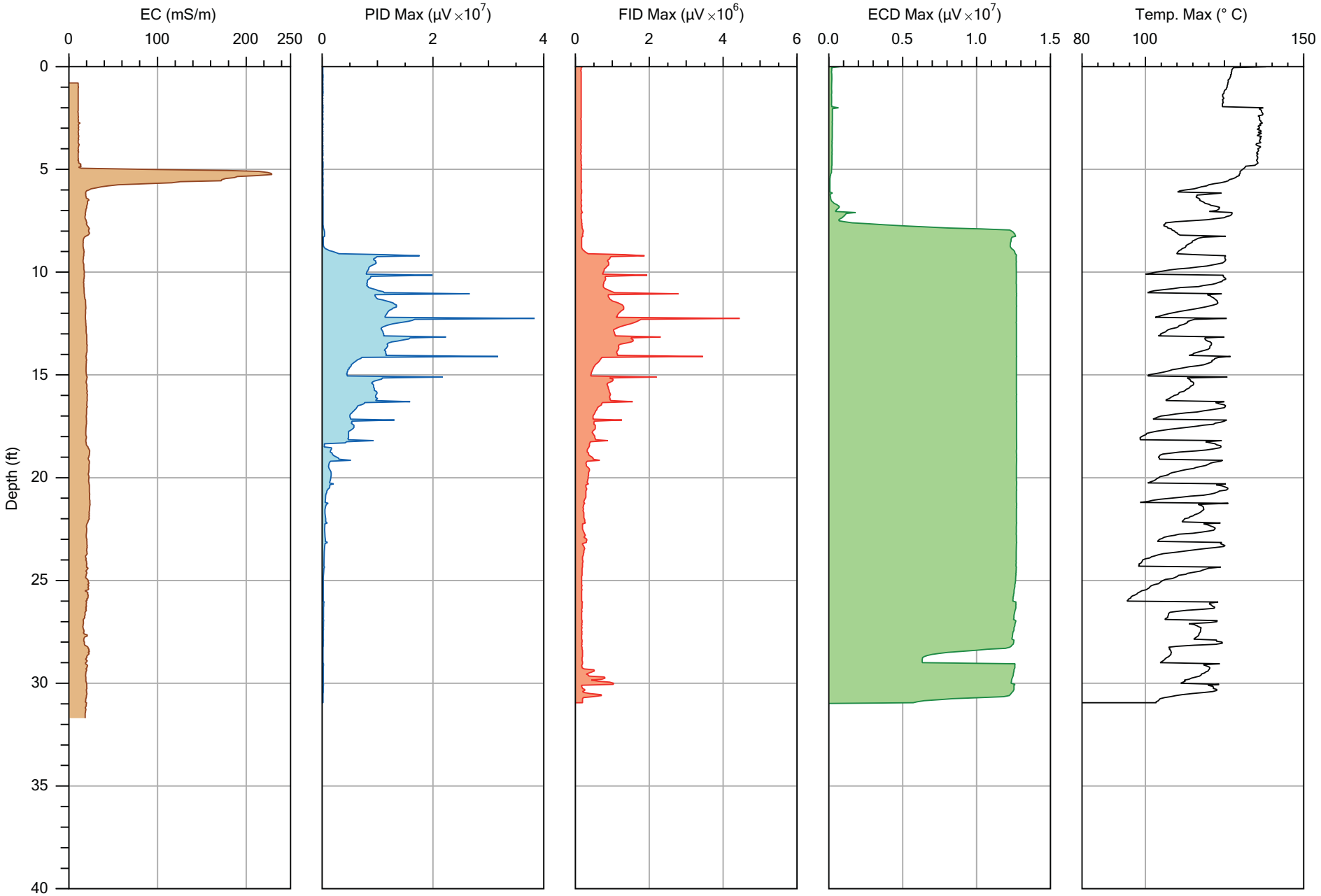
Screen: Dia.: 1" Length: 5' Slot Size: 0.020"

Casing: Dia.: 1" Length: 15' Type: sch 40 PVC

Sand Pack: #1 Bentonite Seal: Holeplug Protective Casing: stickup

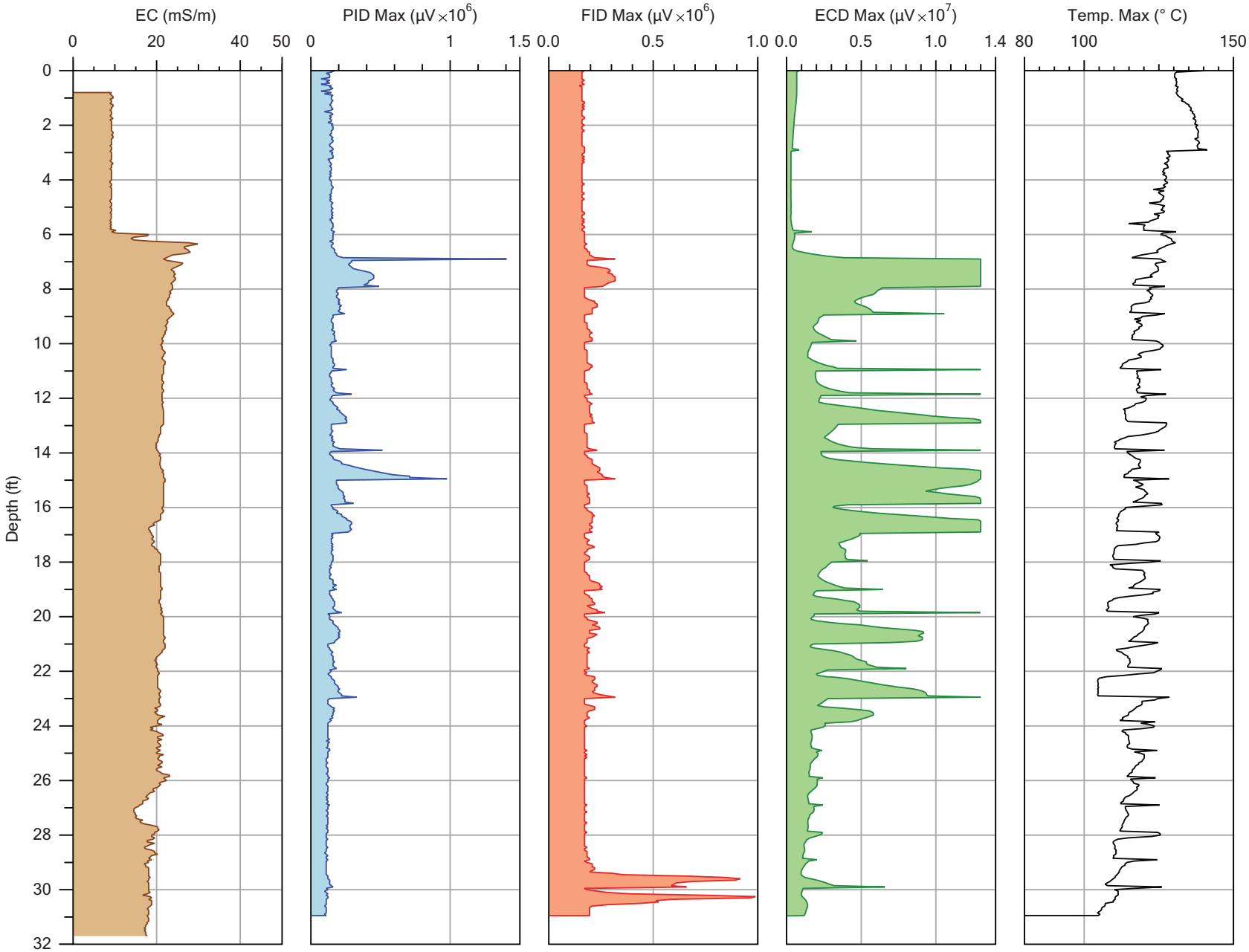


Depth (ft.)	Well Construction	Notes	PID (ppm)	Description/ Soil Classification Soil description from Macrocore SB-9
				Well SB-9D installed ~5 ft northeast of Macrocore boring
0	sand			topsoil
		SS 0-5' rec=3.75'	5.1 ppm	Brown, moist-dry, SILT, some fine Sand, trace fine Gravel (fill) — 2'
			0.4 ppm	Brown, moist, SILT, some Clay. - 1st boring attempt refusal at 4.2' - concrete, moved 2.5'south — 4.5'
5	bentonite	SS 5-10' rec=4.25'	2.4-3.4 ppm	Lt Gray, dry, SILT, some fine Gravel and Sand (fill?) — 5.5' Brown, moist, fine SAND and SILT — 6'
	riser		1630ppm@8-10'	Brown, wet, SILT, little Clay - soft 8-9'
10		SS 10-15' rec=4.75'	408 ppm	same as above
			83 ppm	— 13'
			37 ppm	Gray, wet, SILT, trace Clay
15	sand pack / well screen	SS 15-20' rec=4.75'	105 ppm	— 16.5'
			44 ppm	Gray, wet, SILT, some Clay
			13 ppm	
20			8.5 ppm	
		SS 20-25' rec=4.75'	3.1 ppm	same as above
			1.3 ppm	
25			1.1 ppm	— 24.5'
		SS 25-30' rec=4.75'	3.3 ppm	Gray, wet, coarse(-) fine SAND, some Silt - 2" coarse SAND layer at 27.5'
			12 ppm	
			0.4 ppm	— 28'
30			0.2 ppm	Brown, wet, med.(-) fine SAND, trace Silt — 28.5' Brown, wet, coarse(+) fine SAND, trace Silt — 30'
		SS 30-35' rec=5'	1.7 ppm	
			0.4 ppm	Brown, wet, med(+)fine SAND, trace Silt
			0.2 ppm	
35				EOE=35'
				Advanced flush-thread casing to 20' below grade and installed 1" microwell
40				
45				



COLUMBIA TECHNOLOGIES

Company: COLUMBIA Technologies	Operator: RJT	File: MIP02.DAT
		Date: 7/15/2013
Project ID: Owego Heat and Treat	Client: Aztech Technologies	Location:



COLUMBIA TECHNOLOGIES

Company: COLUmBIA Technologies	Operator: RT	File: MIP03.DAT
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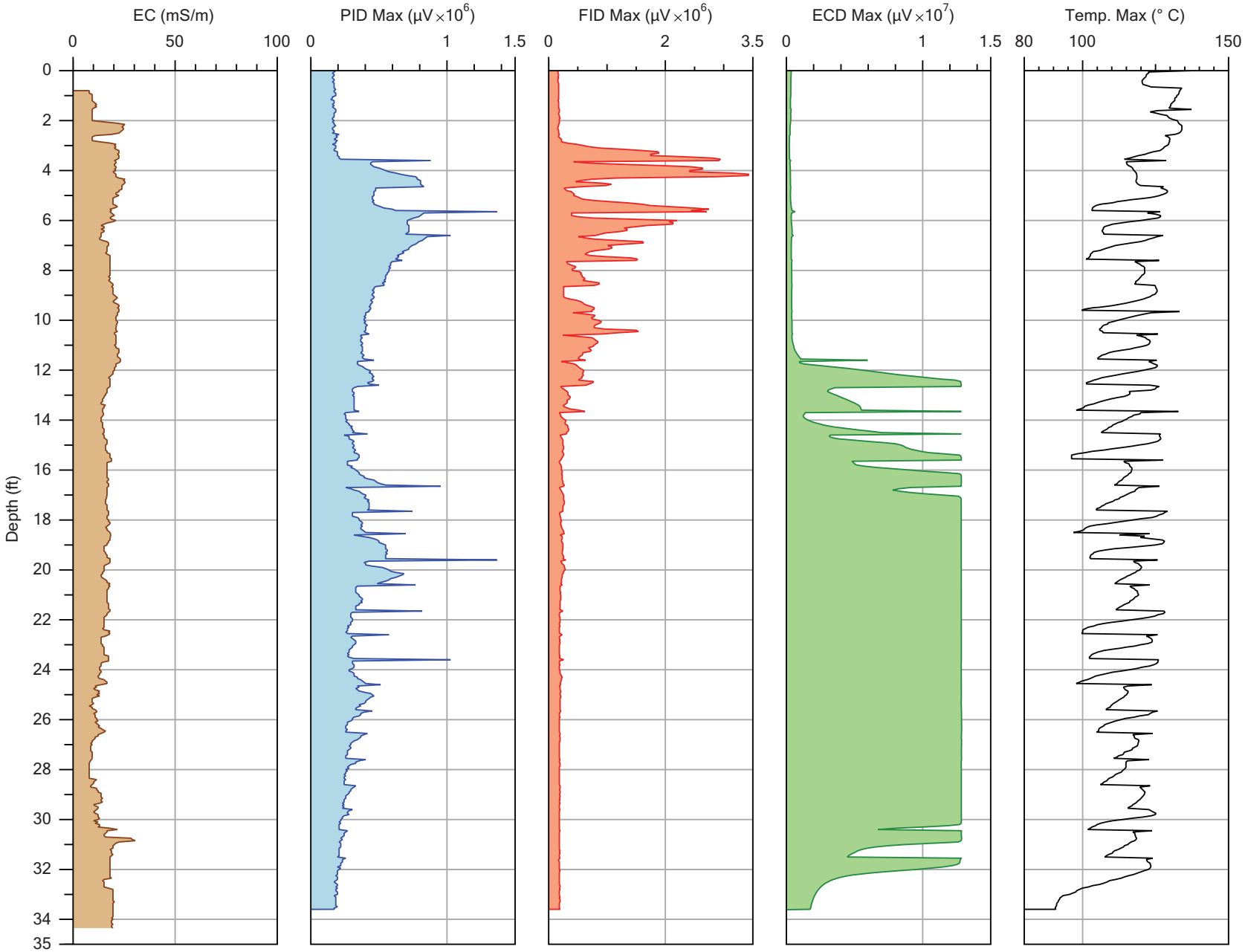
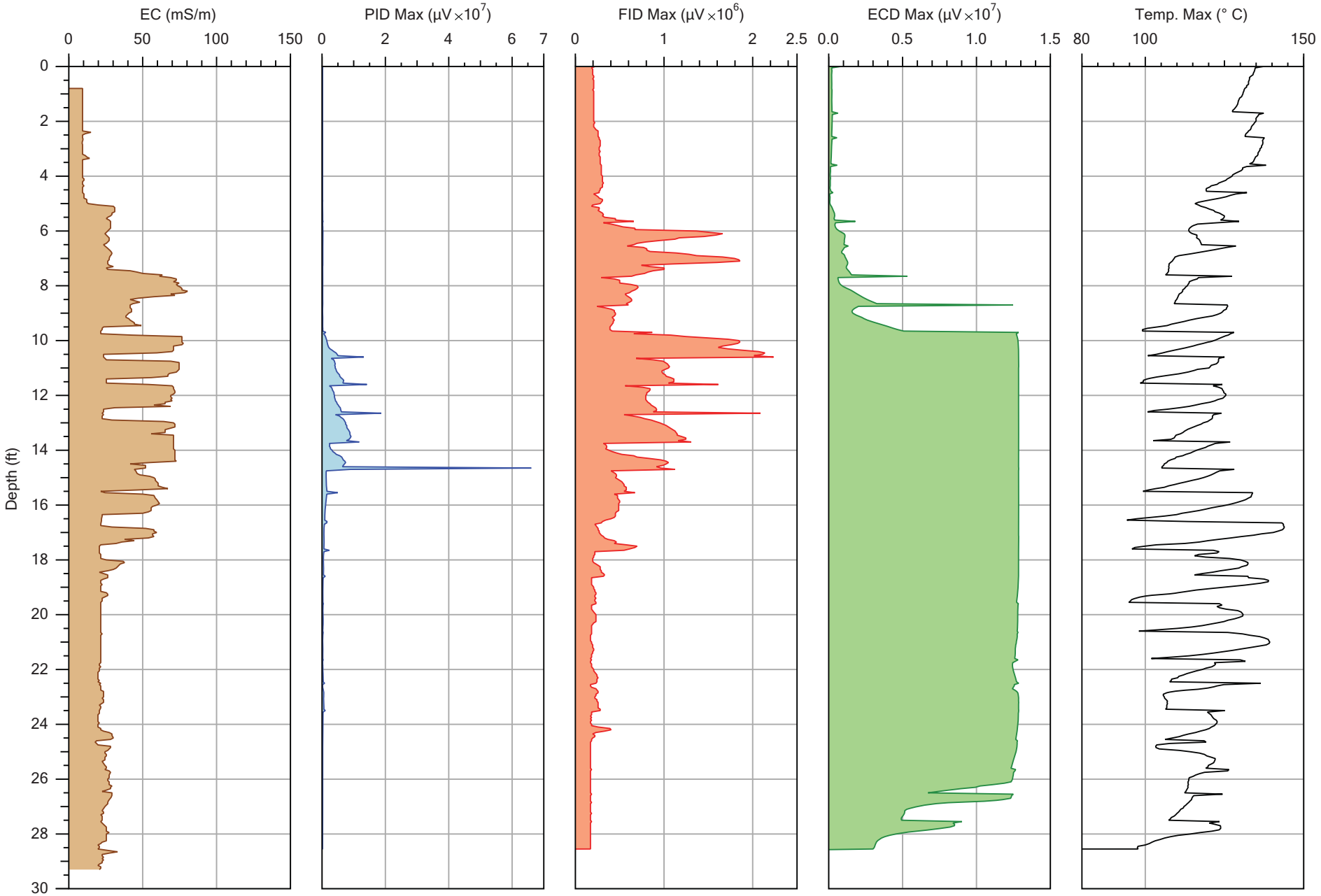
Project ID: wego Heat & Treat NYSDEC Site No. 754011	Client: Aztech	Location:



COLUMBIA TECHNOLOGIES

Company: COLUMBIA Technologies	Operator: RT		File: MIP05.DAT
			Date: 7/17/2013
Project ID: wego Heat & Treat NYSDEC Site No. 754011	Client: Aztech		Location:



COLUMBIA TECHNOLOGIES

Company: COLUMBIA Technologies	Operator: RT	File: MIP07.DAT
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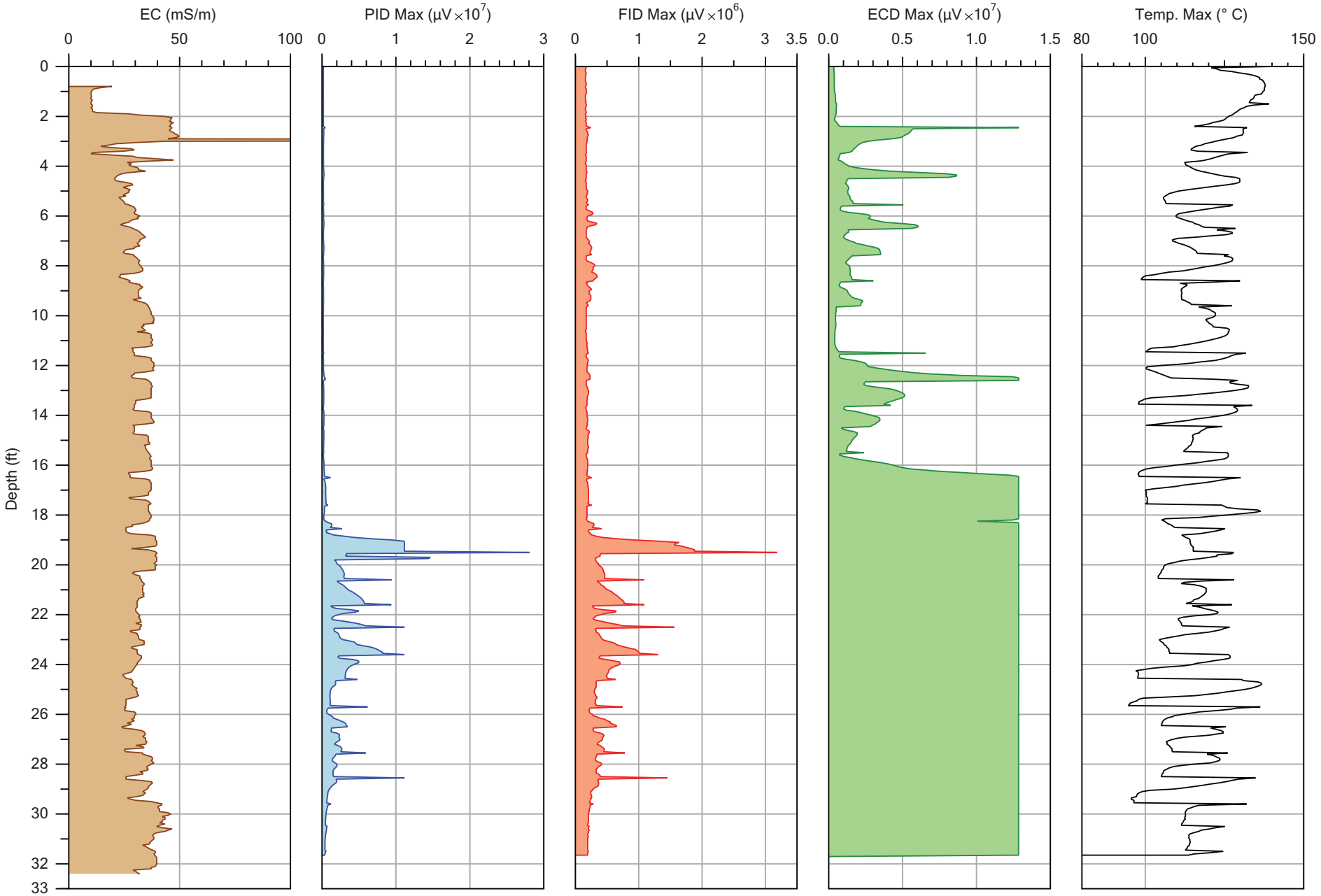
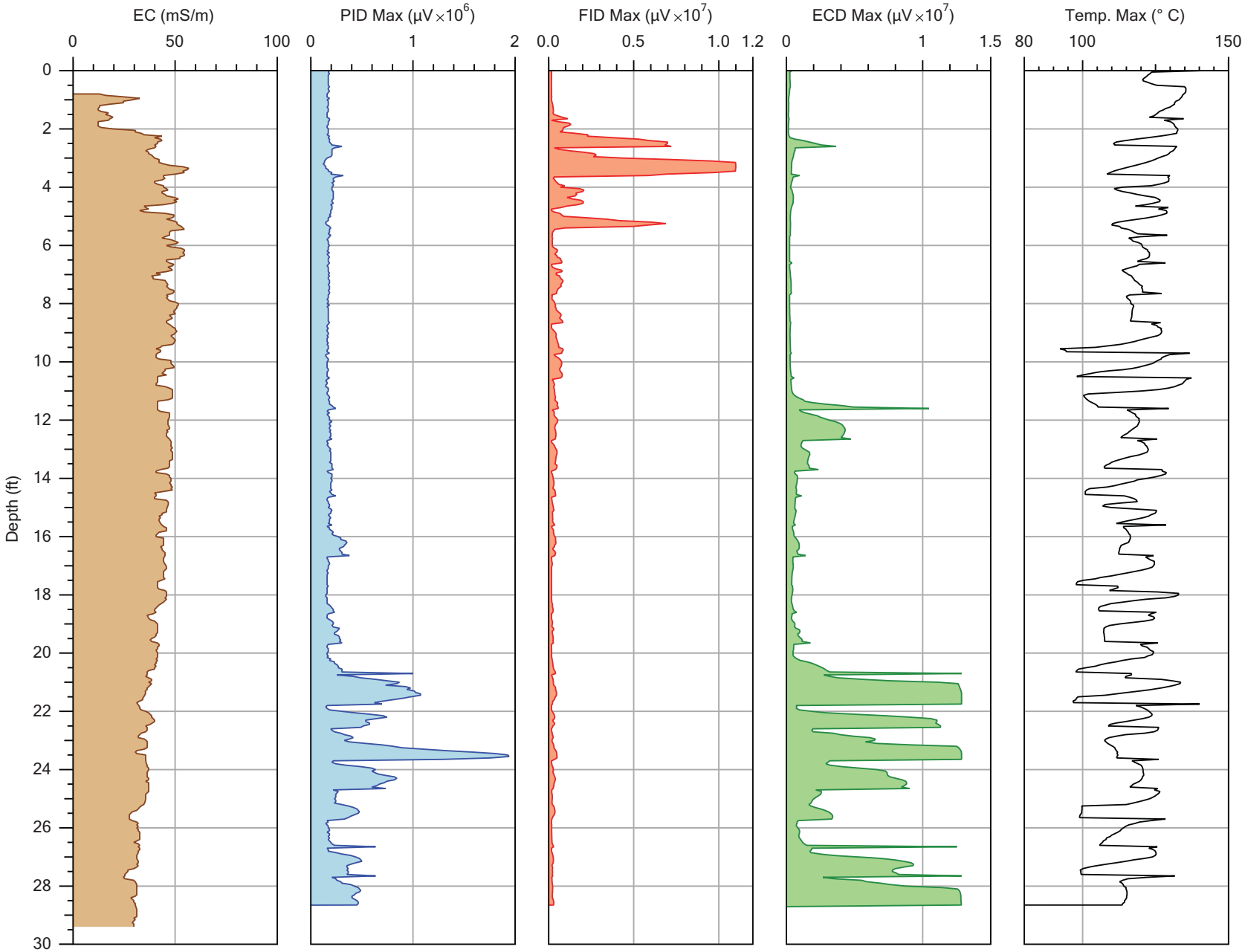
Project ID: NYSDEC Site No. 754011	Client: Aztech	Location:



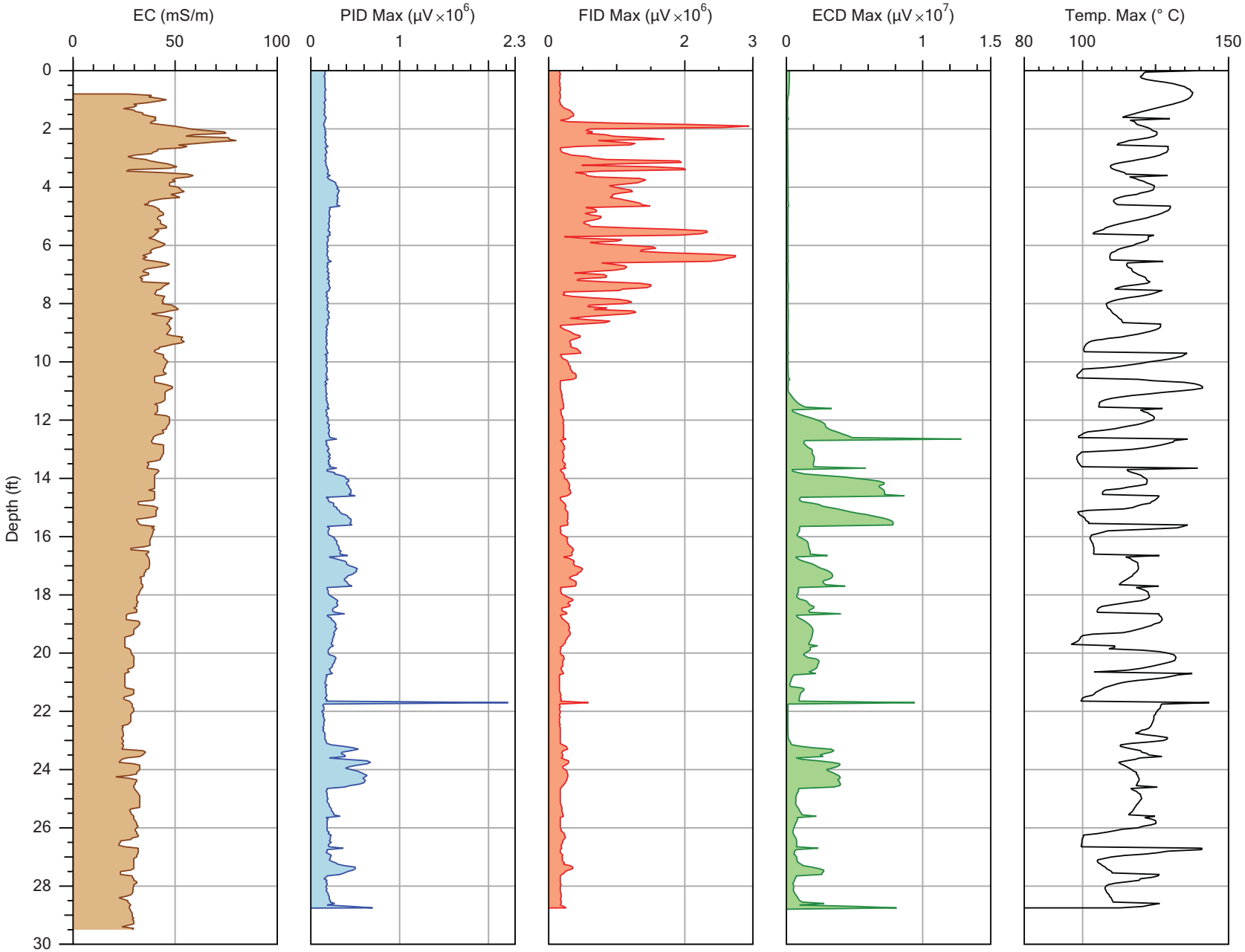
COLUMBIA TECHNOLOGIES

Company: COLUMBIA Technologies	Operator: RT	File: MIP12.DAT
		Date: 7/18/2013
Project ID: NYSDEC Site No. 754011	Client: Aztech	Location:



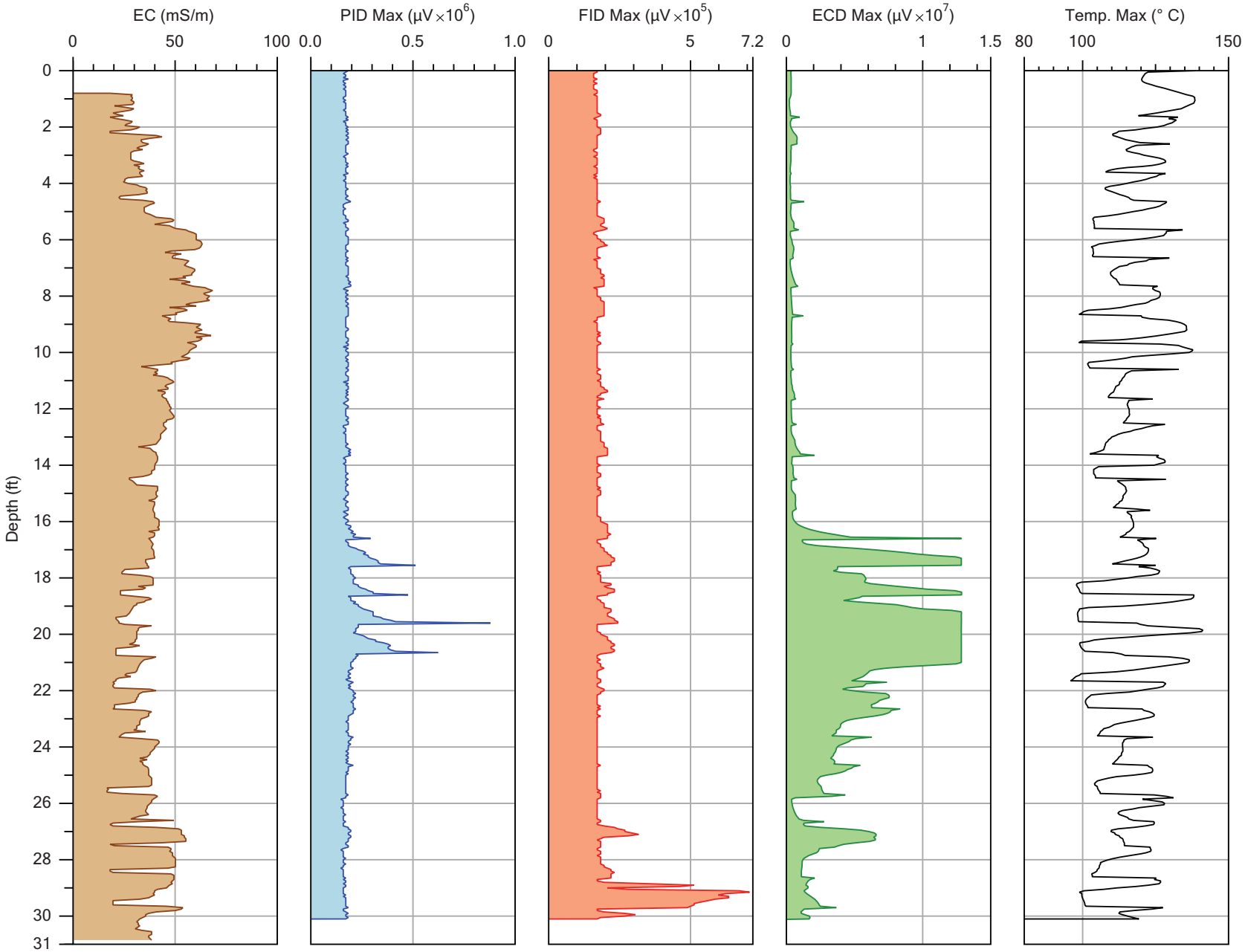
COLUMBIA TECHNOLOGIES

Company: COLUMBIA Technologies	Operator: RT	File: MIP13.DAT
Project ID: NYSDEC Site No. 754011	Client: Aztech	Date: 7/18/2013
		Location:



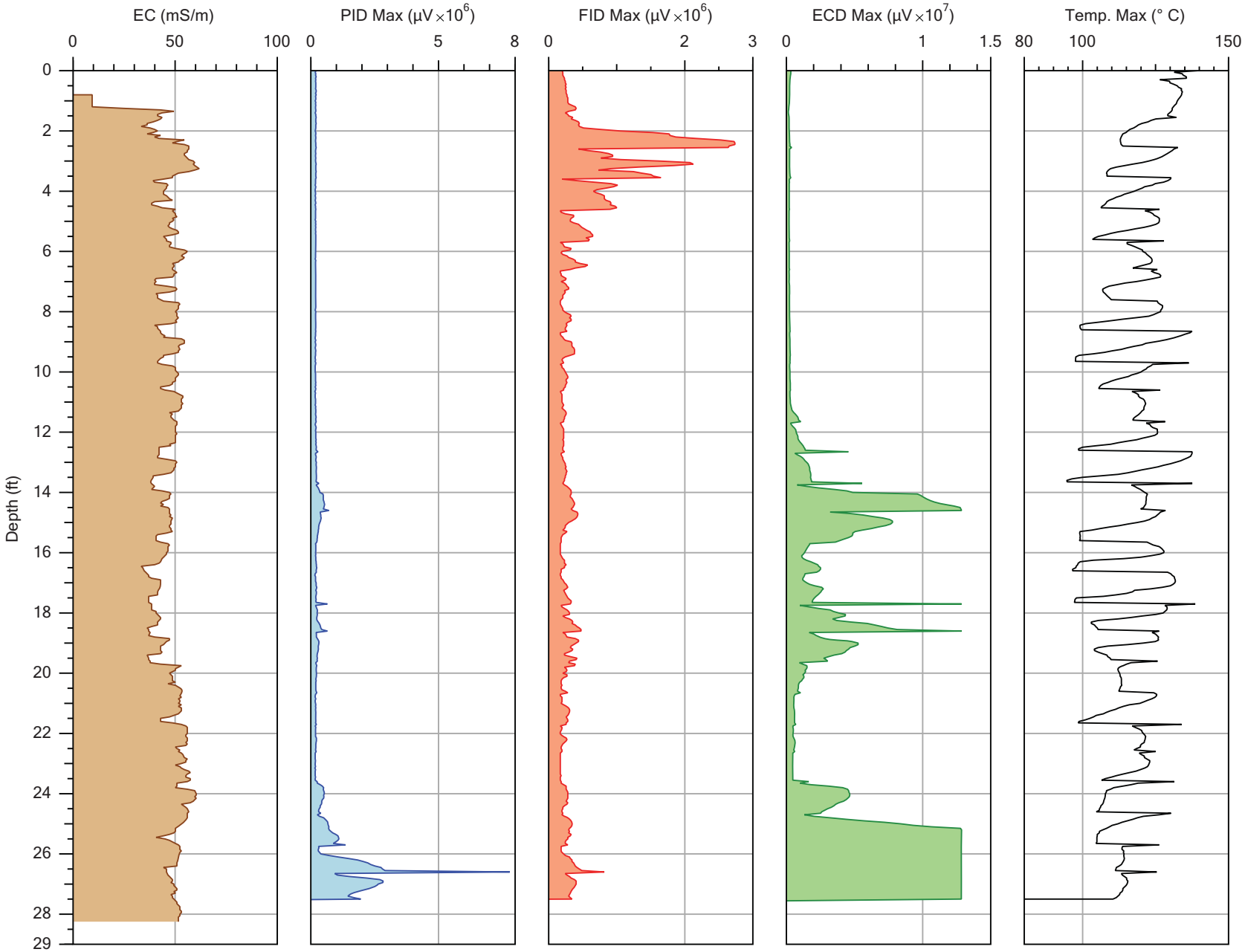
COLUMBIA TECHNOLOGIES

		File: MIP14.DAT
Company: COLUMBIA Technologies	Operator: RT	Date: 7/19/2013
Project ID: NYSDEC Site No. 754011	Client: Aztech	Location:



COLUMBIA TECHNOLOGIES

		File: MIP16.DAT
Company: COLUMBIA Technologies	Operator: RT	Date: 7/19/2013
Project ID: NYSDEC Site No. 754011	Client: Aztech	Location:



COLUMBIA TECHNOLOGIES

Company: COLUMBIA Technologies	Operator: RT	File: MIP17.DAT
		Date: 7/19/2013
Project ID: NYSDEC Site No. 754011	Client: Aztech	Location:

APPENDIX B

LABORATORY ANALYTICAL REPORTS – SOIL & GROUNDWATER

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-54461-1
Client Project/Site: Owego Heat Treat #754011

For:
New York State D.E.C.
615 Erie Blvd., West
Syracuse, New York 13204

Attn: Gary Priscott

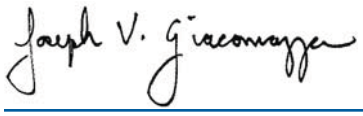
Joseph V. Giacomazza

Authorized for release by:
2/20/2014 3:28:01 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



Joe Giacomazza
Project Management Assistant II
2/20/2014 3:28:01 PM

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)
Dil Fac	Dilution Factor
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)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Job ID: 480-54461-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-54461-1

Receipt
The samples were received on 2/11/2014 1:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

GC/MS VOA
Method(s) 8260C: Due to the high concentration of Tetrachloroethene, the matrix spike and matrix spike duplicate (MS/MSD) for batch 165902 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 166166 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8260C: The following sample(s) was analyzed medium level to bring the concentration of target analytes within the calibration range: (480-54461-7 MS), (480-54461-7 MSD), SB-1 29-30' (480-54461-1), SB-4 18-20' (480-54461-7), SB-8 19-20' (480-54461-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were analyzed as a medium level extraction and diluted to bring the concentration of target analytes within the calibration range: SB-2 29-30' (480-54461-2), SB-7 14-15' (480-54461-5), SB-9 8-10' (480-54461-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 166306 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8260C: Reported analyte concentrations in the following sample(s) are below 200ug/kg and may be biased low due to the sample(s) not being collected according to 5035-L/5035A-L low-level specifications: (480-54461-3 MS), (480-54461-3 MSD), SB-5 13-14' (480-54461-3).

Method(s) 8260C: Reported analyte concentrations in the following sample(s) are below 200ug/kg and may be biased low due to the sample(s) not being collected according to 5035-L/5035A-L low-level specifications: (480-54461-7 MS), (480-54461-7 MSD), SB-1 29-30' (480-54461-1), SB-2 29-30' (480-54461-2), SB-4 18-20' (480-54461-7), SB-7 14-15' (480-54461-5), SB-8 19-20' (480-54461-4), SB-9 8-10' (480-54461-6).

No other analytical or quality issues were noted.

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-1 29-30'
Date Collected: 02/03/14 14:00
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-1
Matrix: Solid
Percent Solids: 92.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.3	0.39	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,1,2,2-Tetrachloroethane	ND		5.3	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,1,2-Trichloroethane	ND		5.3	0.69	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.3	1.2	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,1-Dichloroethane	ND		5.3	0.65	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,1-Dichloroethene	ND		5.3	0.65	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,2,4-Trichlorobenzene	ND		5.3	0.32	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,2-Dibromo-3-Chloropropane	ND		5.3	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,2-Dichlorobenzene	ND		5.3	0.42	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,2-Dichloroethane	ND		5.3	0.27	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,2-Dichloropropane	ND		5.3	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,3-Dichlorobenzene	ND		5.3	0.27	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,4-Dichlorobenzene	ND		5.3	0.75	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
2-Butanone (MEK)	ND		27	2.0	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
2-Hexanone	ND		27	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
4-Methyl-2-pentanone (MIBK)	ND		27	1.8	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Acetone	**9.3**	**J**	27	4.5	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Benzene	ND		5.3	0.26	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Bromodichloromethane	ND		5.3	0.72	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Bromoform	ND		5.3	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Bromomethane	ND		5.3	0.48	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Carbon disulfide	ND		5.3	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Carbon tetrachloride	ND		5.3	0.52	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Chlorobenzene	**0.86**	**J**	5.3	0.71	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Dibromochloromethane	ND		5.3	0.68	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Chloroethane	ND		5.3	1.2	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Chloroform	ND		5.3	0.33	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Chloromethane	ND		5.3	0.32	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
cis-1,3-Dichloropropene	ND		5.3	0.77	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Cyclohexane	ND		5.3	0.75	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Dichlorodifluoromethane	ND		5.3	0.44	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Ethylbenzene	ND		5.3	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
1,2-Dibromoethane	ND		5.3	0.69	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Isopropylbenzene	ND		5.3	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Methyl acetate	ND		5.3	0.99	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Methyl tert-butyl ether	ND		5.3	0.52	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Methylcyclohexane	ND		5.3	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Methylene Chloride	ND		5.3	2.5	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Styrene	ND		5.3	0.27	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Toluene	ND		5.3	0.40	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
trans-1,2-Dichloroethene	**3.2**	**J**	5.3	0.55	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
trans-1,3-Dichloropropene	ND		5.3	2.4	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Trichlorofluoromethane	ND		5.3	0.51	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Vinyl chloride	**2.5**	**J**	5.3	0.65	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1
Xylenes, Total	ND		11	0.90	ug/Kg	☼	02/13/14 20:39	02/14/14 02:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*71 - 125*	*02/13/14 20:39*	*02/14/14 02:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*	*02/13/14 20:39*	*02/14/14 02:38*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-1 29-30'
Date Collected: 02/03/14 14:00
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-1
Matrix: Solid
Percent Solids: 92.1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*02/13/14 20:39*	*02/14/14 02:38*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	980	J	1000	280	ug/Kg	☼	02/15/14 03:47	02/17/14 04:36	10
Tetrachloroethene	46000		1000	140	ug/Kg	☼	02/15/14 03:47	02/17/14 04:36	10
Trichloroethene	6700		1000	290	ug/Kg	☼	02/15/14 03:47	02/17/14 04:36	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*97*		*50 - 149*	*02/15/14 03:47*	*02/17/14 04:36*	*10*
1,2-Dichloroethane-d4 (Surr)	*100*		*53 - 146*	*02/15/14 03:47*	*02/17/14 04:36*	*10*
4-Bromofluorobenzene (Surr)	*94*		*49 - 148*	*02/15/14 03:47*	*02/17/14 04:36*	*10*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-2 29-30'
Date Collected: 02/04/14 09:00
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-2
Matrix: Solid
Percent Solids: 81.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.0	0.44	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,1,2,2-Tetrachloroethane	ND		6.0	0.98	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,1,2-Trichloroethane	ND		6.0	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.0	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,1-Dichloroethane	ND		6.0	0.74	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,1-Dichloroethene	ND		6.0	0.74	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,2,4-Trichlorobenzene	ND		6.0	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,2-Dibromo-3-Chloropropane	ND		6.0	3.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,2-Dichlorobenzene	ND		6.0	0.47	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,2-Dichloroethane	ND		6.0	0.30	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,2-Dichloropropane	ND		6.0	3.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,3-Dichlorobenzene	ND		6.0	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,4-Dichlorobenzene	ND		6.0	0.85	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
2-Butanone (MEK)	ND		30	2.2	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
2-Hexanone	ND		30	3.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
4-Methyl-2-pentanone (MIBK)	ND		30	2.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Acetone	**18**	**J**	30	5.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Benzene	ND		6.0	0.30	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Bromodichloromethane	ND		6.0	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Bromoform	ND		6.0	3.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Bromomethane	ND		6.0	0.54	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Carbon disulfide	ND		6.0	3.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Carbon tetrachloride	ND		6.0	0.59	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Chlorobenzene	ND		6.0	0.80	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Dibromochloromethane	ND		6.0	0.77	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Chloroethane	ND		6.0	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Chloroform	ND		6.0	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Chloromethane	ND		6.0	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
cis-1,2-Dichloroethene	**170**		6.0	0.77	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
cis-1,3-Dichloropropene	ND		6.0	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Cyclohexane	ND		6.0	0.85	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Dichlorodifluoromethane	ND		6.0	0.50	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Ethylbenzene	ND		6.0	0.42	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
1,2-Dibromoethane	ND		6.0	0.78	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Isopropylbenzene	ND		6.0	0.91	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Methyl acetate	ND		6.0	1.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Methyl tert-butyl ether	ND		6.0	0.59	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Methylcyclohexane	ND		6.0	0.92	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Methylene Chloride	ND		6.0	2.8	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Styrene	ND		6.0	0.30	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Toluene	ND		6.0	0.46	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
trans-1,2-Dichloroethene	**2.4**	**J**	6.0	0.62	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
trans-1,3-Dichloropropene	ND		6.0	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Trichlorofluoromethane	ND		6.0	0.57	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Vinyl chloride	**2.3**	**J**	6.0	0.74	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*71 - 125*	*02/13/14 20:39*	*02/14/14 03:03*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-2 29-30'
Date Collected: 02/04/14 09:00
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-2
Matrix: Solid
Percent Solids: 81.7

