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Annual Periodic Review Report

Baseline Event through Q4

Madison Avenue Former MGP Site
Elmira, New York
NYSDEC Site Number: 808018

September 2014
Revised February 2015

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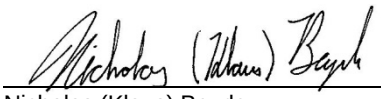

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Annual Periodic Review Report
Baseline Event through Q4

Madison Avenue Former MGP Site

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1. Introduction

This *Annual Periodic Review Report* (report) summarizes monitoring results collected and operation and maintenance (O&M) activities conducted during the first year of operation of the New York State Department of Environmental Conservation-(NYSDEC-) selected remedy for the Madison Avenue former manufactured gas plant (MGP) site. The former MGP site is located in the City of Elmira, Chemung County, New York (**Figure 1**). The site approximately 6 acres in size and occupies most of the city block bounded by East Clinton Street, Madison Avenue and East Fifth Street (**Figure 2**).This report covers the monitoring period from April 2013 (Baseline Sampling Event) through February 2014 (Q4 Annual Visit).

Recommendations based on evaluation of data collected during the reporting period are also included. Verification from NYSEG that site controls were in place and effective, and no changes have occurred at the site that would impair the ability of the controls to protect public health and the environment is included as an appendix.

1.1 Background

The NYSDEC-selected soil and groundwater remedies for the site are presented in the Record of Decision (NYSDEC, 2008) (ROD). The soil remedy for the site was completed in January 2012; remedial components associated with the groundwater treatment and non-aqueous phase liquid (NAPL) recovery systems were subsequently installed in October 2012.

In general, the soil remedy consisted of:

- Excavation of approximately 9,820 tons of soil/fill from three areas of the site at depths up to 15 feet below ground surface (bgs) containing visual evidence of heavy MGP-related impacts.

- In-situ soil stabilization (ISS) of approximately 7,811 cubic yards (cy) of soil in 10 discrete areas of the site exhibiting visual evidence of heavy MGP-related impacts at depths up to 28 feet bgs.

- Excavation and removal of an oil/tar separator.

In addition, a shallow area (approximately 6,250 square feet [sf]) containing purifier waste that was observed on the eastern portion of the site during excavation of a test

pit, an abandoned electrical line encased in concrete, and an abandoned section of railroad that was discovered during implementation of the site remedy were removed for off-site disposal.

The groundwater remedy for the site consists of increasing the oxygen content of groundwater in the southwest corner of the site to enhance natural biodegradation of MGP-related contaminants of concern (COCs). The ROD (Table 1) provides the following COCs for groundwater:

- Four (4) volatile organic compounds (VOCs):

  Benzene
  Toluene
  Ethylbenzene
  Xylene

- Six (6) polycyclic aromatic hydrocarbons (PAHs):

  Benzo(a)anthracene
  Benzo(b)fluoranthene
  Benzo(a)pyrene
  Indeno(1,2,3-cd)pyrene
  Benzo(k)fluoranthene
  Chrysene

The technology of enhancing the population of naturally occurring indigenous bacteria is targeted at the single-ringed, less complex, more mobile benzene, toluene, ethylbenzene, and xylene (BTEX) compounds rather than the multi-ringed, complex PAH compounds. While some reduction in dissolved levels of PAHs associated with source removal/ISS may be anticipated, monitoring concentrations of BTEX compounds is most appropriate for evaluating the effectiveness of the treatment system. However, PAHs will also be considered during the evaluation of the treatment system.

Oxygen-enhancement of groundwater is accomplished through application of oxygen releasing compounds (i.e., Adventus EHC-O oxygen-releasing socks) in site Application Wells (AWs). The objective of the groundwater treatment system is to mitigate BTEX migration beyond the southwest property boundary. The in-situ groundwater remedy consists of:

- Nineteen (19) 4-inch diameter AWs (AW-1 through AW-19); each AW contains a stainless steel canister containing oxygen-releasing material

- Six (6) Performance Monitoring Wells (PMW-1 through PMW-6); three (3) PMWs are located hydraulically upgradient from the AWs, 3 are located hydraulically downgradient

NAPL monitoring and removal is also a component of the site remedy. The NAPL collection network consists of five (5) NAPL collection wells for passive removal of MGP-related NAPL:

- NRW-1 through NRW-4 (installed during site remedial actions in 2012)

- NAPL Monitoring Well NMW-0402S (previously existing site well)

Locations of the groundwater treatment and monitoring wells and NAPL collection wells are shown on **Figure 2**. Soil boring and well construction logs are included in the *Site Management Plan* (ARCADIS, 2014) (SMP). The SMP also includes an *Engineering and Institutional Control Plan*, a *Monitoring Plan*, an *Operation and Maintenance Plan*, and inspection and reporting requirements.