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*02/13/14 20:39*	*02/14/14 03:03*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 126*	*02/13/14 20:39*	*02/14/14 03:03*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	9500		120	16	ug/Kg	☼	02/15/14 03:47	02/17/14 12:56	1
Trichloroethene	1300		120	34	ug/Kg	☼	02/15/14 03:47	02/17/14 12:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*110*		*50 - 149*	*02/15/14 03:47*	*02/17/14 12:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*53 - 146*	*02/15/14 03:47*	*02/17/14 12:56*	*1*
4-Bromofluorobenzene (Surr)	*110*		*49 - 148*	*02/15/14 03:47*	*02/17/14 12:56*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-5 13-14'
Date Collected: 02/04/14 10:15
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-3
Matrix: Solid
Percent Solids: 83.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.8	0.42	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,1,2,2-Tetrachloroethane	ND		5.8	0.94	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,1,2-Trichloroethane	ND		5.8	0.76	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.8	1.3	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,1-Dichloroethane	ND		5.8	0.71	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,1-Dichloroethene	ND		5.8	0.71	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,2,4-Trichlorobenzene	ND		5.8	0.35	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,2-Dibromo-3-Chloropropane	ND		5.8	2.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,2-Dichlorobenzene	ND		5.8	0.45	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,2-Dichloroethane	ND		5.8	0.29	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,2-Dichloropropane	ND		5.8	2.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,3-Dichlorobenzene	ND		5.8	0.30	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,4-Dichlorobenzene	ND		5.8	0.81	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
2-Butanone (MEK)	ND		29	2.1	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
2-Hexanone	ND		29	2.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
4-Methyl-2-pentanone (MIBK)	ND		29	1.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Acetone	**8.8**	**J**	29	4.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Benzene	ND		5.8	0.28	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Bromodichloromethane	ND		5.8	0.78	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Bromoform	ND		5.8	2.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Bromomethane	ND		5.8	0.52	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Carbon disulfide	ND		5.8	2.9	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Carbon tetrachloride	ND		5.8	0.56	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Chlorobenzene	ND		5.8	0.77	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Dibromochloromethane	ND		5.8	0.74	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Chloroethane	ND		5.8	1.3	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Chloroform	ND		5.8	0.36	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Chloromethane	ND		5.8	0.35	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
cis-1,2-Dichloroethene	ND		5.8	0.74	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
cis-1,3-Dichloropropene	ND		5.8	0.84	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Cyclohexane	ND		5.8	0.81	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Dichlorodifluoromethane	ND		5.8	0.48	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Ethylbenzene	ND		5.8	0.40	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
1,2-Dibromoethane	ND		5.8	0.75	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Isopropylbenzene	ND		5.8	0.88	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Methyl acetate	ND		5.8	1.1	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Methyl tert-butyl ether	ND		5.8	0.57	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Methylcyclohexane	ND		5.8	0.88	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Methylene Chloride	ND		5.8	2.7	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Styrene	ND		5.8	0.29	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Tetrachloroethene	**1.5**	**J**	5.8	0.78	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Toluene	ND		5.8	0.44	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
trans-1,2-Dichloroethene	ND		5.8	0.60	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
trans-1,3-Dichloropropene	ND		5.8	2.6	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Trichloroethene	ND		5.8	1.3	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Trichlorofluoromethane	ND		5.8	0.55	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Vinyl chloride	ND		5.8	0.71	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1
Xylenes, Total	ND		12	0.98	ug/Kg	☼	02/17/14 22:12	02/17/14 23:44	1

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-5 13-14'
Date Collected: 02/04/14 10:15
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-3
Matrix: Solid
Percent Solids: 83.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		71 - 125	02/17/14 22:12	02/17/14 23:44	1
1,2-Dichloroethane-d4 (Surr)	95		64 - 126	02/17/14 22:12	02/17/14 23:44	1
4-Bromofluorobenzene (Surr)	97		72 - 126	02/17/14 22:12	02/17/14 23:44	1

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-8 19-20'
Date Collected: 02/04/14 13:10
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-4
Matrix: Solid
Percent Solids: 77.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.2	0.45	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,1,2,2-Tetrachloroethane	ND		6.2	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,1,2-Trichloroethane	ND		6.2	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,1-Dichloroethane	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,1-Dichloroethene	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,2,4-Trichlorobenzene	ND		6.2	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,2-Dibromo-3-Chloropropane	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,2-Dichlorobenzene	ND		6.2	0.49	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,2-Dichloroethane	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,2-Dichloropropane	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,3-Dichlorobenzene	ND		6.2	0.32	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,4-Dichlorobenzene	ND		6.2	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
2-Butanone (MEK)	ND		31	2.3	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
2-Hexanone	ND		31	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
4-Methyl-2-pentanone (MIBK)	ND		31	2.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Acetone	**28**	**J**	31	5.3	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Benzene	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Bromodichloromethane	ND		6.2	0.84	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Bromoform	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Bromomethane	ND		6.2	0.56	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Carbon disulfide	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Carbon tetrachloride	ND		6.2	0.60	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Chlorobenzene	ND		6.2	0.82	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Dibromochloromethane	ND		6.2	0.80	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Chloroethane	ND		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Chloroform	ND		6.2	0.39	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Chloromethane	ND		6.2	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
cis-1,3-Dichloropropene	ND		6.2	0.90	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Cyclohexane	ND		6.2	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Dichlorodifluoromethane	ND		6.2	0.52	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Ethylbenzene	ND		6.2	0.43	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
1,2-Dibromoethane	ND		6.2	0.80	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Isopropylbenzene	ND		6.2	0.94	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Methyl acetate	ND		6.2	1.2	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Methyl tert-butyl ether	ND		6.2	0.61	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Methylcyclohexane	ND		6.2	0.95	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Methylene Chloride	ND		6.2	2.9	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Styrene	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Tetrachloroethene	**18**		6.2	0.84	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Toluene	ND		6.2	0.47	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
trans-1,2-Dichloroethene	**2.2**	**J**	6.2	0.64	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
trans-1,3-Dichloropropene	ND		6.2	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Trichlorofluoromethane	ND		6.2	0.59	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Vinyl chloride	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*71 - 125*	*02/13/14 20:39*	*02/14/14 03:54*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-8 19-20'
Date Collected: 02/04/14 13:10
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-4
Matrix: Solid
Percent Solids: 77.4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*02/13/14 20:39*	*02/14/14 03:54*	*1*
4-Bromofluorobenzene (Surr)	*93*		*72 - 126*	*02/13/14 20:39*	*02/14/14 03:54*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	2500		120	33	ug/Kg	☼	02/15/14 03:47	02/17/14 05:20	1
Trichloroethene	1900		120	33	ug/Kg	☼	02/15/14 03:47	02/17/14 05:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*113*		*50 - 149*	*02/15/14 03:47*	*02/17/14 05:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*53 - 146*	*02/15/14 03:47*	*02/17/14 05:20*	*1*
4-Bromofluorobenzene (Surr)	*111*		*49 - 148*	*02/15/14 03:47*	*02/17/14 05:20*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-7 14-15'
Date Collected: 02/04/14 14:50
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-5
Matrix: Solid
Percent Solids: 78.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.2	0.45	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,1,2,2-Tetrachloroethane	ND		6.2	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,1,2-Trichloroethane	ND		6.2	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,1-Dichloroethane	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,1-Dichloroethene	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,2,4-Trichlorobenzene	ND		6.2	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,2-Dibromo-3-Chloropropane	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,2-Dichlorobenzene	ND		6.2	0.49	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,2-Dichloroethane	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,2-Dichloropropane	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,3-Dichlorobenzene	ND		6.2	0.32	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,4-Dichlorobenzene	ND		6.2	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
2-Butanone (MEK)	ND		31	2.3	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
2-Hexanone	ND		31	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
4-Methyl-2-pentanone (MIBK)	ND		31	2.0	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Acetone	**21**	**J**	31	5.2	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Benzene	ND		6.2	0.30	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Bromodichloromethane	ND		6.2	0.83	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Bromoform	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Bromomethane	ND		6.2	0.56	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Carbon disulfide	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Carbon tetrachloride	ND		6.2	0.60	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Chlorobenzene	ND		6.2	0.82	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Dibromochloromethane	ND		6.2	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Chloroethane	ND		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Chloroform	ND		6.2	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Chloromethane	ND		6.2	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
cis-1,3-Dichloropropene	ND		6.2	0.89	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Cyclohexane	ND		6.2	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Dichlorodifluoromethane	ND		6.2	0.51	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Ethylbenzene	ND		6.2	0.43	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
1,2-Dibromoethane	ND		6.2	0.80	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Isopropylbenzene	ND		6.2	0.94	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Methyl acetate	ND		6.2	1.2	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Methyl tert-butyl ether	ND		6.2	0.61	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Methylcyclohexane	ND		6.2	0.94	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Methylene Chloride	ND		6.2	2.9	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Styrene	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Toluene	ND		6.2	0.47	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
trans-1,2-Dichloroethene	**5.8**	**J**	6.2	0.64	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
trans-1,3-Dichloropropene	ND		6.2	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Trichloroethene	**100**		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Trichlorofluoromethane	ND		6.2	0.59	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Vinyl chloride	**4.8**	**J**	6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*71 - 125*	*02/13/14 20:39*	*02/14/14 04:19*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-7 14-15'
Date Collected: 02/04/14 14:50
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-5
Matrix: Solid
Percent Solids: 78.6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*02/13/14 20:39*	*02/14/14 04:19*	*1*
4-Bromofluorobenzene (Surr)	*94*		*72 - 126*	*02/13/14 20:39*	*02/14/14 04:19*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	3400		240	67	ug/Kg	☼	02/15/14 03:47	02/17/14 13:18	2
Tetrachloroethene	11000		240	33	ug/Kg	☼	02/15/14 03:47	02/17/14 13:18	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*103*		*50 - 149*	*02/15/14 03:47*	*02/17/14 13:18*	*2*
1,2-Dichloroethane-d4 (Surr)	*106*		*53 - 146*	*02/15/14 03:47*	*02/17/14 13:18*	*2*
4-Bromofluorobenzene (Surr)	*102*		*49 - 148*	*02/15/14 03:47*	*02/17/14 13:18*	*2*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-9 8-10'
Date Collected: 02/07/14 12:45
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-6
Matrix: Solid
Percent Solids: 80.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.2	0.45	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,1,2,2-Tetrachloroethane	ND		6.2	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,1,2-Trichloroethane	ND		6.2	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,1-Dichloroethane	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,1-Dichloroethene	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,2,4-Trichlorobenzene	ND		6.2	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,2-Dibromo-3-Chloropropane	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,2-Dichlorobenzene	ND		6.2	0.48	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,2-Dichloroethane	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,2-Dichloropropane	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,3-Dichlorobenzene	ND		6.2	0.32	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,4-Dichlorobenzene	ND		6.2	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
2-Butanone (MEK)	ND		31	2.3	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
2-Hexanone	ND		31	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
4-Methyl-2-pentanone (MIBK)	ND		31	2.0	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Acetone	ND		31	5.2	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Benzene	ND		6.2	0.30	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Bromodichloromethane	ND		6.2	0.83	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Bromoform	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Bromomethane	ND		6.2	0.56	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Carbon disulfide	ND		6.2	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Carbon tetrachloride	ND		6.2	0.60	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Chlorobenzene	ND		6.2	0.82	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Dibromochloromethane	ND		6.2	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Chloroethane	ND		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Chloroform	ND		6.2	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Chloromethane	ND		6.2	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
cis-1,2-Dichloroethene	**41**		6.2	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
cis-1,3-Dichloropropene	ND		6.2	0.89	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Cyclohexane	ND		6.2	0.87	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Dichlorodifluoromethane	ND		6.2	0.51	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Ethylbenzene	ND		6.2	0.43	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
1,2-Dibromoethane	ND		6.2	0.80	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Isopropylbenzene	ND		6.2	0.93	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Methyl acetate	ND		6.2	1.2	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Methyl tert-butyl ether	ND		6.2	0.61	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Methylcyclohexane	ND		6.2	0.94	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Methylene Chloride	ND		6.2	2.8	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Styrene	ND		6.2	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Toluene	ND		6.2	0.47	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
trans-1,2-Dichloroethene	ND		6.2	0.64	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
trans-1,3-Dichloropropene	ND		6.2	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Trichloroethene	**31**		6.2	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Trichlorofluoromethane	**8.0**		6.2	0.59	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Vinyl chloride	ND		6.2	0.76	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 04:45	1

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-9 8-10'
Date Collected: 02/07/14 12:45
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-6
Matrix: Solid
Percent Solids: 80.6

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*71 - 125*	*02/13/14 20:39*	*02/14/14 04:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*02/13/14 20:39*	*02/14/14 04:45*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*02/13/14 20:39*	*02/14/14 04:45*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	56000		960	130	ug/Kg	☼	02/15/14 03:47	02/17/14 13:40	8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*50 - 149*	*02/15/14 03:47*	*02/17/14 13:40*	*8*
1,2-Dichloroethane-d4 (Surr)	*108*		*53 - 146*	*02/15/14 03:47*	*02/17/14 13:40*	*8*
4-Bromofluorobenzene (Surr)	*103*		*49 - 148*	*02/15/14 03:47*	*02/17/14 13:40*	*8*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-4 18-20'
Date Collected: 02/07/14 14:05
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-7
Matrix: Solid
Percent Solids: 81.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.1	0.45	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,1,2,2-Tetrachloroethane	ND		6.1	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,1,2-Trichloroethane	ND		6.1	0.80	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.1	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,1-Dichloroethane	ND		6.1	0.75	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,1-Dichloroethene	ND		6.1	0.75	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,2,4-Trichlorobenzene	ND		6.1	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,2-Dibromo-3-Chloropropane	ND		6.1	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,2-Dichlorobenzene	ND		6.1	0.48	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,2-Dichloroethane	ND		6.1	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,2-Dichloropropane	ND		6.1	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,3-Dichlorobenzene	ND		6.1	0.32	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,4-Dichlorobenzene	ND		6.1	0.86	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
2-Butanone (MEK)	ND		31	2.2	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
2-Hexanone	ND		31	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
4-Methyl-2-pentanone (MIBK)	ND		31	2.0	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Acetone	**17**	**J**	31	5.2	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Benzene	ND		6.1	0.30	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Bromodichloromethane	ND		6.1	0.82	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Bromoform	ND		6.1	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Bromomethane	ND		6.1	0.55	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Carbon disulfide	ND		6.1	3.1	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Carbon tetrachloride	ND		6.1	0.59	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Chlorobenzene	**1.9**	**J**	6.1	0.81	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Dibromochloromethane	ND		6.1	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Chloroethane	ND		6.1	1.4	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Chloroform	ND		6.1	0.38	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Chloromethane	ND		6.1	0.37	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
cis-1,2-Dichloroethene	**120**		6.1	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
cis-1,3-Dichloropropene	ND		6.1	0.88	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Cyclohexane	ND		6.1	0.86	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Dichlorodifluoromethane	ND		6.1	0.51	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Ethylbenzene	ND		6.1	0.42	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
1,2-Dibromoethane	ND		6.1	0.79	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Isopropylbenzene	ND		6.1	0.93	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Methyl acetate	ND		6.1	1.1	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Methyl tert-butyl ether	ND		6.1	0.60	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Methylcyclohexane	ND		6.1	0.93	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Methylene Chloride	ND		6.1	2.8	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Styrene	ND		6.1	0.31	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Toluene	ND		6.1	0.46	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
trans-1,2-Dichloroethene	**5.7**	**J**	6.1	0.63	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
trans-1,3-Dichloropropene	ND		6.1	2.7	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Trichlorofluoromethane	ND		6.1	0.58	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Vinyl chloride	ND		6.1	0.75	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	02/13/14 20:39	02/14/14 05:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*71 - 125*	*02/13/14 20:39*	*02/14/14 05:10*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-4 18-20'
Date Collected: 02/07/14 14:05
Date Received: 02/11/14 01:30

Lab Sample ID: 480-54461-7
Matrix: Solid
Percent Solids: 81.4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*108*		*64 - 126*	*02/13/14 20:39*	*02/14/14 05:10*	*1*
4-Bromofluorobenzene (Surr)	*97*		*72 - 126*	*02/13/14 20:39*	*02/14/14 05:10*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	140000		2200	300	ug/Kg	☼	02/15/14 03:47	02/17/14 06:25	20
Trichloroethene	3500		2200	610	ug/Kg	☼	02/15/14 03:47	02/17/14 06:25	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*91*		*50 - 149*	*02/15/14 03:47*	*02/17/14 06:25*	*20*
1,2-Dichloroethane-d4 (Surr)	*96*		*53 - 146*	*02/15/14 03:47*	*02/17/14 06:25*	*20*
4-Bromofluorobenzene (Surr)	*88*		*49 - 148*	*02/15/14 03:47*	*02/17/14 06:25*	*20*

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-1 29-30'

Lab Sample ID: 480-54461-1
Date Collected: 02/03/14 14:00
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			165916	02/13/14 20:39	CDC	TAL BUF
Total/NA	Analysis	8260C		1	165902	02/14/14 02:38	NMD1	TAL BUF
Total/NA	Prep	5035A	DL		166123	02/15/14 03:47	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	10	166166	02/17/14 04:36	GTG	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Client Sample ID: SB-2 29-30'

Lab Sample ID: 480-54461-2
Date Collected: 02/04/14 09:00
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			165916	02/13/14 20:39	CDC	TAL BUF
Total/NA	Analysis	8260C		1	165902	02/14/14 03:03	NMD1	TAL BUF
Total/NA	Prep	5035A	DL		166123	02/15/14 03:47	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	1	166197	02/17/14 12:56	NMD1	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Client Sample ID: SB-5 13-14'

Lab Sample ID: 480-54461-3
Date Collected: 02/04/14 10:15
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			166323	02/17/14 22:12	CDC	TAL BUF
Total/NA	Analysis	8260C		1	166306	02/17/14 23:44	CDC	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Client Sample ID: SB-8 19-20'

Lab Sample ID: 480-54461-4
Date Collected: 02/04/14 13:10
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			165916	02/13/14 20:39	CDC	TAL BUF
Total/NA	Analysis	8260C		1	165902	02/14/14 03:54	NMD1	TAL BUF
Total/NA	Prep	5035A	DL		166123	02/15/14 03:47	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	1	166166	02/17/14 05:20	GTG	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Client Sample ID: SB-7 14-15'

Lab Sample ID: 480-54461-5

Date Collected: 02/04/14 14:50
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 78.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			165916	02/13/14 20:39	CDC	TAL BUF
Total/NA	Analysis	8260C		1	165902	02/14/14 04:19	NMD1	TAL BUF
Total/NA	Prep	5035A	DL		166123	02/15/14 03:47	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	2	166197	02/17/14 13:18	NMD1	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Client Sample ID: SB-9 8-10'

Lab Sample ID: 480-54461-6

Date Collected: 02/07/14 12:45
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			165916	02/13/14 20:39	CDC	TAL BUF
Total/NA	Analysis	8260C		1	165902	02/14/14 04:45	NMD1	TAL BUF
Total/NA	Prep	5035A	DL		166123	02/15/14 03:47	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	8	166197	02/17/14 13:40	NMD1	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Client Sample ID: SB-4 18-20'

Lab Sample ID: 480-54461-7

Date Collected: 02/07/14 14:05
Matrix: Solid
Date Received: 02/11/14 01:30
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			165916	02/13/14 20:39	CDC	TAL BUF
Total/NA	Analysis	8260C		1	165902	02/14/14 05:10	NMD1	TAL BUF
Total/NA	Prep	5035A	DL		166123	02/15/14 03:47	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	20	166166	02/17/14 06:25	GTG	TAL BUF
Total/NA	Analysis	Moisture		1	165917	02/13/14 20:53	CDC	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	NELAP	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-14
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	04-01-14
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	04-01-14
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
West Virginia DEP	State Program	3	252	03-31-14
Wisconsin	State Program	5	998310390	08-31-14

Method Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-54461-1	SB-1 29-30'	Solid	02/03/14 14:00	02/11/14 01:30
480-54461-2	SB-2 29-30'	Solid	02/04/14 09:00	02/11/14 01:30
480-54461-3	SB-5 13-14'	Solid	02/04/14 10:15	02/11/14 01:30
480-54461-4	SB-8 19-20'	Solid	02/04/14 13:10	02/11/14 01:30
480-54461-5	SB-7 14-15'	Solid	02/04/14 14:50	02/11/14 01:30
480-54461-6	SB-9 8-10'	Solid	02/07/14 12:45	02/11/14 01:30
480-54461-7	SB-4 18-20'	Solid	02/07/14 14:05	02/11/14 01:30

TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, New York 14228
Phone (716) 691-2600

Albany Service Center
25 Kraft Avenue
Albany, NY 12205
Phone (518) 428-8140

Chain of Custody Record

TestAmerica

Client Information	Sampler	Lab PM	Carrier Tracking No(s).	COC No.
Client Contact: Aztech Technologies	Bill Toran - Aztech	Judy Stone		1
Company	Phone: (518)885-5383	E-Mail: gwprisco@gw dec state ny us		Page: 1 of 1
Address: 5 McCrea Hill Rd.	Due Date Requested:			Job #
City: Ballston Spa NY	TAT Requested (days): Standard			
State, Zip: New York				
Phone: 518 885 5383	Quote #: NYSDEC Callout 121812			
Email: rhoose@aztechtech.com	PO #: Site #754011			
Project Name/number: Site #754011	WO #			
Site: DEC/Owego Heat Treat	SSOW#			

Analysis Requested

Preservation Codes:
A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; H - Ascorbic Acid; I - Ice; J - DI Water; M - Hexane; N - None; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; Z - other (specify)

Regulatory programs: MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☐

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SB-1 2-3'	2/5/14	2:[illegible]pm	G	soil	[illegible]	N		X		
SB-2 2-3'	2/4/14	9:[illegible]AM	G	soil	[illegible]	N		X		
SB-5 12-14'	2/4/14	10:[illegible]	G	soil	[illegible]	N		X		
SB-8 19-20'	2/4/14	1:10PM	G	soil	BT	N	N	X		
SB-7 14-15	2/4/14	2:50PM	G	soil	[illegible]	N	N	X		
SB-9 8-10'	2/7/14	12:45PM	G	soil	BT	N	N	X		1630 ppm by PID
SB-4 18-20'	2/7/14	2:05PM	G	soil	BT	N	N	X		
			G	soil		N		X		
			G	soil		N		X		
			G	soil		N		X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: **please send copy to wshafer@aztechtech.com, rhoose@aztechtech.com, gwprisco@gw.dec.state.ny.us**

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	2/7/14 6:45pm		[signature]	2/10/14 05:10	TA
[signature]	2/10/14 15:00	TA	[signature]	2-11-14 0:30	TA

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3 #1

WI-QA-018-rev 0

Page 25 of 26

2/20/2014

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-54461-1

Login Number: 54461

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert K

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	
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?	True	
There are no discrepancies between the sample IDs on the containers 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	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	False	
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-54759-1
Client Project/Site: Owego Heat Treat #754011

For:
New York State D.E.C.
615 Erie Blvd., West
Syracuse, New York 13204

Attn: Gary Priscott

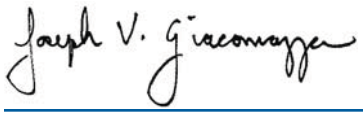
Joseph V. Giacomazza

Authorized for release by:
2/24/2014 3:50:41 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



Joe Giacomazza
Project Management Assistant II
2/24/2014 3:50:41 PM

Table of Contents

Definitions/Glossary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)
Dil Fac	Dilution Factor
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)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Job ID: 480-54759-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-54759-1

Receipt
The sample was received on 2/15/2014 5:56 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2º C.

GC/MS VOA
Method(s) 8260C: Reported analyte concentrations in the following sample(s) are below 200ug/kg and may be biased low due to the sample(s) not being collected according to 5035-L/5035A-L low-level specifications: SB-3 @ 20' (480-54759-1).

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: SB-3 @ 20' (480-54759-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Client Sample ID: SB-3 @ 20'
Date Collected: 02/10/14 13:00
Date Received: 02/15/14 10:00

Lab Sample ID: 480-54759-1
Matrix: Solid
Percent Solids: 76.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.4	0.46	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,1,2,2-Tetrachloroethane	ND		6.4	1.0	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,1,2-Trichloroethane	ND		6.4	0.83	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.4	1.5	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,1-Dichloroethane	ND		6.4	0.78	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,1-Dichloroethene	ND		6.4	0.78	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,2,4-Trichlorobenzene	ND		6.4	0.39	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,2-Dibromo-3-Chloropropane	ND		6.4	3.2	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,2-Dichlorobenzene	ND		6.4	0.50	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,2-Dichloroethane	ND		6.4	0.32	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,2-Dichloropropane	ND		6.4	3.2	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,3-Dichlorobenzene	ND		6.4	0.33	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,4-Dichlorobenzene	ND		6.4	0.90	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
2-Butanone (MEK)	ND		32	2.3	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
2-Hexanone	ND		32	3.2	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
4-Methyl-2-pentanone (MIBK)	ND		32	2.1	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Acetone	**7.6**	**J**	32	5.4	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Benzene	ND		6.4	0.31	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Bromodichloromethane	ND		6.4	0.86	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Bromoform	ND		6.4	3.2	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Bromomethane	ND		6.4	0.58	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Carbon disulfide	ND		6.4	3.2	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Carbon tetrachloride	ND		6.4	0.62	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Chlorobenzene	ND		6.4	0.85	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Dibromochloromethane	ND		6.4	0.82	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Chloroethane	ND		6.4	1.4	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Chloroform	ND		6.4	0.40	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Chloromethane	ND		6.4	0.39	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
cis-1,2-Dichloroethene	**76**		6.4	0.82	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
cis-1,3-Dichloropropene	ND		6.4	0.92	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Cyclohexane	ND		6.4	0.90	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Dichlorodifluoromethane	ND		6.4	0.53	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Ethylbenzene	ND		6.4	0.44	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
1,2-Dibromoethane	ND		6.4	0.82	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Isopropylbenzene	ND		6.4	0.97	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Methyl acetate	ND		6.4	1.2	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Methyl tert-butyl ether	ND		6.4	0.63	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Methylcyclohexane	ND		6.4	0.97	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Methylene Chloride	ND		6.4	2.9	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Styrene	ND		6.4	0.32	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Toluene	ND		6.4	0.48	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
trans-1,2-Dichloroethene	**1.0**	**J**	6.4	0.66	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
trans-1,3-Dichloropropene	ND		6.4	2.8	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Trichloroethene	**110**		6.4	1.4	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Trichlorofluoromethane	ND		6.4	0.61	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Vinyl chloride	ND		6.4	0.78	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1
Xylenes, Total	ND		13	1.1	ug/Kg	☼	02/17/14 23:13	02/18/14 06:32	1

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Client Sample ID: SB-3 @ 20'
Date Collected: 02/10/14 13:00
Date Received: 02/15/14 10:00

Lab Sample ID: 480-54759-1
Matrix: Solid
Percent Solids: 76.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		71 - 125	02/17/14 23:13	02/18/14 06:32	1
1,2-Dichloroethane-d4 (Surr)	96		64 - 126	02/17/14 23:13	02/18/14 06:32	1
4-Bromofluorobenzene (Surr)	93		72 - 126	02/17/14 23:13	02/18/14 06:32	1

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	23000		480	65	ug/Kg	☼	02/18/14 22:04	02/20/14 23:49	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		50 - 149	02/18/14 22:04	02/20/14 23:49	4
1,2-Dichloroethane-d4 (Surr)	106		53 - 146	02/18/14 22:04	02/20/14 23:49	4
4-Bromofluorobenzene (Surr)	102		49 - 148	02/18/14 22:04	02/20/14 23:49	4

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Client Sample ID: SB-3 @ 20'
Date Collected: 02/10/14 13:00
Date Received: 02/15/14 10:00

Lab Sample ID: 480-54759-1
Matrix: Solid
Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			166323	02/17/14 23:13	CDC	TAL BUF
Total/NA	Analysis	8260C		1	166306	02/18/14 06:32	CDC	TAL BUF
Total/NA	Prep	5035A	DL		166543	02/18/14 22:04	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	4	166947	02/20/14 23:49	LCH	TAL BUF
Total/NA	Analysis	Moisture		1	166159	02/15/14 16:00		TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	NELAP	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-14
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	04-01-14
Kentucky (DW)	State Program	4	90029	12-31-14
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	04-01-14
Minnesota	NELAP	5	036-999-337	12-31-14
New Hampshire	NELAP	1	2337	11-17-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	03-31-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-30-14
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
West Virginia DEP	State Program	3	252	03-31-14
Wisconsin	State Program	5	998310390	08-31-14

Method Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-54759-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-54759-1	SB-3 @ 20'	Solid	02/10/14 13:00	02/15/14 10:00

TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, New York 14228
Phone (716) 691-2600

Albany Service Center
25 Kraft Avenue
Albany, NY 12205
Phone (518) 428-8140

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Randy Hoose - Aztech	Lab PM: Judy Stone	Carrier Tracking No(s):	COC No: 1
Client Contact: Aztech Technologies	Phone: (518)885-5383	E-Mail: gwprisco@gw.dec.state.ny.us		Page: 1 of 1
Company:				Job #:

Address: 5 McCrea Hill Rd.	Due Date Requested:	Analysis Requested	Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, H - Ascorbic Acid, I - Ice, J - DI Water, M - Hexane, N - None, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, Z - other (specify)
City: Ballston Spa NY	TAT Requested (days): Standard		
State, Zip: New York			
Phone: 518 885 5383	Quote #: NYSDEC Callout 121812		
Email: rhoose@aztechtech.com	PO #: Site #754011		
Project Name/number: Site #754011	WO #:		
Site: DEC/Owego Heat Treat	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260	Total Number of containers	Special Instructions/Note:
SB-3 @ 20'	2/10/14	1300	G	soil			N		X		Full VOC list

480-54759 Chain of Custody

Regulatory programs: MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☐

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: **please send copy to wshafer@aztechtech.com, rhoose@aztechtech.com, gwprisco@gw.dec.state.ny.us**

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Randy Hoose	2-13-14 0730	AZTECH		2/13/14 08:05	TA
Relinquished by:	2/14/14 18:00	TA		2/15/14 1000	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.2 #1

WI-QA-010-rev 6

Page 12 of 13

2/24/2014

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-54759-1

Login Number: 54759

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert K

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	
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?	True	
There are no discrepancies between the sample IDs on the containers 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	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AZTECH
Samples received within 48 hours of sampling.	False	2/10/14
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-56111-1
Client Project/Site: Owego Heat Treat #754011

For:
New York State D.E.C.
615 Erie Blvd., West
Syracuse, New York 13204

Attn: Gary Priscott

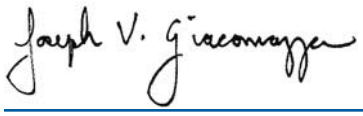
Joseph V. Giacomazza

Authorized for release by:
3/21/2014 1:38:24 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



Joe Giacomazza
Project Management Assistant II
3/21/2014 1:38:24 PM

Table of Contents

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

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)
Dil Fac	Dilution Factor
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)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Job ID: 480-56111-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-56111-1

Receipt
The samples were received on 3/15/2014 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

GC/MS VOA
Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-56111-5 MS), (480-56111-5 MSD), MW-2 (480-56111-1), SB-7(TW) (480-56111-7), SB-9D (480-56111-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: SB-1(TW) (480-56111-2), SB-4S (480-56111-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-56111-6 MS), (480-56111-6 MSD), SB-1(TW) (480-56111-2), SB-4D (480-56111-3), SB-4S (480-56111-4), SB-9S (480-56111-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatile sample was analyzed with headspace in the sample vial due to multiple injections and limited volume: SB-9S (480-56111-6).

Method(s) 8260C: The method blank for batch 170364 contained Carbon Disulfide above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260C: 1,1,2-trichloroethane was detected in the following sample at a concentration above the linear range of the initial calibration curve: MW-2 (480-56111-1). Due to the high dilution dictated by other target compounds, this analyte was diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag

Method(s) 8260C: Vinyl Chloride was detected in the following sample at a concentration above the linear range of the initial calibration curve: SB-4D (480-56111-3). Due to the high dilution dictated by other target compounds, this analyte was diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag

Method(s) 8260C: cis 1,2-Dichloroethane was detected in the following sample at a concentration above the linear range of the initial calibration curve: SB-9D (480-56111-5). Due to the high dilution dictated by other target compounds, this analyte was diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag

No other analytical or quality issues were noted.

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: MW-2
Date Collected: 03/10/14 13:00
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 16:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 16:55	1
1,1,2-Trichloroethane	**130**	**E**	1.0	0.23	ug/L			03/17/14 16:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 16:55	1
1,1-Dichloroethane	**0.96**	**J**	1.0	0.38	ug/L			03/17/14 16:55	1
1,1-Dichloroethene	**4.6**		1.0	0.29	ug/L			03/17/14 16:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 16:55	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 16:55	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 16:55	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 16:55	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 16:55	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 16:55	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 16:55	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 16:55	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 16:55	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/17/14 16:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 16:55	1
Acetone	ND		10	3.0	ug/L			03/17/14 16:55	1
Benzene	ND		1.0	0.41	ug/L			03/17/14 16:55	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 16:55	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 16:55	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 16:55	1
Carbon disulfide	**1.1**	**B**	1.0	0.19	ug/L			03/17/14 16:55	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 16:55	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/17/14 16:55	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/17/14 16:55	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 16:55	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 16:55	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 16:55	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 16:55	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 16:55	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 16:55	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 16:55	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 16:55	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 16:55	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 16:55	1
Methylcyclohexane	**0.35**	**J**	1.0	0.16	ug/L			03/17/14 16:55	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 16:55	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 16:55	1
Toluene	ND		1.0	0.51	ug/L			03/17/14 16:55	1
trans-1,2-Dichloroethene	**17**		1.0	0.90	ug/L			03/17/14 16:55	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 16:55	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/17/14 16:55	1
Vinyl chloride	**41**		1.0	0.90	ug/L			03/17/14 16:55	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/17/14 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*03/17/14 16:55*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*03/17/14 16:55*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: MW-2
Date Collected: 03/10/14 13:00
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-1
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/17/14 16:55*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*03/17/14 16:55*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**920**		80	65	ug/L			03/18/14 13:42	80
Tetrachloroethene	**6500**		80	29	ug/L			03/18/14 13:42	80
Trichloroethene	**3900**		80	37	ug/L			03/18/14 13:42	80

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*03/18/14 13:42*	*80*
Toluene-d8 (Surr)	*98*		*71 - 126*		*03/18/14 13:42*	*80*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*03/18/14 13:42*	*80*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*03/18/14 13:42*	*80*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-1(TW)
Date Collected: 03/10/14 13:05
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 17:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 17:20	1
1,1,2-Trichloroethane	**4.1**		1.0	0.23	ug/L			03/17/14 17:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 17:20	1
1,1-Dichloroethane	**15**		1.0	0.38	ug/L			03/17/14 17:20	1
1,1-Dichloroethene	**35**		1.0	0.29	ug/L			03/17/14 17:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 17:20	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 17:20	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 17:20	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 17:20	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 17:20	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 17:20	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 17:20	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 17:20	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 17:20	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/17/14 17:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 17:20	1
Acetone	ND		10	3.0	ug/L			03/17/14 17:20	1
Benzene	**0.51**	**J**	1.0	0.41	ug/L			03/17/14 17:20	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 17:20	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 17:20	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 17:20	1
Carbon disulfide	**1.5**	**B**	1.0	0.19	ug/L			03/17/14 17:20	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 17:20	1
Chlorobenzene	**19**		1.0	0.75	ug/L			03/17/14 17:20	1
Dibromochloromethane	**14**		1.0	0.32	ug/L			03/17/14 17:20	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 17:20	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 17:20	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 17:20	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 17:20	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 17:20	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 17:20	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 17:20	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 17:20	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 17:20	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 17:20	1
Methylcyclohexane	**2.3**		1.0	0.16	ug/L			03/17/14 17:20	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 17:20	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 17:20	1
Toluene	**0.86**	**J**	1.0	0.51	ug/L			03/17/14 17:20	1
trans-1,2-Dichloroethene	**32**		1.0	0.90	ug/L			03/17/14 17:20	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 17:20	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/17/14 17:20	1
Vinyl chloride	**73**		1.0	0.90	ug/L			03/17/14 17:20	1
Xylenes, Total	**0.81**	**J**	2.0	0.66	ug/L			03/17/14 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*03/17/14 17:20*	*1*
Toluene-d8 (Surr)	*110*		*71 - 126*		*03/17/14 17:20*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-1(TW)
Date Collected: 03/10/14 13:05
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-2
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/17/14 17:20*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*03/17/14 17:20*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1300		400	320	ug/L			03/18/14 14:06	400

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*03/18/14 14:06*	*400*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/18/14 14:06*	*400*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*03/18/14 14:06*	*400*
Dibromofluoromethane (Surr)	*89*		*60 - 140*		*03/18/14 14:06*	*400*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	150000		5000	1800	ug/L			03/18/14 22:15	5000
Trichloroethene	5000		5000	2300	ug/L			03/18/14 22:15	5000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*90*		*66 - 137*		*03/18/14 22:15*	*5000*
Toluene-d8 (Surr)	*101*		*71 - 126*		*03/18/14 22:15*	*5000*
4-Bromofluorobenzene (Surr)	*111*		*73 - 120*		*03/18/14 22:15*	*5000*
Dibromofluoromethane (Surr)	*91*		*60 - 140*		*03/18/14 22:15*	*5000*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-4D
Date Collected: 03/10/14 13:10
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 17:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 17:46	1
1,1,2-Trichloroethane	**0.75**	**J**	1.0	0.23	ug/L			03/17/14 17:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 17:46	1
1,1-Dichloroethane	**5.5**		1.0	0.38	ug/L			03/17/14 17:46	1
1,1-Dichloroethene	**18**		1.0	0.29	ug/L			03/17/14 17:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 17:46	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 17:46	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 17:46	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 17:46	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 17:46	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 17:46	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 17:46	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 17:46	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 17:46	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/17/14 17:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 17:46	1
Acetone	**7.0**	**J**	10	3.0	ug/L			03/17/14 17:46	1
Benzene	ND		1.0	0.41	ug/L			03/17/14 17:46	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 17:46	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 17:46	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 17:46	1
Carbon disulfide	**1.2**	**B**	1.0	0.19	ug/L			03/17/14 17:46	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 17:46	1
Chlorobenzene	**10**		1.0	0.75	ug/L			03/17/14 17:46	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/17/14 17:46	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 17:46	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 17:46	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 17:46	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 17:46	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 17:46	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 17:46	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 17:46	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 17:46	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 17:46	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 17:46	1
Methylcyclohexane	**1.3**		1.0	0.16	ug/L			03/17/14 17:46	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 17:46	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 17:46	1
Toluene	**0.76**	**J**	1.0	0.51	ug/L			03/17/14 17:46	1
trans-1,2-Dichloroethene	**25**		1.0	0.90	ug/L			03/17/14 17:46	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 17:46	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/17/14 17:46	1
Vinyl chloride	**210**	**E**	1.0	0.90	ug/L			03/17/14 17:46	1
Xylenes, Total	**0.95**	**J**	2.0	0.66	ug/L			03/17/14 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*66 - 137*		*03/17/14 17:46*	*1*
Toluene-d8 (Surr)	*109*		*71 - 126*		*03/17/14 17:46*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-4D
Date Collected: 03/10/14 13:10
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-3
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/17/14 17:46*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*03/17/14 17:46*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3200**		2000	1600	ug/L			03/18/14 22:38	2000
Tetrachloroethene	**110000**		2000	720	ug/L			03/18/14 22:38	2000
Trichloroethene	**6000**		2000	920	ug/L			03/18/14 22:38	2000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*03/18/14 22:38*	*2000*
Toluene-d8 (Surr)	*104*		*71 - 126*		*03/18/14 22:38*	*2000*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*03/18/14 22:38*	*2000*
Dibromofluoromethane (Surr)	*90*		*60 - 140*		*03/18/14 22:38*	*2000*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-4S
Date Collected: 03/10/14 13:15
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 18:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 18:11	1
1,1,2-Trichloroethane	**0.72**	**J**	1.0	0.23	ug/L			03/17/14 18:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 18:11	1
1,1-Dichloroethane	**8.0**		1.0	0.38	ug/L			03/17/14 18:11	1
1,1-Dichloroethene	**8.9**		1.0	0.29	ug/L			03/17/14 18:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 18:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 18:11	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 18:11	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 18:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 18:11	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 18:11	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 18:11	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 18:11	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 18:11	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/17/14 18:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 18:11	1
Acetone	ND		10	3.0	ug/L			03/17/14 18:11	1
Benzene	ND		1.0	0.41	ug/L			03/17/14 18:11	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 18:11	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 18:11	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 18:11	1
Carbon disulfide	**1.5**	**B**	1.0	0.19	ug/L			03/17/14 18:11	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 18:11	1
Chlorobenzene	**6.7**		1.0	0.75	ug/L			03/17/14 18:11	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/17/14 18:11	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 18:11	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 18:11	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 18:11	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 18:11	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 18:11	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 18:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 18:11	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 18:11	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 18:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 18:11	1
Methylcyclohexane	**0.70**	**J**	1.0	0.16	ug/L			03/17/14 18:11	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 18:11	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 18:11	1
Toluene	ND		1.0	0.51	ug/L			03/17/14 18:11	1
trans-1,2-Dichloroethene	**12**		1.0	0.90	ug/L			03/17/14 18:11	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 18:11	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/17/14 18:11	1
Vinyl chloride	**20**		1.0	0.90	ug/L			03/17/14 18:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/17/14 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*66 - 137*		*03/17/14 18:11*	*1*
Toluene-d8 (Surr)	*111*		*71 - 126*		*03/17/14 18:11*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-4S
Date Collected: 03/10/14 13:15
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-4
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/17/14 18:11*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*03/17/14 18:11*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		400	320	ug/L			03/18/14 14:53	400
Trichloroethene	**2500**		400	180	ug/L			03/18/14 14:53	400

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*03/18/14 14:53*	*400*
Toluene-d8 (Surr)	*101*		*71 - 126*		*03/18/14 14:53*	*400*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*03/18/14 14:53*	*400*
Dibromofluoromethane (Surr)	*91*		*60 - 140*		*03/18/14 14:53*	*400*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**100000**		4000	1400	ug/L			03/18/14 23:02	4000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*90*		*66 - 137*		*03/18/14 23:02*	*4000*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/18/14 23:02*	*4000*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*03/18/14 23:02*	*4000*
Dibromofluoromethane (Surr)	*88*		*60 - 140*		*03/18/14 23:02*	*4000*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-9D
Date Collected: 03/10/14 13:20
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 18:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 18:36	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/17/14 18:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 18:36	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/17/14 18:36	1
1,1-Dichloroethene	**0.38**	**J**	1.0	0.29	ug/L			03/17/14 18:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 18:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 18:36	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 18:36	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 18:36	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 18:36	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 18:36	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 18:36	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 18:36	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 18:36	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/17/14 18:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 18:36	1
Acetone	ND		10	3.0	ug/L			03/17/14 18:36	1
Benzene	ND		1.0	0.41	ug/L			03/17/14 18:36	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 18:36	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 18:36	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 18:36	1
Carbon disulfide	**1.4**	**B**	1.0	0.19	ug/L			03/17/14 18:36	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 18:36	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/17/14 18:36	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/17/14 18:36	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 18:36	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 18:36	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 18:36	1
cis-1,2-Dichloroethene	**120**	**E**	1.0	0.81	ug/L			03/17/14 18:36	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 18:36	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 18:36	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 18:36	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 18:36	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 18:36	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 18:36	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 18:36	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/17/14 18:36	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 18:36	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 18:36	1
Toluene	ND		1.0	0.51	ug/L			03/17/14 18:36	1
trans-1,2-Dichloroethene	**3.0**		1.0	0.90	ug/L			03/17/14 18:36	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 18:36	1
Trichlorofluoromethane	**63**		1.0	0.88	ug/L			03/17/14 18:36	1
Vinyl chloride	**17**		1.0	0.90	ug/L			03/17/14 18:36	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/17/14 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*03/17/14 18:36*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-9D
Date Collected: 03/10/14 13:20
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-5
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*102*		*71 - 126*		*03/17/14 18:36*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*03/17/14 18:36*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*03/17/14 18:36*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**16000**		200	72	ug/L			03/18/14 15:17	200
Trichloroethene	**150**	**J**	200	92	ug/L			03/18/14 15:17	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*89*		*66 - 137*		*03/18/14 15:17*	*200*
Toluene-d8 (Surr)	*100*		*71 - 126*		*03/18/14 15:17*	*200*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*03/18/14 15:17*	*200*
Dibromofluoromethane (Surr)	*90*		*60 - 140*		*03/18/14 15:17*	*200*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-9S
Date Collected: 03/10/14 13:25
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 19:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 19:01	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/17/14 19:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 19:01	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/17/14 19:01	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/17/14 19:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 19:01	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 19:01	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 19:01	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 19:01	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 19:01	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 19:01	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 19:01	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 19:01	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 19:01	1
2-Butanone (MEK)	**4.2**	**J**	10	1.3	ug/L			03/17/14 19:01	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 19:01	1
Acetone	**21**		10	3.0	ug/L			03/17/14 19:01	1
Benzene	ND		1.0	0.41	ug/L			03/17/14 19:01	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 19:01	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 19:01	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 19:01	1
Carbon disulfide	**2.5**	**B**	1.0	0.19	ug/L			03/17/14 19:01	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 19:01	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/17/14 19:01	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/17/14 19:01	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 19:01	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 19:01	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 19:01	1
cis-1,2-Dichloroethene	**44**		1.0	0.81	ug/L			03/17/14 19:01	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 19:01	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 19:01	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 19:01	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 19:01	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 19:01	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 19:01	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 19:01	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/17/14 19:01	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 19:01	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 19:01	1
Toluene	**0.93**	**J**	1.0	0.51	ug/L			03/17/14 19:01	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/17/14 19:01	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 19:01	1
Trichloroethene	**45**		1.0	0.46	ug/L			03/17/14 19:01	1
Trichlorofluoromethane	**24**		1.0	0.88	ug/L			03/17/14 19:01	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/17/14 19:01	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/17/14 19:01	1

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-9S
Date Collected: 03/10/14 13:25
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-6
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		66 - 137		03/17/14 19:01	1
Toluene-d8 (Surr)	115		71 - 126		03/17/14 19:01	1
4-Bromofluorobenzene (Surr)	99		73 - 120		03/17/14 19:01	1
Dibromofluoromethane (Surr)	95		60 - 140		03/17/14 19:01	1

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	46000		1000	360	ug/L			03/18/14 23:25	1000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		66 - 137		03/18/14 23:25	1000
Toluene-d8 (Surr)	99		71 - 126		03/18/14 23:25	1000
4-Bromofluorobenzene (Surr)	109		73 - 120		03/18/14 23:25	1000
Dibromofluoromethane (Surr)	90		60 - 140		03/18/14 23:25	1000

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-7(TW)
Date Collected: 03/10/14 13:30
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/17/14 19:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/17/14 19:27	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/17/14 19:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/17/14 19:27	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/17/14 19:27	1
1,1-Dichloroethene	**6.9**		1.0	0.29	ug/L			03/17/14 19:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/17/14 19:27	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/17/14 19:27	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/17/14 19:27	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/17/14 19:27	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/17/14 19:27	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/17/14 19:27	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/17/14 19:27	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/17/14 19:27	1
2-Hexanone	ND		5.0	1.2	ug/L			03/17/14 19:27	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/17/14 19:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/17/14 19:27	1
Acetone	ND		10	3.0	ug/L			03/17/14 19:27	1
Benzene	ND		1.0	0.41	ug/L			03/17/14 19:27	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/17/14 19:27	1
Bromoform	ND		1.0	0.26	ug/L			03/17/14 19:27	1
Bromomethane	ND		1.0	0.69	ug/L			03/17/14 19:27	1
Carbon disulfide	**0.95**	**J B**	1.0	0.19	ug/L			03/17/14 19:27	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/17/14 19:27	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/17/14 19:27	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/17/14 19:27	1
Chloroethane	ND		1.0	0.32	ug/L			03/17/14 19:27	1
Chloroform	ND		1.0	0.34	ug/L			03/17/14 19:27	1
Chloromethane	ND		1.0	0.35	ug/L			03/17/14 19:27	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/17/14 19:27	1
Cyclohexane	ND		1.0	0.18	ug/L			03/17/14 19:27	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/17/14 19:27	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/17/14 19:27	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/17/14 19:27	1
Methyl acetate	ND		2.5	0.50	ug/L			03/17/14 19:27	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/17/14 19:27	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/17/14 19:27	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/17/14 19:27	1
Styrene	ND		1.0	0.73	ug/L			03/17/14 19:27	1
Toluene	ND		1.0	0.51	ug/L			03/17/14 19:27	1
trans-1,2-Dichloroethene	**28**		1.0	0.90	ug/L			03/17/14 19:27	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/17/14 19:27	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/17/14 19:27	1
Vinyl chloride	**35**		1.0	0.90	ug/L			03/17/14 19:27	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/17/14 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*03/17/14 19:27*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/17/14 19:27*	*1*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-7(TW)
Date Collected: 03/10/14 13:30
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-7
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*03/17/14 19:27*	*1*
Dibromofluoromethane (Surr)	*100*		*60 - 140*		*03/17/14 19:27*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3900**		40	32	ug/L			03/18/14 16:05	40
Tetrachloroethene	**3500**		40	14	ug/L			03/18/14 16:05	40
Trichloroethene	**570**		40	18	ug/L			03/18/14 16:05	40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*03/18/14 16:05*	*40*
Toluene-d8 (Surr)	*100*		*71 - 126*		*03/18/14 16:05*	*40*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*03/18/14 16:05*	*40*
Dibromofluoromethane (Surr)	*91*		*60 - 140*		*03/18/14 16:05*	*40*

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: TRIP BLANK
Date Collected: 03/10/14 00:00
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/18/14 12:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/18/14 12:31	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/18/14 12:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/18/14 12:31	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/18/14 12:31	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/18/14 12:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/18/14 12:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/18/14 12:31	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/18/14 12:31	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/18/14 12:31	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/18/14 12:31	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/18/14 12:31	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/18/14 12:31	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/18/14 12:31	1
2-Hexanone	ND		5.0	1.2	ug/L			03/18/14 12:31	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/18/14 12:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/18/14 12:31	1
Acetone	ND		10	3.0	ug/L			03/18/14 12:31	1
Benzene	ND		1.0	0.41	ug/L			03/18/14 12:31	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/18/14 12:31	1
Bromoform	ND		1.0	0.26	ug/L			03/18/14 12:31	1
Bromomethane	ND		1.0	0.69	ug/L			03/18/14 12:31	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/18/14 12:31	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/18/14 12:31	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/18/14 12:31	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/18/14 12:31	1
Chloroethane	ND		1.0	0.32	ug/L			03/18/14 12:31	1
Chloroform	ND		1.0	0.34	ug/L			03/18/14 12:31	1
Chloromethane	ND		1.0	0.35	ug/L			03/18/14 12:31	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/18/14 12:31	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/18/14 12:31	1
Cyclohexane	ND		1.0	0.18	ug/L			03/18/14 12:31	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/18/14 12:31	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/18/14 12:31	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/18/14 12:31	1
Methyl acetate	ND		2.5	0.50	ug/L			03/18/14 12:31	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/18/14 12:31	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/18/14 12:31	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/18/14 12:31	1
Styrene	ND		1.0	0.73	ug/L			03/18/14 12:31	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/18/14 12:31	1
Toluene	ND		1.0	0.51	ug/L			03/18/14 12:31	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/18/14 12:31	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/18/14 12:31	1
Trichloroethene	ND		1.0	0.46	ug/L			03/18/14 12:31	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/18/14 12:31	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/18/14 12:31	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/18/14 12:31	1

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: TRIP BLANK
Date Collected: 03/10/14 00:00
Date Received: 03/15/14 01:00

Lab Sample ID: 480-56111-8
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		66 - 137		03/18/14 12:31	1
Toluene-d8 (Surr)	102		71 - 126		03/18/14 12:31	1
4-Bromofluorobenzene (Surr)	108		73 - 120		03/18/14 12:31	1
Dibromofluoromethane (Surr)	93		60 - 140		03/18/14 12:31	1

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: MW-2

Lab Sample ID: 480-56111-1

Date Collected: 03/10/14 13:00

Matrix: Water

Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 16:55	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	80	170499	03/18/14 13:42	NMD1	TAL BUF

Client Sample ID: SB-1(TW)

Lab Sample ID: 480-56111-2

Date Collected: 03/10/14 13:05

Matrix: Water

Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 17:20	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	400	170499	03/18/14 14:06	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL2	5000	170666	03/18/14 22:15	RAL	TAL BUF

Client Sample ID: SB-4D

Lab Sample ID: 480-56111-3

Date Collected: 03/10/14 13:10

Matrix: Water

Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 17:46	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	2000	170666	03/18/14 22:38	RAL	TAL BUF

Client Sample ID: SB-4S

Lab Sample ID: 480-56111-4

Date Collected: 03/10/14 13:15

Matrix: Water

Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 18:11	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	400	170499	03/18/14 14:53	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL2	4000	170666	03/18/14 23:02	RAL	TAL BUF

Client Sample ID: SB-9D

Lab Sample ID: 480-56111-5

Date Collected: 03/10/14 13:20

Matrix: Water

Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 18:36	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	200	170499	03/18/14 15:17	NMD1	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Client Sample ID: SB-9S

Lab Sample ID: 480-56111-6

Date Collected: 03/10/14 13:25
Matrix: Water
Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 19:01	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	1000	170666	03/18/14 23:25	RAL	TAL BUF

Client Sample ID: SB-7(TW)

Lab Sample ID: 480-56111-7

Date Collected: 03/10/14 13:30
Matrix: Water
Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170364	03/17/14 19:27	NMD1	TAL BUF
Total/NA	Analysis	8260C	DL	40	170499	03/18/14 16:05	NMD1	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-56111-8

Date Collected: 03/10/14 00:00
Matrix: Water
Date Received: 03/15/14 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	170499	03/18/14 12:31	NMD1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-14

Method Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: New York State D.E.C.
Project/Site: Owego Heat Treat #754011

TestAmerica Job ID: 480-56111-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-56111-1	MW-2	Water	03/10/14 13:00	03/15/14 01:00
480-56111-2	SB-1(TW)	Water	03/10/14 13:05	03/15/14 01:00
480-56111-3	SB-4D	Water	03/10/14 13:10	03/15/14 01:00
480-56111-4	SB-4S	Water	03/10/14 13:15	03/15/14 01:00
480-56111-5	SB-9D	Water	03/10/14 13:20	03/15/14 01:00
480-56111-6	SB-9S	Water	03/10/14 13:25	03/15/14 01:00
480-56111-7	SB-7(TW)	Water	03/10/14 13:30	03/15/14 01:00
480-56111-8	TRIP BLANK	Water	03/10/14 00:00	03/15/14 01:00

TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, New York 14228
Phone (716) 691-2600

Albany Service Center
25 Kraft Avenue
Albany, NY 12205
Phone (518) 428-814

480-56111 Chain of Custody

# of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Randy Hoose - Aztec	Carrier Tracking No(s):	COC No: 1
Client Contact: **Aztech Technologies**	Phone: (518) 885-5383		Page: 1 of 1
Company:			Job #:
Address: **5 McCrea Hill Rd.**	Due Date Requested:	**Analysis Requested**	**Preservation Codes:** A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, H - Ascorbic Acid, I - Ice, J - DI Water, M - Hexane, N - None, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, Z - other (specify)
City: **Ballston Spa NY**	TAT Requested (days): Standard		
State, Zip: **New York**			
Phone: **518 885 5383**	Quote #: NYSDEC Callout 121812		
Email: rhoose@aztechtech.com	PO #: Site #754011		**Regulatory programs:** MCP ☐ RCP ☐ DEP Form ☐ GW1/S1 ☐ CT RSR ☐ EDD Required ☐
Project Name/number: Site #754011	WO #: 48007955		
Site: NYSDEC/Owego Heat Treat	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260	Total Number of containers	Special Instructions/Note:
			Preservation Code:					A		
MW-2	3/10/14	1300	G	W	RHH	N		X	3	Full VOC list
SB-1 (TW)	3/10/14	1305	G	W	RHH	N		X	3	Full VOC list
SB-4D	3/10/14	1310	G	W	RHH	N		X	3	Full VOC list
SB-4S	3/10/14	1315	G	W	RHH	N		X	3	Full VOC list
SB-9D	3/10/14	1320	G	W	RHH	N		X	3	Full VOC list
SB-9S	3/10/14	1325	G	W	RHH	N		X	1	1-vial only - Insufficient Sample Volume
SB-7 (TW)	3/10/14	1330	G	W	RHH	N		X	3	Full VOC list
TRIP BLANK									2	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ________ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: **please send e-mail copy to wshafer@aztechtech.com, rhoose@aztechtech.com, gwprisco@gw.dec.state.ny.us**

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-12-14 @ 1300	AZTECH	[signature]	3/14/14 11:55	TA
[signature]	3/14/14 18:00	TA	[signature]	3-15-14 0100	TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.7 #1

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-56111-1

Login Number: 56111

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert K

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	
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?	True	
There are no discrepancies between the sample IDs on the containers 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	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Only 1 vial for SB-9S (noted on COC)
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AZTECH
Samples received within 48 hours of sampling.	False	sampled 3/10/14
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

APPENDIX C

SUMMARY TABLES

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

OWEGO HEAT TREAT
1646 Marshland Road
Appalachin, New York
Site No. 754011

WELL ID/DATE	COMPOUND				
	PCE	**TCE**	**VC**	**Cis-1,2 DCE**	**Total VOC**
NYSDEC Standard[+] (ug/l)	**5.0**	**5.0**	**2.0**	**5.0**	**-**
MW-1					
	---------- Not Sampled - 12/14/06 -- 6/4-5/13 ----------				
06/05/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
MW-2					
12/14/06*					2,365
3/15/07*					31
6/22/07*					63
9/17/07*					825
12/31/07*					223
3/24/08*					31
9/29/28*					41
3/6/09*	4.6	**16**	< 1.0	**70**	91
3/23/11**	**5,100**	**1,300**	< 500	< 500	6,400
6/25/12**	**3,600**	**1,100**	< 500	< 500	4,700
9/17/12**	**7,700**	**2,700**	< 200	**1,200**	11,600
06/05/13	**200**	**260**	**4.0**	**240**	709
03/10/14	**6,500**	**3,900**	**41**	**937**	11,515
MW-3					
	---------- Not Sampled - 12/14/06 -- 3/10/14 ----------				
MW-4					
	---------- Not Sampled - 12/14/06 -- 6/4-5/13 ----------				
06/04/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
MW-5					
	---------- Not Sampled - 12/14/06 -- 6/4-5/13 ----------				
06/04/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
MW-6					
12/14/06*					23
3/15/07*					1.0
6/22/07*					6.0
9/17/07*					10
12/31/07*					15
3/24/08*					5.0
9/29/28*					38
3/6/09*	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3/23/11**	**5.3**	1.0	< 1.0	< 1.0	6.3
6/25/12**	< 1.0	1.0	< 1.0	< 1.0	< 1.0
9/17/12**	< 1.0	1.0	< 1.0	< 1.0	< 1.0
06/05/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
MW-7					
12/14/06*					18
3/15/07*					16
6/22/07*					13
9/17/07*					13
12/31/07*					14
3/24/08*					17
9/29/28*					8.0
3/6/09*	< 1.0	1.7	< 1.0	< 1.0	1.7
3/23/11**	2.1	3.0	< 1.0	< 1.0	5.1
6/25/12**	---------- Not Sampled ----------				
9/17/12**	< 1.0	1.2	< 1.0	< 1.0	3.4
06/04/13	2.8	4.1	< 1.0	< 1.0	6.9
03/10/14	---------- Not Sampled ----------				

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

OWEGO HEAT TREAT
1646 Marshland Road
Appalachin, New York
Site No. 754011

WELL ID/DATE	COMPOUND				
	PCE	TCE	VC	Cis-1,2 DCE	Total VOC
NYSDEC Standard+ (ug/l)	**5.0**	**5.0**	**2.0**	**5.0**	**-**
MW-8					
	---------- Not Sampled - 12/14/06 -- 6/4-5/13 ----------				
06/04/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
MW-9					
	---------- Not Sampled - 12/14/06 -- 6/4-5/13 ----------				
06/05/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
MW-10					
12/14/06*					603
3/15/07*					2,230
6/22/07*					3,140
9/17/07*					3,530
12/31/07*					1,903
3/24/08*					399
9/29/28*					2,006
3/6/09*	**580**	**160**	< 1.0	3.2	772
3/23/11**	**1,800**	**600**	< 200	**310**	2,710
6/25/12**	---------- Not Sampled ----------				
9/17/12**	**2,200**	**1,200**	< 100	**670**	4,070
06/05/13	**1,100**	**430**	< 1.0	**200**	1,736
03/10/14	---------- Not Sampled ----------				
MW-11					
	---------- Not Sampled - 12/14/06 -- 6/4-5/13 ----------				
06/05/13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
03/10/14	---------- Not Sampled ----------				
SB-1 (TW)					
	---------- Well Installed February, 2014 ----------				
03/10/14	**150,000**	**5,000**	**73**	**1,332**	156,498
SB-4S					
	---------- Well Installed February, 2014 ----------				
03/10/14	**100,000**	**2,500**	**20**	**12**	102,559
SB-4D					
	---------- Well Installed February, 2014 ----------				
03/10/14	**110,000**	**6,000**	**210**	**3,225**	119,481
SB-7 (TW)					
	---------- Well Installed February, 2014 ----------				
03/10/14	**3,500**	**570**	**35**	**3,928**	8,041
SB-9S					
	---------- Well Installed February, 2014 ----------				
03/10/14	**46,000**	**45**	< 1.0	**44**	46,121
SB-9D					
	---------- Well Installed February, 2014 ----------				
03/10/14	**16,000**	**150**	**17**	**123**	16,335

Notes:

All concentrations presented in micrograms per liter (ug/l)

+ NYSDEC Standard for class GA groundwater given in 6NYCRR Part 703.5 Table 1.

Concentrations in bold are in excess of their respective Standard for class GA groundwater.

* Lab results provided in Status Report by Geologic, NY, Inc. (4-29-2009). Analysis via Method 8260.

** Lab results provided in Periodic Review Report by Owego Heat Treat (10-15-2012). Analysis via Method 624 for Method 601 volatiles list.

Total VOC = Sum of all VOCs identified in that sample

Blank space indicates that that information is not available.

Abbreviations:

PCE = Tetrachloroethene
TCE = Trichloroethene
Cis 1,2-DCE = Cis-1,2-dichloroethene
VC - Vinyl Chloride

Water Quality Field Parameters
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

WELL ID/DATE	PARAMETER					
	Temp (C)	pH	SC (ms/cm)	ORP (mV)	DO (mg/l)	Turbidity (NTU)
MW-1						
06/04-05/13	13.7	5.3	0.159	221	3.92	28.1
03/10/14	NM	NM	NM	NM	NM	NM
MW-2						
06/04-05/13	13.0	6.2	0.334	53	0.27	62.4
03/10/14	NM	NM	NM	NM	NM	NM
SB-1 (TW)						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	12.0	6.2	0.759	6.3	0.86	NM
MW-3						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	NM	NM	NM	NM	NM	NM
MW-4						
06/04-05/13	15.0	6.7	0.588	175	1.75	38.4
03/10/14	NM	NM	NM	NM	NM	NM
MW-5						
06/04-05/13	15.6	5.0	0.089	245	8.63	2.5
03/10/14	NM	NM	NM	NM	NM	NM
MW-6						
06/04-05/13	13.4	7.3	0.582	86	0.00	1.0
03/10/14	NM	NM	NM	NM	NM	NM
SB-4S						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	11.3	6.4	0.731	36	3.43	NM
SB-4D						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	12.2	6.7	0.711	-26	6.39	NM
SB-7 (TW)						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	10.2	7.1	0.664	32	6.88	NM
SB-9S						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	NM	NM	NM	NM	NM	NM
SB-9D						
06/04-05/13	NI	NI	NI	NI	NI	NI
03/10/14	10.8	6.9	0.544	34	3.43	NM
MW-7						
06/04-05/13	13.8	7.2	0.691	106	0.00	22.8
03/10/14	NM	NM	NM	NM	NM	NM
MW-8						
06/04-05/13	11.6	7.3	0.269	201	9.27	76.6
03/10/14	NM	NM	NM	NM	NM	NM
MW-9						
06/04-05/13	12.3	7.0	0.594	34	0.74	24.9
03/10/14	NM	NM	NM	NM	NM	NM
MW-10						
06/04-05/13	11.7	7.4	0.534	182	0.00	1.9
03/10/14	NM	NM	NM	NM	NM	NM
MW-11						
06/04-05/13	16.9	6.5	0.247	26	0.50	9.3
03/10/14	NM	NM	NM	NM	NM	NM

Notes:

NI = Well not installed on that date

NM = Water Quality Field Parameter measurements not collected from that location on that date

APPENDIX D

HYDRAULIC CONDUCTIVITY TESTING

Summary of Slug Test Analysis
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Well/Test ID	Formation	Slug In (cm/sec)	Slug Out (cm/sec)	Average	
				(cm/sec)	(ft/day)
MW-1 (Slug-1)	SAND & GRAVEL (assumed)	0.01323	0.01467	0.012042	34.14
MW-1 (Slug-2)		0.01185	0.01435		
MW-1 (Slug-3, T-1)		0.0115	0.0138		
MW-1 (Slug-3, T-2)		0.008482	0.008454		
MW-2 (Slug-1)	SILT, "little" to "some" clay	0.000464	0.0003486	0.000425	1.20
MW-2 (Slug-2)		0.0004524	0.0002091		
MW-2 (Slug-3, T-1)		0.0006214	0.000437		
MW-2 (Slug-3, T-2)		0.0004797	0.000387		

Slug Testing conducted March 10, 2014

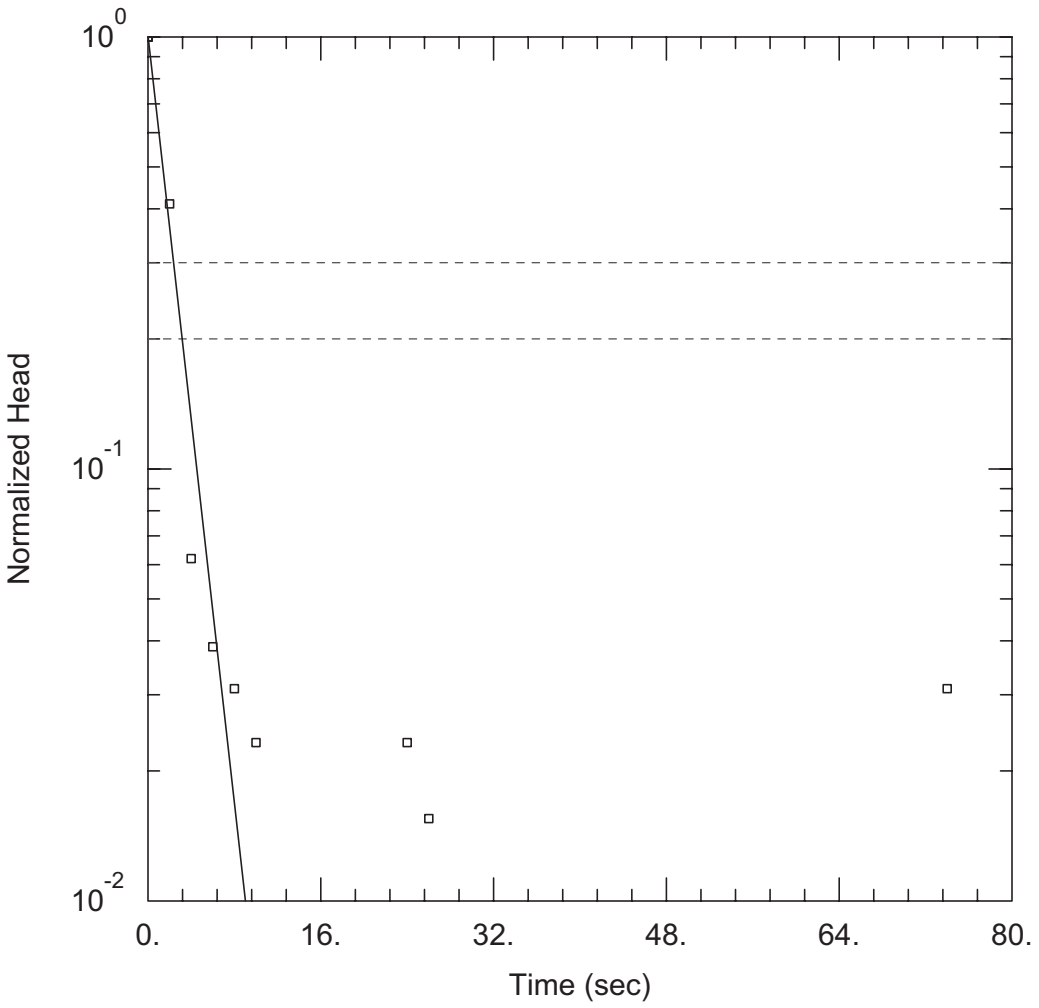
Aqtesolve Data Input - Slug Test Analysis
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-1: Slug-3 IN (TEST-1)	16:00	80	12.00	0.00		
	16:00	82	10.85	1.15	0	1.15
	16:00	84	11.55	0.45	2	0.45
	16:01	88	11.92	0.08	6	0.08
	16:01	90	11.93	0.07	8	0.07
	16:01	92	11.95	0.05	10	0.05
	16:01	94	11.95	0.05	12	0.05
	16:01	96	11.96	0.04	14	0.04
	16:01	104	11.96	0.04	22	0.04
	16:01	106	11.97	0.03	24	0.03
	16:03	224	11.98	0.02	142	0.02
	16:03	226	11.99	0.01	144	0.01
	16:04	266	12.00	0.00	184	0.00
MW-1: Slug-3 OUT (TEST-1)	16:04	268	12.43	-0.43		
	16:04	270	12.95	-0.95	0	0.95
	16:04	272	12.32	-0.32	2	0.32
	16:04	274	12.11	-0.11	4	0.11
	16:04	276	12.05	-0.05	6	0.05
	16:04	278	12.03	-0.03	8	0.03
	16:04	280	12.02	-0.02	10	0.02
	16:04	282	12.01	-0.01	12	0.01
	16:04	284	12.01	-0.01	14	0.01
	16:05	348	11.99	0.01		
MW-1: Slug-3 IN (TEST-2)	16:05	350	11.24	0.75	0	0.75
	16:05	352	11.45	0.54	2	0.54
	16:05	354	11.86	0.13	4	0.13
	16:05	356	11.93	0.06	6	0.06
	16:05	358	11.95	0.04	8	0.04
	16:05	360	11.96	0.03	10	0.03
	16:05	364	11.96	0.03	14	0.03
	16:05	366	11.97	0.02	16	0.02
	16:05	382	11.98	0.01	32	0.01
	16:05	384	11.99	0.00	34	0.00
	16:09	610	12.03	-0.04		
MW-1: Slug-3 OUT (TEST-2)	16:09	612	13.13	-1.10	0	1.10
	16:09	614	12.72	-0.69	2	0.69
	16:09	616	12.27	-0.24	4	0.24
	16:09	618	12.14	-0.11	6	0.11
	16:09	620	12.10	-0.07	8	0.07
	16:09	622	12.09	-0.06	10	0.06
	16:09	624	12.08	-0.05	12	0.05
	16:11	700	12.08	-0.05	88	0.05
	16:18	1,114	12.07	-0.04	502	0.04
	16:18	1,116	12.06	-0.03	504	0.03
	16:19	1,212	12.06	-0.03	600	0.03
	16:19	1,214	12.05	-0.02	602	0.02
	16:19	1,224	12.05	-0.02	612	0.02
	16:25	1,550	12.12	-0.09		

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-1: Slug-2 IN	16:25	1,552	10.70	1.42	0	1.42
	16:25	1,554	11.46	0.66	2	0.66
	16:25	1,556	12.04	0.08	4	0.08
	16:25	1,558	12.07	0.05	6	0.05
	16:25	1,560	12.08	0.04	8	0.04
	16:25	1,562	11.72	0.40	10	0.40
	16:25	1,564	12.09	0.03	12	0.03
	16:25	1,566	12.09	0.03	14	0.03
	16:25	1,568	12.10	0.02	16	0.02
	16:26	1,598	12.11	0.01	46	0.01
	16:26	1,600	12.12	0.00	48	0.00
	16:26	1,602	12.12	0.00	50	0.00
MW-1: Slug-2 OUT	16:27	1,704	13.38	-1.26	0	1.26
	16:28	1,706	12.65	-0.53	2	0.53
	16:28	1,708	12.29	-0.17	4	0.17
	16:28	1,710	12.18	-0.06	6	0.06
	16:28	1,712	12.15	-0.03	8	0.03
	16:28	1,714	12.15	-0.03	10	0.03
	16:28	1,716	12.14	-0.02	12	0.02
	16:30	1,856	12.13	-0.01	152	0.01
	16:30	1,858	12.12	0.00	154	0.00
	16:31	1,888	12.12	0.00	184	0.00
	16:39	2,420	12.06	0.06		
MW-1: Slug-1 IN	16:39	2,422	10.77	1.29	0	1.29
	16:39	2,424	11.53	0.53	2	0.53
	16:40	2,426	11.98	0.08	4	0.08
	16:40	2,428	12.01	0.05	6	0.05
	16:40	2,430	12.02	0.04	8	0.04
	16:40	2,432	12.03	0.03	10	0.03
	16:40	2,446	12.03	0.03	24	0.03
	16:40	2,448	12.04	0.02	26	0.02
	16:41	2,496	12.02	0.04	74	0.04
MW-1: Slug-1 OUT	16:41	2,498	12.19	-0.17		
	16:41	2,500	12.36	-0.34	0	0.34
	16:41	2,502	12.12	-0.10	2	0.10
	16:41	2,504	12.06	-0.04	4	0.04
	16:41	2,506	12.04	-0.02	6	0.02
	16:41	2,508	12.04	-0.02	8	0.02
	16:41	2,510	12.03	-0.01	10	0.01
	16:41	2,512	12.03	-0.01	12	0.01
	16:41	2,514	12.03	-0.01	14	0.01
	16:41	2,516	12.03	-0.01	16	0.01
	16:41	2,518	12.03	-0.01	18	0.01
	16:41	2,520	12.03	-0.01	20	0.01
	16:43	2,658	12.03	-0.01	158	0.01

TESTING CONDUCTED MARCH 10, 2014

Anticipated displacement in a 2.0" ID Well: Slug-1 = 1.0'; Slug-2 = 1.5'; Slug-3 = 2.0'



MW-1: SLUG-1 = IN

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-1 Slug-1 IN.aqt
Date: 04/08/14 Time: 10:35:10

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

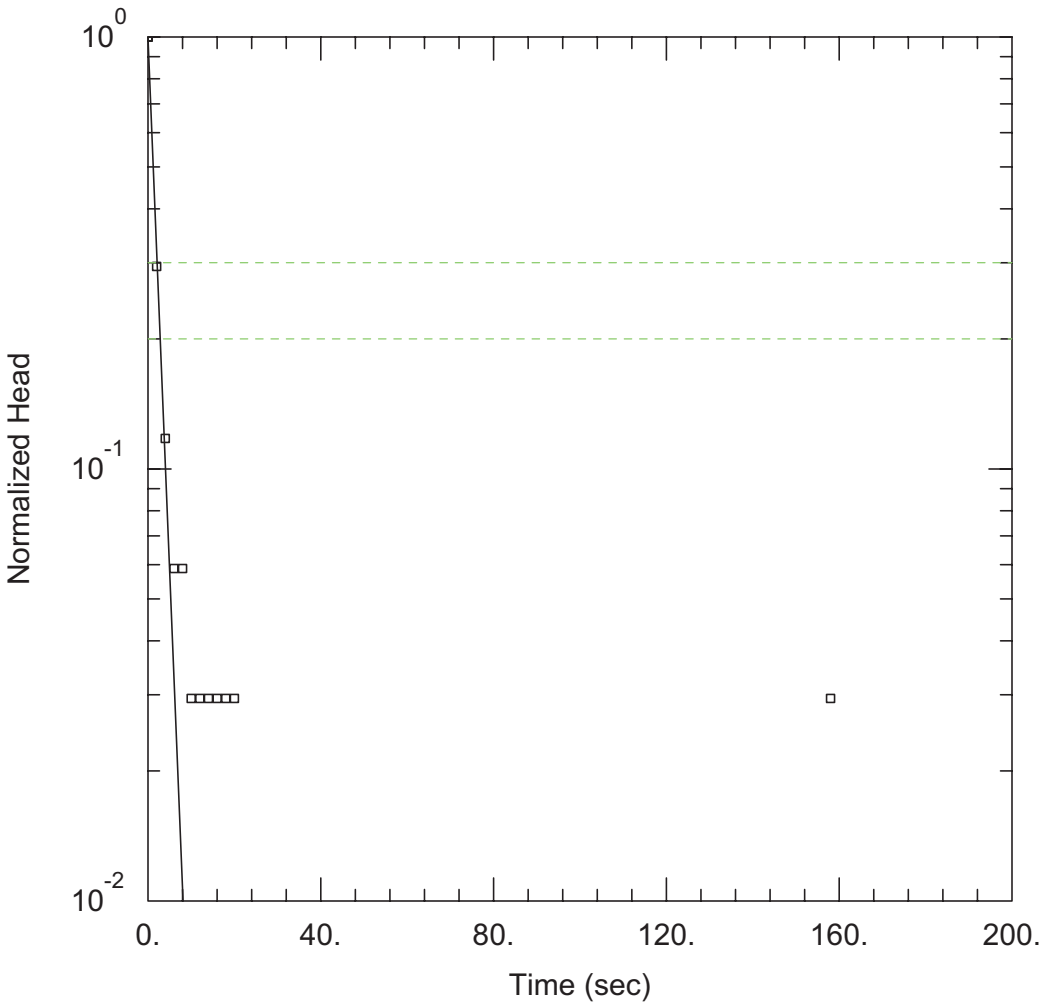
Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.29 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01323 cm/sec
y0 = 1.301 ft



MW-1: SLUG-1 = OUT

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-1 Slug-1 OUT.aqt
Date: 04/08/14 Time: 10:37:47

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

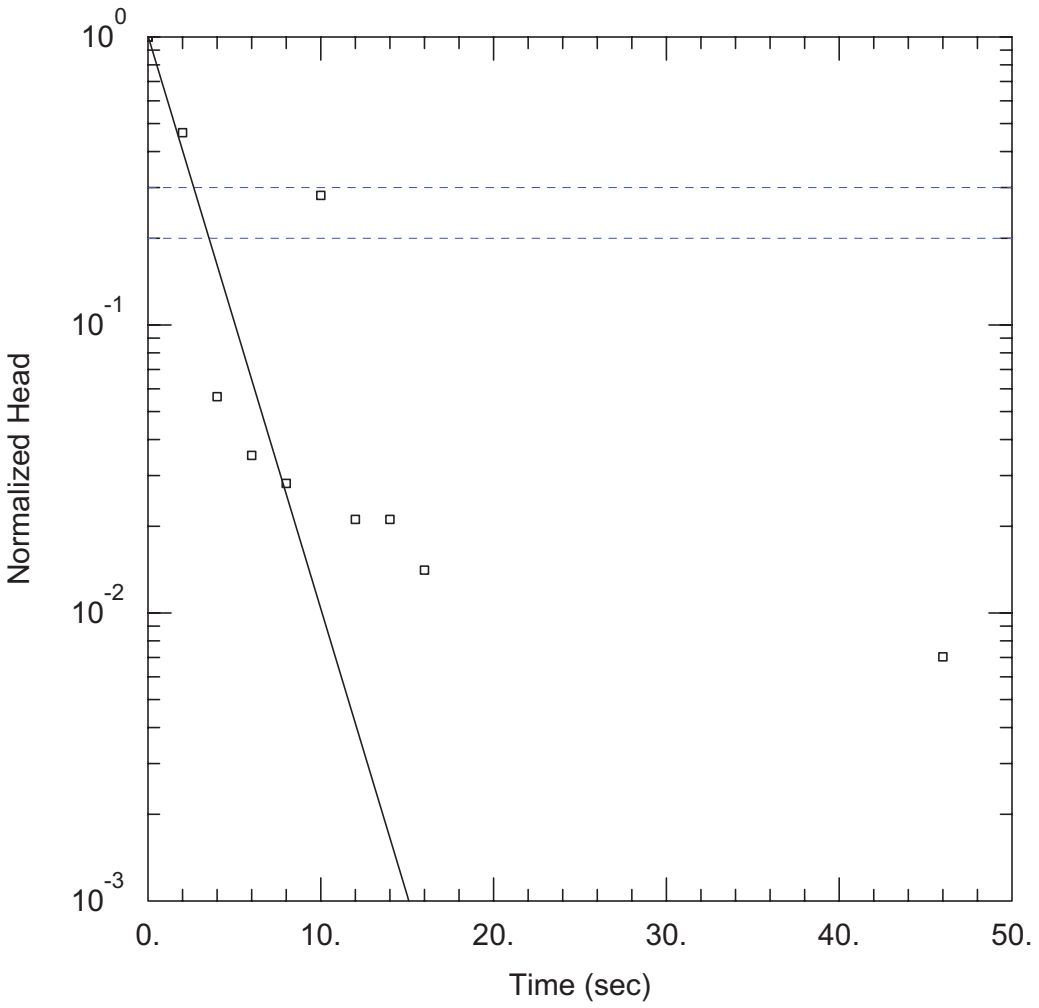
Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 0.34 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01467 cm/sec
y0 = 0.3382 ft



MW-1: SLUG-2 = IN

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-1 Slug-2 IN.aqt
Date: 04/08/14 Time: 10:39:48

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

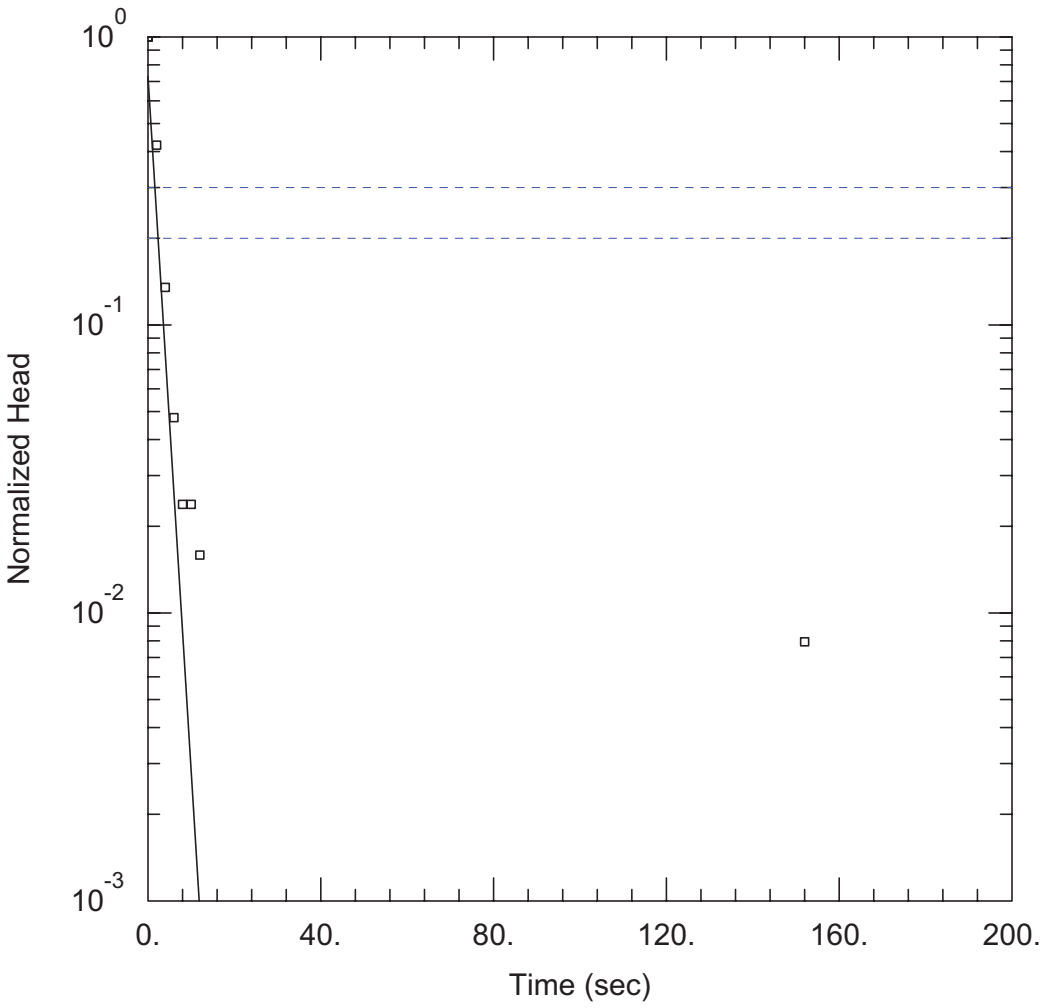
Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.42 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01185 cm/sec
y0 = 1.432 ft



MW-1: SLUG-2 = OUT

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-1 Slug-2 OUT.aqt
Date: 04/08/14 Time: 10:41:30

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

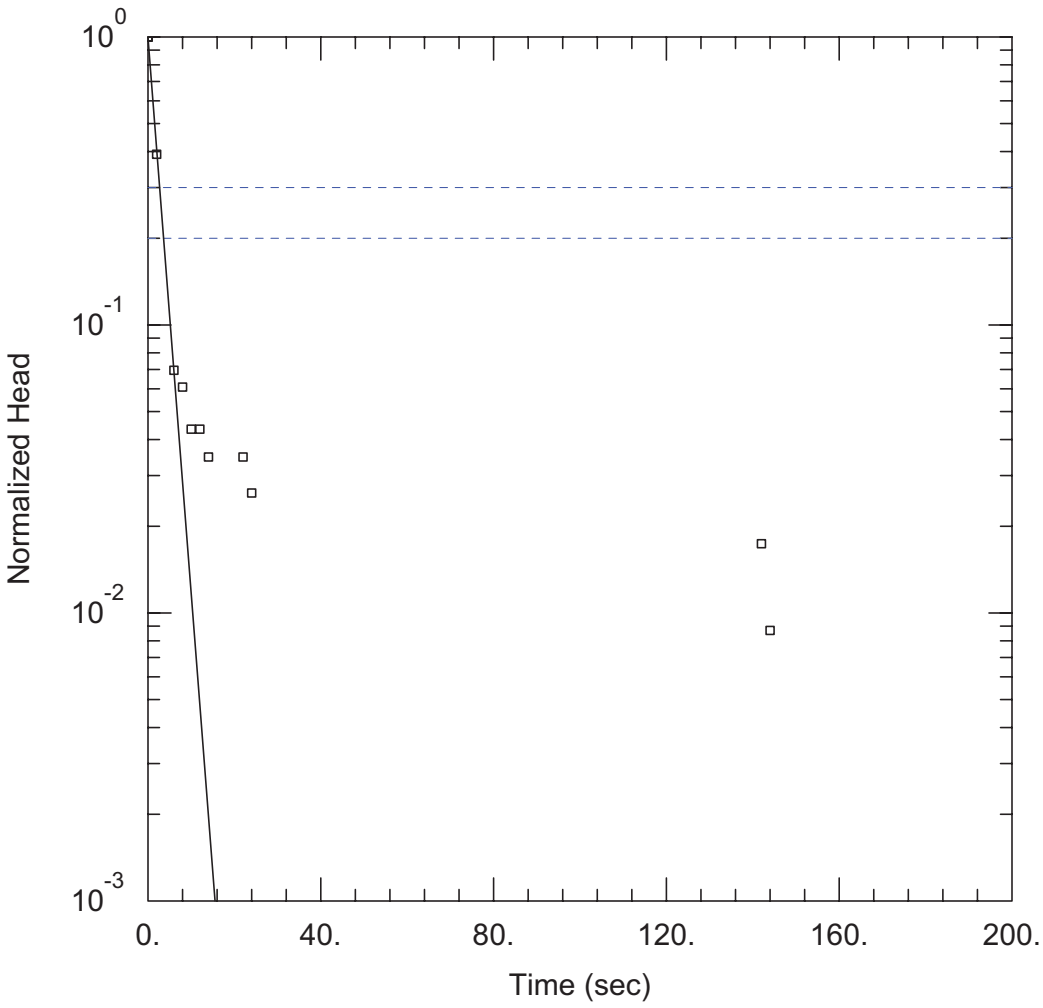
Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.26 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01435 cm/sec
y0 = 0.9165 ft



MW-1: SLUG-3 = IN (TEST-1)

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-1 Slug-3 IN Test 1.aqt
Date: 04/08/14 Time: 10:44:17

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

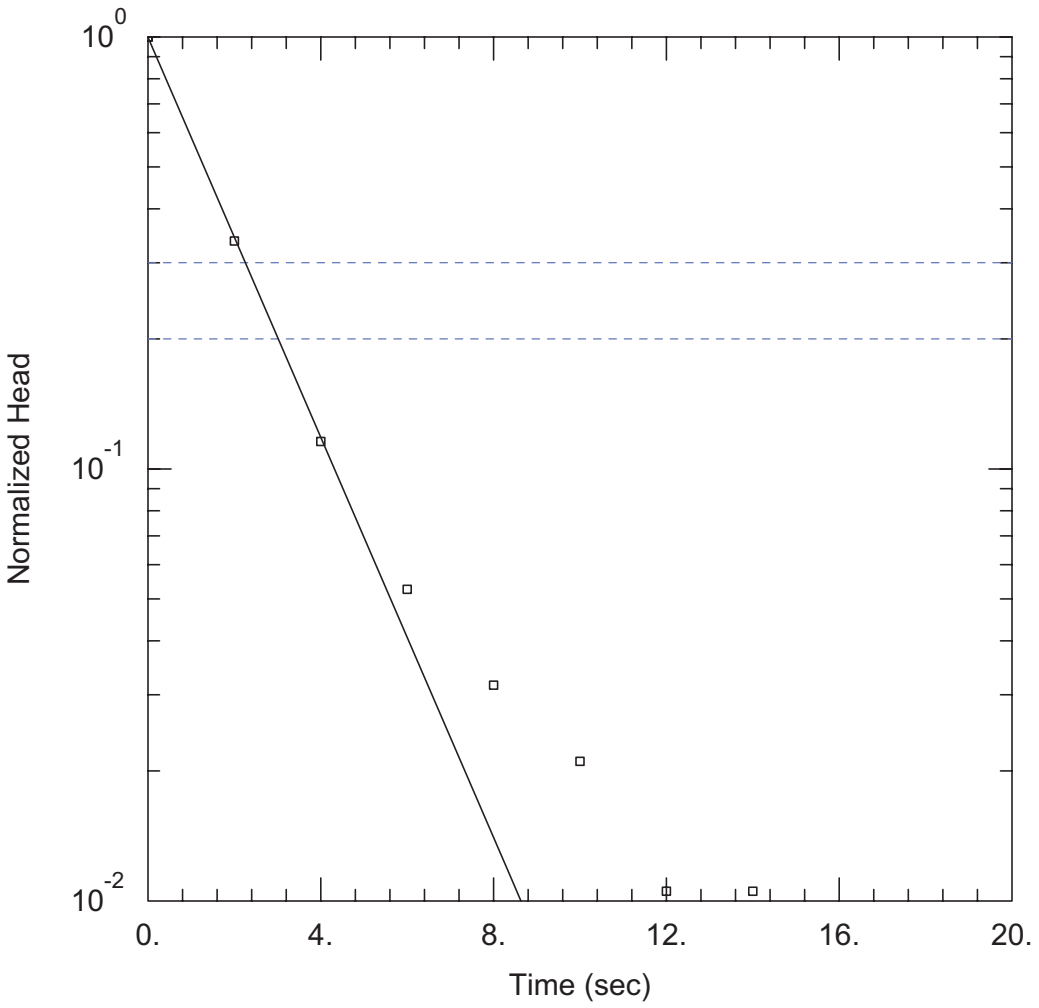
Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.15 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0115 cm/sec
y0 = 1.144 ft



MW-1: SLUG-3 = OUT (TEST-1)

Data Set: C:\...\MW-1 Slug-3 OUT Test 1.aqt
Date: 04/08/14 Time: 10:46:15

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

Saturated Thickness: 22. ft Anisotropy Ratio (Kz/Kr): 1.