1.2 Objectives

As stated in the SMP, the objectives of this *Annual Report* are to:

- Present the site-wide data collected during the first year of treatment system operation (Baseline Sampling Event and Q1 through Q4 visits)

- Evaluate the site-wide data collected during the monitoring period

- Present conclusions indicating whether the treatment system objectives, as defined in the ROD and SMP and presented herein, are being achieved

- Present recommendations for modifications to the treatment system and/or monitoring requirements based on the evaluation of treatment system data

Prior to startup of the groundwater treatment, a Baseline Sampling Event was conducted from April 1 through 5, 2013 to document pre-treatment conditions. The initiation of oxygen-enhancement of groundwater was conducted during the Baseline

event after Baseline sampling was completed. As required by the SMP, during this reporting period performance monitoring, effectiveness monitoring, and NAPL was gauged on a quarterly basis; O&M activities were conducted semi-annually.

A summary of monitoring and O&M tasks completed, along with associated dates tasks were conducted, is presented in **Table 1**.

2. Performance Monitoring

The *Monitoring Plan* included in the SMP describes performance and effectiveness monitoring requirements for evaluating the remedy effectiveness of reducing migration of dissolved MGP-related COCs from the site. Performance monitoring is the assessment of physical and chemical parameters of the treatment system to determine if the remedy is performing as designed. The performance monitoring program presented in the SMP was developed to document that the groundwater treatment system was delivering oxygen to the groundwater within the AWs (i.e., treatment area). Enhancement of oxygen could stimulate growth of indigenous biological populations and enhance biodegradation of COCs within the treatment area.

As stated above, the technology of enhancing the population of naturally occurring indigenous bacteria is targeted at the single-ringed, less complex, more mobile BTEX compounds rather than the multi-ringed, complex PAH compounds. Therefore, monitoring concentrations of BTEX compounds is most appropriate for evaluating effectiveness of the treatment system. However, some reduction in dissolved levels of PAHs associated with source removal/ISS may be anticipated; therefore, PAHs will also be considered during the evaluation of the remedy.

As required by the SMP, performance monitoring was conducted quarterly during the first year of treatment system operation (May 2013 [Q1], August 2013 [Q2], November 2013 [Q3], and February 2014 [Q4]). In addition, baseline (i.e., pre-treatment) conditions were monitored in April 2013 prior to initiating oxygen-enhancement of groundwater.

Performance monitoring consisted of:

- Measuring and recording DO concentrations from each of the 19 AWs (AW-1 through AW-19) to verify that the Adventus socks are contributing oxygen to groundwater

- Measuring and recording DO concentrations and depth to bottom at each of the 6 PMWs (PMW-1 through PMW-6)

- Collecting field measurements of pH from each of the 6 PMWs and 19 AWs

Measurements of DO concentrations were collected using two field methods:

- Flow-through cell equipped with a DO electrode (YSI, Inc.)
- Colorimetric testing using CHEMet ampoules

Two different CHEMet ampoules were used to measure DO. For concentrations greater than 1 part per million (ppm), CHEMet kit #K-7512 was used; for concentrations less than or equal to 1 ppm, kit #K-7501 was used.

DO and pH measurements were collected from the AWs and PMWs prior to change out of the Adventus oxygen-releasing socks during the Q2 and Q4 visits. Tabulated concentrations of DO and pH collected prior to change out of the socks are presented in **Table 2** and **Table 3**, respectively. While not required as part of the performance monitoring, DO measurements within the AWs were collected on several successive days after change out of the socks during the Baseline Sampling Event and the Q4 (February 2014) sampling event. DO over time data are presented in **Table 4**.

2.1 Comparison of DO Measurement Methods

Comparisons of DO data obtained using the two field methods for each of the 6 PMWs during the Baseline Event and 4 quarterly sampling events (i.e., Q1 through Q4) are presented on Graphs 1 through 3 (**Appendix A**). Including the baseline data, 5 data sets exist for comparing the two field methods. Based on data collected to date the two methods exhibit similar trends and appear to correlate well.