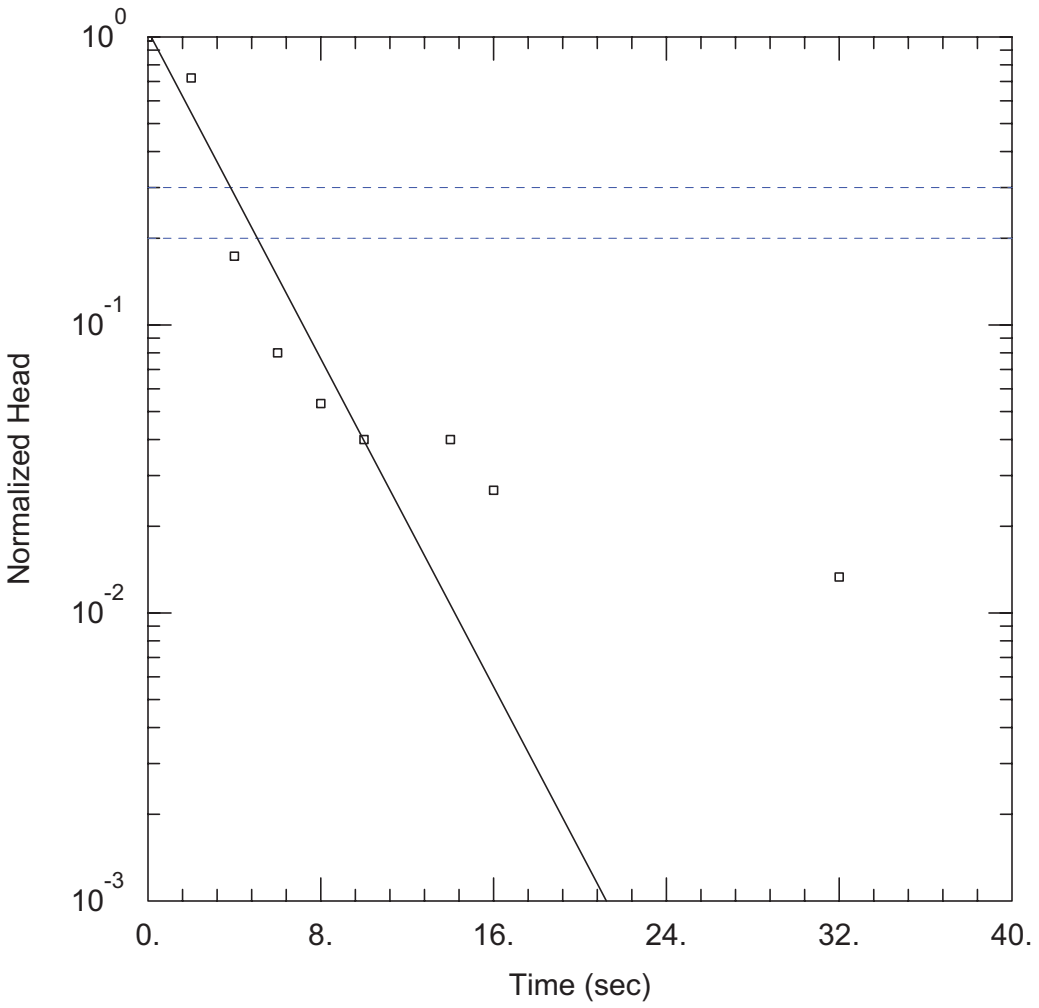
WELL DATA (MW-1)

Initial Displacement: 0.95 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0138 cm/sec y0 = 0.9483 ft



MW-1: SLUG-3 = IN (TEST-2)

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-1 Slug-3 IN Test 2.aqt
Date: 04/16/14 Time: 10:37:25

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

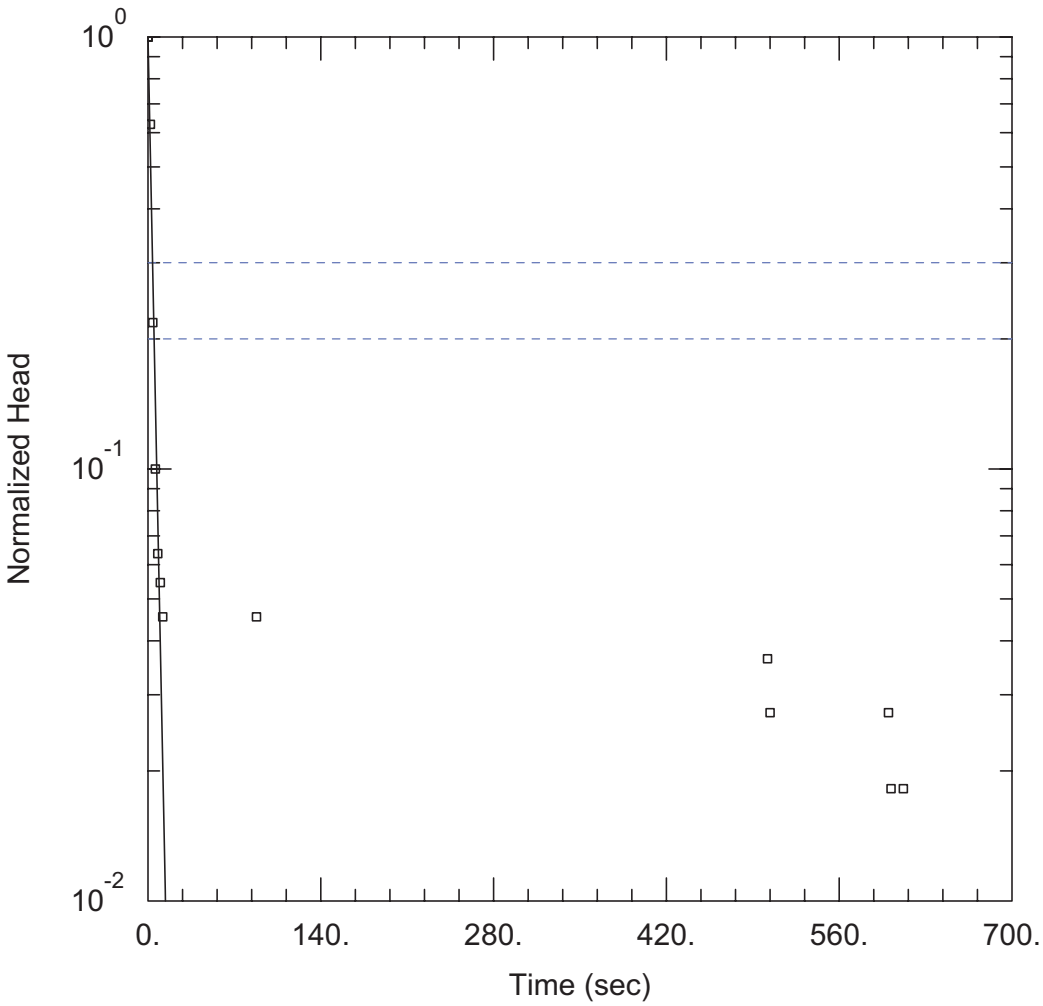
Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 0.75 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.008482 cm/sec
y0 = 0.7878 ft



MW-1: SLUG-3 = OUT (TEST-2)

Data Set: C:\...\MW-1 Slug-3 OUT Test 2.aqt
Date: 04/08/14 Time: 10:50:18

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-1
Test Date: March 10, 2014

AQUIFER DATA

Saturated Thickness: 22. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.1 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.008454 cm/sec y0 = 1.129 ft

Aqtesolve Data Input - Slug Test Analysis
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: Slug-3 IN (Test-1)	14:52	0	14.91	0.00		
	14:52	30	14.57	0.34		
	14:52	32	13.25	1.66	0	1.66
	14:52	36	13.41	1.50	4	1.50
	14:52	38	13.73	1.18	6	1.18
	14:52	40	13.57	1.34	8	1.34
	14:52	42	13.63	1.28	10	1.28
	14:52	44	13.69	1.22	12	1.22
	14:52	46	13.74	1.17	14	1.17
	14:53	48	13.79	1.12	16	1.12
	14:53	50	13.83	1.08	18	1.08
	14:53	52	13.88	1.03	20	1.03
	14:53	54	13.92	0.99	22	0.99
	14:53	56	13.96	0.95	24	0.95
	14:53	58	14.00	0.91	26	0.91
	14:53	60	14.04	0.87	28	0.87
	14:53	62	14.07	0.84	30	0.84
	14:53	64	14.11	0.80	32	0.80
	14:53	66	14.11	0.80	34	0.80
	14:53	68	14.18	0.73	36	0.73
	14:53	70	14.21	0.70	38	0.70
	14:53	72	14.24	0.67	40	0.67
	14:53	74	14.27	0.64	42	0.64
	14:53	76	14.30	0.61	44	0.61
	14:53	78	14.37	0.54	46	0.54
	14:53	80	14.35	0.56	48	0.56
	14:53	82	14.40	0.51	50	0.51
	14:53	84	14.40	0.51	52	0.51
	14:53	86	14.43	0.48	54	0.48
	14:53	88	14.45	0.46	56	0.46
	14:53	90	14.49	0.42	58	0.42
	14:53	92	14.49	0.42	60	0.42
	14:53	94	14.52	0.39	62	0.39
	14:53	96	14.54	0.37	64	0.37
	14:53	98	14.56	0.35	66	0.35
	14:53	100	14.58	0.33	68	0.33
	14:53	102	14.60	0.31	70	0.31
	14:53	104	14.62	0.29	72	0.29
	14:53	106	14.63	0.28	74	0.28
	14:54	108	14.65	0.26	76	0.26
	14:54	110	14.67	0.24	78	0.24
	14:54	112	14.69	0.22	80	0.22
	14:54	114	14.70	0.21	82	0.21
	14:54	116	14.72	0.19	84	0.19
	14:54	118	14.73	0.18	86	0.18
	14:54	120	14.75	0.16	88	0.16
	14:54	122	14.76	0.15	90	0.15
	14:54	124	14.78	0.13	92	0.13
	14:54	126	14.79	0.12	94	0.12
	14:54	128	14.80	0.11	96	0.11
	14:54	130	14.81	0.10	98	0.10
	14:54	132	14.82	0.09	100	0.09
	14:54	136	14.84	0.07	104	0.07
	14:54	138	14.85	0.06	106	0.06
	14:54	140	14.87	0.04	108	0.04
	14:54	142	14.87	0.04	110	0.04
	14:54	144	14.89	0.02	112	0.02
	14:54	146	14.90	0.01	114	0.01

TESTING CONDUCTED MARCH 10, 2014
Anticipated displacement in a 2.0" ID Well:
Slug-1 = 1.0'; Slug-2 = 1.5'; Slug-3 = 2.0'

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: Slug-3 OUT (TEST-1)	15:03	700	15.19	1.47		
	15:03	702	16.97	-1.78	0	1.78
	15:03	704	16.89	-1.70	2	1.70
	15:03	706	16.80	-1.61	4	1.61
	15:04	708	16.73	-1.54	6	1.54
	15:04	710	16.66	-1.47	8	1.47
	15:04	712	16.60	-1.41	10	1.41
	15:04	714	16.55	-1.36	12	1.36
	15:04	716	16.50	-1.31	14	1.31
	15:04	718	16.46	-1.27	16	1.27
	15:04	720	16.41	-1.22	18	1.22
	15:04	722	16.37	-1.18	20	1.18
	15:04	724	16.33	-1.14	22	1.14
	15:04	726	16.29	-1.10	24	1.10
	15:04	728	16.26	-1.07	26	1.07
	15:04	730	16.23	-1.04	28	1.04
	15:04	732	16.19	-1.00	30	1.00
	15:04	734	16.15	-0.96	32	0.96
	15:04	736	16.12	-0.93	34	0.93
	15:04	738	16.09	-0.90	36	0.90
	15:04	740	16.07	-0.88	38	0.88
	15:04	742	16.04	-0.85	40	0.85
	15:04	744	16.01	-0.82	42	0.82
	15:04	746	15.98	-0.79	44	0.79
	15:04	748	15.95	-0.76	46	0.76
	15:04	750	15.93	-0.74	48	0.74
	15:04	752	15.91	-0.72	50	0.72
	15:04	754	15.88	-0.69	52	0.69
	15:04	756	15.86	-0.67	54	0.67
	15:04	758	15.84	-0.65	56	0.65
	15:04	760	15.82	-0.63	58	0.63
	15:04	762	15.79	-0.60	60	0.60
	15:04	764	15.78	-0.59	62	0.59
	15:04	766	15.76	-0.57	64	0.57
	15:05	768	15.74	-0.55	66	0.55
	15:05	770	15.72	-0.53	68	0.53
	15:05	772	15.71	-0.52	70	0.52
	15:05	774	15.69	-0.50	72	0.50
	15:05	776	15.67	-0.48	74	0.48
	15:05	778	15.66	-0.47	76	0.47
	15:05	780	15.65	-0.46	78	0.46
	15:05	782	15.63	-0.44	80	0.44
	15:05	784	15.62	-0.43	82	0.43
	15:05	786	15.60	-0.41	84	0.41
	15:05	788	15.59	-0.40	86	0.40
	15:05	790	15.57	-0.38	88	0.38
	15:05	792	15.56	-0.37	90	0.37
	15:05	794	15.55	-0.36	92	0.36
	15:05	796	15.54	-0.35	94	0.35
	15:05	798	15.53	-0.34	96	0.34
	15:05	800	15.52	-0.33	98	0.33
	15:05	802	15.51	-0.32	100	0.32
	15:05	804	15.50	-0.31	102	0.31
	15:05	806	15.49	-0.30	104	0.30
	15:05	808	15.48	-0.29	106	0.29
	15:05	810	15.47	-0.28	108	0.28
	15:05	812	15.47	-0.28	110	0.28
	15:05	816	15.45	-0.26	114	0.26
	15:05	820	15.44	-0.25	118	0.25
	15:05	822	15.43	-0.24	120	0.24
	15:05	824	15.42	-0.23	122	0.23
	15:05	826	15.41	-0.22	124	0.22
	15:06	830	15.40	-0.21	128	0.21
	15:06	834	15.38	-0.19	132	0.19
	15:06	838	15.38	-0.19	136	0.19
	15:06	842	15.37	-0.18	140	0.18
	15:06	846	15.37	-0.18	144	0.18
	15:06	848	15.36	-0.17	146	0.17
	15:06	852	15.36	-0.17	150	0.17
	15:06	856	15.34	-0.15	154	0.15
	15:06	860	15.34	-0.15	158	0.15
	15:06	864	15.34	-0.15	162	0.15
	15:06	866	15.33	-0.14	164	0.14
	15:06	870	15.32	-0.13	168	0.13
	15:06	874	15.32	-0.13	172	0.13
	15:06	878	15.31	-0.12	176	0.12
	15:07	890	15.30	-0.11	188	0.11
	15:07	894	15.29	-0.10	192	0.10
	15:07	910	15.29	-0.10	208	0.10
	15:07	912	15.28	-0.09	210	0.09
	15:07	916	15.28	-0.09	214	0.09
	15:08	958	15.27	-0.08	256	0.08
	15:08	960	15.26	-0.07	258	0.07
	15:10	1,126	15.24	-0.05	424	0.05
	15:11	1,150	15.23	-0.04	448	0.04
	15:14	1,308	15.22	-0.03	606	0.03
	15:14	1,334	15.21	-0.02	632	0.02
	15:14	1,358	15.21	-0.02	656	0.02
	15:15	1,420	15.20	-0.01	718	0.01

Aqtesolve Data Input - Slug Test Analysis
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: SLUG-3 IN (TEST-2)	15:19	1,640	15.18	0.00		
	15:19	1,652	13.29	1.89	0	1.89
	15:19	1,654	14.04	1.14	2	1.14
	15:19	1,656	13.69	1.49	4	1.49
	15:19	1,658	13.76	1.42	6	1.42
	15:19	1,660	13.82	1.36	8	1.36
	15:19	1,662	13.87	1.31	10	1.31
	15:19	1,664	13.93	1.25	12	1.25
	15:19	1,666	13.98	1.20	14	1.20
	15:20	1,668	14.03	1.15	16	1.15
	15:20	1,670	14.07	1.11	18	1.11
	15:20	1,672	14.12	1.06	20	1.06
	15:20	1,674	14.15	1.03	22	1.03
	15:20	1,676	14.21	0.97	24	0.97
	15:20	1,678	14.23	0.95	26	0.95
	15:20	1,680	14.26	0.92	28	0.92
	15:20	1,682	14.30	0.88	30	0.88
	15:20	1,684	14.33	0.85	32	0.85
	15:20	1,686	14.37	0.81	34	0.81
	15:20	1,688	14.39	0.79	36	0.79
	15:20	1,690	14.41	0.77	38	0.77
	15:20	1,692	14.45	0.73	40	0.73
	15:20	1,694	14.47	0.71	42	0.71
	15:20	1,696	14.50	0.68	44	0.68
	15:20	1,698	14.52	0.66	46	0.66
	15:20	1,700	14.53	0.65	48	0.65
	15:20	1,702	14.56	0.62	50	0.62
	15:20	1,704	14.59	0.59	52	0.59
	15:20	1,706	14.60	0.58	54	0.58
	15:20	1,708	14.62	0.56	56	0.56
	15:20	1,710	14.65	0.53	58	0.53
	15:20	1,712	14.66	0.52	60	0.52
	15:20	1,714	14.68	0.50	62	0.50
	15:20	1,716	14.69	0.49	64	0.49
	15:20	1,718	14.71	0.47	66	0.47
	15:20	1,720	14.73	0.45	68	0.45
	15:20	1,722	14.75	0.43	70	0.43
	15:20	1,724	14.76	0.42	72	0.42
	15:20	1,726	14.77	0.41	74	0.41
	15:21	1,728	14.79	0.39	76	0.39
	15:21	1,730	14.80	0.38	78	0.38
	15:21	1,732	14.82	0.36	80	0.36
	15:21	1,734	14.83	0.35	82	0.35
	15:21	1,736	14.85	0.33	84	0.33
	15:21	1,738	14.85	0.33	86	0.33
	15:21	1,740	14.87	0.31	88	0.31
	15:21	1,742	14.88	0.30	90	0.30
	15:21	1,744	14.89	0.29	92	0.29
	15:21	1,746	14.90	0.28	94	0.28
	15:21	1,748	14.91	0.27	96	0.27
	15:21	1,750	14.92	0.26	98	0.26
	15:21	1,752	14.93	0.25	100	0.25
	15:21	1,754	14.93	0.25	102	0.25
	15:21	1,756	14.95	0.23	104	0.23
	15:21	1,758	14.95	0.23	106	0.23
	15:21	1,760	14.96	0.22	108	0.22
	15:21	1,762	14.97	0.21	110	0.21
	15:21	1,764	14.97	0.21	112	0.21
	15:21	1,766	14.98	0.20	114	0.20
	15:21	1,768	14.99	0.19	116	0.19
	15:21	1,772	15.00	0.18	120	0.18
	15:21	1,776	15.01	0.17	124	0.17
	15:21	1,778	15.02	0.16	126	0.16
	15:21	1,782	15.03	0.15	130	0.15
	15:21	1,786	15.04	0.14	134	0.14
	15:22	1,788	15.04	0.14	136	0.14
	15:22	1,790	15.05	0.13	138	0.13
	15:22	1,794	15.06	0.12	142	0.12
	15:22	1,796	15.07	0.11	144	0.11
	15:22	1,804	15.08	0.10	152	0.10
	15:22	1,808	15.09	0.09	156	0.09
	15:22	1,816	15.11	0.07	164	0.07
	15:22	1,824	15.11	0.07	172	0.07
	15:22	1,832	15.12	0.06	180	0.06
	15:22	1,840	15.13	0.05	188	0.05
	15:23	1,848	15.13	0.05	196	0.05
	15:23	1,856	15.15	0.03	204	0.03
	15:23	1,888	15.17	0.01	236	0.01
	15:23	1,898	15.17	0.01	246	0.01

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: SLUG-3 OUT (TEST-2)	15:36	2,676	15.14			
	15:37	2,688	16.41	-1.27		
	15:37	2,690	16.87	-1.73	0	1.73
	15:37	2,692	16.79	-1.65	2	1.65
	15:37	2,694	16.72	-1.58	4	1.58
	15:37	2,696	16.66	-1.52	6	1.52
	15:37	2,698	16.60	-1.46	8	1.46
	15:37	2,700	16.55	-1.41	10	1.41
	15:37	2,702	16.51	-1.37	12	1.37
	15:37	2,704	16.46	-1.32	14	1.32
	15:37	2,706	16.42	-1.28	16	1.28
	15:37	2,708	16.38	-1.24	18	1.24
	15:37	2,710	16.34	-1.20	20	1.20
	15:37	2,712	16.30	-1.16	22	1.16
	15:37	2,714	16.27	-1.13	24	1.13
	15:37	2,716	16.23	-1.09	26	1.09
	15:37	2,718	16.20	-1.06	28	1.06
	15:37	2,720	16.17	-1.03	30	1.03
	15:37	2,722	16.14	-1.00	32	1.00
	15:37	2,724	16.11	-0.97	34	0.97
	15:37	2,726	16.08	-0.94	36	0.94
	15:37	2,728	16.05	-0.91	38	0.91
	15:37	2,730	16.03	-0.89	40	0.89
	15:37	2,732	16.01	-0.87	42	0.87
	15:37	2,734	15.98	-0.84	44	0.84
	15:37	2,736	15.95	-0.81	46	0.81
	15:37	2,738	15.93	-0.79	48	0.79
	15:37	2,740	15.91	-0.77	50	0.77
	15:37	2,742	15.88	-0.74	52	0.74
	15:37	2,744	15.86	-0.72	54	0.72
	15:37	2,746	15.84	-0.70	56	0.70
	15:38	2,748	15.82	-0.68	58	0.68
	15:38	2,750	15.80	-0.66	60	0.66
	15:38	2,752	15.78	-0.64	62	0.64
	15:38	2,754	15.76	-0.62	64	0.62
	15:38	2,756	15.74	-0.60	66	0.60
	15:38	2,758	15.73	-0.59	68	0.59
	15:38	2,760	15.71	-0.57	70	0.57
	15:38	2,762	15.69	-0.55	72	0.55
	15:38	2,764	15.68	-0.54	74	0.54
	15:38	2,766	15.66	-0.52	76	0.52
	15:38	2,768	15.65	-0.51	78	0.51
	15:38	2,770	15.63	-0.49	80	0.49
	15:38	2,772	15.62	-0.48	82	0.48
	15:38	2,774	15.60	-0.46	84	0.46
	15:38	2,776	15.59	-0.45	86	0.45
	15:38	2,778	15.58	-0.44	88	0.44
	15:38	2,780	15.57	-0.43	90	0.43
	15:38	2,782	15.56	-0.42	92	0.42
	15:38	2,784	15.55	-0.41	94	0.41
	15:38	2,786	15.54	-0.40	96	0.40
	15:38	2,788	15.53	-0.39	98	0.39
	15:38	2,790	15.52	-0.38	100	0.38
	15:38	2,792	15.51	-0.37	102	0.37
	15:38	2,794	15.50	-0.36	104	0.36
	15:38	2,796	15.49	-0.35	106	0.35
	15:38	2,798	15.48	-0.34	108	0.34
	15:38	2,800	15.47	-0.33	110	0.33
	15:38	2,802	15.46	-0.32	112	0.32
	15:38	2,804	15.45	-0.31	114	0.31
	15:39	2,812	15.43	-0.29	122	0.29
	15:39	2,820	15.41	-0.27	130	0.27
	15:39	2,828	15.38	-0.24	138	0.24
	15:39	2,836	15.36	-0.22	146	0.22
	15:39	2,844	15.35	-0.21	154	0.21
	15:39	2,852	15.33	-0.19	162	0.19
	15:40	2,868	15.32	-0.18	178	0.18
	15:40	2,884	15.30	-0.16	194	0.16
	15:40	2,900	15.28	-0.14	210	0.14
	15:40	2,916	15.28	-0.14	226	0.14
	15:41	2,932	15.27	-0.13	242	0.13
	15:41	2,964	15.26	-0.12	274	0.12
	15:41	2,980	15.25	-0.11	290	0.11
	15:42	3,044	15.24	-0.10	354	0.10
	15:43	3,060	15.23	-0.09	370	0.09
	15:43	3,076	15.24	-0.10	386	0.10
	15:43	3,084	15.24	-0.10	394	0.10
	15:43	3,092	15.24	-0.10	402	0.10
	15:44	3,108	15.23	-0.09	418	0.09
	15:44	3,164	15.23	-0.09	474	0.09
	15:45	3,192	15.21	-0.07	502	0.07
	15:45	3,194	15.20	-0.06	504	0.06

TESTING CONDUCTED MARCH 10, 2014
Anticipated displacement in a 2.0" ID Well:
Slug-1 = 1.0'; Slug-2 = 1.5'; Slug-3 = 2.0'

Aqtesolve Data Input - Slug Test Analysis
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: SLUG-2 IN	15:45	3,194	15.20	0.00		
	15:45	3,196	13.88	1.32	0	1.32
	15:45	3,198	14.03	1.17	2	1.17
	15:45	3,200	14.09	1.11	4	1.11
	15:45	3,202	14.14	1.06	6	1.06
	15:45	3,204	14.01	1.19	8	1.19
	15:45	3,206	14.23	0.97	10	0.97
	15:45	3,208	14.27	0.93	12	0.93
	15:45	3,210	14.30	0.90	14	0.90
	15:45	3,212	14.33	0.87	16	0.87
	15:45	3,214	14.37	0.83	18	0.83
	15:45	3,216	14.40	0.80	20	0.80
	15:45	3,218	14.42	0.78	22	0.78
	15:45	3,220	14.45	0.75	24	0.75
	15:45	3,222	14.48	0.72	26	0.72
	15:45	3,224	14.51	0.69	28	0.69
	15:45	3,226	14.53	0.67	30	0.67
	15:46	3,228	14.55	0.65	32	0.65
	15:46	3,230	14.57	0.63	34	0.63
	15:46	3,232	14.59	0.61	36	0.61
	15:46	3,234	14.61	0.59	38	0.59
	15:46	3,236	14.63	0.57	40	0.57
	15:46	3,238	14.65	0.55	42	0.55
	15:46	3,240	14.67	0.53	44	0.53
	15:46	3,242	14.68	0.52	46	0.52
	15:46	3,244	14.70	0.50	48	0.50
	15:46	3,246	14.71	0.49	50	0.49
	15:46	3,248	14.73	0.47	52	0.47
	15:46	3,250	14.74	0.46	54	0.46
	15:46	3,252	14.76	0.44	56	0.44
	15:46	3,254	14.77	0.43	58	0.43
	15:46	3,256	14.79	0.41	60	0.41
	15:46	3,258	14.79	0.41	62	0.41
	15:46	3,260	14.80	0.40	64	0.40
	15:46	3,262	14.82	0.38	66	0.38
	15:46	3,264	14.83	0.37	68	0.37
	15:46	3,266	14.84	0.36	70	0.36
	15:46	3,268	14.86	0.34	72	0.34
	15:46	3,270	14.87	0.33	74	0.33
	15:46	3,272	14.88	0.32	76	0.32
	15:46	3,274	14.89	0.31	78	0.31
	15:46	3,276	14.90	0.30	80	0.30
	15:46	3,278	14.90	0.30	82	0.30
	15:46	3,280	14.91	0.29	84	0.29
	15:46	3,282	14.92	0.28	86	0.28
	15:46	3,284	14.93	0.27	88	0.27
	15:47	3,292	14.95	0.25	96	0.25
	15:47	3,294	14.96	0.24	98	0.24
	15:47	3,296	14.97	0.23	100	0.23
	15:47	3,300	14.98	0.22	104	0.22
	15:47	3,302	14.99	0.21	106	0.21
	15:47	3,304	15.00	0.20	108	0.20
	15:47	3,314	15.02	0.18	118	0.18
	15:47	3,316	15.03	0.17	120	0.17
	15:47	3,326	15.05	0.15	130	0.15
	15:47	3,330	15.05	0.15	134	0.15
	15:47	3,334	15.06	0.14	138	0.14
	15:47	3,342	15.07	0.13	146	0.13
	15:48	3,350	15.08	0.12	154	0.12
	15:48	3,352	15.09	0.11	156	0.11
	15:48	3,370	15.11	0.09	174	0.09
	15:48	3,380	15.11	0.09	184	0.09
	15:48	3,382	15.12	0.08	186	0.08
	15:49	3,418	15.13	0.07	222	0.07
	15:49	3,436	15.14	0.06	240	0.06
	15:49	3,438	15.15	0.05	242	0.05
	15:54	3,744	15.15	0.05	548	0.05
	15:54	3,746	15.15	0.05	550	0.05

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: SLUG-2 OUT	16:14	4,932	15.06	0.00		
	16:14	4,950	16.36	-1.30	0	1.30
	16:14	4,952	16.30	-1.24	2	1.24
	16:14	4,954	16.25	-1.19	4	1.19
	16:14	4,956	16.21	-1.15	6	1.15
	16:14	4,958	16.17	-1.11	8	1.11
	16:14	4,960	16.13	-1.07	10	1.07
	16:14	4,962	16.10	-1.04	12	1.04
	16:14	4,964	16.07	-1.01	14	1.01
	16:14	4,966	16.03	-0.97	16	0.97
	16:15	4,968	16.01	-0.95	18	0.95
	16:15	4,970	15.98	-0.92	20	0.92
	16:15	4,972	15.96	-0.90	22	0.90
	16:15	4,974	15.94	-0.88	24	0.88
	16:15	4,976	15.91	-0.85	26	0.85
	16:15	4,978	15.89	-0.83	28	0.83
	16:15	4,980	15.86	-0.80	30	0.80
	16:15	4,982	15.84	-0.78	32	0.78
	16:15	4,984	15.82	-0.76	34	0.76
	16:15	4,986	15.80	-0.74	36	0.74
	16:15	4,988	15.78	-0.72	38	0.72
	16:15	4,990	15.76	-0.70	40	0.70
	16:15	4,992	15.75	-0.69	42	0.69
	16:15	4,994	15.73	-0.67	44	0.67
	16:15	4,996	15.71	-0.65	46	0.65
	16:15	4,998	15.70	-0.64	48	0.64
	16:15	5,000	15.68	-0.62	50	0.62
	16:15	5,002	15.67	-0.61	52	0.61
	16:15	5,004	15.65	-0.59	54	0.59
	16:15	5,006	15.63	-0.57	56	0.57
	16:15	5,008	15.62	-0.56	58	0.56
	16:15	5,010	15.61	-0.55	60	0.55
	16:15	5,012	15.60	-0.54	62	0.54
	16:15	5,014	15.58	-0.52	64	0.52
	16:15	5,016	15.57	-0.51	66	0.51
	16:15	5,018	15.56	-0.50	68	0.50
	16:15	5,020	15.55	-0.49	70	0.49
	16:15	5,022	15.54	-0.48	72	0.48
	16:15	5,024	15.53	-0.47	74	0.47
	16:15	5,026	15.52	-0.46	76	0.46
	16:16	5,028	15.51	-0.45	78	0.45
	16:16	5,030	15.50	-0.44	80	0.44
	16:16	5,032	15.49	-0.43	82	0.43
	16:16	5,034	15.48	-0.42	84	0.42
	16:16	5,036	15.47	-0.41	86	0.41
	16:16	5,040	15.46	-0.40	90	0.40
	16:16	5,042	15.45	-0.39	92	0.39
	16:16	5,044	15.44	-0.38	94	0.38
	16:16	5,046	15.43	-0.37	96	0.37
	16:16	5,048	15.42	-0.36	98	0.36
	16:16	5,050	15.42	-0.36	100	0.36
	16:16	5,052	15.41	-0.35	102	0.35
	16:16	5,056	15.40	-0.34	106	0.34
	16:16	5,058	15.39	-0.33	108	0.33
	16:16	5,060	15.39	-0.33	110	0.33
	16:16	5,062	15.38	-0.32	112	0.32
	16:16	5,068	15.37	-0.31	118	0.31
	16:16	5,070	15.36	-0.30	120	0.30
	16:16	5,072	15.35	-0.29	122	0.29
	16:16	5,076	15.35	-0.29	126	0.29
	16:16	5,080	15.34	-0.28	130	0.28
	16:16	5,084	15.33	-0.27	134	0.27
	16:17	5,088	15.33	-0.27	138	0.27
	16:17	5,092	15.32	-0.26	142	0.26
	16:17	5,096	15.31	-0.25	146	0.25
	16:17	5,100	15.31	-0.25	150	0.25
	16:17	5,104	15.30	-0.24	154	0.24
	16:17	5,108	15.30	-0.24	158	0.24
	16:17	5,112	15.29	-0.23	162	0.23
	16:17	5,132	15.28	-0.22	182	0.22
	16:17	5,136	15.27	-0.21	186	0.21
	16:17	5,140	15.27	-0.21	190	0.21
	16:17	5,144	15.27	-0.21	194	0.21
	16:18	5,148	15.26	-0.20	198	0.20
	16:18	5,182	15.25	-0.19	232	0.19
	16:18	5,184	15.24	-0.18	234	0.18
	16:19	5,214	15.24	-0.18	264	0.18
	16:19	5,216	15.24	-0.18	266	0.18
	16:19	5,218	15.23	-0.17	268	0.17
	16:21	5,332	15.21	-0.15	382	0.15
	16:21	5,354	15.21	-0.15	404	0.15

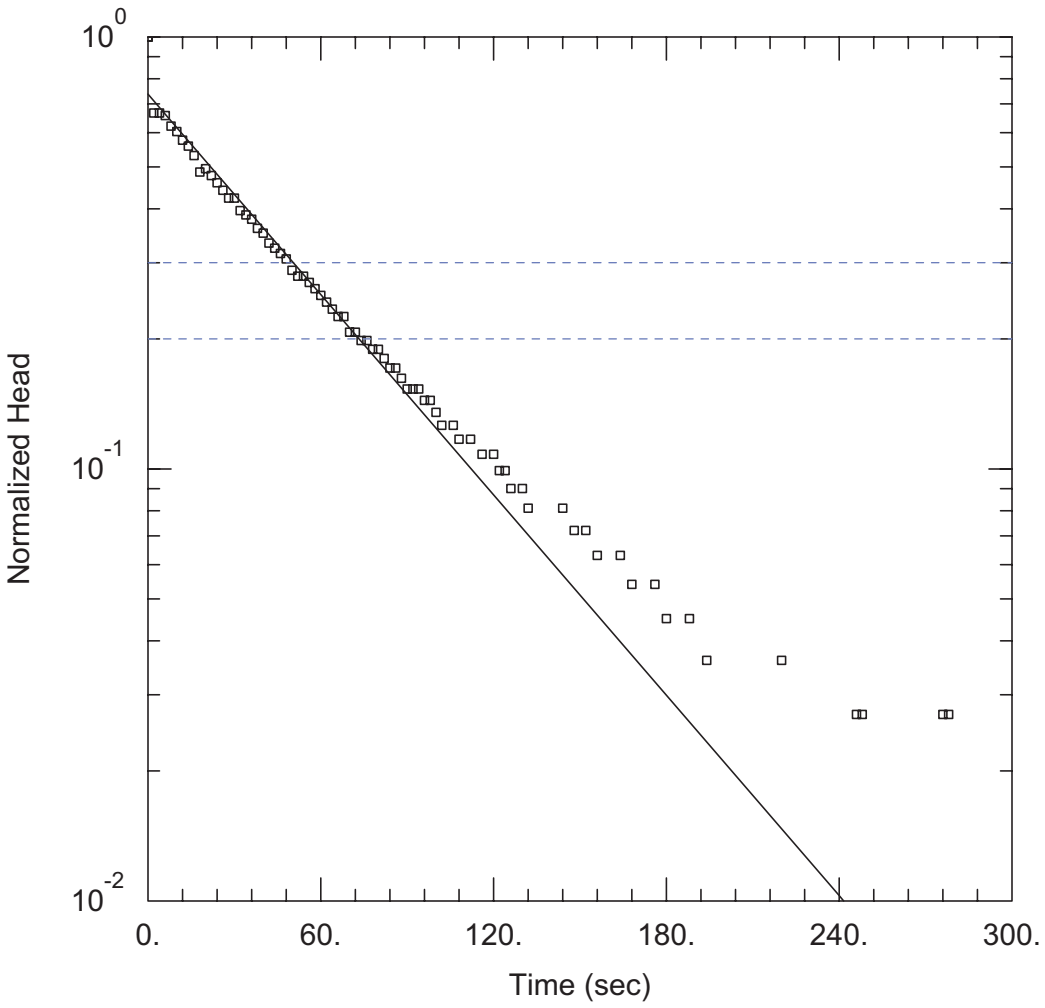
TESTING CONDUCTED MARCH 10, 2014
Anticipated displacement in a 2.0" ID Well:
Slug-1 = 1.0'; Slug-2 = 1.5'; Slug-3 = 2.0'

Aqtesolve Data Input - Slug Test Analysis
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: SLUG-1 IN	16:21	5,356	15.21	0.00		
	16:21	5,368	14.10	1.11	0	1.11
	16:21	5,370	14.47	0.74	2	0.74
	16:21	5,372	14.47	0.74	4	0.74
	16:21	5,374	14.48	0.73	6	0.73
	16:21	5,376	14.52	0.69	8	0.69
	16:21	5,378	14.54	0.67	10	0.67
	16:21	5,380	14.57	0.64	12	0.64
	16:21	5,382	14.59	0.62	14	0.62
	16:21	5,384	14.62	0.59	16	0.59
	16:21	5,386	14.67	0.54	18	0.54
	16:22	5,388	14.66	0.55	20	0.55
	16:22	5,390	14.68	0.53	22	0.53
	16:22	5,392	14.70	0.51	24	0.51
	16:22	5,394	14.72	0.49	26	0.49
	16:22	5,396	14.74	0.47	28	0.47
	16:22	5,398	14.74	0.47	30	0.47
	16:22	5,400	14.77	0.44	32	0.44
	16:22	5,402	14.78	0.43	34	0.43
	16:22	5,404	14.79	0.42	36	0.42
	16:22	5,406	14.81	0.40	38	0.40
	16:22	5,408	14.82	0.39	40	0.39
	16:22	5,410	14.84	0.37	42	0.37
	16:22	5,412	14.85	0.36	44	0.36
	16:22	5,414	14.86	0.35	46	0.35
	16:22	5,416	14.87	0.34	48	0.34
	16:22	5,418	14.89	0.32	50	0.32
	16:22	5,420	14.90	0.31	52	0.31
	16:22	5,422	14.90	0.31	54	0.31
	16:22	5,424	14.91	0.30	56	0.30
	16:22	5,426	14.92	0.29	58	0.29
	16:22	5,428	14.93	0.28	60	0.28
	16:22	5,430	14.94	0.27	62	0.27
	16:22	5,432	14.95	0.26	64	0.26
	16:22	5,434	14.96	0.25	66	0.25
	16:22	5,436	14.96	0.25	68	0.25
	16:22	5,438	14.98	0.23	70	0.23
	16:22	5,440	14.98	0.23	72	0.23
	16:22	5,442	14.99	0.22	74	0.22
	16:22	5,444	14.99	0.22	76	0.22
	16:22	5,446	15.00	0.21	78	0.21
	16:23	5,448	15.00	0.21	80	0.21
	16:23	5,450	15.01	0.20	82	0.20
	16:23	5,452	15.02	0.19	84	0.19
	16:23	5,454	15.02	0.19	86	0.19
	16:23	5,456	15.03	0.18	88	0.18
	16:23	5,458	15.04	0.17	90	0.17
	16:23	5,460	15.04	0.17	92	0.17
	16:23	5,462	15.04	0.17	94	0.17
	16:23	5,464	15.05	0.16	96	0.16
	16:23	5,466	15.05	0.16	98	0.16
	16:23	5,468	15.06	0.15	100	0.15
	16:23	5,470	15.07	0.14	102	0.14
	16:23	5,474	15.07	0.14	106	0.14
	16:23	5,476	15.08	0.13	108	0.13
	16:23	5,480	15.08	0.13	112	0.13
	16:23	5,484	15.09	0.12	116	0.12
	16:23	5,488	15.09	0.12	120	0.12
	16:23	5,490	15.10	0.11	122	0.11
	16:23	5,492	15.10	0.11	124	0.11
	16:23	5,494	15.11	0.10	126	0.10
	16:23	5,498	15.11	0.10	130	0.10
	16:23	5,500	15.12	0.09	132	0.09
	16:24	5,512	15.12	0.09	144	0.09
	16:24	5,516	15.13	0.08	148	0.08
	16:24	5,520	15.13	0.08	152	0.08
	16:24	5,524	15.14	0.07	156	0.07
	16:24	5,532	15.14	0.07	164	0.07
	16:24	5,536	15.15	0.06	168	0.06
	16:24	5,544	15.15	0.06	176	0.06
	16:24	5,548	15.16	0.05	180	0.05
	16:24	5,556	15.16	0.05	188	0.05
	16:24	5,562	15.17	0.04	194	0.04
	16:25	5,588	15.17	0.04	220	0.04
	16:25	5,614	15.18	0.03	246	0.03
	16:25	5,616	15.18	0.03	248	0.03
	16:26	5,644	15.18	0.03	276	0.03
	16:26	5,646	15.18	0.03	278	0.03

TESTING CONDUCTED MARCH 10, 2014
Anticipated displacement in a 2.0" ID Well:
Slug-1 = 1.0'; Slug-2 = 1.5'; Slug-3 = 2.0'

TEST	Clock	Elapsed Time (seconds)	DTW	Delta	Aqtesolve Input	
					Elapsed Seconds	Delta
MW-2: SLUG-1 OUT	16:33	6,072	15.14	0.00		
	16:33	6,088	16.02	-0.88	0	0.88
	16:33	6,090	15.97	-0.83	2	0.83
	16:33	6,092	15.94	-0.80	4	0.80
	16:33	6,094	15.91	-0.77	6	0.77
	16:33	6,096	15.88	-0.74	8	0.74
	16:33	6,098	15.85	-0.71	10	0.71
	16:33	6,100	15.83	-0.69	12	0.69
	16:33	6,102	15.81	-0.67	14	0.67
	16:33	6,104	15.78	-0.64	16	0.64
	16:33	6,106	15.77	-0.63	18	0.63
	16:34	6,108	15.75	-0.61	20	0.61
	16:34	6,110	15.73	-0.59	22	0.59
	16:34	6,112	15.71	-0.57	24	0.57
	16:34	6,114	15.70	-0.56	26	0.56
	16:34	6,116	15.68	-0.54	28	0.54
	16:34	6,118	15.66	-0.52	30	0.52
	16:34	6,120	15.65	-0.51	32	0.51
	16:34	6,122	15.64	-0.50	34	0.50
	16:34	6,124	15.62	-0.48	36	0.48
	16:34	6,126	15.61	-0.47	38	0.47
	16:34	6,128	15.60	-0.46	40	0.46
	16:34	6,130	15.58	-0.44	42	0.44
	16:34	6,132	15.57	-0.43	44	0.43
	16:34	6,134	15.56	-0.42	46	0.42
	16:34	6,136	15.54	-0.40	48	0.40
	16:34	6,138	15.54	-0.40	50	0.40
	16:34	6,140	15.53	-0.39	52	0.39
	16:34	6,142	15.52	-0.38	54	0.38
	16:34	6,144	15.50	-0.36	56	0.36
	16:34	6,146	15.50	-0.36	58	0.36
	16:34	6,148	15.49	-0.35	60	0.35
	16:34	6,150	15.48	-0.34	62	0.34
	16:34	6,152	15.47	-0.33	64	0.33
	16:34	6,154	15.46	-0.32	66	0.32
	16:34	6,156	15.46	-0.32	68	0.32
	16:34	6,158	15.45	-0.31	70	0.31
	16:34	6,160	15.44	-0.30	72	0.30
	16:34	6,162	15.43	-0.29	74	0.29
	16:34	6,164	15.43	-0.29	76	0.29
	16:34	6,166	15.42	-0.28	78	0.28
	16:35	6,168	15.41	-0.27	80	0.27
	16:35	6,170	15.40	-0.26	82	0.26
	16:35	6,172	15.40	-0.26	84	0.26
	16:35	6,174	15.39	-0.25	86	0.25
	16:35	6,176	15.39	-0.25	88	0.25
	16:35	6,178	15.38	-0.24	90	0.24
	16:35	6,180	15.38	-0.24	92	0.24
	16:35	6,182	15.36	-0.22	94	0.22
	16:35	6,184	15.37	-0.23	96	0.23
	16:35	6,186	15.36	-0.22	98	0.22
	16:35	6,188	15.36	-0.22	100	0.22
	16:35	6,190	15.35	-0.21	102	0.21
	16:35	6,192	15.35	-0.21	104	0.21
	16:35	6,194	15.34	-0.20	106	0.20
	16:35	6,196	15.34	-0.20	108	0.20
	16:35	6,198	15.33	-0.19	110	0.19
	16:35	6,202	15.33	-0.19	114	0.19
	16:35	6,204	15.32	-0.18	116	0.18
	16:35	6,206	15.31	-0.17	118	0.17
	16:35	6,218	15.31	-0.17	130	0.17
	16:35	6,220	15.30	-0.16	132	0.16
	16:35	6,226	15.30	-0.16	138	0.16
	16:36	6,228	15.29	-0.15	140	0.15
	16:36	6,234	15.29	-0.15	146	0.15
	16:36	6,236	15.28	-0.14	148	0.14
	16:36	6,246	15.28	-0.14	158	0.14
	16:36	6,254	15.27	-0.13	166	0.13
	16:36	6,262	15.27	-0.13	174	0.13
	16:36	6,264	15.26	-0.12	176	0.12
	16:36	6,274	15.26	-0.12	186	0.12
	16:36	6,276	15.25	-0.11	188	0.11
	16:37	6,304	15.25	-0.11	216	0.11
	16:37	6,306	15.24	-0.10	218	0.10
	16:37	6,336	15.24	-0.10	248	0.10
	16:37	6,338	15.23	-0.09	250	0.09
	16:39	6,410	15.23	-0.09	322	0.09
	16:39	6,412	15.22	-0.08	324	0.08
	16:39	6,438	15.22	-0.08	350	0.08
	16:40	6,506	15.21	-0.07	418	0.07
	16:40	6,508	15.20	-0.06	420	0.06
	16:43	6,668	15.19	-0.05	580	0.05
	16:43	6,670	15.19	-0.05	582	0.05
	16:45	6,770	15.19	-0.05	682	0.05
	16:45	6,772	15.18	-0.04	684	0.04
	16:48	6,980	15.18	-0.04	892	0.04
	16:48	6,982	15.17	-0.03	894	0.03
	16:51	7,166	15.17	-0.03	1,078	0.03
	16:54	7,316	15.16	-0.02	1,228	0.02
	16:56	7,428	15.15	-0.01	1,340	0.01



MW-2: SLUG-1 = IN

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-1 IN.aqt
Date: 04/08/14 Time: 10:06:52

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

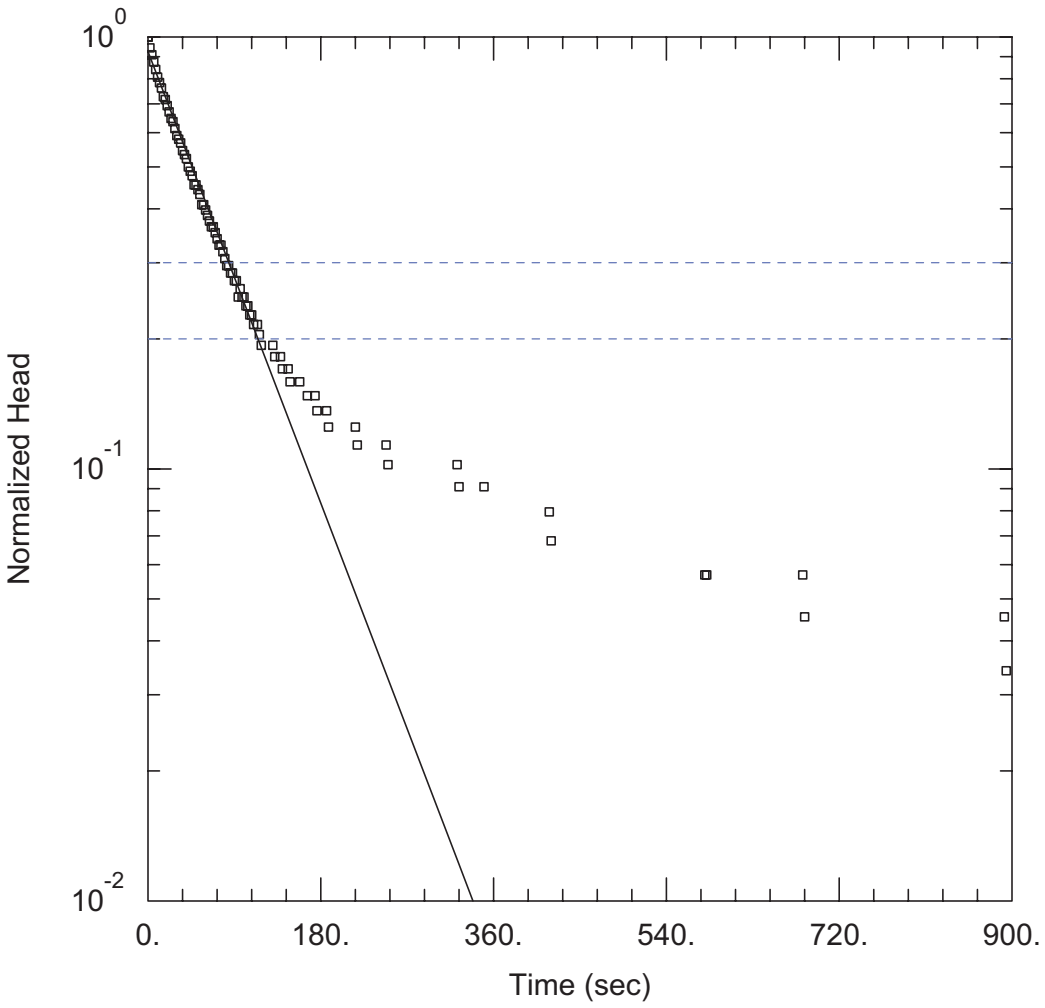
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.11 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.000464 cm/sec
y0 = 0.818 ft