Experience using both measuring devices (i.e., YSI meter and CHEMets) at a similar site has identified benefits and deficiencies of each method. Additionally, studies performed by White, et al. (1990), Walton-Day, et al. (1990) and Wilkin, et al. (2001), indicate that CHEMets colorimetric methods were found to be accurate and reproducible, particularly at low DO concentrations (<1 ppm). DO electrodes (i.e., as used in the YSI meter) were found to be generally less reliable and prone to problems such as membrane fouling that compromise electrode performance (hydrogen sulfide, thio-organic, and other organic compounds were found to be the most problematic compounds responsible for membrane fouling and subsequent inaccurate readings). However, despite being found to be relatively accurate and reproducible, colorimetric methods can also be subject to interferences that may affect the accuracy of readings. Because the colorimetric reagents involve oxidation-reduction reactions to indicate concentration of DO, redox species in groundwater other than DO can influence results (Wilkin et al. 2001).

Regression analysis was used to calculate correlation between YSI readings and CHEMet readings (from the Baseline event through the Q4 sampling event); the analysis indicates a correlation factor (R^2) of 0.93. This correlation factor indicates that the two DO measurement techniques have correlated reasonably well.

2.2 DO Concentration Results

This section summarizes baseline DO data collected prior to installing the oxygen-releasing socks, followed by a discussion of the DO data collected in AWs after the oxygen-releasing socks were installed. Discussions include DO data collected from both the AWs and the PMWs. DO data are presented in **Table 2** and **Table 4**.

During the Baseline Sampling Event (i.e., spring) *prior to deployment of oxygen-releasing socks*, DO data in the treatment area were collected from the 6 PMWs and 19 AWs. The average DO concentrations within the treatment area wells were:

- Upgradient PMWs: 0.93 mg/l / 0.32 mg/l (CHEMets / YSI meter).
- Downgradient PMWs: 1.77 mg/l / 1.39 mg/l (CHEMets / YSI meter).
- AWs: 1.43 mg/l / 0.96 mg/l (CHEMets / YSI meter).

DO data from CHEMet colorimetric kits and YSI meter both indicated that the aquifer was considered to be oxygen limited (i.e., DO less than 1.0 to 2.0 mg/l).

General observations based on data provided in **Table 2** include:

- Average DO concentration in groundwater from upgradient PMWs during the reporting period was 1.52 mg/l / 0.86 mg/l (CHEMets / YSI meter); average DO concentration from downgradient PMWs was 1.65 mg/l / 1.37 mg/l (9% / 59% increase)
- Average DO concentration in groundwater from AWs sampled during the Baseline Sampling Event (1.43 mg/l / 0.96 mg/l [CHEMets / YSI meter]) increase to approximately 5.74 mg/l / 8.78 mg/l (CHEMets / YSI meter) over the Q1 through Q4 events (301% / 815% increase)
- when comparing DO concentrations in groundwater from PMW upgradient/ downgradient “pairs” over the reporting period:

- PMW-1/PMW-2: DO concentrations in groundwater increased in the downgradient well during each for the 4 quarterly visits

- PMW-3/PMW-4: No consistent pattern in DO concentration existed (concentrations increased, stayed the same, or decreased during the reporting period)

- PMW-5/PMW-6: DO concentrations in groundwater generally decreased in the downgradient well

Comparisons of DO data over time (Baseline Sampling through Q4) for each of the upgradient and downgradient PMWs are provided in Graphs 1 through 3 (**Appendix A)**. Key dates, including dates for initial installation and subsequent replacement of oxygen-releasing material, are included on the graphs. While some trends of increasing DO concentrations appear to exist, several variables make the data inconclusive, including:

- Limited DO data available to establish trends

- Variations between the field analytical methods

- The presence of dense nonaqueous phase liquid (DNAPL) in PMW-3, NRW-2 and NMW-0402S (see **Section 4**).

2.3 Dissolved COCs in Performance Monitoring Wells

Groundwater samples were collected from the three hydraulically downgradient PMWs (PMW-2, PMW-4, and PMW-6) during the Baseline, Q2 and Q4 sampling events for laboratory analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8260b. In addition, groundwater collected during the Baseline Sampling Event was also analyzed for PAHs by USEPA Method 8270c. Analysis for dissolved COCs was conducted to:

- determine baseline concentrations of COCs downgradient from the AWs (i.e., prior to leaving the site)

- monitor the concentrations of BTEX downgradient from AWs over time

Results from the laboratory analyses are presented in **Table 5** and presented on **Figure 3.**