MW-2: SLUG-1 = OUT

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-1 OUT.aqt
Date: 04/08/14 Time: 10:06:07

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

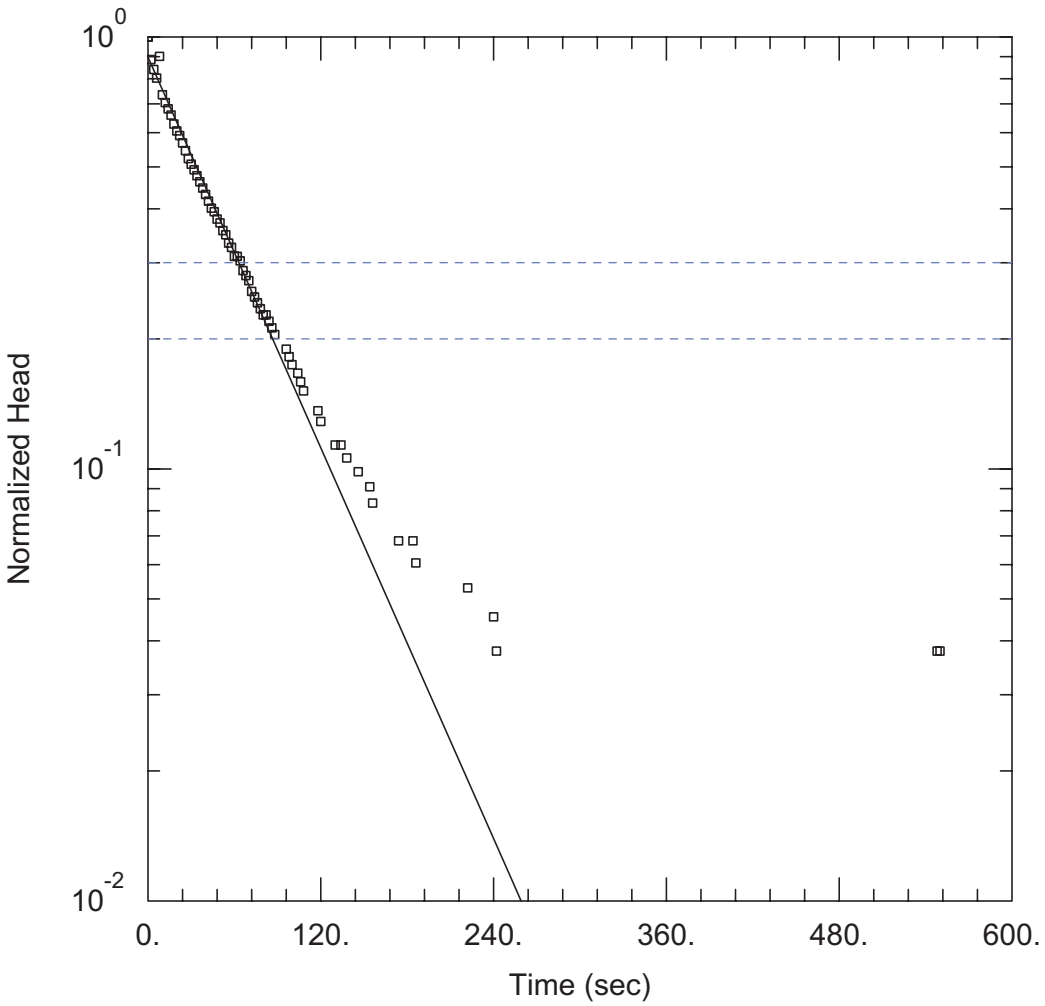
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 0.88 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0003486 cm/sec
y0 = 0.8139 ft



MW-2: SLUG-2 = IN

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-2 IN.aqt
Date: 04/08/14 Time: 10:09:56

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

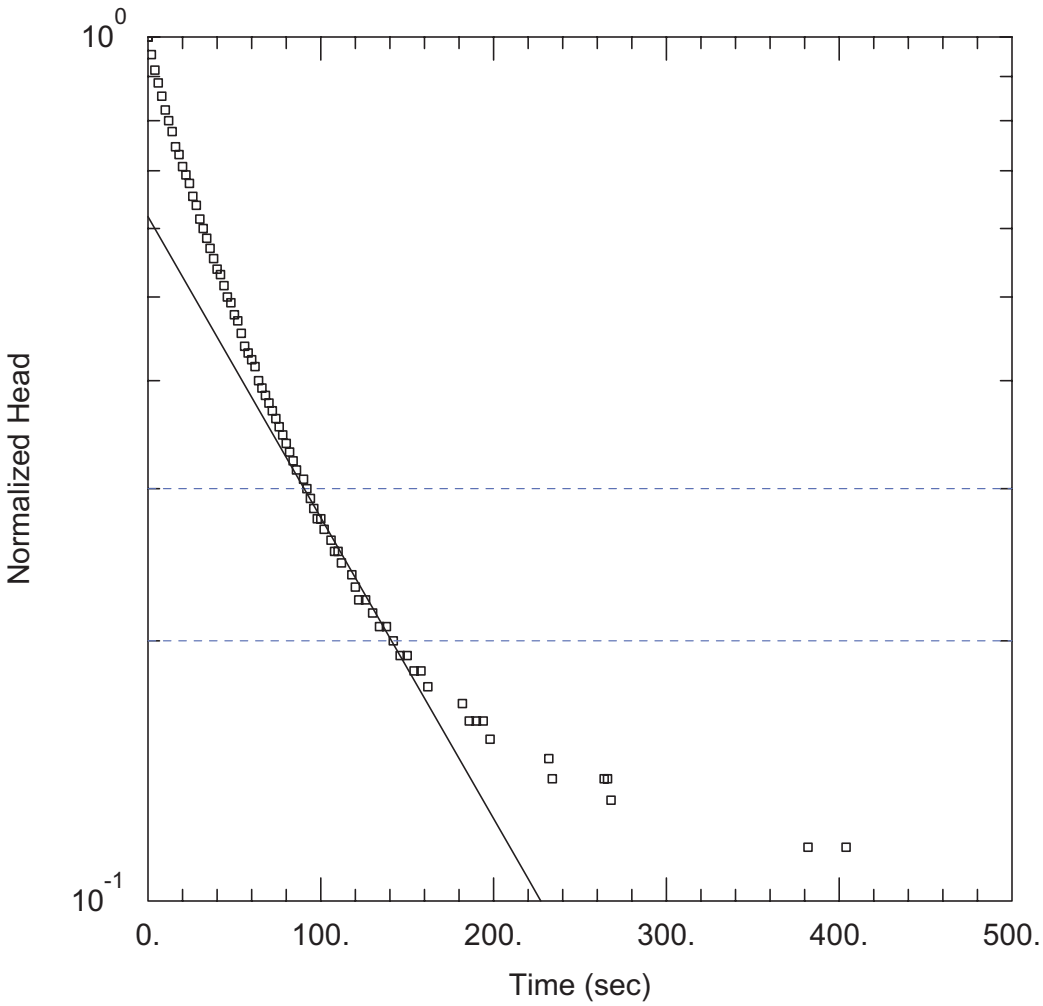
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.32 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0004524 cm/sec
y0 = 1.185 ft



MW-2: SLUG-2 = OUT

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-2 OUT.aqt
Date: 04/08/14 Time: 10:14:18

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

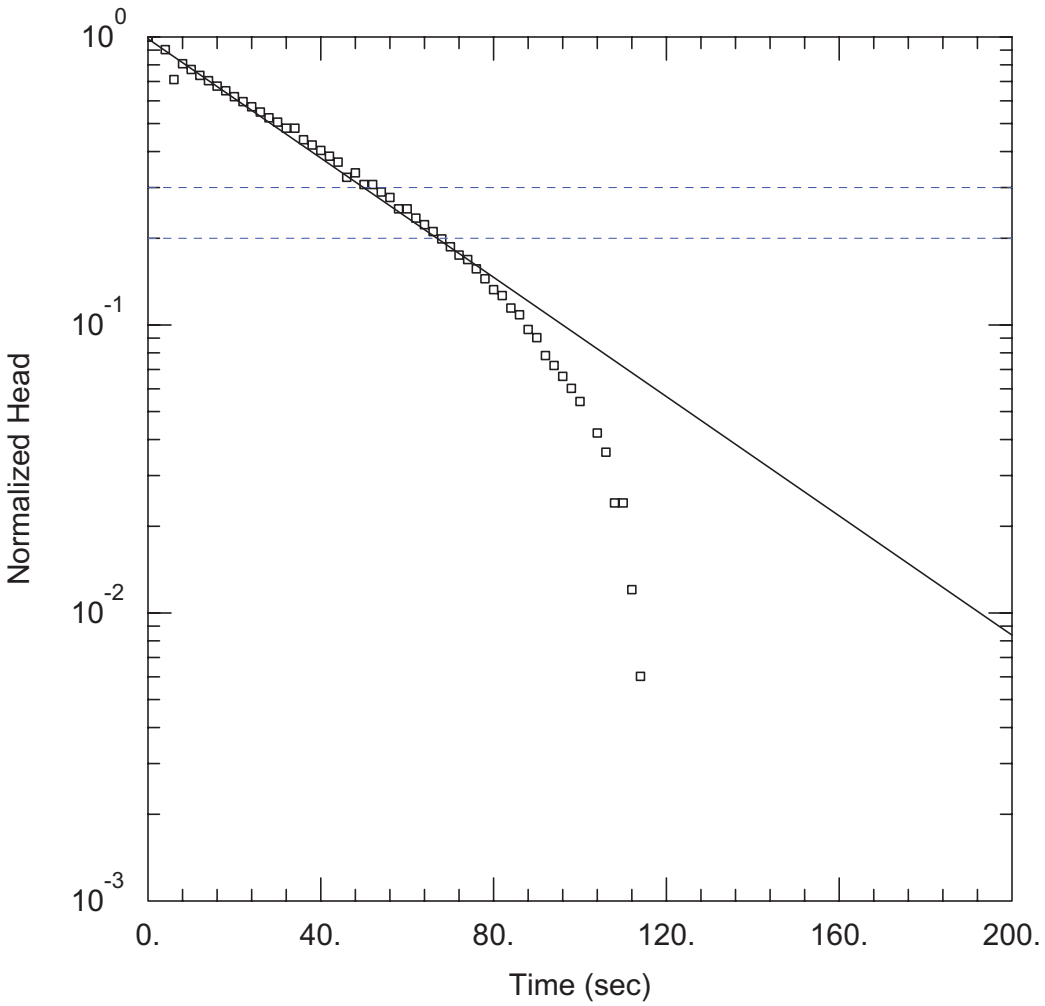
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.3 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0002091 cm/sec
y0 = 0.8052 ft



MW-2: SLUG-3 = IN (1)

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-3 IN (1).aqt
Date: 04/08/14 Time: 10:17:11

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

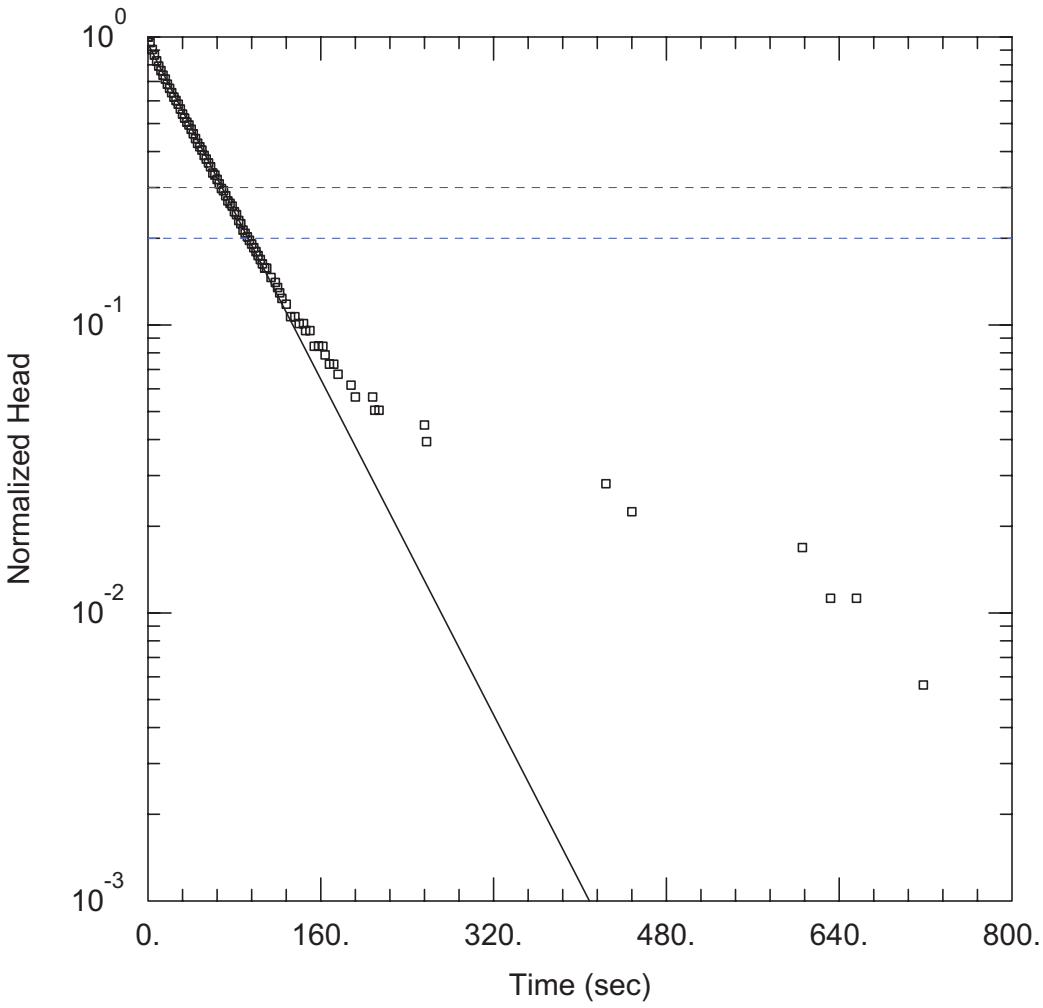
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.66 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0006214 cm/sec
y0 = 1.635 ft



MW-2: SLUG-3 = OUT (1)

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-3 OUT (1).aqt
Date: 04/08/14 Time: 10:19:32

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

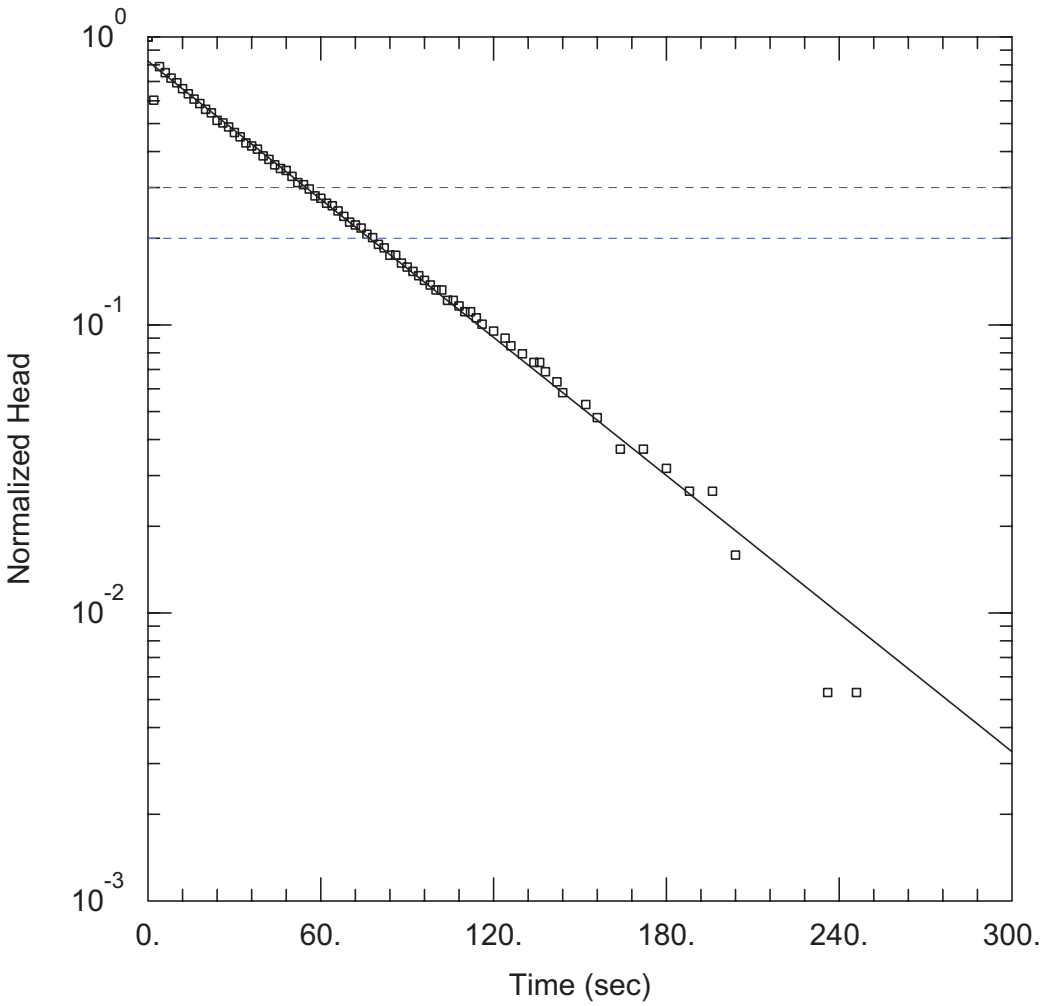
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.78 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.000437 cm/sec
y0 = 1.683 ft



MW-2: SLUG-3 = IN (2)

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-3 IN (2).aqt
Date: 04/08/14 Time: 10:22:05

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

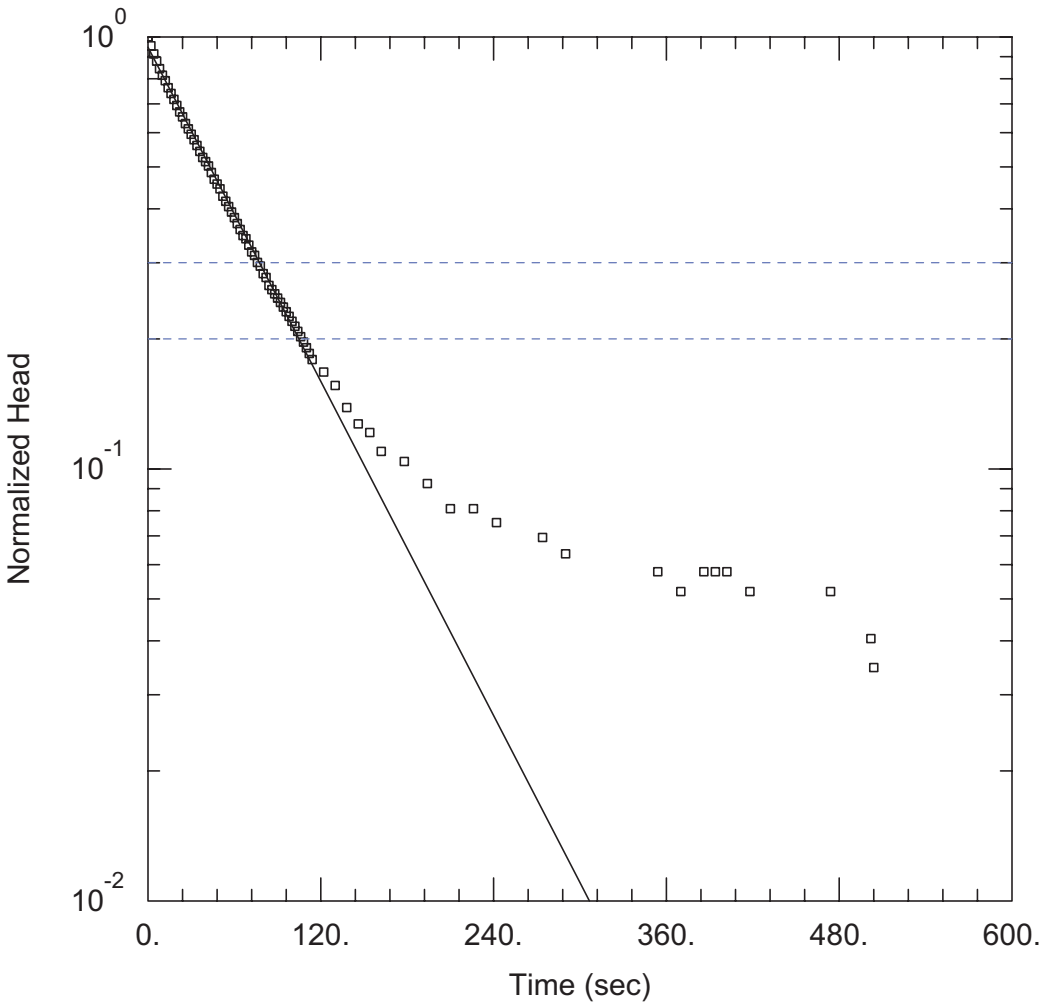
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.89 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0004797 cm/sec
y0 = 1.556 ft



MW-2: SLUG-3 = OUT (2)

Data Set: C:\Program Files (x86)\HydroSOLVE\AQTESOLV Std 4.0\Owego\MW-2 Slug-3 OUT (2).aqt
Date: 04/08/14 Time: 10:24:28

PROJECT INFORMATION

Company: Aztech Technologies, Inc.
Client: NYSDEC
Project: Owego Heat Treat
Location: 1646 Marshland Road, Appalachi
Test Well: MW-2
Test Date: March 10, 2014

AQUIFER DATA

Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 1.73 ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.083 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.28

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.000387 cm/sec
y0 = 1.638 ft

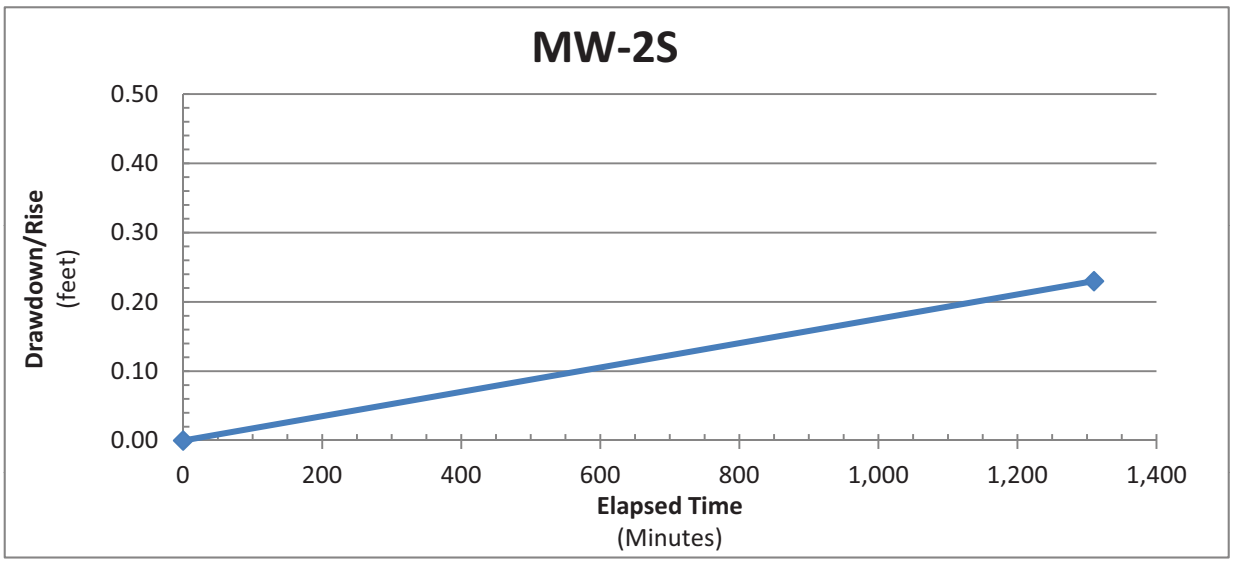
APPENDIX E

INFILTRATION TESTING

Depth to Water Measurements During Injection Testing
Manual Measurements
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

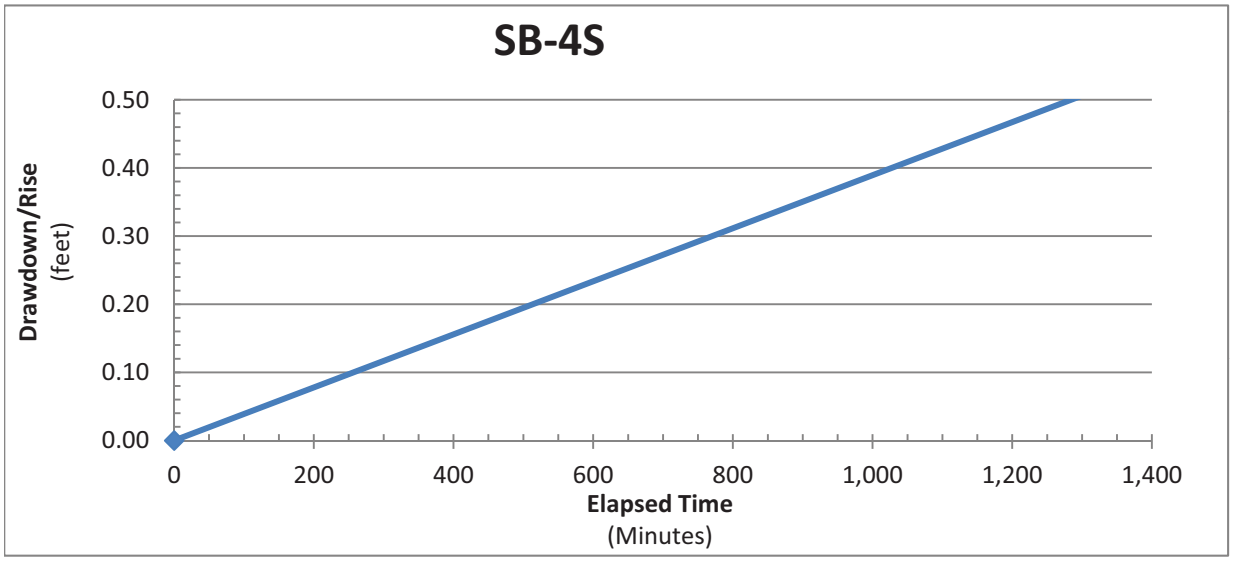
MW-2S

Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0:00	15.10	0.00	Static - with transducer
3/12/2014	7:15	21:50	1,310	14.87	0.23	End - with transducer



SB-4S

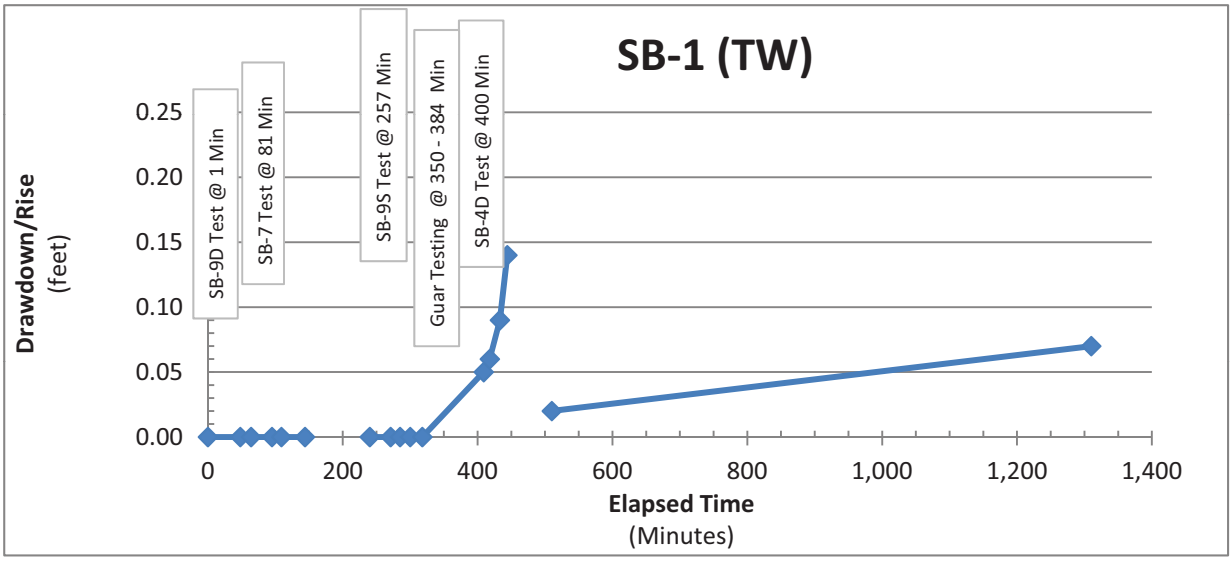
Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0	13.04	0.00	Static - without transducer
3/12/2014	7:15	21:50	1,310	12.53	0.51	End - without transducer



Depth to Water Measurements During Injection Testing
Manual Measurements
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

SB-1 (TW)

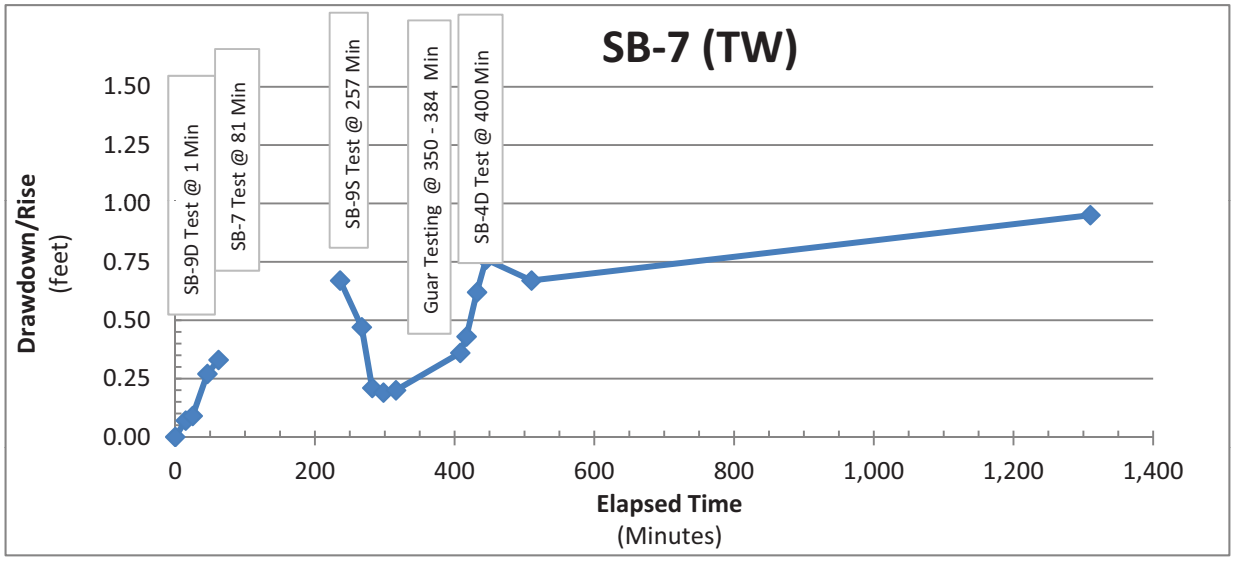
Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0	14.49	0.00	
	10:13	0:48	48	14.49	0.00	Testing SB-9D @ 9:26
	10:29	1:04	64	14.49	0.00	SB-9D End @ 10:30
	11:00	1:35	95	14.49	0.00	Testing SB-7 (TW) @ 10:46
	11:14	1:49	109	14.49	0.00	
	11:49	2:24	144	14.49	0.00	
	11:55	2:30	150	14.50		SB-7 End @ 12:00
	13:25	4:00	240	14.49	0.00	
	13:56	4:31	271	14.49	0.00	Testing SB-9S @ 13:42
	14:10	4:45	285	14.49	0.00	
	14:25	5:00	300	14.49	0.00	
	14:43	5:18	318	14.49	0.00	SB-9S End @ 14:43
	16:14	6:49	409	14.44	0.05	Testing SB-4D @ 16:05
	16:23	6:58	418	14.43	0.06	
	16:38	7:13	433	14.40	0.09	
	16:49	7:24	444	14.35	0.14	SB-4D End @ 16:49
	16:50	7:25	445			Testing SB-1 (TW) @ 16:50
	17:55	8:30	510	14.47	0.02	
3/12/2014	7:15	21:50	1,310	14.42	0.07	



Depth to Water Measurements During Injection Testing
Manual Measurements
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

SB-7 (TW)

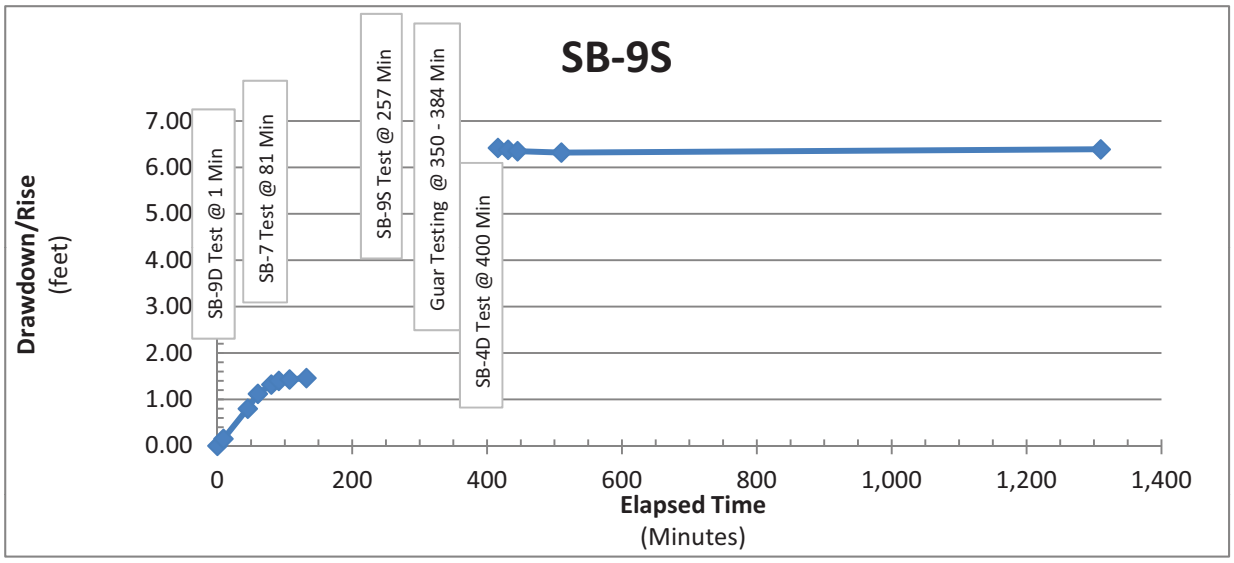
Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0	13.82	0.00	
	9:40	0:15	15	13.75	0.07	Testing SB-9D @ 9:26
	9:50	0:25	25	13.73	0.09	
	10:11	0:46	46	13.55	0.27	
	10:27	1:02	62	13.49	0.33	SB-9D End @ 10:30
	10:46	1:21	81			Testing SB-7 (TW) @ 10:46
	13:21	3:56	236	13.15	0.67	SB-7 End @ 12:00
	13:52	4:27	267	13.35	0.47	Testing SB-9S @ 13:42
	14:07	4:42	282	13.61	0.21	
	14:23	4:58	298	13.63	0.19	
	14:41	5:16	316	13.62	0.20	SB-9S End @ 14:43
	16:13	6:48	408	13.46	0.36	Testing SB-4D @ 16:05
	16:22	6:57	417	13.39	0.43	
	16:37	7:12	432	13.20	0.62	SB-4D End @ 16:49
	16:50	7:25	445	13.06	0.76	Testing SB-1 (TW) @ 16:50
	17:55	8:30	510	13.15	0.67	
3/12/2014	7:15	21:50	1,310	12.87	0.95	



Depth to Water Measurements During Injection Testing
Manual Measurements
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

SB-9S

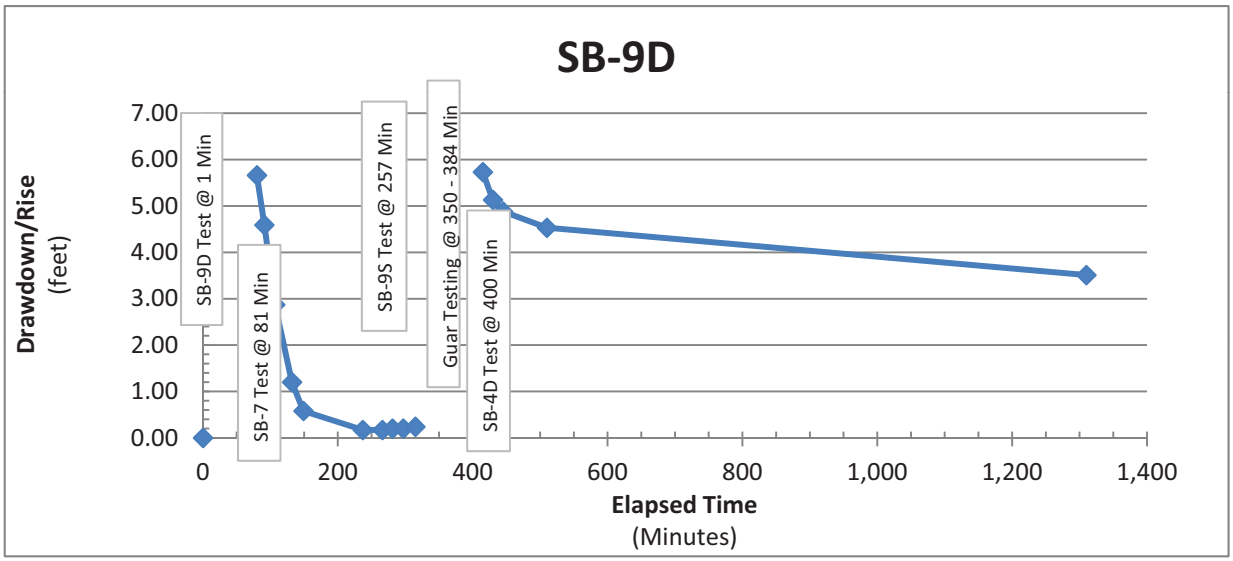
Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0	12.00	0.00	
	9:34	0:09	9	11.85	0.15	Testing SB-9D @ 9:26
	10:10	0:45	45	11.20	0.80	
	10:25	1:00	60	10.88	1.12	
	10:45	1:20	80	10.68	1.32	SB-9D End @ 10:30
	10:56	1:31	91	10.60	1.40	Testing SB-7 (TW) @ 10:46
	11:12	1:47	107	10.57	1.43	
	11:37	2:12	132	10.54	1.46	SB-7 (TW) End @ 12:00
	13:42	4:17	257			Testing SB-9S @ 13:42; End @ 14:43
	15:49	6:24	384			Guar Test
	16:21	6:56	416	5.58	6.42	Post Guar Test
	16:36	7:11	431	5.62	6.38	Post Guar Test
	16:50	7:25	445	5.65	6.35	Post Guar Test
	17:55	8:30	510	5.68	6.32	Post Guar Test
3/12/2014	7:15	21:50	1,310	5.61	6.39	



Depth to Water Measurements During Injection Testing
Manual Measurements
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

SB-9D

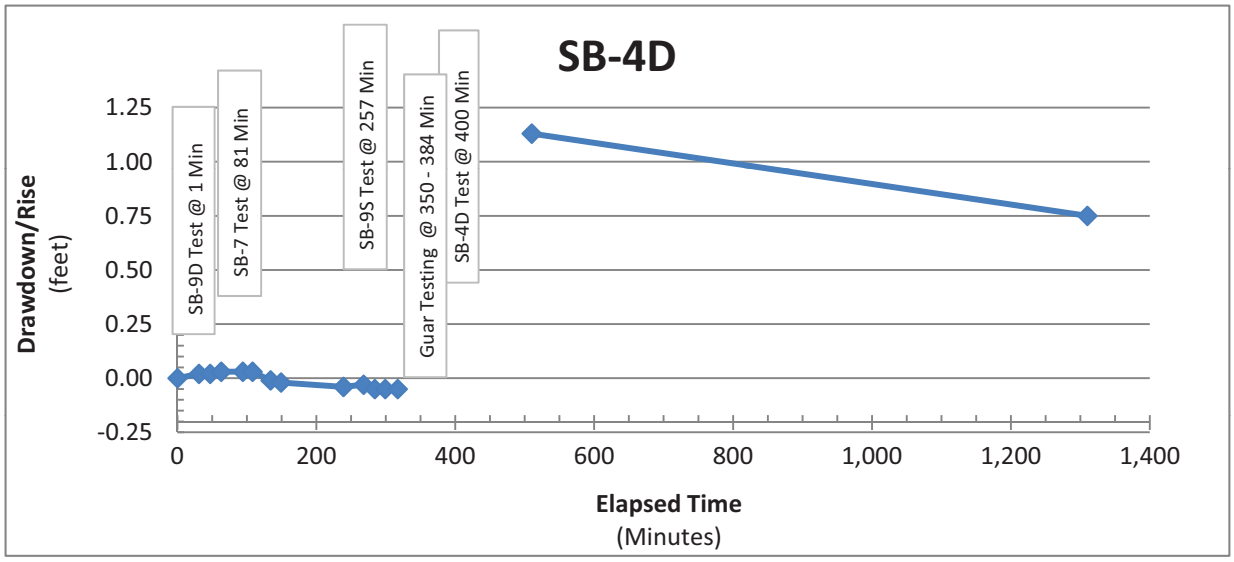
Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0	14.13	0.00	
	9:26	0:01	1			Testing SB-9D @ 9:26
	10:45	1:20	80	8.47	5.66	SB-9D End @ 10:30
	10:56	1:31	91	9.54	4.59	Testing SB-7 (TW) @ 10:46
	11:12	1:47	107	11.26	2.87	
	11:37	2:12	132	12.93	1.20	
	11:54	2:29	149	13.55	0.58	SB-7 End @ 12:00
	13:22	3:57	237	13.96	0.17	
	13:51	4:26	266	13.96	0.17	Testing SB-9S @ 13:42
	14:06	4:41	281	13.93	0.20	
	14:22	4:57	297	13.93	0.20	
	14:40	5:15	315	13.89	0.24	SB-9S End @ 14:43
	15:15	5:50	350			Guar Test @ 15:15
	16:20	6:55	415	8.40	5.73	Post Guar Test
	16:35	7:10	430	9.00	5.13	Post Guar Test
	16:50	7:25	445	9.25	4.88	Post Guar Test
	17:55	8:30	510	9.60	4.53	Post Guar Test
3/12/2014	7:15	21:50	1,310	10.62	3.51	

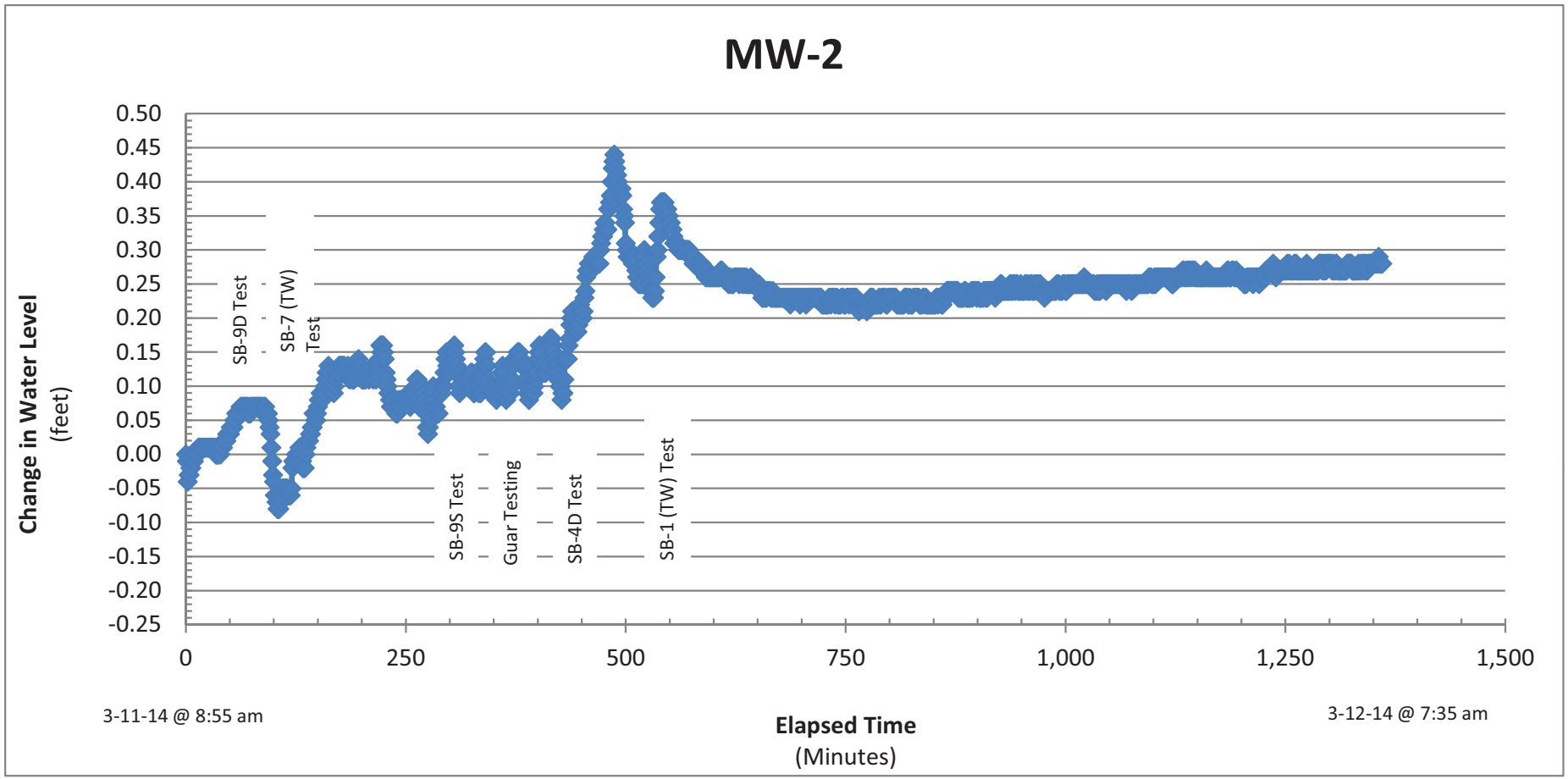


Depth to Water Measurements During Injection Testing
Manual Measurements
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

SB-4D

Date	Time			DTW	Change	
	Clock	Elapsed				
		Hours	Minutes			
3/11/2014	9:25	0:00	0	14.84	0.00	
	9:56	0:31	31	14.82	0.02	Testing SB-9D @ 9:26
	10:12	0:47	47	14.82	0.02	
	10:28	1:03	63	14.81	0.03	SB-9D End @ 10:30
	10:59	1:34	94	14.81	0.03	Testing SB-7 (TW) @ 10:46
	11:13	1:48	108	14.81	0.03	
	11:39	2:14	134	14.85	-0.01	
	11:54	2:29	149	14.86	-0.02	
	13:24	3:59	239	14.88	-0.04	SB-7 End @ 12:00
	13:53	4:28	268	14.87	-0.03	Testing SB-9S @ 13:42
	14:09	4:44	284	14.89	-0.05	
	14:24	4:59	299	14.89	-0.05	
	14:42	5:17	317	14.89	-0.05	SB-9S End @ 14:43
	16:05	6:40	400			Testing SB-4D @ 16:05
	17:55	8:30	510	13.71	1.13	SB-4D End @ 16:49
3/12/2014	7:15	21:50	1,310	14.09	0.75	Testing SB-1 (TW) @ 16:50




MW-2
Change in Water Level
(feet)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
SB-9D Test
SB-7 (TW) Test
SB-9S Test
Guar Testing
SB-4D Test
SB-1 (TW) Test
0
250
500
750
1,000
1,250
1,500
3-11-14 @ 8:55 am
3-12-14 @ 7:35 am
Elapsed Time
(Minutes)

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	8:55	0	0	15.07	0.00	
	8:56	60	1	15.08	-0.01	
	8:57	120	2	15.11	-0.04	
	8:58	180	3	15.10	-0.03	
	8:59	240	4	15.10	-0.03	
	9:00	300	5	15.09	-0.02	
	9:01	360	6	15.09	-0.02	
	9:02	420	7	15.08	-0.01	
	9:03	480	8	15.08	-0.01	
	9:04	540	9	15.08	-0.01	
	9:05	600	10	15.07	0.00	
	9:06	660	11	15.07	0.00	
	9:07	720	12	15.07	0.00	
	9:08	780	13	15.07	0.00	
	9:09	840	14	15.06	0.01	
	9:10	900	15	15.06	0.01	
	9:11	960	16	15.06	0.01	
	9:12	1,020	17	15.06	0.01	
	9:13	1,080	18	15.06	0.01	
	9:14	1,140	19	15.06	0.01	
	9:15	1,200	20	15.06	0.01	
	9:16	1,260	21	15.06	0.01	
	9:17	1,320	22	15.06	0.01	
	9:18	1,380	23	15.06	0.01	
	9:19	1,440	24	15.06	0.01	
	9:20	1,500	25	15.06	0.01	
	9:21	1,560	26	15.06	0.01	
	9:22	1,620	27	15.06	0.01	
	9:23	1,680	28	15.06	0.01	
	9:24	1,740	29	15.06	0.01	
	9:25	1,800	30	15.06	0.01	
	9:26	1,860	31	15.06	0.01	9D Start
	9:27	1,920	32	15.06	0.01	
	9:28	1,980	33	15.06	0.01	
	9:29	2,040	34	15.07	0.00	
	9:30	2,100	35	15.07	0.00	
	9:31	2,160	36	15.07	0.00	
	9:32	2,220	37	15.07	0.00	
	9:33	2,280	38	15.06	0.01	
	9:34	2,340	39	15.07	0.00	
	9:35	2,400	40	15.06	0.01	
	9:36	2,460	41	15.06	0.01	
	9:37	2,520	42	15.06	0.01	
	9:38	2,580	43	15.05	0.02	
	9:39	2,640	44	15.05	0.02	
	9:40	2,700	45	15.05	0.02	
	9:41	2,760	46	15.05	0.02	
	9:42	2,820	47	15.04	0.03	
	9:43	2,880	48	15.04	0.03	
	9:44	2,940	49	15.04	0.03	
	9:45	3,000	50	15.04	0.03	
	9:46	3,060	51	15.03	0.04	
	9:47	3,120	52	15.03	0.04	
	9:48	3,180	53	15.03	0.04	
	9:49	3,240	54	15.03	0.04	
	9:50	3,300	55	15.02	0.05	
	9:51	3,360	56	15.02	0.05	
	9:52	3,420	57	15.01	0.06	
	9:53	3,480	58	15.01	0.06	
	9:54	3,540	59	15.01	0.06	
	9:55	3,600	60	15.01	0.06	
	9:56	3,660	61	15.01	0.06	
	9:57	3,720	62	15.00	0.07	
	9:58	3,780	63	15.00	0.07	
	9:59	3,840	64	15.00	0.07	
	10:00	3,900	65	15.00	0.07	
	10:01	3,960	66	15.00	0.07	
	10:02	4,020	67	15.00	0.07	
	10:03	4,080	68	15.00	0.07	
	10:04	4,140	69	15.00	0.07	
	10:05	4,200	70	15.00	0.07	
	10:06	4,260	71	15.01	0.06	
	10:07	4,320	72	15.00	0.07	
	10:08	4,380	73	15.01	0.06	
	10:09	4,440	74	15.00	0.07	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	10:10	4,500	75	15.00	0.07	
	10:11	4,560	76	15.00	0.07	
	10:12	4,620	77	15.00	0.07	
	10:13	4,680	78	15.00	0.07	
	10:14	4,740	79	15.00	0.07	
	10:15	4,800	80	15.00	0.07	
	10:16	4,860	81	15.00	0.07	
	10:17	4,920	82	15.00	0.07	
	10:18	4,980	83	15.00	0.07	
	10:19	5,040	84	15.00	0.07	
	10:20	5,100	85	15.00	0.07	
	10:21	5,160	86	15.00	0.07	
	10:22	5,220	87	15.00	0.07	
	10:23	5,280	88	15.01	0.06	
	10:24	5,340	89	15.00	0.07	
	10:25	5,400	90	15.00	0.07	
	10:26	5,460	91	15.01	0.06	
	10:27	5,520	92	15.01	0.06	
	10:28	5,580	93	15.01	0.06	
	10:29	5,640	94	15.02	0.05	
	10:30	5,700	95	15.03	0.04	9D End
	10:31	5,760	96	15.04	0.03	
	10:32	5,820	97	15.06	0.01	
	10:33	5,880	98	15.08	-0.01	
	10:34	5,940	99	15.10	-0.03	
	10:35	6,000	100	15.11	-0.04	
	10:36	6,060	101	15.13	-0.06	
	10:37	6,120	102	15.13	-0.06	
	10:38	6,180	103	15.14	-0.07	
	10:39	6,240	104	15.15	-0.08	
	10:40	6,300	105	15.15	-0.08	
	10:41	6,360	106	15.15	-0.08	
	10:42	6,420	107	15.14	-0.07	
	10:43	6,480	108	15.14	-0.07	
	10:44	6,540	109	15.13	-0.06	
	10:45	6,600	110	15.12	-0.05	
	10:46	6,660	111	15.12	-0.05	SB-7 Start
	10:47	6,720	112	15.12	-0.05	
	10:48	6,780	113	15.12	-0.05	
	10:49	6,840	114	15.12	-0.05	
	10:50	6,900	115	15.12	-0.05	
	10:51	6,960	116	15.13	-0.06	
	10:52	7,020	117	15.13	-0.06	
	10:53	7,080	118	15.13	-0.06	
	10:54	7,140	119	15.13	-0.06	
	10:55	7,200	120	15.12	-0.05	
	10:56	7,260	121	15.09	-0.02	
	10:57	7,320	122	15.08	-0.01	
	10:58	7,380	123	15.08	-0.01	
	10:59	7,440	124	15.08	-0.01	
	11:00	7,500	125	15.07	0.00	
	11:01	7,560	126	15.07	0.00	
	11:02	7,620	127	15.07	0.00	
	11:03	7,680	128	15.07	0.00	
	11:04	7,740	129	15.06	0.01	
	11:05	7,800	130	15.07	0.00	
	11:06	7,860	131	15.08	-0.01	
	11:07	7,920	132	15.08	-0.01	
	11:08	7,980	133	15.09	-0.02	
	11:09	8,040	134	15.09	-0.02	
	11:10	8,100	135	15.09	-0.02	
	11:11	8,160	136	15.07	0.00	
	11:12	8,220	137	15.06	0.01	
	11:13	8,280	138	15.05	0.02	
	11:14	8,340	139	15.05	0.02	
	11:15	8,400	140	15.05	0.02	
	11:16	8,460	141	15.04	0.03	
	11:17	8,520	142	15.04	0.03	
	11:18	8,580	143	15.03	0.04	
	11:19	8,640	144	15.03	0.04	
	11:20	8,700	145	15.01	0.06	
	11:21	8,760	146	15.01	0.06	
	11:22	8,820	147	15.02	0.05	
	11:23	8,880	148	15.02	0.05	
	11:24	8,940	149	15.01	0.06	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	11:25	9,000	150	15.00	0.07	
	11:26	9,060	151	14.99	0.08	
	11:27	9,120	152	14.99	0.08	
	11:28	9,180	153	14.98	0.09	
	11:29	9,240	154	14.99	0.08	
	11:30	9,300	155	14.99	0.08	
	11:31	9,360	156	14.98	0.09	
	11:32	9,420	157	14.98	0.09	
	11:33	9,480	158	14.97	0.10	
	11:34	9,540	159	14.96	0.11	
	11:35	9,600	160	14.95	0.12	
	11:36	9,660	161	14.96	0.11	
	11:37	9,720	162	14.94	0.13	
	11:38	9,780	163	14.95	0.12	
	11:39	9,840	164	14.97	0.10	
	11:40	9,900	165	14.97	0.10	
	11:41	9,960	166	14.97	0.10	
	11:42	10,020	167	14.97	0.10	
	11:43	10,080	168	14.98	0.09	
	11:44	10,140	169	14.97	0.10	
	11:45	10,200	170	14.96	0.11	
	11:46	10,260	171	14.95	0.12	
	11:47	10,320	172	14.95	0.12	
	11:48	10,380	173	14.95	0.12	
	11:49	10,440	174	14.94	0.13	
	11:50	10,500	175	14.94	0.13	
	11:51	10,560	176	14.94	0.13	
	11:52	10,620	177	14.94	0.13	
	11:53	10,680	178	14.94	0.13	
	11:54	10,740	179	14.94	0.13	
	11:55	10,800	180	14.94	0.13	
	11:56	10,860	181	14.95	0.12	
	11:57	10,920	182	14.95	0.12	
	11:58	10,980	183	14.95	0.12	
	11:59	11,040	184	14.94	0.13	
	12:00	11,100	185	14.95	0.12	SB-7 End
	12:01	11,160	186	14.96	0.11	
	12:02	11,220	187	14.95	0.12	
	12:03	11,280	188	14.95	0.12	
	12:04	11,340	189	14.96	0.11	
	12:05	11,400	190	14.96	0.11	
	12:06	11,460	191	14.96	0.11	
	12:07	11,520	192	14.95	0.12	
	12:08	11,580	193	14.94	0.13	
	12:09	11,640	194	14.95	0.12	
	12:10	11,700	195	14.94	0.13	
	12:11	11,760	196	14.93	0.14	
	12:12	11,820	197	14.94	0.13	
	12:13	11,880	198	14.94	0.13	
	12:14	11,940	199	14.95	0.12	
	12:15	12,000	200	14.96	0.11	
	12:16	12,060	201	14.96	0.11	
	12:17	12,120	202	14.96	0.11	
	12:18	12,180	203	14.96	0.11	
	12:19	12,240	204	14.96	0.11	
	12:20	12,300	205	14.95	0.12	
	12:21	12,360	206	14.95	0.12	
	12:22	12,420	207	14.95	0.12	
	12:23	12,480	208	14.96	0.11	
	12:24	12,540	209	14.95	0.12	
	12:25	12,600	210	14.95	0.12	
	12:26	12,660	211	14.95	0.12	
	12:27	12,720	212	14.94	0.13	
	12:28	12,780	213	14.96	0.11	
	12:29	12,840	214	14.95	0.12	
	12:30	12,900	215	14.95	0.12	
	12:31	12,960	216	14.96	0.11	
	12:32	13,020	217	14.95	0.12	
	12:33	13,080	218	14.94	0.13	
	12:34	13,140	219	14.94	0.13	
	12:35	13,200	220	14.93	0.14	
	12:36	13,260	221	14.91	0.16	
	12:37	13,320	222	14.92	0.15	
	12:38	13,380	223	14.91	0.16	
	12:39	13,440	224	14.91	0.16	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	12:40	13,500	225	14.92	0.15	
	12:41	13,560	226	14.93	0.14	
	12:42	13,620	227	14.95	0.12	
	12:43	13,680	228	14.96	0.11	
	12:44	13,740	229	14.97	0.10	
	12:45	13,800	230	14.98	0.09	
	12:46	13,860	231	14.98	0.09	
	12:47	13,920	232	14.99	0.08	
	12:48	13,980	233	15.00	0.07	
	12:49	14,040	234	14.99	0.08	
	12:50	14,100	235	15.00	0.07	
	12:51	14,160	236	14.99	0.08	
	12:52	14,220	237	15.00	0.07	
	12:53	14,280	238	15.00	0.07	
	12:54	14,340	239	15.01	0.06	
	12:55	14,400	240	15.01	0.06	
	12:56	14,460	241	15.00	0.07	
	12:57	14,520	242	14.99	0.08	
	12:58	14,580	243	15.00	0.07	
	12:59	14,640	244	14.99	0.08	
	13:00	14,700	245	14.99	0.08	
	13:01	14,760	246	14.99	0.08	
	13:02	14,820	247	14.99	0.08	
	13:03	14,880	248	14.99	0.08	
	13:04	14,940	249	14.99	0.08	
	13:05	15,000	250	14.99	0.08	
	13:06	15,060	251	14.99	0.08	
	13:07	15,120	252	14.99	0.08	
	13:08	15,180	253	14.98	0.09	
	13:09	15,240	254	14.99	0.08	
	13:10	15,300	255	15.00	0.07	
	13:11	15,360	256	14.99	0.08	
	13:12	15,420	257	14.99	0.08	
	13:13	15,480	258	14.99	0.08	
	13:14	15,540	259	14.98	0.09	
	13:15	15,600	260	14.98	0.09	
	13:16	15,660	261	14.97	0.10	
	13:17	15,720	262	14.96	0.11	
	13:18	15,780	263	14.96	0.11	
	13:19	15,840	264	14.99	0.08	
	13:20	15,900	265	15.00	0.07	
	13:21	15,960	266	14.99	0.08	
	13:22	16,020	267	14.98	0.09	
	13:23	16,080	268	14.97	0.10	
	13:24	16,140	269	14.97	0.10	
	13:25	16,200	270	14.98	0.09	
	13:26	16,260	271	14.99	0.08	
	13:27	16,320	272	15.00	0.07	
	13:28	16,380	273	15.01	0.06	
	13:29	16,440	274	15.03	0.04	
	13:30	16,500	275	15.04	0.03	
	13:31	16,560	276	15.03	0.04	
	13:32	16,620	277	15.02	0.05	
	13:33	16,680	278	15.02	0.05	
	13:34	16,740	279	15.00	0.07	
	13:35	16,800	280	14.98	0.09	
	13:36	16,860	281	14.97	0.10	
	13:37	16,920	282	14.98	0.09	
	13:38	16,980	283	14.99	0.08	
	13:39	17,040	284	15.00	0.07	
	13:40	17,100	285	15.01	0.06	
	13:41	17,160	286	15.01	0.06	
	13:42	17,220	287	15.01	0.06	9S Start
	13:43	17,280	288	14.97	0.10	
	13:44	17,340	289	14.97	0.10	
	13:45	17,400	290	14.97	0.10	
	13:46	17,460	291	14.98	0.09	
	13:47	17,520	292	14.97	0.10	
	13:48	17,580	293	14.97	0.10	
	13:49	17,640	294	14.95	0.12	
	13:50	17,700	295	14.93	0.14	
	13:51	17,760	296	14.92	0.15	
	13:52	17,820	297	14.94	0.13	
	13:53	17,880	298	14.94	0.13	
	13:54	17,940	299	14.95	0.12	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	13:55	18,000	300	14.94	0.13	
	13:56	18,060	301	14.93	0.14	
	13:57	18,120	302	14.93	0.14	
	13:58	18,180	303	14.93	0.14	
	13:59	18,240	304	14.92	0.15	
	14:00	18,300	305	14.91	0.16	
	14:01	18,360	306	14.92	0.15	
	14:02	18,420	307	14.93	0.14	
	14:03	18,480	308	14.94	0.13	
	14:04	18,540	309	14.95	0.12	
	14:05	18,600	310	14.97	0.10	
	14:06	18,660	311	14.98	0.09	
	14:07	18,720	312	14.97	0.10	
	14:08	18,780	313	14.95	0.12	
	14:09	18,840	314	14.96	0.11	
	14:10	18,900	315	14.96	0.11	
	14:11	18,960	316	14.96	0.11	
	14:12	19,020	317	14.96	0.11	
	14:13	19,080	318	14.96	0.11	
	14:14	19,140	319	14.96	0.11	
	14:15	19,200	320	14.97	0.10	
	14:16	19,260	321	14.97	0.10	
	14:17	19,320	322	14.97	0.10	
	14:18	19,380	323	14.96	0.11	
	14:19	19,440	324	14.95	0.12	
	14:20	19,500	325	14.95	0.12	
	14:21	19,560	326	14.97	0.10	
	14:22	19,620	327	14.98	0.09	
	14:23	19,680	328	14.98	0.09	
	14:24	19,740	329	14.96	0.11	
	14:25	19,800	330	14.96	0.11	
	14:26	19,860	331	14.96	0.11	
	14:27	19,920	332	14.96	0.11	
	14:28	19,980	333	14.98	0.09	
	14:29	20,040	334	14.97	0.10	
	14:30	20,100	335	14.98	0.09	
	14:31	20,160	336	14.96	0.11	
	14:32	20,220	337	14.95	0.12	
	14:33	20,280	338	14.94	0.13	
	14:34	20,340	339	14.93	0.14	
	14:35	20,400	340	14.92	0.15	
	14:36	20,460	341	14.92	0.15	
	14:37	20,520	342	14.94	0.13	
	14:38	20,580	343	14.96	0.11	
	14:39	20,640	344	14.97	0.10	
	14:40	20,700	345	14.97	0.10	
	14:41	20,760	346	14.98	0.09	
	14:42	20,820	347	14.98	0.09	
	14:43	20,880	348	14.98	0.09	
	14:44	20,940	349	14.98	0.09	9S End
	14:45	21,000	350	14.97	0.10	
	14:46	21,060	351	14.98	0.09	
	14:47	21,120	352	14.98	0.09	
	14:48	21,180	353	14.99	0.08	
	14:49	21,240	354	14.98	0.09	
	14:50	21,300	355	14.97	0.10	
	14:51	21,360	356	14.98	0.09	
	14:52	21,420	357	14.98	0.09	
	14:53	21,480	358	14.97	0.10	
	14:54	21,540	359	14.95	0.12	
	14:55	21,600	360	14.94	0.13	
	14:56	21,660	361	14.95	0.12	
	14:57	21,720	362	14.97	0.10	
	14:58	21,780	363	14.98	0.09	
	14:59	21,840	364	14.99	0.08	
	15:00	21,900	365	14.97	0.10	
	15:01	21,960	366	14.98	0.09	
	15:02	22,020	367	14.97	0.10	
	15:03	22,080	368	14.98	0.09	
	15:04	22,140	369	14.98	0.09	
	15:05	22,200	370	14.97	0.10	
	15:06	22,260	371	14.96	0.11	
	15:07	22,320	372	14.94	0.13	
	15:08	22,380	373	14.93	0.14	
	15:09	22,440	374	14.93	0.14	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	15:10	22,500	375	14.93	0.14	
	15:11	22,560	376	14.93	0.14	
	15:12	22,620	377	14.92	0.15	
	15:13	22,680	378	14.92	0.15	
	15:14	22,740	379	14.92	0.15	
	15:15	22,800	380	14.93	0.14	Guar - 9D
	15:16	22,860	381	14.93	0.14	
	15:17	22,920	382	14.94	0.13	
	15:18	22,980	383	14.94	0.13	
	15:19	23,040	384	14.94	0.13	
	15:20	23,100	385	14.94	0.13	
	15:21	23,160	386	14.96	0.11	
	15:22	23,220	387	14.97	0.10	
	15:23	23,280	388	14.98	0.09	
	15:24	23,340	389	14.98	0.09	
	15:25	23,400	390	14.99	0.08	
	15:26	23,460	391	14.98	0.09	
	15:27	23,520	392	14.97	0.10	
	15:28	23,580	393	14.98	0.09	
	15:29	23,640	394	14.98	0.09	
	15:30	23,700	395	14.98	0.09	
	15:31	23,760	396	14.97	0.10	
	15:32	23,820	397	14.96	0.11	
	15:33	23,880	398	14.96	0.11	Stop Guar
	15:34	23,940	399	14.95	0.12	
	15:35	24,000	400	14.93	0.14	
	15:36	24,060	401	14.92	0.15	
	15:37	24,120	402	14.91	0.16	
	15:38	24,180	403	14.92	0.15	
	15:39	24,240	404	14.94	0.13	
	15:40	24,300	405	14.94	0.13	
	15:41	24,360	406	14.95	0.12	
	15:42	24,420	407	14.95	0.12	
	15:43	24,480	408	14.95	0.12	
	15:44	24,540	409	14.95	0.12	
	15:45	24,600	410	14.93	0.14	
	15:46	24,660	411	14.94	0.13	
	15:47	24,720	412	14.94	0.13	Guar - 9S
	15:48	24,780	413	14.91	0.16	
	15:49	24,840	414	14.90	0.17	Guar Done
	15:50	24,900	415	14.91	0.16	
	15:51	24,960	416	14.90	0.17	9S Chaser
	15:52	25,020	417	14.91	0.16	
	15:53	25,080	418	14.92	0.15	
	15:54	25,140	419	14.93	0.14	
	15:55	25,200	420	14.94	0.13	9D Chaser
	15:56	25,260	421	14.94	0.13	
	15:57	25,320	422	14.95	0.12	
	15:58	25,380	423	14.96	0.11	
	15:59	25,440	424	14.96	0.11	
	16:00	25,500	425	14.97	0.10	
	16:01	25,560	426	14.97	0.10	
	16:02	25,620	427	14.99	0.08	
	16:03	25,680	428	14.98	0.09	
	16:04	25,740	429	14.98	0.09	
	16:05	25,800	430	14.96	0.11	4D Start
	16:06	25,860	431	14.93	0.14	
	16:07	25,920	432	14.93	0.14	
	16:08	25,980	433	14.93	0.14	
	16:09	26,040	434	14.93	0.14	
	16:10	26,100	435	14.91	0.16	
	16:11	26,160	436	14.90	0.17	
	16:12	26,220	437	14.88	0.19	
	16:13	26,280	438	14.87	0.20	
	16:14	26,340	439	14.86	0.21	
	16:15	26,400	440	14.87	0.20	
	16:16	26,460	441	14.89	0.18	
	16:17	26,520	442	14.89	0.18	
	16:18	26,580	443	14.88	0.19	
	16:19	26,640	444	14.89	0.18	
	16:20	26,700	445	14.89	0.18	
	16:21	26,760	446	14.88	0.19	
	16:22	26,820	447	14.86	0.21	
	16:23	26,880	448	14.85	0.22	
	16:24	26,940	449	14.86	0.21	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	16:25	27,000	450	14.86	0.21	
	16:26	27,060	451	14.87	0.20	
	16:27	27,120	452	14.86	0.21	
	16:28	27,180	453	14.84	0.23	
	16:29	27,240	454	14.83	0.24	
	16:30	27,300	455	14.81	0.26	
	16:31	27,360	456	14.80	0.27	
	16:32	27,420	457	14.80	0.27	
	16:33	27,480	458	14.79	0.28	
	16:34	27,540	459	14.79	0.28	
	16:35	27,600	460	14.79	0.28	
	16:36	27,660	461	14.80	0.27	
	16:37	27,720	462	14.79	0.28	
	16:38	27,780	463	14.78	0.29	
	16:39	27,840	464	14.79	0.28	
	16:40	27,900	465	14.79	0.28	
	16:41	27,960	466	14.79	0.28	
	16:42	28,020	467	14.79	0.28	
	16:43	28,080	468	14.79	0.28	
	16:44	28,140	469	14.79	0.28	
	16:45	28,200	470	14.79	0.28	
	16:46	28,260	471	14.77	0.30	
	16:47	28,320	472	14.76	0.31	
	16:48	28,380	473	14.75	0.32	
	16:49	28,440	474	14.75	0.32	
	16:50	28,500	475	14.74	0.33	4D End
	16:51	28,560	476	14.73	0.34	1 Start
	16:52	28,620	477	14.73	0.34	
	16:53	28,680	478	14.74	0.33	
	16:54	28,740	479	14.74	0.33	
	16:55	28,800	480	14.71	0.36	
	16:56	28,860	481	14.71	0.36	
	16:57	28,920	482	14.70	0.37	
	16:58	28,980	483	14.69	0.38	
	16:59	29,040	484	14.67	0.40	
	17:00	29,100	485	14.65	0.42	
	17:01	29,160	486	14.64	0.43	
	17:02	29,220	487	14.63	0.44	1 End
	17:03	29,280	488	14.64	0.43	
	17:04	29,340	489	14.65	0.42	
	17:05	29,400	490	14.66	0.41	
	17:06	29,460	491	14.67	0.40	
	17:07	29,520	492	14.68	0.39	
	17:08	29,580	493	14.69	0.38	
	17:09	29,640	494	14.68	0.39	
	17:10	29,700	495	14.68	0.39	
	17:11	29,760	496	14.69	0.38	
	17:12	29,820	497	14.71	0.36	
	17:13	29,880	498	14.72	0.35	
	17:14	29,940	499	14.73	0.34	
	17:15	30,000	500	14.76	0.31	
	17:16	30,060	501	14.77	0.30	
	17:17	30,120	502	14.78	0.29	
	17:18	30,180	503	14.78	0.29	
	17:19	30,240	504	14.77	0.30	
	17:20	30,300	505	14.78	0.29	
	17:21	30,360	506	14.78	0.29	
	17:22	30,420	507	14.78	0.29	
	17:23	30,480	508	14.79	0.28	
	17:24	30,540	509	14.78	0.29	
	17:25	30,600	510	14.79	0.28	
	17:26	30,660	511	14.79	0.28	
	17:27	30,720	512	14.80	0.27	
	17:28	30,780	513	14.81	0.26	
	17:29	30,840	514	14.81	0.26	
	17:30	30,900	515	14.82	0.25	
	17:31	30,960	516	14.82	0.25	
	17:32	31,020	517	14.82	0.25	
	17:33	31,080	518	14.82	0.25	
	17:34	31,140	519	14.80	0.27	
	17:35	31,200	520	14.78	0.29	
	17:36	31,260	521	14.77	0.30	
	17:37	31,320	522	14.78	0.29	
	17:38	31,380	523	14.79	0.28	
	17:39	31,440	524	14.80	0.27	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	17:40	31,500	525	14.81	0.26	
	17:41	31,560	526	14.81	0.26	
	17:42	31,620	527	14.82	0.25	
	17:43	31,680	528	14.83	0.24	
	17:44	31,740	529	14.83	0.24	
	17:45	31,800	530	14.84	0.23	
	17:46	31,860	531	14.84	0.23	
	17:47	31,920	532	14.84	0.23	
	17:48	31,980	533	14.83	0.24	
	17:49	32,040	534	14.81	0.26	
	17:50	32,100	535	14.78	0.29	
	17:51	32,160	536	14.77	0.30	
	17:52	32,220	537	14.75	0.32	
	17:53	32,280	538	14.73	0.34	
	17:54	32,340	539	14.71	0.36	
	17:55	32,400	540	14.70	0.37	
	17:56	32,460	541	14.70	0.37	
	17:57	32,520	542	14.70	0.37	
	17:58	32,580	543	14.70	0.37	
	17:59	32,640	544	14.70	0.37	
	18:00	32,700	545	14.71	0.36	
	18:01	32,760	546	14.71	0.36	
	18:02	32,820	547	14.71	0.36	
	18:03	32,880	548	14.72	0.35	
	18:04	32,940	549	14.72	0.35	
	18:05	33,000	550	14.73	0.34	
	18:06	33,060	551	14.73	0.34	
	18:07	33,120	552	14.74	0.33	
	18:08	33,180	553	14.74	0.33	
	18:09	33,240	554	14.75	0.32	
	18:10	33,300	555	14.76	0.31	
	18:11	33,360	556	14.76	0.31	
	18:12	33,420	557	14.76	0.31	
	18:13	33,480	558	14.76	0.31	
	18:14	33,540	559	14.76	0.31	
	18:15	33,600	560	14.77	0.30	
	18:16	33,660	561	14.77	0.30	
	18:17	33,720	562	14.77	0.30	
	18:18	33,780	563	14.77	0.30	
	18:19	33,840	564	14.77	0.30	
	18:20	33,900	565	14.77	0.30	
	18:21	33,960	566	14.77	0.30	
	18:22	34,020	567	14.77	0.30	
	18:23	34,080	568	14.77	0.30	
	18:24	34,140	569	14.77	0.30	
	18:25	34,200	570	14.77	0.30	
	18:26	34,260	571	14.77	0.30	
	18:27	34,320	572	14.77	0.30	
	18:28	34,380	573	14.78	0.29	
	18:29	34,440	574	14.78	0.29	
	18:30	34,500	575	14.78	0.29	
	18:31	34,560	576	14.78	0.29	
	18:32	34,620	577	14.79	0.28	
	18:33	34,680	578	14.78	0.29	
	18:34	34,740	579	14.79	0.28	
	18:35	34,800	580	14.79	0.28	
	18:36	34,860	581	14.79	0.28	
	18:37	34,920	582	14.79	0.28	
	18:38	34,980	583	14.79	0.28	
	18:39	35,040	584	14.79	0.28	
	18:40	35,100	585	14.80	0.27	
	18:41	35,160	586	14.79	0.28	
	18:42	35,220	587	14.80	0.27	
	18:43	35,280	588	14.80	0.27	
	18:44	35,340	589	14.80	0.27	
	18:45	35,400	590	14.80	0.27	
	18:46	35,460	591	14.81	0.26	
	18:47	35,520	592	14.81	0.26	
	18:48	35,580	593	14.80	0.27	
	18:49	35,640	594	14.81	0.26	
	18:50	35,700	595	14.81	0.26	
	18:51	35,760	596	14.81	0.26	
	18:52	35,820	597	14.81	0.26	
	18:53	35,880	598	14.81	0.26	
	18:54	35,940	599	14.81	0.26	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	18:55	36,000	600	14.81	0.26	
	18:56	36,060	601	14.81	0.26	
	18:57	36,120	602	14.81	0.26	
	18:58	36,180	603	14.81	0.26	
	18:59	36,240	604	14.81	0.26	
	19:00	36,300	605	14.81	0.26	
	19:01	36,360	606	14.81	0.26	
	19:02	36,420	607	14.81	0.26	
	19:03	36,480	608	14.80	0.27	
	19:04	36,540	609	14.80	0.27	
	19:05	36,600	610	14.81	0.26	
	19:06	36,660	611	14.81	0.26	
	19:07	36,720	612	14.81	0.26	
	19:08	36,780	613	14.81	0.26	
	19:09	36,840	614	14.81	0.26	
	19:10	36,900	615	14.81	0.26	
	19:11	36,960	616	14.81	0.26	
	19:12	37,020	617	14.82	0.25	
	19:13	37,080	618	14.81	0.26	
	19:14	37,140	619	14.81	0.26	
	19:15	37,200	620	14.82	0.25	
	19:16	37,260	621	14.82	0.25	
	19:17	37,320	622	14.82	0.25	
	19:18	37,380	623	14.81	0.26	
	19:19	37,440	624	14.81	0.26	
	19:20	37,500	625	14.81	0.26	
	19:21	37,560	626	14.81	0.26	
	19:22	37,620	627	14.81	0.26	
	19:23	37,680	628	14.81	0.26	
	19:24	37,740	629	14.82	0.25	
	19:25	37,800	630	14.81	0.26	
	19:26	37,860	631	14.81	0.26	
	19:27	37,920	632	14.81	0.26	
	19:28	37,980	633	14.82	0.25	
	19:29	38,040	634	14.81	0.26	
	19:30	38,100	635	14.81	0.26	
	19:31	38,160	636	14.82	0.25	
	19:32	38,220	637	14.81	0.26	
	19:33	38,280	638	14.82	0.25	
	19:34	38,340	639	14.82	0.25	
	19:35	38,400	640	14.82	0.25	
	19:36	38,460	641	14.82	0.25	
	19:37	38,520	642	14.81	0.26	
	19:38	38,580	643	14.82	0.25	
	19:39	38,640	644	14.82	0.25	
	19:40	38,700	645	14.82	0.25	
	19:41	38,760	646	14.82	0.25	
	19:42	38,820	647	14.82	0.25	
	19:43	38,880	648	14.82	0.25	
	19:44	38,940	649	14.82	0.25	
	19:45	39,000	650	14.82	0.25	
	19:46	39,060	651	14.82	0.25	
	19:47	39,120	652	14.83	0.24	
	19:48	39,180	653	14.83	0.24	
	19:49	39,240	654	14.83	0.24	
	19:50	39,300	655	14.84	0.23	
	19:51	39,360	656	14.84	0.23	
	19:52	39,420	657	14.84	0.23	
	19:53	39,480	658	14.83	0.24	
	19:54	39,540	659	14.84	0.23	
	19:55	39,600	660	14.84	0.23	
	19:56	39,660	661	14.83	0.24	
	19:57	39,720	662	14.83	0.24	
	19:58	39,780	663	14.83	0.24	
	19:59	39,840	664	14.83	0.24	
	20:00	39,900	665	14.84	0.23	
	20:01	39,960	666	14.84	0.23	
	20:02	40,020	667	14.83	0.24	
	20:03	40,080	668	14.84	0.23	
	20:04	40,140	669	14.84	0.23	
	20:05	40,200	670	14.84	0.23	
	20:06	40,260	671	14.84	0.23	
	20:07	40,320	672	14.84	0.23	
	20:08	40,380	673	14.84	0.23	
	20:09	40,440	674	14.84	0.23	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	20:10	40,500	675	14.84	0.23	
	20:11	40,560	676	14.84	0.23	
	20:12	40,620	677	14.84	0.23	
	20:13	40,680	678	14.84	0.23	
	20:14	40,740	679	14.84	0.23	
	20:15	40,800	680	14.84	0.23	
	20:16	40,860	681	14.84	0.23	
	20:17	40,920	682	14.84	0.23	
	20:18	40,980	683	14.84	0.23	
	20:19	41,040	684	14.84	0.23	
	20:20	41,100	685	14.84	0.23	
	20:21	41,160	686	14.84	0.23	
	20:22	41,220	687	14.85	0.22	
	20:23	41,280	688	14.84	0.23	
	20:24	41,340	689	14.84	0.23	
	20:25	41,400	690	14.84	0.23	
	20:26	41,460	691	14.84	0.23	
	20:27	41,520	692	14.84	0.23	
	20:28	41,580	693	14.84	0.23	
	20:29	41,640	694	14.84	0.23	
	20:30	41,700	695	14.84	0.23	
	20:31	41,760	696	14.84	0.23	
	20:32	41,820	697	14.84	0.23	
	20:33	41,880	698	14.85	0.22	
	20:34	41,940	699	14.84	0.23	
	20:35	42,000	700	14.84	0.23	
	20:36	42,060	701	14.84	0.23	
	20:37	42,120	702	14.84	0.23	
	20:38	42,180	703	14.84	0.23	
	20:39	42,240	704	14.84	0.23	
	20:40	42,300	705	14.85	0.22	
	20:41	42,360	706	14.84	0.23	
	20:42	42,420	707	14.84	0.23	
	20:43	42,480	708	14.84	0.23	
	20:44	42,540	709	14.84	0.23	
	20:45	42,600	710	14.84	0.23	
	20:46	42,660	711	14.84	0.23	
	20:47	42,720	712	14.84	0.23	
	20:48	42,780	713	14.84	0.23	
	20:49	42,840	714	14.84	0.23	
	20:50	42,900	715	14.84	0.23	
	20:51	42,960	716	14.84	0.23	
	20:52	43,020	717	14.84	0.23	
	20:53	43,080	718	14.84	0.23	
	20:54	43,140	719	14.84	0.23	
	20:55	43,200	720	14.84	0.23	
	20:56	43,260	721	14.84	0.23	
	20:57	43,320	722	14.84	0.23	
	20:58	43,380	723	14.85	0.22	
	20:59	43,440	724	14.85	0.22	
	21:00	43,500	725	14.85	0.22	
	21:01	43,560	726	14.85	0.22	
	21:02	43,620	727	14.85	0.22	
	21:03	43,680	728	14.85	0.22	
	21:04	43,740	729	14.85	0.22	
	21:05	43,800	730	14.85	0.22	
	21:06	43,860	731	14.84	0.23	
	21:07	43,920	732	14.84	0.23	
	21:08	43,980	733	14.85	0.22	
	21:09	44,040	734	14.84	0.23	
	21:10	44,100	735	14.84	0.23	
	21:11	44,160	736	14.84	0.23	
	21:12	44,220	737	14.84	0.23	
	21:13	44,280	738	14.85	0.22	
	21:14	44,340	739	14.84	0.23	
	21:15	44,400	740	14.84	0.23	
	21:16	44,460	741	14.85	0.22	
	21:17	44,520	742	14.85	0.22	
	21:18	44,580	743	14.85	0.22	
	21:19	44,640	744	14.85	0.22	
	21:20	44,700	745	14.84	0.23	
	21:21	44,760	746	14.84	0.23	
	21:22	44,820	747	14.84	0.23	
	21:23	44,880	748	14.85	0.22	
	21:24	44,940	749	14.85	0.22	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	21:25	45,000	750	14.85	0.22	
	21:26	45,060	751	14.84	0.23	
	21:27	45,120	752	14.84	0.23	
	21:28	45,180	753	14.84	0.23	
	21:29	45,240	754	14.85	0.22	
	21:30	45,300	755	14.84	0.23	
	21:31	45,360	756	14.84	0.23	
	21:32	45,420	757	14.84	0.23	
	21:33	45,480	758	14.84	0.23	
	21:34	45,540	759	14.84	0.23	
	21:35	45,600	760	14.84	0.23	
	21:36	45,660	761	14.84	0.23	
	21:37	45,720	762	14.84	0.23	
	21:38	45,780	763	14.85	0.22	
	21:39	45,840	764	14.85	0.22	
	21:40	45,900	765	14.86	0.21	
	21:41	45,960	766	14.85	0.22	
	21:42	46,020	767	14.85	0.22	
	21:43	46,080	768	14.85	0.22	
	21:44	46,140	769	14.85	0.22	
	21:45	46,200	770	14.85	0.22	
	21:46	46,260	771	14.85	0.22	
	21:47	46,320	772	14.85	0.22	
	21:48	46,380	773	14.85	0.22	
	21:49	46,440	774	14.86	0.21	
	21:50	46,500	775	14.85	0.22	
	21:51	46,560	776	14.85	0.22	
	21:52	46,620	777	14.85	0.22	
	21:53	46,680	778	14.84	0.23	
	21:54	46,740	779	14.84	0.23	
	21:55	46,800	780	14.84	0.23	
	21:56	46,860	781	14.84	0.23	
	21:57	46,920	782	14.85	0.22	
	21:58	46,980	783	14.85	0.22	
	21:59	47,040	784	14.85	0.22	
	22:00	47,100	785	14.85	0.22	
	22:01	47,160	786	14.85	0.22	
	22:02	47,220	787	14.85	0.22	
	22:03	47,280	788	14.84	0.23	
	22:04	47,340	789	14.85	0.22	
	22:05	47,400	790	14.85	0.22	
	22:06	47,460	791	14.84	0.23	
	22:07	47,520	792	14.84	0.23	
	22:08	47,580	793	14.84	0.23	
	22:09	47,640	794	14.84	0.23	
	22:10	47,700	795	14.84	0.23	
	22:11	47,760	796	14.85	0.22	
	22:12	47,820	797	14.85	0.22	
	22:13	47,880	798	14.84	0.23	
	22:14	47,940	799	14.84	0.23	
	22:15	48,000	800	14.84	0.23	
	22:16	48,060	801	14.84	0.23	
	22:17	48,120	802	14.84	0.23	
	22:18	48,180	803	14.84	0.23	
	22:19	48,240	804	14.84	0.23	
	22:20	48,300	805	14.84	0.23	
	22:21	48,360	806	14.84	0.23	
	22:22	48,420	807	14.84	0.23	
	22:23	48,480	808	14.85	0.22	
	22:24	48,540	809	14.85	0.22	
	22:25	48,600	810	14.85	0.22	
	22:26	48,660	811	14.85	0.22	
	22:27	48,720	812	14.85	0.22	
	22:28	48,780	813	14.85	0.22	
	22:29	48,840	814	14.85	0.22	
	22:30	48,900	815	14.85	0.22	
	22:31	48,960	816	14.85	0.22	
	22:32	49,020	817	14.84	0.23	
	22:33	49,080	818	14.84	0.23	
	22:34	49,140	819	14.84	0.23	
	22:35	49,200	820	14.84	0.23	
	22:36	49,260	821	14.85	0.22	
	22:37	49,320	822	14.85	0.22	
	22:38	49,380	823	14.84	0.23	
	22:39	49,440	824	14.85	0.22	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	22:40	49,500	825	14.85	0.22	
	22:41	49,560	826	14.85	0.22	
	22:42	49,620	827	14.84	0.23	
	22:43	49,680	828	14.84	0.23	
	22:44	49,740	829	14.84	0.23	
	22:45	49,800	830	14.84	0.23	
	22:46	49,860	831	14.84	0.23	
	22:47	49,920	832	14.84	0.23	
	22:48	49,980	833	14.84	0.23	
	22:49	50,040	834	14.85	0.22	
	22:50	50,100	835	14.85	0.22	
	22:51	50,160	836	14.85	0.22	
	22:52	50,220	837	14.85	0.22	
	22:53	50,280	838	14.84	0.23	
	22:54	50,340	839	14.84	0.23	
	22:55	50,400	840	14.85	0.22	
	22:56	50,460	841	14.84	0.23	
	22:57	50,520	842	14.85	0.22	
	22:58	50,580	843	14.85	0.22	
	22:59	50,640	844	14.85	0.22	
	23:00	50,700	845	14.85	0.22	
	23:01	50,760	846	14.85	0.22	
	23:02	50,820	847	14.85	0.22	
	23:03	50,880	848	14.85	0.22	
	23:04	50,940	849	14.85	0.22	
	23:05	51,000	850	14.85	0.22	
	23:06	51,060	851	14.85	0.22	
	23:07	51,120	852	14.85	0.22	
	23:08	51,180	853	14.84	0.23	
	23:09	51,240	854	14.84	0.23	
	23:10	51,300	855	14.85	0.22	
	23:11	51,360	856	14.84	0.23	
	23:12	51,420	857	14.84	0.23	
	23:13	51,480	858	14.84	0.23	
	23:14	51,540	859	14.85	0.22	
	23:15	51,600	860	14.85	0.22	
	23:16	51,660	861	14.84	0.23	
	23:17	51,720	862	14.84	0.23	
	23:18	51,780	863	14.84	0.23	
	23:19	51,840	864	14.84	0.23	
	23:20	51,900	865	14.83	0.24	
	23:21	51,960	866	14.83	0.24	
	23:22	52,020	867	14.83	0.24	
	23:23	52,080	868	14.83	0.24	
	23:24	52,140	869	14.83	0.24	
	23:25	52,200	870	14.83	0.24	
	23:26	52,260	871	14.83	0.24	
	23:27	52,320	872	14.83	0.24	
	23:28	52,380	873	14.83	0.24	
	23:29	52,440	874	14.83	0.24	
	23:30	52,500	875	14.83	0.24	
	23:31	52,560	876	14.83	0.24	
	23:32	52,620	877	14.83	0.24	
	23:33	52,680	878	14.84	0.23	
	23:34	52,740	879	14.84	0.23	
	23:35	52,800	880	14.84	0.23	
	23:36	52,860	881	14.84	0.23	
	23:37	52,920	882	14.84	0.23	
	23:38	52,980	883	14.84	0.23	
	23:39	53,040	884	14.84	0.23	
	23:40	53,100	885	14.83	0.24	
	23:41	53,160	886	14.83	0.24	
	23:42	53,220	887	14.84	0.23	
	23:43	53,280	888	14.84	0.23	
	23:44	53,340	889	14.84	0.23	
	23:45	53,400	890	14.84	0.23	
	23:46	53,460	891	14.84	0.23	
	23:47	53,520	892	14.84	0.23	
	23:48	53,580	893	14.83	0.24	
	23:49	53,640	894	14.84	0.23	
	23:50	53,700	895	14.83	0.24	
	23:51	53,760	896	14.83	0.24	
	23:52	53,820	897	14.83	0.24	
	23:53	53,880	898	14.83	0.24	
	23:54	53,940	899	14.84	0.23	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	23:55	54,000	900	14.83	0.24	
	23:56	54,060	901	14.83	0.24	
	23:57	54,120	902	14.84	0.23	
	23:58	54,180	903	14.84	0.23	
	23:59	54,240	904	14.84	0.23	
3/12/2014	0:00	54,300	905	14.84	0.23	
	0:01	54,360	906	14.84	0.23	
	0:02	54,420	907	14.83	0.24	
	0:03	54,480	908	14.83	0.24	
	0:04	54,540	909	14.84	0.23	
	0:05	54,600	910	14.83	0.24	
	0:06	54,660	911	14.84	0.23	
	0:07	54,720	912	14.83	0.24	
	0:08	54,780	913	14.83	0.24	
	0:09	54,840	914	14.83	0.24	
	0:10	54,900	915	14.83	0.24	
	0:11	54,960	916	14.83	0.24	
	0:12	55,020	917	14.83	0.24	
	0:13	55,080	918	14.83	0.24	
	0:14	55,140	919	14.83	0.24	
	0:15	55,200	920	14.84	0.23	
	0:16	55,260	921	14.83	0.24	
	0:17	55,320	922	14.83	0.24	
	0:18	55,380	923	14.83	0.24	
	0:19	55,440	924	14.83	0.24	
	0:20	55,500	925	14.83	0.24	
	0:21	55,560	926	14.82	0.25	
	0:22	55,620	927	14.82	0.25	
	0:23	55,680	928	14.83	0.24	
	0:24	55,740	929	14.83	0.24	
	0:25	55,800	930	14.83	0.24	
	0:26	55,860	931	14.83	0.24	
	0:27	55,920	932	14.83	0.24	
	0:28	55,980	933	14.83	0.24	
	0:29	56,040	934	14.83	0.24	
	0:30	56,100	935	14.83	0.24	
	0:31	56,160	936	14.83	0.24	
	0:32	56,220	937	14.82	0.25	
	0:33	56,280	938	14.83	0.24	
	0:34	56,340	939	14.82	0.25	
	0:35	56,400	940	14.83	0.24	
	0:36	56,460	941	14.82	0.25	
	0:37	56,520	942	14.82	0.25	
	0:38	56,580	943	14.83	0.24	
	0:39	56,640	944	14.82	0.25	
	0:40	56,700	945	14.82	0.25	
	0:41	56,760	946	14.83	0.24	
	0:42	56,820	947	14.83	0.24	
	0:43	56,880	948	14.83	0.24	
	0:44	56,940	949	14.82	0.25	
	0:45	57,000	950	14.83	0.24	
	0:46	57,060	951	14.83	0.24	
	0:47	57,120	952	14.83	0.24	
	0:48	57,180	953	14.83	0.24	
	0:49	57,240	954	14.82	0.25	
	0:50	57,300	955	14.82	0.25	
	0:51	57,360	956	14.83	0.24	
	0:52	57,420	957	14.82	0.25	
	0:53	57,480	958	14.83	0.24	
	0:54	57,540	959	14.83	0.24	
	0:55	57,600	960	14.82	0.25	
	0:56	57,660	961	14.82	0.25	
	0:57	57,720	962	14.83	0.24	
	0:58	57,780	963	14.83	0.24	
	0:59	57,840	964	14.82	0.25	
	1:00	57,900	965	14.83	0.24	
	1:01	57,960	966	14.82	0.25	
	1:02	58,020	967	14.82	0.25	
	1:03	58,080	968	14.83	0.24	
	1:04	58,140	969	14.82	0.25	
	1:05	58,200	970	14.83	0.24	
	1:06	58,260	971	14.82	0.25	
	1:07	58,320	972	14.83	0.24	
	1:08	58,380	973	14.83	0.24	
	1:09	58,440	974	14.83	0.24	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	1:10	58,500	975	14.83	0.24	
	1:11	58,560	976	14.84	0.23	
	1:12	58,620	977	14.83	0.24	
	1:13	58,680	978	14.83	0.24	
	1:14	58,740	979	14.83	0.24	
	1:15	58,800	980	14.83	0.24	
	1:16	58,860	981	14.83	0.24	
	1:17	58,920	982	14.83	0.24	
	1:18	58,980	983	14.83	0.24	
	1:19	59,040	984	14.83	0.24	
	1:20	59,100	985	14.83	0.24	
	1:21	59,160	986	14.83	0.24	
	1:22	59,220	987	14.83	0.24	
	1:23	59,280	988	14.83	0.24	
	1:24	59,340	989	14.83	0.24	
	1:25	59,400	990	14.82	0.25	
	1:26	59,460	991	14.82	0.25	
	1:27	59,520	992	14.82	0.25	
	1:28	59,580	993	14.83	0.24	
	1:29	59,640	994	14.83	0.24	
	1:30	59,700	995	14.83	0.24	
	1:31	59,760	996	14.83	0.24	
	1:32	59,820	997	14.82	0.25	
	1:33	59,880	998	14.82	0.25	
	1:34	59,940	999	14.82	0.25	
	1:35	60,000	1,000	14.83	0.24	
	1:36	60,060	1,001	14.83	0.24	
	1:37	60,120	1,002	14.82	0.25	
	1:38	60,180	1,003	14.82	0.25	
	1:39	60,240	1,004	14.82	0.25	
	1:40	60,300	1,005	14.82	0.25	
	1:41	60,360	1,006	14.82	0.25	
	1:42	60,420	1,007	14.82	0.25	
	1:43	60,480	1,008	14.82	0.25	
	1:44	60,540	1,009	14.82	0.25	
	1:45	60,600	1,010	14.82	0.25	
	1:46	60,660	1,011	14.82	0.25	
	1:47	60,720	1,012	14.82	0.25	
	1:48	60,780	1,013	14.82	0.25	
	1:49	60,840	1,014	14.82	0.25	
	1:50	60,900	1,015	14.82	0.25	
	1:51	60,960	1,016	14.82	0.25	
	1:52	61,020	1,017	14.82	0.25	
	1:53	61,080	1,018	14.82	0.25	
	1:54	61,140	1,019	14.82	0.25	
	1:55	61,200	1,020	14.82	0.25	
	1:56	61,260	1,021	14.81	0.26	
	1:57	61,320	1,022	14.82	0.25	
	1:58	61,380	1,023	14.82	0.25	
	1:59	61,440	1,024	14.82	0.25	
	2:00	61,500	1,025	14.82	0.25	
	2:01	61,560	1,026	14.82	0.25	
	2:02	61,620	1,027	14.82	0.25	
	2:03	61,680	1,028	14.82	0.25	
	2:04	61,740	1,029	14.82	0.25	
	2:05	61,800	1,030	14.82	0.25	
	2:06	61,860	1,031	14.82	0.25	
	2:07	61,920	1,032	14.82	0.25	
	2:08	61,980	1,033	14.83	0.24	
	2:09	62,040	1,034	14.83	0.24	
	2:10	62,100	1,035	14.83	0.24	
	2:11	62,160	1,036	14.82	0.25	
	2:12	62,220	1,037	14.83	0.24	
	2:13	62,280	1,038	14.82	0.25	
	2:14	62,340	1,039	14.83	0.24	
	2:15	62,400	1,040	14.82	0.25	
	2:16	62,460	1,041	14.82	0.25	
	2:17	62,520	1,042	14.82	0.25	
	2:18	62,580	1,043	14.82	0.25	
	2:19	62,640	1,044	14.82	0.25	
	2:20	62,700	1,045	14.82	0.25	
	2:21	62,760	1,046	14.83	0.24	
	2:22	62,820	1,047	14.82	0.25	
	2:23	62,880	1,048	14.82	0.25	
	2:24	62,940	1,049	14.82	0.25	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	2:25	63,000	1,050	14.82	0.25	
	2:26	63,060	1,051	14.82	0.25	
	2:27	63,120	1,052	14.82	0.25	
	2:28	63,180	1,053	14.82	0.25	
	2:29	63,240	1,054	14.82	0.25	
	2:30	63,300	1,055	14.82	0.25	
	2:31	63,360	1,056	14.82	0.25	
	2:32	63,420	1,057	14.82	0.25	
	2:33	63,480	1,058	14.82	0.25	
	2:34	63,540	1,059	14.82	0.25	
	2:35	63,600	1,060	14.82	0.25	
	2:36	63,660	1,061	14.82	0.25	
	2:37	63,720	1,062	14.82	0.25	
	2:38	63,780	1,063	14.82	0.25	
	2:39	63,840	1,064	14.82	0.25	
	2:40	63,900	1,065	14.82	0.25	
	2:41	63,960	1,066	14.82	0.25	
	2:42	64,020	1,067	14.82	0.25	
	2:43	64,080	1,068	14.82	0.25	
	2:44	64,140	1,069	14.83	0.24	
	2:45	64,200	1,070	14.82	0.25	
	2:46	64,260	1,071	14.82	0.25	
	2:47	64,320	1,072	14.82	0.25	
	2:48	64,380	1,073	14.82	0.25	
	2:49	64,440	1,074	14.82	0.25	
	2:50	64,500	1,075	14.83	0.24	
	2:51	64,560	1,076	14.82	0.25	
	2:52	64,620	1,077	14.82	0.25	
	2:53	64,680	1,078	14.82	0.25	
	2:54	64,740	1,079	14.82	0.25	
	2:55	64,800	1,080	14.82	0.25	
	2:56	64,860	1,081	14.82	0.25	
	2:57	64,920	1,082	14.82	0.25	
	2:58	64,980	1,083	14.82	0.25	
	2:59	65,040	1,084	14.82	0.25	
	3:00	65,100	1,085	14.82	0.25	
	3:01	65,160	1,086	14.82	0.25	
	3:02	65,220	1,087	14.82	0.25	
	3:03	65,280	1,088	14.82	0.25	
	3:04	65,340	1,089	14.82	0.25	
	3:05	65,400	1,090	14.82	0.25	
	3:06	65,460	1,091	14.82	0.25	
	3:07	65,520	1,092	14.82	0.25	
	3:08	65,580	1,093	14.82	0.25	
	3:09	65,640	1,094	14.82	0.25	
	3:10	65,700	1,095	14.81	0.26	
	3:11	65,760	1,096	14.81	0.26	
	3:12	65,820	1,097	14.81	0.26	
	3:13	65,880	1,098	14.82	0.25	
	3:14	65,940	1,099	14.82	0.25	
	3:15	66,000	1,100	14.82	0.25	
	3:16	66,060	1,101	14.81	0.26	
	3:17	66,120	1,102	14.82	0.25	
	3:18	66,180	1,103	14.81	0.26	
	3:19	66,240	1,104	14.81	0.26	
	3:20	66,300	1,105	14.81	0.26	
	3:21	66,360	1,106	14.81	0.26	
	3:22	66,420	1,107	14.81	0.26	
	3:23	66,480	1,108	14.81	0.26	
	3:24	66,540	1,109	14.81	0.26	
	3:25	66,600	1,110	14.81	0.26	
	3:26	66,660	1,111	14.81	0.26	
	3:27	66,720	1,112	14.81	0.26	
	3:28	66,780	1,113	14.81	0.26	
	3:29	66,840	1,114	14.81	0.26	
	3:30	66,900	1,115	14.81	0.26	
	3:31	66,960	1,116	14.81	0.26	
	3:32	67,020	1,117	14.81	0.26	
	3:33	67,080	1,118	14.81	0.26	
	3:34	67,140	1,119	14.81	0.26	
	3:35	67,200	1,120	14.81	0.26	
	3:36	67,260	1,121	14.82	0.25	
	3:37	67,320	1,122	14.82	0.25	
	3:38	67,380	1,123	14.81	0.26	
	3:39	67,440	1,124	14.81	0.26	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	3:40	67,500	1,125	14.81	0.26	
	3:41	67,560	1,126	14.81	0.26	
	3:42	67,620	1,127	14.81	0.26	
	3:43	67,680	1,128	14.81	0.26	
	3:44	67,740	1,129	14.81	0.26	
	3:45	67,800	1,130	14.81	0.26	
	3:46	67,860	1,131	14.81	0.26	
	3:47	67,920	1,132	14.81	0.26	
	3:48	67,980	1,133	14.80	0.27	
	3:49	68,040	1,134	14.80	0.27	
	3:50	68,100	1,135	14.81	0.26	
	3:51	68,160	1,136	14.81	0.26	
	3:52	68,220	1,137	14.80	0.27	
	3:53	68,280	1,138	14.81	0.26	
	3:54	68,340	1,139	14.80	0.27	
	3:55	68,400	1,140	14.81	0.26	
	3:56	68,460	1,141	14.80	0.27	
	3:57	68,520	1,142	14.80	0.27	
	3:58	68,580	1,143	14.81	0.26	
	3:59	68,640	1,144	14.80	0.27	
	4:00	68,700	1,145	14.80	0.27	
	4:01	68,760	1,146	14.81	0.26	
	4:02	68,820	1,147	14.80	0.27	
	4:03	68,880	1,148	14.81	0.26	
	4:04	68,940	1,149	14.81	0.26	
	4:05	69,000	1,150	14.81	0.26	
	4:06	69,060	1,151	14.81	0.26	
	4:07	69,120	1,152	14.81	0.26	
	4:08	69,180	1,153	14.81	0.26	
	4:09	69,240	1,154	14.81	0.26	
	4:10	69,300	1,155	14.81	0.26	
	4:11	69,360	1,156	14.81	0.26	
	4:12	69,420	1,157	14.81	0.26	
	4:13	69,480	1,158	14.81	0.26	
	4:14	69,540	1,159	14.81	0.26	
	4:15	69,600	1,160	14.80	0.27	
	4:16	69,660	1,161	14.81	0.26	
	4:17	69,720	1,162	14.81	0.26	
	4:18	69,780	1,163	14.81	0.26	
	4:19	69,840	1,164	14.81	0.26	
	4:20	69,900	1,165	14.81	0.26	
	4:21	69,960	1,166	14.81	0.26	
	4:22	70,020	1,167	14.81	0.26	
	4:23	70,080	1,168	14.81	0.26	
	4:24	70,140	1,169	14.81	0.26	
	4:25	70,200	1,170	14.81	0.26	
	4:26	70,260	1,171	14.81	0.26	
	4:27	70,320	1,172	14.81	0.26	
	4:28	70,380	1,173	14.81	0.26	
	4:29	70,440	1,174	14.81	0.26	
	4:30	70,500	1,175	14.81	0.26	
	4:31	70,560	1,176	14.81	0.26	
	4:32	70,620	1,177	14.81	0.26	
	4:33	70,680	1,178	14.81	0.26	
	4:34	70,740	1,179	14.81	0.26	
	4:35	70,800	1,180	14.81	0.26	
	4:36	70,860	1,181	14.81	0.26	
	4:37	70,920	1,182	14.81	0.26	
	4:38	70,980	1,183	14.81	0.26	
	4:39	71,040	1,184	14.80	0.27	
	4:40	71,100	1,185	14.80	0.27	
	4:41	71,160	1,186	14.81	0.26	
	4:42	71,220	1,187	14.81	0.26	
	4:43	71,280	1,188	14.81	0.26	
	4:44	71,340	1,189	14.80	0.27	
	4:45	71,400	1,190	14.80	0.27	
	4:46	71,460	1,191	14.80	0.27	
	4:47	71,520	1,192	14.81	0.26	
	4:48	71,580	1,193	14.81	0.26	
	4:49	71,640	1,194	14.80	0.27	
	4:50	71,700	1,195	14.81	0.26	
	4:51	71,760	1,196	14.81	0.26	
	4:52	71,820	1,197	14.81	0.26	
	4:53	71,880	1,198	14.81	0.26	
	4:54	71,940	1,199	14.81	0.26	