Dissolved BTEX in PMWs during the reporting period ranged from BDL at PMW-2 (Baseline and Q2 events) to 429 micrograms per liter (ug/l) at PMW-4 (Baseline event). The lowest concentrations of BTEX were detected at PMW-2, located at the western end of the row of AWs; the highest concentrations of BTEX were detected at PMW-4, which is located approximately midway along the row of AWs. Similarly, dissolved PAHs were not detected in groundwater collected from PMW-2; the highest concentration was detected at PMW-4. The lower concentrations of dissolved BTEX and PAHs detected at PMW-2 appears to be consistent with observations of subsurface soil conditions documented during installation of the AWs and PMWs (visual evidence of staining, blebs, etc. were not detected at AW-1, AW-2, or AW-3 [the western three AWs]). More frequent observations of staining and heavy impacts were documented in AWs located along the central and eastern portions of the treatment zone. This is also consistent with the presence of NAPL within NRW-2 and PMW-3 (Section 4).

2.4 Biological Oxygen Demand

Groundwater samples collected during the Baseline (April 2013) and Q2 events (August 2013) from the three hydraulically upgradient PMWs (PMW-1, PMW-3, and PMW-5) were sent for laboratory analysis of Biochemical Oxygen Demand (BOD) to assess oxygen requirements of groundwater immediately upgradient from the AWs. Groundwater samples collected during the Baseline Event were also analyzed for carbonaceous BOD (cBOD). BOD analysis is used to determine the amount of oxygen demand that exists in groundwater. Initial DO levels in samples are compared to DO levels after 5-days of incubation in the laboratory to determine the biochemical degradation of organic (carbonaceous demand) and the oxygen used to oxidize inorganic materials. Sources of organic material include dissolved MGP impacts (e.g., BTEX and PAHs) as well as other non-regulated organic material originating from the formation; inorganic sources include sulfides and ferrous iron, as well as reduced nitrogen. A high BOD causes excessive oxygen demands on the groundwater.

The sample's cBOD will be less than or equal to the BOD result. The cBOD measurement is therefore generally more useful in assessing the oxygen needed to satisfy the organic demand (i.e., versus the total oxygen demand). Comparing the

BOD with the cBOD is useful when developing trends in dissolved organics with relation to time and seasons.

The results from BOD and cBOD analyses are also presented in **Table 5.**

BOD values ranged from below laboratory detection limits (BDL; < 2.0 mg/l) at PMW-5 (during both sampling events) to 99 mg/l at PMW-3 (PMW-3 is located approximately midway along the row of AWs upgradient from where the highest dissolved BTEX concentrations were detected at downgradient well PMW-4); however, a significant difference in BOD results existed between the two sampling events at PMW-3 (99 mg/l versus 13 mg/l).

Similarly, cBOD values ranged from below laboratory detection limits (< 2.0 mg/l) at PMW-5 to 79.4 mg/l at PMW-3.

2.5 pH

Groundwater samples were collected from the AWs and PMWs during the Baseline and 4 quarterly sampling events during the reporting period and field analyzed for pH. The pH values were measured prior to installation of the Adventus oxygen-releasing socks (Baseline Event) and prior to change out of the socks during the Q2 and Q4 sampling events. Results from the pH analyses are presented in **Table 3**.

The average pH value for the upgradient PMWs during the Baseline Sampling Event (i.e., prior to deployment of the oxygen-releasing socks) was 7.12 Standard Units (SUs); the average pH value for the downgradient PMWs was 7.13 SUs (i.e., the same value given the inherent variability in the field analytical method). The average pH of the 19 AWs was 7.23 SUs.

The pH of groundwater was analyzed during each of the four quarterly site visits prior to change out of the oxygen-releasing socks. The average pH value for upgradient PMWs during this period was 7.06 SUs (i.e., less than 1% decrease), and the average pH for downgradient PMWs was 6.98 SUs (approximately 2% decrease). However, the average pH of groundwater within the AWs prior to change out of the socks was 8.3 SUs (approximately a 15% increase). A potential connection may exist between higher DO concentrations measured in AWs during the quarterly visits and higher pH readings within these AWs. Higher pH values could be an indicator that DO is being released by the Adventus oxygen-releasing socks deployed in the wells because hydroxide in the

form of $Ca(OH)_2$ is a byproduct of the oxygen producing reaction associated with the socks, which can therefore create high pH/alkaline conditions.

When pH values of groundwater are looked at in individual AWs over the reporting period, a significant increase in the pH of groundwater consistently occurs in AW-1 through AW-11 (average increase of greater than 27%); however, a decrease in pH of groundwater generally occurs in AW-12 through AW-19 located on the eastern end of the system (average decrease of 3%).