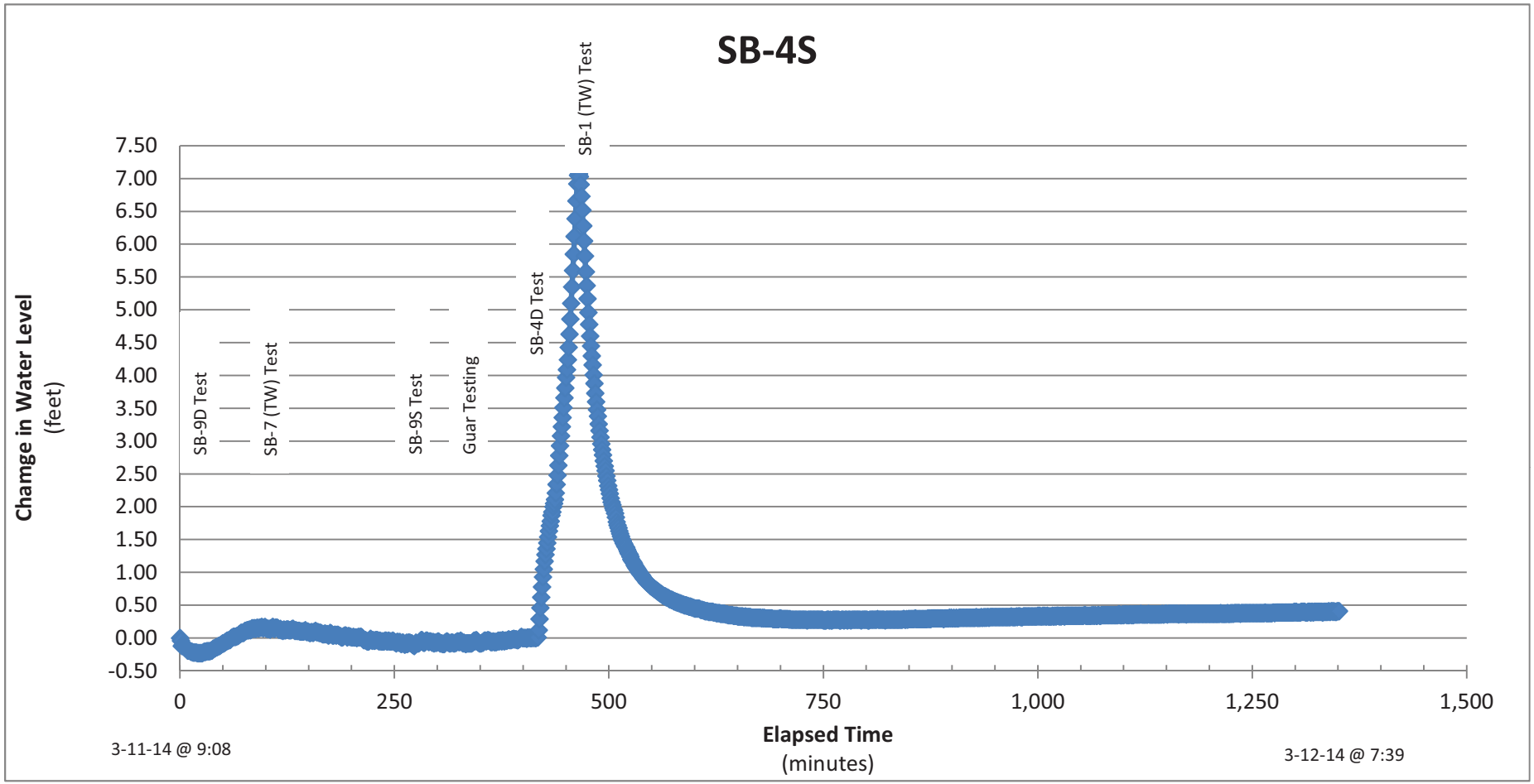
Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	4:55	72,000	1,200	14.81	0.26	
	4:56	72,060	1,201	14.81	0.26	
	4:57	72,120	1,202	14.81	0.26	
	4:58	72,180	1,203	14.82	0.25	
	4:59	72,240	1,204	14.82	0.25	
	5:00	72,300	1,205	14.82	0.25	
	5:01	72,360	1,206	14.81	0.26	
	5:02	72,420	1,207	14.81	0.26	
	5:03	72,480	1,208	14.81	0.26	
	5:04	72,540	1,209	14.81	0.26	
	5:05	72,600	1,210	14.81	0.26	
	5:06	72,660	1,211	14.81	0.26	
	5:07	72,720	1,212	14.81	0.26	
	5:08	72,780	1,213	14.82	0.25	
	5:09	72,840	1,214	14.81	0.26	
	5:10	72,900	1,215	14.81	0.26	
	5:11	72,960	1,216	14.81	0.26	
	5:12	73,020	1,217	14.81	0.26	
	5:13	73,080	1,218	14.81	0.26	
	5:14	73,140	1,219	14.81	0.26	
	5:15	73,200	1,220	14.82	0.25	
	5:16	73,260	1,221	14.81	0.26	
	5:17	73,320	1,222	14.81	0.26	
	5:18	73,380	1,223	14.81	0.26	
	5:19	73,440	1,224	14.81	0.26	
	5:20	73,500	1,225	14.81	0.26	
	5:21	73,560	1,226	14.81	0.26	
	5:22	73,620	1,227	14.81	0.26	
	5:23	73,680	1,228	14.80	0.27	
	5:24	73,740	1,229	14.80	0.27	
	5:25	73,800	1,230	14.80	0.27	
	5:26	73,860	1,231	14.80	0.27	
	5:27	73,920	1,232	14.80	0.27	
	5:28	73,980	1,233	14.80	0.27	
	5:29	74,040	1,234	14.80	0.27	
	5:30	74,100	1,235	14.80	0.27	
	5:31	74,160	1,236	14.79	0.28	
	5:32	74,220	1,237	14.80	0.27	
	5:33	74,280	1,238	14.80	0.27	
	5:34	74,340	1,239	14.81	0.26	
	5:35	74,400	1,240	14.80	0.27	
	5:36	74,460	1,241	14.80	0.27	
	5:37	74,520	1,242	14.80	0.27	
	5:38	74,580	1,243	14.80	0.27	
	5:39	74,640	1,244	14.80	0.27	
	5:40	74,700	1,245	14.80	0.27	
	5:41	74,760	1,246	14.80	0.27	
	5:42	74,820	1,247	14.80	0.27	
	5:43	74,880	1,248	14.80	0.27	
	5:44	74,940	1,249	14.80	0.27	
	5:45	75,000	1,250	14.80	0.27	
	5:46	75,060	1,251	14.80	0.27	
	5:47	75,120	1,252	14.79	0.28	
	5:48	75,180	1,253	14.80	0.27	
	5:49	75,240	1,254	14.79	0.28	
	5:50	75,300	1,255	14.80	0.27	
	5:51	75,360	1,256	14.80	0.27	
	5:52	75,420	1,257	14.80	0.27	
	5:53	75,480	1,258	14.80	0.27	
	5:54	75,540	1,259	14.80	0.27	
	5:55	75,600	1,260	14.79	0.28	
	5:56	75,660	1,261	14.80	0.27	
	5:57	75,720	1,262	14.79	0.28	
	5:58	75,780	1,263	14.80	0.27	
	5:59	75,840	1,264	14.80	0.27	
	6:00	75,900	1,265	14.80	0.27	
	6:01	75,960	1,266	14.80	0.27	
	6:02	76,020	1,267	14.80	0.27	
	6:03	76,080	1,268	14.80	0.27	
	6:04	76,140	1,269	14.80	0.27	
	6:05	76,200	1,270	14.80	0.27	
	6:06	76,260	1,271	14.80	0.27	
	6:07	76,320	1,272	14.80	0.27	
	6:08	76,380	1,273	14.80	0.27	
	6:09	76,440	1,274	14.79	0.28	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	6:10	76,500	1,275	14.80	0.27	
	6:11	76,560	1,276	14.80	0.27	
	6:12	76,620	1,277	14.80	0.27	
	6:13	76,680	1,278	14.80	0.27	
	6:14	76,740	1,279	14.80	0.27	
	6:15	76,800	1,280	14.80	0.27	
	6:16	76,860	1,281	14.80	0.27	
	6:17	76,920	1,282	14.80	0.27	
	6:18	76,980	1,283	14.80	0.27	
	6:19	77,040	1,284	14.80	0.27	
	6:20	77,100	1,285	14.80	0.27	
	6:21	77,160	1,286	14.80	0.27	
	6:22	77,220	1,287	14.80	0.27	
	6:23	77,280	1,288	14.79	0.28	
	6:24	77,340	1,289	14.79	0.28	
	6:25	77,400	1,290	14.79	0.28	
	6:26	77,460	1,291	14.79	0.28	
	6:27	77,520	1,292	14.80	0.27	
	6:28	77,580	1,293	14.79	0.28	
	6:29	77,640	1,294	14.80	0.27	
	6:30	77,700	1,295	14.79	0.28	
	6:31	77,760	1,296	14.80	0.27	
	6:32	77,820	1,297	14.79	0.28	
	6:33	77,880	1,298	14.79	0.28	
	6:34	77,940	1,299	14.79	0.28	
	6:35	78,000	1,300	14.79	0.28	
	6:36	78,060	1,301	14.79	0.28	
	6:37	78,120	1,302	14.79	0.28	
	6:38	78,180	1,303	14.80	0.27	
	6:39	78,240	1,304	14.79	0.28	
	6:40	78,300	1,305	14.80	0.27	
	6:41	78,360	1,306	14.80	0.27	
	6:42	78,420	1,307	14.79	0.28	
	6:43	78,480	1,308	14.79	0.28	
	6:44	78,540	1,309	14.80	0.27	
	6:45	78,600	1,310	14.80	0.27	
	6:46	78,660	1,311	14.80	0.27	
	6:47	78,720	1,312	14.80	0.27	
	6:48	78,780	1,313	14.80	0.27	
	6:49	78,840	1,314	14.80	0.27	
	6:50	78,900	1,315	14.80	0.27	
	6:51	78,960	1,316	14.80	0.27	
	6:52	79,020	1,317	14.80	0.27	
	6:53	79,080	1,318	14.80	0.27	
	6:54	79,140	1,319	14.80	0.27	
	6:55	79,200	1,320	14.79	0.28	
	6:56	79,260	1,321	14.79	0.28	
	6:57	79,320	1,322	14.79	0.28	
	6:58	79,380	1,323	14.79	0.28	
	6:59	79,440	1,324	14.79	0.28	
	7:00	79,500	1,325	14.79	0.28	
	7:01	79,560	1,326	14.80	0.27	
	7:02	79,620	1,327	14.80	0.27	
	7:03	79,680	1,328	14.80	0.27	
	7:04	79,740	1,329	14.80	0.27	
	7:05	79,800	1,330	14.80	0.27	
	7:06	79,860	1,331	14.80	0.27	
	7:07	79,920	1,332	14.80	0.27	
	7:08	79,980	1,333	14.79	0.28	
	7:09	80,040	1,334	14.80	0.27	
	7:10	80,100	1,335	14.80	0.27	
	7:11	80,160	1,336	14.79	0.28	
	7:12	80,220	1,337	14.79	0.28	
	7:13	80,280	1,338	14.80	0.27	
	7:14	80,340	1,339	14.79	0.28	
	7:15	80,400	1,340	14.79	0.28	
	7:16	80,460	1,341	14.80	0.27	
	7:17	80,520	1,342	14.79	0.28	
	7:18	80,580	1,343	14.80	0.27	
	7:19	80,640	1,344	14.79	0.28	
	7:20	80,700	1,345	14.79	0.28	
	7:21	80,760	1,346	14.79	0.28	
	7:22	80,820	1,347	14.79	0.28	
	7:23	80,880	1,348	14.79	0.28	
	7:24	80,940	1,349	14.79	0.28	

Depth to Water Measurements During Injection Testing
Well MW-2
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	7:25	81,000	1,350	14.79	0.28	
	7:26	81,060	1,351	14.79	0.28	
	7:27	81,120	1,352	14.79	0.28	
	7:28	81,180	1,353	14.79	0.28	
	7:29	81,240	1,354	14.79	0.28	
	7:30	81,300	1,355	14.79	0.28	
	7:31	81,360	1,356	14.78	0.29	
	7:32	81,420	1,357	14.79	0.28	
	7:33	81,480	1,358	14.79	0.28	
	7:34	81,540	1,359	14.79	0.28	
	7:35	81,600	1,360	14.79	0.28	


SB-4S
Change in Water Level
(feet)
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
-0.50
SB-9D Test
SB-7 (TW) Test
SB-9S Test
Guar Testing
SB-4D Test
SB-1 (TW) Test
0
250
500
750
1,000
1,250
1,500
Elapsed Time
(minutes)
3-11-14 @ 9:08
3-12-14 @ 7:39

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	9:08	0	0	13.04	0.00	
	9:09	60	1	13.08	-0.04	
	9:10	120	2	13.16	-0.12	
	9:11	180	3	13.15	-0.11	
	9:12	240	4	13.16	-0.12	
	9:13	300	5	13.17	-0.13	
	9:14	360	6	13.19	-0.15	
	9:15	420	7	13.20	-0.16	
	9:16	480	8	13.21	-0.17	
	9:17	540	9	13.23	-0.19	
	9:18	600	10	13.23	-0.19	
	9:19	660	11	13.23	-0.19	
	9:20	720	12	13.24	-0.20	
	9:21	780	13	13.25	-0.21	
	9:22	840	14	13.25	-0.21	
	9:23	900	15	13.26	-0.22	
	9:24	960	16	13.26	-0.22	
	9:25	1,020	17	13.26	-0.22	
	9:26	1,080	18	13.26	-0.22	9D Start
	9:27	1,140	19	13.26	-0.22	
	9:28	1,200	20	13.27	-0.23	
	9:29	1,260	21	13.27	-0.23	
	9:30	1,320	22	13.27	-0.23	
	9:31	1,380	23	13.27	-0.23	
	9:32	1,440	24	13.27	-0.23	
	9:33	1,500	25	13.27	-0.23	
	9:34	1,560	26	13.27	-0.23	
	9:35	1,620	27	13.26	-0.22	
	9:36	1,680	28	13.25	-0.21	
	9:37	1,740	29	13.25	-0.21	
	9:38	1,800	30	13.25	-0.21	
	9:39	1,860	31	13.24	-0.20	
	9:40	1,920	32	13.24	-0.20	
	9:41	1,980	33	13.24	-0.20	
	9:42	2,040	34	13.24	-0.20	
	9:43	2,100	35	13.24	-0.20	
	9:44	2,160	36	13.23	-0.19	
	9:45	2,220	37	13.23	-0.19	
	9:46	2,280	38	13.22	-0.18	
	9:47	2,340	39	13.20	-0.16	
	9:48	2,400	40	13.20	-0.16	
	9:49	2,460	41	13.19	-0.15	
	9:50	2,520	42	13.18	-0.14	
	9:51	2,580	43	13.18	-0.14	
	9:52	2,640	44	13.17	-0.13	
	9:53	2,700	45	13.16	-0.12	
	9:54	2,760	46	13.16	-0.12	
	9:55	2,820	47	13.15	-0.11	
	9:56	2,880	48	13.14	-0.10	
	9:57	2,940	49	13.13	-0.09	
	9:58	3,000	50	13.12	-0.08	
	9:59	3,060	51	13.12	-0.08	
	10:00	3,120	52	13.11	-0.07	
	10:01	3,180	53	13.10	-0.06	
	10:02	3,240	54	13.09	-0.05	
	10:03	3,300	55	13.08	-0.04	
	10:04	3,360	56	13.08	-0.04	
	10:05	3,420	57	13.07	-0.03	
	10:06	3,480	58	13.07	-0.03	
	10:07	3,540	59	13.06	-0.02	
	10:08	3,600	60	13.04	0.00	
	10:09	3,660	61	13.03	0.01	
	10:10	3,720	62	13.02	0.02	
	10:11	3,780	63	13.02	0.02	
	10:12	3,840	64	13.02	0.02	
	10:13	3,900	65	13.02	0.02	
	10:14	3,960	66	13.01	0.03	
	10:15	4,020	67	13.01	0.03	
	10:16	4,080	68	13.00	0.04	
	10:17	4,140	69	12.98	0.06	
	10:18	4,200	70	12.98	0.06	
	10:19	4,260	71	12.96	0.08	
	10:20	4,320	72	12.96	0.08	
	10:21	4,380	73	12.96	0.08	
	10:22	4,440	74	12.96	0.08	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	10:23	4,500	75	12.94	0.10	
	10:24	4,560	76	12.93	0.11	
	10:25	4,620	77	12.93	0.11	
	10:26	4,680	78	12.92	0.12	
	10:27	4,740	79	12.92	0.12	
	10:28	4,800	80	12.92	0.12	
	10:29	4,860	81	12.91	0.13	
	10:30	4,920	82	12.92	0.12	9D End
	10:31	4,980	83	12.91	0.13	
	10:32	5,040	84	12.89	0.15	
	10:33	5,100	85	12.90	0.14	
	10:34	5,160	86	12.89	0.15	
	10:35	5,220	87	12.89	0.15	
	10:36	5,280	88	12.90	0.14	
	10:37	5,340	89	12.89	0.15	
	10:38	5,400	90	12.88	0.16	
	10:39	5,460	91	12.89	0.15	
	10:40	5,520	92	12.89	0.15	
	10:41	5,580	93	12.88	0.16	
	10:42	5,640	94	12.88	0.16	
	10:43	5,700	95	12.87	0.17	
	10:44	5,760	96	12.88	0.16	
	10:45	5,820	97	12.89	0.15	
	10:46	5,880	98	12.88	0.16	SB-7 Start
	10:47	5,940	99	12.87	0.17	
	10:48	6,000	100	12.89	0.15	
	10:49	6,060	101	12.89	0.15	
	10:50	6,120	102	12.90	0.14	
	10:51	6,180	103	12.90	0.14	
	10:52	6,240	104	12.90	0.14	
	10:53	6,300	105	12.91	0.13	
	10:54	6,360	106	12.89	0.15	
	10:55	6,420	107	12.89	0.15	
	10:56	6,480	108	12.87	0.17	
	10:57	6,540	109	12.89	0.15	
	10:58	6,600	110	12.90	0.14	
	10:59	6,660	111	12.88	0.16	
	11:00	6,720	112	12.88	0.16	
	11:01	6,780	113	12.88	0.16	
	11:02	6,840	114	12.89	0.15	
	11:03	6,900	115	12.91	0.13	
	11:04	6,960	116	12.91	0.13	
	11:05	7,020	117	12.90	0.14	
	11:06	7,080	118	12.92	0.12	
	11:07	7,140	119	12.92	0.12	
	11:08	7,200	120	12.93	0.11	
	11:09	7,260	121	12.91	0.13	
	11:10	7,320	122	12.92	0.12	
	11:11	7,380	123	12.92	0.12	
	11:12	7,440	124	12.91	0.13	
	11:13	7,500	125	12.91	0.13	
	11:14	7,560	126	12.91	0.13	
	11:15	7,620	127	12.92	0.12	
	11:16	7,680	128	12.92	0.12	
	11:17	7,740	129	12.92	0.12	
	11:18	7,800	130	12.91	0.13	
	11:19	7,860	131	12.90	0.14	
	11:20	7,920	132	12.90	0.14	
	11:21	7,980	133	12.92	0.12	
	11:22	8,040	134	12.93	0.11	
	11:23	8,100	135	12.92	0.12	
	11:24	8,160	136	12.93	0.11	
	11:25	8,220	137	12.93	0.11	
	11:26	8,280	138	12.93	0.11	
	11:27	8,340	139	12.93	0.11	
	11:28	8,400	140	12.94	0.10	
	11:29	8,460	141	12.94	0.10	
	11:30	8,520	142	12.94	0.10	
	11:31	8,580	143	12.94	0.10	
	11:32	8,640	144	12.94	0.10	
	11:33	8,700	145	12.93	0.11	
	11:34	8,760	146	12.92	0.12	
	11:35	8,820	147	12.94	0.10	
	11:36	8,880	148	12.95	0.09	
	11:37	8,940	149	12.94	0.10	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	11:38	9,000	150	12.95	0.09	
	11:39	9,060	151	12.96	0.08	
	11:40	9,120	152	12.96	0.08	
	11:41	9,180	153	12.95	0.09	
	11:42	9,240	154	12.95	0.09	
	11:43	9,300	155	12.96	0.08	
	11:44	9,360	156	12.95	0.09	
	11:45	9,420	157	12.94	0.10	
	11:46	9,480	158	12.93	0.11	
	11:47	9,540	159	12.95	0.09	
	11:48	9,600	160	12.95	0.09	
	11:49	9,660	161	12.95	0.09	
	11:50	9,720	162	12.96	0.08	
	11:51	9,780	163	12.96	0.08	
	11:52	9,840	164	12.96	0.08	
	11:53	9,900	165	12.97	0.07	
	11:54	9,960	166	12.98	0.06	
	11:55	10,020	167	12.98	0.06	
	11:56	10,080	168	12.98	0.06	
	11:57	10,140	169	12.97	0.07	
	11:58	10,200	170	12.98	0.06	
	11:59	10,260	171	12.98	0.06	
	12:00	10,320	172	12.98	0.06	SB-7 End
	12:01	10,380	173	13.00	0.04	
	12:02	10,440	174	12.99	0.05	
	12:03	10,500	175	12.96	0.08	
	12:04	10,560	176	12.97	0.07	
	12:05	10,620	177	12.99	0.05	
	12:06	10,680	178	13.00	0.04	
	12:07	10,740	179	13.00	0.04	
	12:08	10,800	180	12.99	0.05	
	12:09	10,860	181	12.99	0.05	
	12:10	10,920	182	13.00	0.04	
	12:11	10,980	183	12.99	0.05	
	12:12	11,040	184	12.99	0.05	
	12:13	11,100	185	13.00	0.04	
	12:14	11,160	186	13.01	0.03	
	12:15	11,220	187	13.01	0.03	
	12:16	11,280	188	13.03	0.01	
	12:17	11,340	189	13.03	0.01	
	12:18	11,400	190	13.02	0.02	
	12:19	11,460	191	13.01	0.03	
	12:20	11,520	192	13.00	0.04	
	12:21	11,580	193	13.00	0.04	
	12:22	11,640	194	13.01	0.03	
	12:23	11,700	195	13.03	0.01	
	12:24	11,760	196	13.01	0.03	
	12:25	11,820	197	13.01	0.03	
	12:26	11,880	198	13.02	0.02	
	12:27	11,940	199	13.02	0.02	
	12:28	12,000	200	13.03	0.01	
	12:29	12,060	201	13.03	0.01	
	12:30	12,120	202	13.02	0.02	
	12:31	12,180	203	13.03	0.01	
	12:32	12,240	204	13.03	0.01	
	12:33	12,300	205	13.03	0.01	
	12:34	12,360	206	13.04	0.00	
	12:35	12,420	207	13.03	0.01	
	12:36	12,480	208	13.02	0.02	
	12:37	12,540	209	13.03	0.01	
	12:38	12,600	210	13.02	0.02	
	12:39	12,660	211	13.02	0.02	
	12:40	12,720	212	13.03	0.01	
	12:41	12,780	213	13.05	-0.01	
	12:42	12,840	214	13.07	-0.03	
	12:43	12,900	215	13.07	-0.03	
	12:44	12,960	216	13.07	-0.03	
	12:45	13,020	217	13.08	-0.04	
	12:46	13,080	218	13.09	-0.05	
	12:47	13,140	219	13.09	-0.05	
	12:48	13,200	220	13.09	-0.05	
	12:49	13,260	221	13.07	-0.03	
	12:50	13,320	222	13.05	-0.01	
	12:51	13,380	223	13.07	-0.03	
	12:52	13,440	224	13.08	-0.04	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	12:53	13,500	225	13.07	-0.03	
	12:54	13,560	226	13.08	-0.04	
	12:55	13,620	227	13.08	-0.04	
	12:56	13,680	228	13.07	-0.03	
	12:57	13,740	229	13.07	-0.03	
	12:58	13,800	230	13.07	-0.03	
	12:59	13,860	231	13.08	-0.04	
	13:00	13,920	232	13.09	-0.05	
	13:01	13,980	233	13.08	-0.04	
	13:02	14,040	234	13.09	-0.05	
	13:03	14,100	235	13.09	-0.05	
	13:04	14,160	236	13.09	-0.05	
	13:05	14,220	237	13.09	-0.05	
	13:06	14,280	238	13.09	-0.05	
	13:07	14,340	239	13.08	-0.04	
	13:08	14,400	240	13.08	-0.04	
	13:09	14,460	241	13.09	-0.05	
	13:10	14,520	242	13.09	-0.05	
	13:11	14,580	243	13.08	-0.04	
	13:12	14,640	244	13.09	-0.05	
	13:13	14,700	245	13.09	-0.05	
	13:14	14,760	246	13.09	-0.05	
	13:15	14,820	247	13.09	-0.05	
	13:16	14,880	248	13.08	-0.04	
	13:17	14,940	249	13.09	-0.05	
	13:18	15,000	250	13.10	-0.06	
	13:19	15,060	251	13.11	-0.07	
	13:20	15,120	252	13.12	-0.08	
	13:21	15,180	253	13.10	-0.06	
	13:22	15,240	254	13.10	-0.06	
	13:23	15,300	255	13.11	-0.07	
	13:24	15,360	256	13.10	-0.06	
	13:25	15,420	257	13.12	-0.08	
	13:26	15,480	258	13.13	-0.09	
	13:27	15,540	259	13.11	-0.07	
	13:28	15,600	260	13.11	-0.07	
	13:29	15,660	261	13.13	-0.09	
	13:30	15,720	262	13.14	-0.10	
	13:31	15,780	263	13.13	-0.09	
	13:32	15,840	264	13.11	-0.07	
	13:33	15,900	265	13.13	-0.09	
	13:34	15,960	266	13.11	-0.07	
	13:35	16,020	267	13.11	-0.07	
	13:36	16,080	268	13.11	-0.07	
	13:37	16,140	269	13.12	-0.08	
	13:38	16,200	270	13.12	-0.08	
	13:39	16,260	271	13.14	-0.10	
	13:40	16,320	272	13.15	-0.11	
	13:41	16,380	273	13.16	-0.12	
	13:42	16,440	274	13.14	-0.10	9S Start
	13:43	16,500	275	13.11	-0.07	
	13:44	16,560	276	13.12	-0.08	
	13:45	16,620	277	13.12	-0.08	
	13:46	16,680	278	13.12	-0.08	
	13:47	16,740	279	13.11	-0.07	
	13:48	16,800	280	13.09	-0.05	
	13:49	16,860	281	13.07	-0.03	
	13:50	16,920	282	13.07	-0.03	
	13:51	16,980	283	13.10	-0.06	
	13:52	17,040	284	13.11	-0.07	
	13:53	17,100	285	13.11	-0.07	
	13:54	17,160	286	13.09	-0.05	
	13:55	17,220	287	13.08	-0.04	
	13:56	17,280	288	13.08	-0.04	
	13:57	17,340	289	13.09	-0.05	
	13:58	17,400	290	13.10	-0.06	
	13:59	17,460	291	13.09	-0.05	
	14:00	17,520	292	13.09	-0.05	
	14:01	17,580	293	13.10	-0.06	
	14:02	17,640	294	13.11	-0.07	
	14:03	17,700	295	13.10	-0.06	
	14:04	17,760	296	13.12	-0.08	
	14:05	17,820	297	13.11	-0.07	
	14:06	17,880	298	13.11	-0.07	
	14:07	17,940	299	13.11	-0.07	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	14:08	18,000	300	13.10	-0.06	
	14:09	18,060	301	13.09	-0.05	
	14:10	18,120	302	13.10	-0.06	
	14:11	18,180	303	13.12	-0.08	
	14:12	18,240	304	13.12	-0.08	
	14:13	18,300	305	13.12	-0.08	
	14:14	18,360	306	13.13	-0.09	
	14:15	18,420	307	13.13	-0.09	
	14:16	18,480	308	13.13	-0.09	
	14:17	18,540	309	13.11	-0.07	
	14:18	18,600	310	13.10	-0.06	
	14:19	18,660	311	13.09	-0.05	
	14:20	18,720	312	13.10	-0.06	
	14:21	18,780	313	13.11	-0.07	
	14:22	18,840	314	13.12	-0.08	
	14:23	18,900	315	13.12	-0.08	
	14:24	18,960	316	13.11	-0.07	
	14:25	19,020	317	13.11	-0.07	
	14:26	19,080	318	13.11	-0.07	
	14:27	19,140	319	13.12	-0.08	
	14:28	19,200	320	13.12	-0.08	
	14:29	19,260	321	13.11	-0.07	
	14:30	19,320	322	13.11	-0.07	
	14:31	19,380	323	13.09	-0.05	
	14:32	19,440	324	13.09	-0.05	
	14:33	19,500	325	13.10	-0.06	
	14:34	19,560	326	13.10	-0.06	
	14:35	19,620	327	13.08	-0.04	
	14:36	19,680	328	13.09	-0.05	
	14:37	19,740	329	13.11	-0.07	
	14:38	19,800	330	13.12	-0.08	
	14:39	19,860	331	13.11	-0.07	
	14:40	19,920	332	13.12	-0.08	
	14:41	19,980	333	13.13	-0.09	
	14:42	20,040	334	13.12	-0.08	
	14:43	20,100	335	13.12	-0.08	
	14:44	20,160	336	13.12	-0.08	9S End
	14:45	20,220	337	13.12	-0.08	
	14:46	20,280	338	13.12	-0.08	
	14:47	20,340	339	13.12	-0.08	
	14:48	20,400	340	13.12	-0.08	
	14:49	20,460	341	13.11	-0.07	
	14:50	20,520	342	13.09	-0.05	
	14:51	20,580	343	13.08	-0.04	
	14:52	20,640	344	13.09	-0.05	
	14:53	20,700	345	13.07	-0.03	
	14:54	20,760	346	13.08	-0.04	
	14:55	20,820	347	13.10	-0.06	
	14:56	20,880	348	13.11	-0.07	
	14:57	20,940	349	13.12	-0.08	
	14:58	21,000	350	13.12	-0.08	
	14:59	21,060	351	13.12	-0.08	
	15:00	21,120	352	13.11	-0.07	
	15:01	21,180	353	13.11	-0.07	
	15:02	21,240	354	13.09	-0.05	
	15:03	21,300	355	13.08	-0.04	
	15:04	21,360	356	13.08	-0.04	
	15:05	21,420	357	13.09	-0.05	
	15:06	21,480	358	13.08	-0.04	
	15:07	21,540	359	13.07	-0.03	
	15:08	21,600	360	13.08	-0.04	
	15:09	21,660	361	13.08	-0.04	
	15:10	21,720	362	13.10	-0.06	
	15:11	21,780	363	13.10	-0.06	
	15:12	21,840	364	13.10	-0.06	
	15:13	21,900	365	13.09	-0.05	
	15:14	21,960	366	13.10	-0.06	
	15:15	22,020	367	13.10	-0.06	Guar - 9D
	15:16	22,080	368	13.10	-0.06	
	15:17	22,140	369	13.10	-0.06	
	15:18	22,200	370	13.09	-0.05	
	15:19	22,260	371	13.08	-0.04	
	15:20	22,320	372	13.09	-0.05	
	15:21	22,380	373	13.08	-0.04	
	15:22	22,440	374	13.08	-0.04	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	15:23	22,500	375	13.09	-0.05	
	15:24	22,560	376	13.07	-0.03	
	15:25	22,620	377	13.08	-0.04	
	15:26	22,680	378	13.09	-0.05	
	15:27	22,740	379	13.08	-0.04	
	15:28	22,800	380	13.08	-0.04	
	15:29	22,860	381	13.08	-0.04	
	15:30	22,920	382	13.07	-0.03	
	15:31	22,980	383	13.06	-0.02	
	15:32	23,040	384	13.07	-0.03	
	15:33	23,100	385	13.07	-0.03	Stop Guar
	15:34	23,160	386	13.07	-0.03	
	15:35	23,220	387	13.06	-0.02	
	15:36	23,280	388	13.06	-0.02	
	15:37	23,340	389	13.05	-0.01	
	15:38	23,400	390	13.06	-0.02	
	15:39	23,460	391	13.06	-0.02	
	15:40	23,520	392	13.06	-0.02	
	15:41	23,580	393	13.07	-0.03	
	15:42	23,640	394	13.07	-0.03	
	15:43	23,700	395	13.06	-0.02	
	15:44	23,760	396	13.05	-0.01	
	15:45	23,820	397	13.03	0.01	
	15:46	23,880	398	13.02	0.02	
	15:47	23,940	399	13.04	0.00	Guar - 9S
	15:48	24,000	400	13.04	0.00	
	15:49	24,060	401	13.04	0.00	Guar Done
	15:50	24,120	402	13.04	0.00	
	15:51	24,180	403	13.04	0.00	9S Chaser
	15:52	24,240	404	13.05	-0.01	
	15:53	24,300	405	13.03	0.01	
	15:54	24,360	406	13.04	0.00	
	15:55	24,420	407	13.03	0.01	9D Chaser
	15:56	24,480	408	13.04	0.00	
	15:57	24,540	409	13.04	0.00	
	15:58	24,600	410	13.04	0.00	
	15:59	24,660	411	13.03	0.01	
	16:00	24,720	412	13.04	0.00	
	16:01	24,780	413	13.03	0.01	
	16:02	24,840	414	13.04	0.00	
	16:03	24,900	415	13.04	0.00	
	16:04	24,960	416	13.03	0.01	
	16:05	25,020	417	13.03	0.01	4D Start
	16:06	25,080	418	12.92	0.12	
	16:07	25,140	419	12.75	0.29	
	16:08	25,200	420	12.58	0.46	
	16:09	25,260	421	12.42	0.62	
	16:10	25,320	422	12.26	0.78	
	16:11	25,380	423	12.11	0.93	
	16:12	25,440	424	11.99	1.05	
	16:13	25,500	425	11.87	1.17	
	16:14	25,560	426	11.77	1.27	
	16:15	25,620	427	11.68	1.36	
	16:16	25,680	428	11.59	1.45	
	16:17	25,740	429	11.50	1.54	
	16:18	25,800	430	11.41	1.63	
	16:19	25,860	431	11.33	1.71	
	16:20	25,920	432	11.26	1.78	
	16:21	25,980	433	11.17	1.87	
	16:22	26,040	434	11.12	1.92	
	16:23	26,100	435	11.04	2.00	
	16:24	26,160	436	10.99	2.05	
	16:25	26,220	437	10.93	2.11	
	16:26	26,280	438	10.83	2.21	
	16:27	26,340	439	10.70	2.34	
	16:28	26,400	440	10.56	2.48	
	16:29	26,460	441	10.41	2.63	
	16:30	26,520	442	10.26	2.78	
	16:31	26,580	443	10.11	2.93	
	16:32	26,640	444	9.96	3.08	
	16:33	26,700	445	9.82	3.22	
	16:34	26,760	446	9.68	3.36	
	16:35	26,820	447	9.53	3.51	
	16:36	26,880	448	9.38	3.66	
	16:37	26,940	449	9.23	3.81	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/20114	16:38	27,000	450	9.07	3.97	
	16:39	27,060	451	8.95	4.09	
	16:40	27,120	452	8.80	4.24	
	16:41	27,180	453	8.61	4.43	
	16:42	27,240	454	8.41	4.63	
	16:43	27,300	455	8.18	4.86	
	16:44	27,360	456	7.94	5.10	
	16:45	27,420	457	7.69	5.35	
	16:46	27,480	458	7.44	5.60	
	16:47	27,540	459	7.19	5.85	
	16:48	27,600	460	6.92	6.12	
	16:49	27,660	461	6.65	6.39	
	16:50	27,720	462	6.38	6.66	4D End
	16:51	27,780	463	6.12	6.92	1 Start
	16:52	27,840	464	5.99	7.05	
	16:53	27,900	465	5.97	7.07	
	16:54	27,960	466	6.01	7.03	
	16:55	28,020	467	6.13	6.91	
	16:56	28,080	468	6.31	6.73	
	16:57	28,140	469	6.52	6.52	
	16:58	28,200	470	6.76	6.28	
	16:59	28,260	471	6.99	6.05	
	17:00	28,320	472	7.22	5.82	
	17:01	28,380	473	7.46	5.58	
	17:02	28,440	474	7.67	5.37	1 End
	17:03	28,500	475	7.87	5.17	
	17:04	28,560	476	8.08	4.96	
	17:05	28,620	477	8.26	4.78	
	17:06	28,680	478	8.44	4.60	
	17:07	28,740	479	8.59	4.45	
	17:08	28,800	480	8.74	4.30	
	17:09	28,860	481	8.88	4.16	
	17:10	28,920	482	9.03	4.01	
	17:11	28,980	483	9.16	3.88	
	17:12	29,040	484	9.31	3.73	
	17:13	29,100	485	9.44	3.60	
	17:14	29,160	486	9.56	3.48	
	17:15	29,220	487	9.66	3.38	
	17:16	29,280	488	9.78	3.26	
	17:17	29,340	489	9.88	3.16	
	17:18	29,400	490	9.98	3.06	
	17:19	29,460	491	10.08	2.96	
	17:20	29,520	492	10.17	2.87	
	17:21	29,580	493	10.25	2.79	
	17:22	29,640	494	10.34	2.70	
	17:23	29,700	495	10.42	2.62	
	17:24	29,760	496	10.49	2.55	
	17:25	29,820	497	10.57	2.47	
	17:26	29,880	498	10.64	2.40	
	17:27	29,940	499	10.72	2.32	
	17:28	30,000	500	10.78	2.26	
	17:29	30,060	501	10.84	2.20	
	17:30	30,120	502	10.91	2.13	
	17:31	30,180	503	10.97	2.07	
	17:32	30,240	504	11.01	2.03	
	17:33	30,300	505	11.06	1.98	
	17:34	30,360	506	11.09	1.95	
	17:35	30,420	507	11.14	1.90	
	17:36	30,480	508	11.20	1.84	
	17:37	30,540	509	11.27	1.77	
	17:38	30,600	510	11.32	1.72	
	17:39	30,660	511	11.36	1.68	
	17:40	30,720	512	11.41	1.63	
	17:41	30,780	513	11.45	1.59	
	17:42	30,840	514	11.49	1.55	
	17:43	30,900	515	11.53	1.51	
	17:44	30,960	516	11.56	1.48	
	17:45	31,020	517	11.59	1.45	
	17:46	31,080	518	11.61	1.43	
	17:47	31,140	519	11.64	1.40	
	17:48	31,200	520	11.66	1.38	
	17:49	31,260	521	11.69	1.35	
	17:50	31,320	522	11.72	1.32	
	17:51	31,380	523	11.75	1.29	
	17:52	31,440	524	11.77	1.27	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	17:53	31,500	525	11.80	1.24	
	17:54	31,560	526	11.84	1.20	
	17:55	31,620	527	11.86	1.18	
	17:56	31,680	528	11.88	1.16	
	17:57	31,740	529	11.90	1.14	
	17:58	31,800	530	11.93	1.11	
	17:59	31,860	531	11.95	1.09	
	18:00	31,920	532	11.97	1.07	
	18:01	31,980	533	11.99	1.05	
	18:02	32,040	534	12.01	1.03	
	18:03	32,100	535	12.03	1.01	
	18:04	32,160	536	12.05	0.99	
	18:05	32,220	537	12.07	0.97	
	18:06	32,280	538	12.08	0.96	
	18:07	32,340	539	12.10	0.94	
	18:08	32,400	540	12.12	0.92	
	18:09	32,460	541	12.14	0.90	
	18:10	32,520	542	12.15	0.89	
	18:11	32,580	543	12.17	0.87	
	18:12	32,640	544	12.19	0.85	
	18:13	32,700	545	12.20	0.84	
	18:14	32,760	546	12.21	0.83	
	18:15	32,820	547	12.22	0.82	
	18:16	32,880	548	12.24	0.80	
	18:17	32,940	549	12.25	0.79	
	18:18	33,000	550	12.26	0.78	
	18:19	33,060	551	12.27	0.77	
	18:20	33,120	552	12.28	0.76	
	18:21	33,180	553	12.29	0.75	
	18:22	33,240	554	12.30	0.74	
	18:23	33,300	555	12.31	0.73	
	18:24	33,360	556	12.32	0.72	
	18:25	33,420	557	12.33	0.71	
	18:26	33,480	558	12.34	0.70	
	18:27	33,540	559	12.35	0.69	
	18:28	33,600	560	12.36	0.68	
	18:29	33,660	561	12.37	0.67	
	18:30	33,720	562	12.38	0.66	
	18:31	33,780	563	12.39	0.65	
	18:32	33,840	564	12.40	0.64	
	18:33	33,900	565	12.40	0.64	
	18:34	33,960	566	12.41	0.63	
	18:35	34,020	567	12.42	0.62	
	18:36	34,080	568	12.42	0.62	
	18:37	34,140	569	12.43	0.61	
	18:38	34,200	570	12.44	0.60	
	18:39	34,260	571	12.45	0.59	
	18:40	34,320	572	12.45	0.59	
	18:41	34,380	573	12.46	0.58	
	18:42	34,440	574	12.46	0.58	
	18:43	34,500	575	12.47	0.57	
	18:44	34,560	576	12.48	0.56	
	18:45	34,620	577	12.48	0.56	
	18:46	34,680	578	12.49	0.55	
	18:47	34,740	579	12.49	0.55	
	18:48	34,800	580	12.50	0.54	
	18:49	34,860	581	12.50	0.54	
	18:50	34,920	582	12.51	0.53	
	18:51	34,980	583	12.51	0.53	
	18:52	35,040	584	12.52	0.52	
	18:53	35,100	585	12.52	0.52	
	18:54	35,160	586	12.53	0.51	
	18:55	35,220	587	12.53	0.51	
	18:56	35,280	588	12.54	0.50	
	18:57	35,340	589	12.54	0.50	
	18:58	35,400	590	12.54	0.50	
	18:59	35,460	591	12.55	0.49	
	19:00	35,520	592	12.55	0.49	
	19:01	35,580	593	12.56	0.48	
	19:02	35,640	594	12.56	0.48	
	19:03	35,700	595	12.56	0.48	
	19:04	35,760	596	12.57	0.47	
	19:05	35,820	597	12.57	0.47	
	19:06	35,880	598	12.58	0.46	
	19:07	35,940	599	12.58	0.46	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	19:08	36,000	600	12.59	0.45	
	19:09	36,060	601	12.59	0.45	
	19:10	36,120	602	12.59	0.45	
	19:11	36,180	603	12.59	0.45	
	19:12	36,240	604	12.59	0.45	
	19:13	36,300	605	12.59	0.45	
	19:14	36,360	606	12.60	0.44	
	19:15	36,420	607	12.61	0.43	
	19:16	36,480	608	12.61	0.43	
	19:17	36,540	609	12.61	0.43	
	19:18	36,600	610	12.62	0.42	
	19:19	36,660	611	12.62	0.42	
	19:20	36,720	612	12.63	0.41	
	19:21	36,780	613	12.63	0.41	
	19:22	36,840	614	12.63	0.41	
	19:23	36,900	615	12.63	0.41	
	19:24	36,960	616	12.64	0.40	
	19:25	37,020	617	12.64	0.40	
	19:26	37,080	618	12.64	0.40	
	19:27	37,140	619	12.64	0.40	
	19:28	37,200	620	12.64	0.40	
	19:29	37,260	621	12.64	0.40	
	19:30	37,320	622	12.65	0.39	
	19:31	37,380	623	12.65	0.39	
	19:32	37,440	624	12.65	0.39	
	19:33	37,500	625	12.66	0.38	
	19:34	37,560	626	12.66	0.38	
	19:35	37,620	627	12.66	0.38	
	19:36	37,680	628	12.66	0.38	
	19:37	37,740	629	12.66	0.38	
	19:38	37,800	630	12.67	0.37	
	19:39	37,860	631	12.67	0.37	
	19:40	37,920	632	12.67	0.37	
	19:41	37,980	633	12.67	0.37	
	19:42	38,040	634	12.67	0.37	
	19:43	38,100	635	12.67	0.37	
	19:44	38,160	636	12.68	0.36	
	19:45	38,220	637	12.68	0.36	
	19:46	38,280	638	12.68	0.36	
	19:47	38,340	639	12.69	0.35	
	19:48	38,400	640	12.69	0.35	
	19:49	38,460	641	12.69	0.35	
	19:50	38,520	642	12.69	0.35	
	19:51	38,580	643	12.69	0.35	
	19:52	38,640	644	12.69	0.35	
	19:53	38,700	645	12.70	0.34	
	19:54	38,760	646	12.70	0.34	
	19:55	38,820	647	12.70	0.34	
	19:56	38,880	648	12.70	0.34	
	19:57	38,940	649	12.70	0.34	
	19:58	39,000	650	12.71	0.33	
	19:59	39,060	651	12.71	0.33	
	20:00	39,120	652	12.71	0.33	
	20:01	39,180	653	12.71	0.33	
	20:02	39,240	654	12.71	0.33	
	20:03	39,300	655	12.71	0.33	
	20:04	39,360	656	12.71	0.33	
	20:05	39,420	657	12.72	0.32	
	20:06	39,480	658	12.72	0.32	
	20:07	39,540	659	12.71	0.33	
	20:08	39,600	660	12.72	0.32	
	20:09	39,660	661	12.72	0.32	
	20:10	39,720	662	12.72	0.32	
	20:11	39,780	663	12.72	0.32	
	20:12	39,840	664	12.72	0.32	
	20:13	39,900	665	12.72	0.32	
	20:14	39,960	666	12.73	0.31	
	20:15	40,020	667	12.73	0.31	
	20:16	40,080	668	12.73	0.31	
	20:17	40,140	669	12.73	0.31	
	20:18	40,200	670	12.73	0.31	
	20:19	40,260	671	12.73	0.31	
	20:20	40,320	672	12.73	0.31	
	20:21	40,380	673	12.73	0.31	
	20:22	40,440	674	12.73	0.31	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	20:23	40,500	675	12.73	0.31	
	20:24	40,560	676	12.73	0.31	
	20:25	40,620	677	12.73	0.31	
	20:26	40,680	678	12.74	0.30	
	20:27	40,740	679	12.73	0.31	
	20:28	40,800	680	12.74	0.30	
	20:29	40,860	681	12.73	0.31	
	20:30	40,920	682	12.74	0.30	
	20:31	40,980	683	12.74	0.30	
	20:32	41,040	684	12.74	0.30	
	20:33	41,100	685	12.74	0.30	
	20:34	41,160	686	12.74	0.30	
	20:35	41,220	687	12.74	0.30	
	20:36	41,280	688	12.74	0.30	
	20:37	41,340	689	12.74	0.30	
	20:38	41,400	690	12.74	0.30	
	20:39	41,460	691	12.75	0.29	
	20:40	41,520	692	12.75	0.29	
	20:41	41,580	693	12.75	0.29	
	20:42	41,640	694	12.75	0.29	
	20:43	41,700	695	12.75	0.29	
	20:44	41,760	696	12.75	0.29	
	20:45	41,820	697	12.75	0.29	
	20:46	41,880	698	12.75	0.29	
	20:47	41,940	699	12.74	0.30	
	20:48	42,000	700	12.74	0.30	
	20:49	42,060	701	12.75	0.29	
	20:50	42,120	702	12.75	0.29	
	20:51	42,180	703	12.75	0.29	
	20:52	42,240	704	12.75	0.29	
	20:53	42,300	705	12.75	0.29	
	20:54	42,360	706	12.75	0.29	
	20:55	42,420	707	12.75	0.29	
	20:56	42,480	708	12.75	0.29	
	20:57	42,540	709	12.75	0.29	
	20:58	42,600	710	12.76	0.28	
	20:59	42,660	711	12.75	0.29	
	21:00	42,720	712	12.76	0.28	
	21:01	42,780	713	12.76	0.28	
	21:02	42,840	714	12.76	0.28	
	21:03	42,900	715	12.76	0.28	
	21:04	42,960	716	12.76	0.28	
	21:05	43,020	717	12.76	0.28	
	21:06	43,080	718	12.76	0.28	
	21:07	43,140	719	12.76	0.28	
	21:08	43,200	720	12.76	0.28	
	21:09	43,260	721	12.76	0.28	
	21:10	43,320	722	12.76	0.28	
	21:11	43,380	723	12.76	0.28	
	21:12	43,440	724	12.76	0.28	
	21:13	43,500	725	12.76	0.28	
	21:14	43,560	726	12.76	0.28	
	21:15	43,620	727	12.76	0.28	
	21:16	43,680	728	12.76	0.28	
	21:17	43,740	729	12.76	0.28	
	21:18	43,800	730	12.76	0.28	
	21:19	43,860	731	12.77	0.27	
	21:20	43,920	732	12.76	0.28	
	21:21	43,980	733	12.76	0.28	
	21:22	44,040	734	12.76	0.28	
	21:23	44,100	735	12.76	0.28	
	21:24	44,160	736	12.76	0.28	
	21:25	44,220	737	12.76	0.28	
	21:26	44,280	738	12.76	0.28	
	21:27	44,340	739	12.76	0.28	
	21:28	44,400	740	12.76	0.28	
	21:29	44,460	741	12.76	0.28	
	21:30	44,520	742	12.76	0.28	
	21:31	44,580	743	12.76	0.28	
	21:32	44,640	744	12.76	0.28	
	21:33	44,700	745	12.76	0.28	
	21:34	44,760	746	12.76	0.28	
	21:35	44,820	747	12.76	0.28	
	21:36	44,880	748	12.76	0.28	
	21:37	44,940	749	12.76	0.28	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	21:38	45,000	750	12.77	0.27	
	21:39	45,060	751	12.77	0.27	
	21:40	45,120	752	12.77	0.27	
	21:41	45,180	753	12.77	0.27	
	21:42	45,240	754	12.76	0.28	
	21:43	45,300	755	12.76	0.28	
	21:44	45,360	756	12.76	0.28	
	21:45	45,420	757	12.77	0.27	
	21:46	45,480	758	12.76	0.28	
	21:47	45,540	759	12.77	0.27	
	21:48	45,600	760	12.77	0.27	
	21:49	45,660	761	12.76	0.28	
	21:50	45,720	762	12.76	0.28	
	21:51	45,780	763	12.76	0.28	
	21:52	45,840	764	12.76	0.28	
	21:53	45,900	765	12.76	0.28	
	21:54	45,960	766	12.76	0.28	
	21:55	46,020	767	12.76	0.28	
	21:56	46,080	768	12.76	0.28	
	21:57	46,140	769	12.77	0.27	
	21:58	46,200	770	12.77	0.27	
	21:59	46,260	771	12.76	0.28	
	22:00	46,320	772	12.76	0.28	
	22:01	46,380	773	12.76	0.28	
	22:02	46,440	774	12.77	0.27	
	22:03	46,500	775	12.76	0.28	
	22:04	46,560	776	12.76	0.28	
	22:05	46,620	777	12.76	0.28	
	22:06	46,680	778	12.77	0.27	
	22:07	46,740	779	12.76	0.28	
	22:08	46,800	780	12.76	0.28	
	22:09	46,860	781	12.76	0.28	
	22:10	46,920	782	12.77	0.27	
	22:11	46,980	783	12.76	0.28	
	22:12	47,040	784	12.76	0.28	
	22:13	47,100	785	12.76	0.28	
	22:14	47,160	786	12.76	0.28	
	22:15	47,220	787	12.76	0.28	
	22:16	47,280	788	12.76	0.28	
	22:17	47,340	789	12.76	0.28	
	22:18	47,400	790	12.76	0.28	
	22:19	47,460	791	12.76	0.28	
	22:20	47,520	792	12.76	0.28	
	22:21	47,580	793	12.76	0.28	
	22:22	47,640	794	12.77	0.27	
	22:23	47,700	795	12.76	0.28	
	22:24	47,760	796	12.76	0.28	
	22:25	47,820	797	12.76	0.28	
	22:26	47,880	798	12.76	0.28	
	22:27	47,940	799	12.76	0.28	
	22:28	48,000	800	12.76	0.28	
	22:29	48,060	801	12.76	0.28	
	22:30	48,120	802	12.77	0.27	
	22:31	48,180	803	12.77	0.27	
	22:32	48,240	804	12.76	0.28	
	22:33	48,300	805	12.76	0.28	
	22:34	48,360	806	12.76	0.28	
	22:35	48,420	807	12.76	0.28	
	22:36	48,480	808	12.76	0.28	
	22:37	48,540	809	12.76	0.28	
	22:38	48,600	810	12.76	0.28	
	22:39	48,660	811	12.76	0.28	
	22:40	48,720	812	12.76	0.28	
	22:41	48,780	813	12.75	0.29	
	22:42	48,840	814	12.76	0.28	
	22:43	48,900	815	12.76	0.28	
	22:44	48,960	816	12.76	0.28	
	22:45	49,020	817	12.76	0.28	
	22:46	49,080	818	12.76	0.28	
	22:47	49,140	819	12.76	0.28	
	22:48	49,200	820	12.76	0.28	
	22:49	49,260	821	12.76	0.28	
	22:50	49,320	822	12.77	0.27	
	22:51	49,380	823	12.76	0.28	
	22:52	49,440	824	12.76	0.28	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/11/2014	22:53	49,500	825	12.76	0.28	
	22:54	49,560	826	12.76	0.28	
	22:55	49,620	827	12.76	0.28	
	22:56	49,680	828	12.76	0.28	
	22:57	49,740	829	12.76	0.28	
	22:58	49,800	830	12.76	0.28	
	22:59	49,860	831	12.76	0.28	
	23:00	49,920	832	12.76	0.28	
	23:01	49,980	833	12.76	0.28	
	23:02	50,040	834	12.76	0.28	
	23:03	50,100	835	12.76	0.28	
	23:04	50,160	836	12.76	0.28	
	23:05	50,220	837	12.76	0.28	
	23:06	50,280	838	12.76	0.28	
	23:07	50,340	839	12.76	0.28	
	23:08	50,400	840	12.76	0.28	
	23:09	50,460	841	12.76	0.28	
	23:10	50,520	842	12.76	0.28	
	23:11	50,580	843	12.75	0.29	
	23:12	50,640	844	12.75	0.29	
	23:13	50,700	845	12.76	0.28	
	23:14	50,760	846	12.76	0.28	
	23:15	50,820	847	12.75	0.29	
	23:16	50,880	848	12.76	0.28	
	23:17	50,940	849	12.75	0.29	
	23:18	51,000	850	12.75	0.29	
	23:19	51,060	851	12.75	0.29	
	23:20	51,120	852	12.75	0.29	
	23:21	51,180	853	12.75	0.29	
	23:22	51,240	854	12.75	0.29	
	23:23	51,300	855	12.75	0.29	
	23:24	51,360	856	12.75	0.29	
	23:25	51,420	857	12.74	0.30	
	23:26	51,480	858	12.75	0.29	
	23:27	51,540	859	12.75	0.29	
	23:28	51,600	860	12.75	0.29	
	23:29	51,660	861	12.75	0.29	
	23:30	51,720	862	12.75	0.29	
	23:31	51,780	863	12.75	0.29	
	23:32	51,840	864	12.75	0.29	
	23:33	51,900	865	12.75	0.29	
	23:34	51,960	866	12.75	0.29	
	23:35	52,020	867	12.75	0.29	
	23:36	52,080	868	12.75	0.29	
	23:37	52,140	869	12.75	0.29	
	23:38	52,200	870	12.75	0.29	
	23:39	52,260	871	12.75	0.29	
	23:40	52,320	872	12.74	0.30	
	23:41	52,380	873	12.75	0.29	
	23:42	52,440	874	12.74	0.30	
	23:43	52,500	875	12.75	0.29	
	23:44	52,560	876	12.74	0.30	
	23:45	52,620	877	12.74	0.30	
	23:46	52,680	878	12.74	0.30	
	23:47	52,740	879	12.74	0.30	
	23:48	52,800	880	12.74	0.30	
	23:49	52,860	881	12.74	0.30	
	23:50	52,920	882	12.74	0.30	
	23:51	52,980	883	12.74	0.30	
	23:52	53,040	884	12.74	0.30	
	23:53	53,100	885	12.74	0.30	
	23:54	53,160	886	12.74	0.30	
	23:55	53,220	887	12.74	0.30	
	23:56	53,280	888	12.74	0.30	
	23:57	53,340	889	12.74	0.30	
	23:58	53,400	890	12.75	0.29	
	23:59	53,460	891	12.74	0.30	
3/12/2014	0:00	53,520	892	12.74	0.30	
	0:01	53,580	893	12.74	0.30	
	0:02	53,640	894	12.74	0.30	
	0:03	53,700	895	12.74	0.30	
	0:04	53,760	896	12.74	0.30	
	0:05	53,820	897	12.73	0.31	
	0:06	53,880	898	12.74	0.30	
	0:07	53,940	899	12.73	0.31	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	0:08	54,000	900	12.74	0.30	
	0:09	54,060	901	12.74	0.30	
	0:10	54,120	902	12.73	0.31	
	0:11	54,180	903	12.74	0.30	
	0:12	54,240	904	12.74	0.30	
	0:13	54,300	905	12.73	0.31	
	0:14	54,360	906	12.74	0.30	
	0:15	54,420	907	12.74	0.30	
	0:16	54,480	908	12.73	0.31	
	0:17	54,540	909	12.73	0.31	
	0:18	54,600	910	12.73	0.31	
	0:19	54,660	911	12.73	0.31	
	0:20	54,720	912	12.73	0.31	
	0:21	54,780	913	12.73	0.31	
	0:22	54,840	914	12.73	0.31	
	0:23	54,900	915	12.73	0.31	
	0:24	54,960	916	12.73	0.31	
	0:25	55,020	917	12.73	0.31	
	0:26	55,080	918	12.73	0.31	
	0:27	55,140	919	12.73	0.31	
	0:28	55,200	920	12.73	0.31	
	0:29	55,260	921	12.73	0.31	
	0:30	55,320	922	12.73	0.31	
	0:31	55,380	923	12.73	0.31	
	0:32	55,440	924	12.73	0.31	
	0:33	55,500	925	12.73	0.31	
	0:34	55,560	926	12.73	0.31	
	0:35	55,620	927	12.73	0.31	
	0:36	55,680	928	12.72	0.32	
	0:37	55,740	929	12.73	0.31	
	0:38	55,800	930	12.73	0.31	
	0:39	55,860	931	12.73	0.31	
	0:40	55,920	932	12.73	0.31	
	0:41	55,980	933	12.73	0.31	
	0:42	56,040	934	12.72	0.32	
	0:43	56,100	935	12.73	0.31	
	0:44	56,160	936	12.73	0.31	
	0:45	56,220	937	12.72	0.32	
	0:46	56,280	938	12.73	0.31	
	0:47	56,340	939	12.72	0.32	
	0:48	56,400	940	12.73	0.31	
	0:49	56,460	941	12.72	0.32	
	0:50	56,520	942	12.72	0.32	
	0:51	56,580	943	12.73	0.31	
	0:52	56,640	944	12.72	0.32	
	0:53	56,700	945	12.72	0.32	
	0:54	56,760	946	12.72	0.32	
	0:55	56,820	947	12.72	0.32	
	0:56	56,880	948	12.72	0.32	
	0:57	56,940	949	12.72	0.32	
	0:58	57,000	950	12.72	0.32	
	0:59	57,060	951	12.72	0.32	
	1:00	57,120	952	12.72	0.32	
	1:01	57,180	953	12.72	0.32	
	1:02	57,240	954	12.72	0.32	
	1:03	57,300	955	12.72	0.32	
	1:04	57,360	956	12.72	0.32	
	1:05	57,420	957	12.72	0.32	
	1:06	57,480	958	12.72	0.32	
	1:07	57,540	959	12.72	0.32	
	1:08	57,600	960	12.72	0.32	
	1:09	57,660	961	12.72	0.32	
	1:10	57,720	962	12.72	0.32	
	1:11	57,780	963	12.72	0.32	
	1:12	57,840	964	12.72	0.32	
	1:13	57,900	965	12.72	0.32	
	1:14	57,960	966	12.72	0.32	
	1:15	58,020	967	12.72	0.32	
	1:16	58,080	968	12.72	0.32	
	1:17	58,140	969	12.71	0.33	
	1:18	58,200	970	12.72	0.32	
	1:19	58,260	971	12.72	0.32	
	1:20	58,320	972	12.72	0.32	
	1:21	58,380	973	12.72	0.32	
	1:22	58,440	974	12.72	0.32	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	1:23	58,500	975	12.71	0.33	
	1:24	58,560	976	12.72	0.32	
	1:25	58,620	977	12.71	0.33	
	1:26	58,680	978	12.71	0.33	
	1:27	58,740	979	12.71	0.33	
	1:28	58,800	980	12.72	0.32	
	1:29	58,860	981	12.72	0.32	
	1:30	58,920	982	12.72	0.32	
	1:31	58,980	983	12.71	0.33	
	1:32	59,040	984	12.71	0.33	
	1:33	59,100	985	12.71	0.33	
	1:34	59,160	986	12.71	0.33	
	1:35	59,220	987	12.71	0.33	
	1:36	59,280	988	12.71	0.33	
	1:37	59,340	989	12.71	0.33	
	1:38	59,400	990	12.71	0.33	
	1:39	59,460	991	12.71	0.33	
	1:40	59,520	992	12.71	0.33	
	1:41	59,580	993	12.71	0.33	
	1:42	59,640	994	12.71	0.33	
	1:43	59,700	995	12.71	0.33	
	1:44	59,760	996	12.71	0.33	
	1:45	59,820	997	12.71	0.33	
	1:46	59,880	998	12.71	0.33	
	1:47	59,940	999	12.71	0.33	
	1:48	60,000	1,000	12.70	0.34	
	1:49	60,060	1,001	12.71	0.33	
	1:50	60,120	1,002	12.70	0.34	
	1:51	60,180	1,003	12.71	0.33	
	1:52	60,240	1,004	12.71	0.33	
	1:53	60,300	1,005	12.71	0.33	
	1:54	60,360	1,006	12.70	0.34	
	1:55	60,420	1,007	12.71	0.33	
	1:56	60,480	1,008	12.70	0.34	
	1:57	60,540	1,009	12.71	0.33	
	1:58	60,600	1,010	12.71	0.33	
	1:59	60,660	1,011	12.70	0.34	
	2:00	60,720	1,012	12.71	0.33	
	2:01	60,780	1,013	12.71	0.33	
	2:02	60,840	1,014	12.71	0.33	
	2:03	60,900	1,015	12.71	0.33	
	2:04	60,960	1,016	12.71	0.33	
	2:05	61,020	1,017	12.70	0.34	
	2:06	61,080	1,018	12.71	0.33	
	2:07	61,140	1,019	12.71	0.33	
	2:08	61,200	1,020	12.70	0.34	
	2:09	61,260	1,021	12.71	0.33	
	2:10	61,320	1,022	12.70	0.34	
	2:11	61,380	1,023	12.70	0.34	
	2:12	61,440	1,024	12.70	0.34	
	2:13	61,500	1,025	12.71	0.33	
	2:14	61,560	1,026	12.70	0.34	
	2:15	61,620	1,027	12.71	0.33	
	2:16	61,680	1,028	12.70	0.34	
	2:17	61,740	1,029	12.70	0.34	
	2:18	61,800	1,030	12.70	0.34	
	2:19	61,860	1,031	12.71	0.33	
	2:20	61,920	1,032	12.70	0.34	
	2:21	61,980	1,033	12.70	0.34	
	2:22	62,040	1,034	12.70	0.34	
	2:23	62,100	1,035	12.70	0.34	
	2:24	62,160	1,036	12.70	0.34	
	2:25	62,220	1,037	12.70	0.34	
	2:26	62,280	1,038	12.70	0.34	
	2:27	62,340	1,039	12.70	0.34	
	2:28	62,400	1,040	12.70	0.34	
	2:29	62,460	1,041	12.70	0.34	
	2:30	62,520	1,042	12.70	0.34	
	2:31	62,580	1,043	12.70	0.34	
	2:32	62,640	1,044	12.70	0.34	
	2:33	62,700	1,045	12.70	0.34	
	2:34	62,760	1,046	12.70	0.34	
	2:35	62,820	1,047	12.70	0.34	
	2:36	62,880	1,048	12.70	0.34	
	2:37	62,940	1,049	12.70	0.34	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	2:38	63,000	1,050	12.70	0.34	
	2:39	63,060	1,051	12.70	0.34	
	2:40	63,120	1,052	12.70	0.34	
	2:41	63,180	1,053	12.70	0.34	
	2:42	63,240	1,054	12.69	0.35	
	2:43	63,300	1,055	12.69	0.35	
	2:44	63,360	1,056	12.70	0.34	
	2:45	63,420	1,057	12.70	0.34	
	2:46	63,480	1,058	12.70	0.34	
	2:47	63,540	1,059	12.70	0.34	
	2:48	63,600	1,060	12.70	0.34	
	2:49	63,660	1,061	12.70	0.34	
	2:50	63,720	1,062	12.70	0.34	
	2:51	63,780	1,063	12.69	0.35	
	2:52	63,840	1,064	12.70	0.34	
	2:53	63,900	1,065	12.69	0.35	
	2:54	63,960	1,066	12.70	0.34	
	2:55	64,020	1,067	12.69	0.35	
	2:56	64,080	1,068	12.70	0.34	
	2:57	64,140	1,069	12.70	0.34	
	2:58	64,200	1,070	12.69	0.35	
	2:59	64,260	1,071	12.69	0.35	
	3:00	64,320	1,072	12.70	0.34	
	3:01	64,380	1,073	12.70	0.34	
	3:02	64,440	1,074	12.69	0.35	
	3:03	64,500	1,075	12.69	0.35	
	3:04	64,560	1,076	12.69	0.35	
	3:05	64,620	1,077	12.69	0.35	
	3:06	64,680	1,078	12.69	0.35	
	3:07	64,740	1,079	12.69	0.35	
	3:08	64,800	1,080	12.69	0.35	
	3:09	64,860	1,081	12.69	0.35	
	3:10	64,920	1,082	12.69	0.35	
	3:11	64,980	1,083	12.69	0.35	
	3:12	65,040	1,084	12.69	0.35	
	3:13	65,100	1,085	12.69	0.35	
	3:14	65,160	1,086	12.69	0.35	
	3:15	65,220	1,087	12.69	0.35	
	3:16	65,280	1,088	12.69	0.35	
	3:17	65,340	1,089	12.69	0.35	
	3:18	65,400	1,090	12.69	0.35	
	3:19	65,460	1,091	12.69	0.35	
	3:20	65,520	1,092	12.69	0.35	
	3:21	65,580	1,093	12.69	0.35	
	3:22	65,640	1,094	12.68	0.36	
	3:23	65,700	1,095	12.68	0.36	
	3:24	65,760	1,096	12.69	0.35	
	3:25	65,820	1,097	12.69	0.35	
	3:26	65,880	1,098	12.69	0.35	
	3:27	65,940	1,099	12.68	0.36	
	3:28	66,000	1,100	12.69	0.35	
	3:29	66,060	1,101	12.68	0.36	
	3:30	66,120	1,102	12.68	0.36	
	3:31	66,180	1,103	12.68	0.36	
	3:32	66,240	1,104	12.69	0.35	
	3:33	66,300	1,105	12.68	0.36	
	3:34	66,360	1,106	12.69	0.35	
	3:35	66,420	1,107	12.68	0.36	
	3:36	66,480	1,108	12.68	0.36	
	3:37	66,540	1,109	12.69	0.35	
	3:38	66,600	1,110	12.68	0.36	
	3:39	66,660	1,111	12.69	0.35	
	3:40	66,720	1,112	12.68	0.36	
	3:41	66,780	1,113	12.68	0.36	
	3:42	66,840	1,114	12.68	0.36	
	3:43	66,900	1,115	12.68	0.36	
	3:44	66,960	1,116	12.68	0.36	
	3:45	67,020	1,117	12.68	0.36	
	3:46	67,080	1,118	12.68	0.36	
	3:47	67,140	1,119	12.68	0.36	
	3:48	67,200	1,120	12.67	0.37	
	3:49	67,260	1,121	12.68	0.36	
	3:50	67,320	1,122	12.68	0.36	
	3:51	67,380	1,123	12.68	0.36	
	3:52	67,440	1,124	12.68	0.36	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	3:53	67,500	1,125	12.68	0.36	
	3:54	67,560	1,126	12.68	0.36	
	3:55	67,620	1,127	12.68	0.36	
	3:56	67,680	1,128	12.68	0.36	
	3:57	67,740	1,129	12.67	0.37	
	3:58	67,800	1,130	12.68	0.36	
	3:59	67,860	1,131	12.68	0.36	
	4:00	67,920	1,132	12.68	0.36	
	4:01	67,980	1,133	12.68	0.36	
	4:02	68,040	1,134	12.68	0.36	
	4:03	68,100	1,135	12.68	0.36	
	4:04	68,160	1,136	12.68	0.36	
	4:05	68,220	1,137	12.68	0.36	
	4:06	68,280	1,138	12.68	0.36	
	4:07	68,340	1,139	12.68	0.36	
	4:08	68,400	1,140	12.68	0.36	
	4:09	68,460	1,141	12.68	0.36	
	4:10	68,520	1,142	12.68	0.36	
	4:11	68,580	1,143	12.68	0.36	
	4:12	68,640	1,144	12.68	0.36	
	4:13	68,700	1,145	12.67	0.37	
	4:14	68,760	1,146	12.68	0.36	
	4:15	68,820	1,147	12.68	0.36	
	4:16	68,880	1,148	12.67	0.37	
	4:17	68,940	1,149	12.67	0.37	
	4:18	69,000	1,150	12.67	0.37	
	4:19	69,060	1,151	12.68	0.36	
	4:20	69,120	1,152	12.67	0.37	
	4:21	69,180	1,153	12.67	0.37	
	4:22	69,240	1,154	12.67	0.37	
	4:23	69,300	1,155	12.67	0.37	
	4:24	69,360	1,156	12.67	0.37	
	4:25	69,420	1,157	12.67	0.37	
	4:26	69,480	1,158	12.67	0.37	
	4:27	69,540	1,159	12.67	0.37	
	4:28	69,600	1,160	12.67	0.37	
	4:29	69,660	1,161	12.67	0.37	
	4:30	69,720	1,162	12.67	0.37	
	4:31	69,780	1,163	12.67	0.37	
	4:32	69,840	1,164	12.68	0.36	
	4:33	69,900	1,165	12.67	0.37	
	4:34	69,960	1,166	12.67	0.37	
	4:35	70,020	1,167	12.67	0.37	
	4:36	70,080	1,168	12.67	0.37	
	4:37	70,140	1,169	12.67	0.37	
	4:38	70,200	1,170	12.67	0.37	
	4:39	70,260	1,171	12.67	0.37	
	4:40	70,320	1,172	12.67	0.37	
	4:41	70,380	1,173	12.68	0.36	
	4:42	70,440	1,174	12.67	0.37	
	4:43	70,500	1,175	12.67	0.37	
	4:44	70,560	1,176	12.67	0.37	
	4:45	70,620	1,177	12.67	0.37	
	4:46	70,680	1,178	12.67	0.37	
	4:47	70,740	1,179	12.67	0.37	
	4:48	70,800	1,180	12.67	0.37	
	4:49	70,860	1,181	12.67	0.37	
	4:50	70,920	1,182	12.67	0.37	
	4:51	70,980	1,183	12.67	0.37	
	4:52	71,040	1,184	12.67	0.37	
	4:53	71,100	1,185	12.67	0.37	
	4:54	71,160	1,186	12.67	0.37	
	4:55	71,220	1,187	12.67	0.37	
	4:56	71,280	1,188	12.67	0.37	
	4:57	71,340	1,189	12.67	0.37	
	4:58	71,400	1,190	12.67	0.37	
	4:59	71,460	1,191	12.67	0.37	
	5:00	71,520	1,192	12.67	0.37	
	5:01	71,580	1,193	12.67	0.37	
	5:02	71,640	1,194	12.67	0.37	
	5:03	71,700	1,195	12.67	0.37	
	5:04	71,760	1,196	12.67	0.37	
	5:05	71,820	1,197	12.67	0.37	
	5:06	71,880	1,198	12.67	0.37	
	5:07	71,940	1,199	12.67	0.37	

Depth to Water Measurements During Injection Testing
Well SB-4S
Owego Heat Treat
1646 Marshland Road
Appalachin, New York

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	5:08	72,000	1,200	12.67	0.37	
	5:09	72,060	1,201	12.67	0.37	
	5:10	72,120	1,202	12.67	0.37	
	5:11	72,180	1,203	12.67	0.37	
	5:12	72,240	1,204	12.67	0.37	
	5:13	72,300	1,205	12.67	0.37	
	5:14	72,360	1,206	12.67	0.37	
	5:15	72,420	1,207	12.67	0.37	
	5:16	72,480	1,208	12.67	0.37	
	5:17	72,540	1,209	12.67	0.37	
	5:18	72,600	1,210	12.67	0.37	
	5:19	72,660	1,211	12.67	0.37	
	5:20	72,720	1,212	12.67	0.37	
	5:21	72,780	1,213	12.66	0.38	
	5:22	72,840	1,214	12.67	0.37	
	5:23	72,900	1,215	12.67	0.37	
	5:24	72,960	1,216	12.67	0.37	
	5:25	73,020	1,217	12.67	0.37	
	5:26	73,080	1,218	12.67	0.37	
	5:27	73,140	1,219	12.67	0.37	
	5:28	73,200	1,220	12.67	0.37	
	5:29	73,260	1,221	12.66	0.38	
	5:30	73,320	1,222	12.67	0.37	
	5:31	73,380	1,223	12.67	0.37	
	5:32	73,440	1,224	12.67	0.37	
	5:33	73,500	1,225	12.66	0.38	
	5:34	73,560	1,226	12.67	0.37	
	5:35	73,620	1,227	12.66	0.38	
	5:36	73,680	1,228	12.67	0.37	
	5:37	73,740	1,229	12.66	0.38	
	5:38	73,800	1,230	12.66	0.38	
	5:39	73,860	1,231	12.66	0.38	
	5:40	73,920	1,232	12.66	0.38	
	5:41	73,980	1,233	12.66	0.38	
	5:42	74,040	1,234	12.66	0.38	
	5:43	74,100	1,235	12.66	0.38	
	5:44	74,160	1,236	12.67	0.37	
	5:45	74,220	1,237	12.66	0.38	
	5:46	74,280	1,238	12.66	0.38	
	5:47	74,340	1,239	12.66	0.38	
	5:48	74,400	1,240	12.66	0.38	
	5:49	74,460	1,241	12.66	0.38	
	5:50	74,520	1,242	12.66	0.38	
	5:51	74,580	1,243	12.66	0.38	
	5:52	74,640	1,244	12.66	0.38	
	5:53	74,700	1,245	12.66	0.38	
	5:54	74,760	1,246	12.66	0.38	
	5:55	74,820	1,247	12.66	0.38	
	5:56	74,880	1,248	12.66	0.38	
	5:57	74,940	1,249	12.66	0.38	
	5:58	75,000	1,250	12.66	0.38	
	5:59	75,060	1,251	12.66	0.38	
	6:00	75,120	1,252	12.66	0.38	
	6:01	75,180	1,253	12.66	0.38	
	6:02	75,240	1,254	12.66	0.38	
	6:03	75,300	1,255	12.66	0.38	
	6:04	75,360	1,256	12.66	0.38	
	6:05	75,420	1,257	12.66	0.38	
	6:06	75,480	1,258	12.66	0.38	
	6:07	75,540	1,259	12.66	0.38	
	6:08	75,600	1,260	12.66	0.38	
	6:09	75,660	1,261	12.66	0.38	
	6:10	75,720	1,262	12.66	0.38	
	6:11	75,780	1,263	12.66	0.38	
	6:12	75,840	1,264	12.66	0.38	
	6:13	75,900	1,265	12.65	0.39	
	6:14	75,960	1,266	12.66	0.38	
	6:15	76,020	1,267	12.66	0.38	
	6:16	76,080	1,268	12.66	0.38	
	6:17	76,140	1,269	12.66	0.38	
	6:18	76,200	1,270	12.66	0.38	
	6:19	76,260	1,271	12.66	0.38	
	6:20	76,320	1,272	12.66	0.38	
	6:21	76,380	1,273	12.66	0.38	
	6:22	76,440	1,274	12.65	0.39	

Date	Time	Elapsed Time		DTW	Change	Note
		Seconds	Minutes			
3/12/2014	6:23	76,500	1,275	12.65	0.39	
	6:24	76,560	1,276	12.66	0.38	
	6:25	76,620	1,277	12.65	0.39	
	6:26	76,680	1,278	12.65	0.39	
	6:27	76,740	1,279	12.65	0.39	
	6:28	76,800	1,280	12.65	0.39	
	6:29	76,860	1,281	12.65	0.39	
	6:30	76,920	1,282	12.65	0.39	
	6:31	76,980	1,283	12.65	0.39	
	6:32	77,040	1,284	12.65	0.39	
	6:33	77,100	1,285	12.65	0.39	
	6:34	77,160	1,286	12.65	0.39	
	6:35	77,220	1,287	12.65	0.39	
	6:36	77,280	1,288	12.65	0.39	
	6:37	77,340	1,289	12.65	0.39	
	6:38	77,400	1,290	12.65	0.39	
	6:39	77,460	1,291	12.65	0.39	
	6:40	77,520	1,292	12.65	0.39	
	6:41	77,580	1,293	12.65	0.39	
	6:42	77,640	1,294	12.65	0.39	
	6:43	77,700	1,295	12.65	0.39	
	6:44	77,760	1,296	12.65	0.39	
	6:45	77,820	1,297	12.65	0.39	
	6:46	77,880	1,298	12.65	0.39	
	6:47	77,940	1,299	12.64	0.40	
	6:48	78,000	1,300	12.65	0.39	
	6:49	78,060	1,301	12.64	0.40	
	6:50	78,120	1,302	12.65	0.39	
	6:51	78,180	1,303	12.65	0.39	
	6:52	78,240	1,304	12.65	0.39	
	6:53	78,300	1,305	12.65	0.39	
	6:54	78,360	1,306	12.65	0.39	
	6:55	78,420	1,307	12.64	0.40	
	6:56	78,480	1,308	12.64	0.40	
	6:57	78,540	1,309	12.64	0.40	
	6:58	78,600	1,310	12.64	0.40	
	6:59	78,660	1,311	12.64	0.40	
	7:00	78,720	1,312	12.65	0.39	
	7:01	78,780	1,313	12.65	0.39	
	7:02	78,840	1,314	12.65	0.39	
	7:03	78,900	1,315	12.64	0.40	
	7:04	78,960	1,316	12.64	0.40	
	7:05	79,020	1,317	12.64	0.40	
	7:06	79,080	1,318	12.65	0.39	
	7:07	79,140	1,319	12.64	0.40	
	7:08	79,200	1,320	12.64	0.40	
	7:09	79,260	1,321	12.65	0.39	
	7:10	79,320	1,322	12.64	0.40	
	7:11	79,380	1,323	12.64	0.40	
	7:12	79,440	1,324	12.64	0.40	
	7:13	79,500	1,325	12.64	0.40	
	7:14	79,560	1,326	12.64	0.40	
	7:15	79,620	1,327	12.64	0.40	
	7:16	79,680	1,328	12.64	0.40	
	7:17	79,740	1,329	12.64	0.40	
	7:18	79,800	1,330	12.64	0.40	
	7:19	79,860	1,331	12.64	0.40	
	7:20	79,920	1,332	12.65	0.39	
	7:21	79,980	1,333	12.64	0.40	
	7:22	80,040	1,334	12.64	0.40	
	7:23	80,100	1,335	12.64	0.40	
	7:24	80,160	1,336	12.64	0.40	
	7:25	80,220	1,337	12.64	0.40	
	7:26	80,280	1,338	12.64	0.40	
	7:27	80,340	1,339	12.63	0.41	
	7:28	80,400	1,340	12.64	0.40	
	7:29	80,460	1,341	12.64	0.40	
	7:30	80,520	1,342	12.63	0.41	
	7:31	80,580	1,343	12.63	0.41	
	7:32	80,640	1,344	12.64	0.40	
	7:33	80,700	1,345	12.63	0.41	
	7:34	80,760	1,346	12.64	0.40	
	7:35	80,820	1,347	12.64	0.40	
	7:36	80,880	1,348	12.64	0.40	
	7:37	80,940	1,349	12.63	0.41	