2.6 DO and pH Values After New Sock Deployment

During Baseline and Q4 site visits, DO and pH parameters were recorded several times subsequent to installation/replacement of oxygen-releasing socks to evaluate variations early in the change-out cycle. For the Baseline event, parameters were recorded before sock replacement and approximately 24-hours after new socks were installed; for the Q4 site visit, parameters were recorded prior to sock change out and approximately 24- and 48-hours after the new socks were installed. Results from DO and pH measurements over time are presented in **Table 4** and **Table 6**, respectively.

2.6.1 pH Values in AWs Over Time

Results of groundwater pH measurements in AWs subsequent to installation/ replacement of the oxygen-releasing socks indicate:

- Baseline Event:
  - Average pH of groundwater across the 19 AWs was approximately 7.2 SUs prior to installation of oxygen-releasing socks. Groundwater pH concentrations in 17 of 19 AWs exhibited a sharp increase within 24-hours after change-out; groundwater from two AWs (AW-18 and AW-19) did not indicate an increase in pH (slight decrease was measured).
  - Average pH of groundwater across the 19 AWs 24-hours after installation of oxygen-releasing material was approximately 10.0 SUs (including the decrease in pH measured in AW-18 and AW-19).
  - Increases in the pH of groundwater 24-hours after installation of the oxygen-releasing socks ranged from 0.84 to 5.3 SUs (not including AW-18 and AW-19)

  - The highest groundwater pH values were measured at AW-1, AW-4, AW-5, AW-6, AW-7, and AW-9, which are located at the western end of the row of AWs (pH values ranged from approximately 11.0 to 12.7 SUs)

- Q4 Sampling Visit:

  - Prior to change out of the oxygen-releasing socks, average pH of groundwater across the 19 AWs was 8.3 SUs; at five locations (AW-1, AW-5, AW-6, AW-7, and AW-9) the pH prior to change out ranged between 11.1 to 12.3 SUs (i.e., significantly higher than values prior to the Baseline event).

  - 24-hours after change out of the socks, average pH across the 19 AWs was 10.2 SUs (similar to the results during the Baseline Sampling Event); seven AWs (AW-1, and AW-4 through AW-9) had groundwater with pH values above 12.0 SUs (again, these wells are located at the western end of the row of AWs).

  - 48-hours after change out of the socks, average groundwater pH across the 19 AWs was 10.1 SUs (i.e., did not significantly change from the 24-hour measurements). The same seven AWs (AW-1, and AW-4 through AW-9) contained groundwater with pH values above 12.0 SUs.

In general, pH results for groundwater within the AWs exhibited a sharp increase within the first 24-48 hours after sock change-out; no significant changes in pH were recorded between the 24- and 48-hour measurements.

2.6.2 DO Concentrations in AWs Over Time

Results of groundwater DO measurements in AWs subsequent to installation/ replacement of the oxygen-releasing socks indicate:

- Baseline Event

  - Average DO of groundwater across 19 AWs was approximately 1.4 mg/l using the CHEMet ampoules and 1.0 mg/l using the YSI meter prior to initial installation of oxygen-releasing socks.

  - Groundwater in all 19 AWs exhibited a sharp increase in DO concentrations within 24-hours after change-out; average DO of groundwater across the

AWs 24-hours after installation of oxygen-releasing material was >10.0 mg/l using the CHEMet ampoules and 11.7 mg/l using the YSI meter (note that CHEMets cannot measure DO greater than 12 mg/l – at eight locations the DO was >12 mg/l; therefore, a value of 12 mg/l was used for calculating averages).

  - The highest groundwater DO values were measured at AWs located at the western end of the row of AWs.

- Q4 Sampling Event

  - Prior to change out of the oxygen-releasing socks, average DO concentration of groundwater across the 19 AWs was 5.0 mg/l as measured with the CHEMet ampoules (note that at eight locations the DO was >12 mg/l; a value of 12 mg/l was used for calculating average) and 8.4 mg/l measured with the YSI meter. These concentrations are significantly higher than recorded during the Baseline Sampling Event prior to installation of the socks.

  - The highest groundwater DO values were recorded at AWs located at the western end of the row of AWs.

  - 24-hours after change out of the socks, DO concentrations were above measurable limits for CHEMet ampoules (12 mg/l) at 17 of 19 locations; average DO in groundwater was 25.8 mg/l as measured with the YSI meter.

  - 48-hours after change out of the socks, DO concentrations were still above measurable limits for CHEMet ampoules at 15 of 19 AW locations; average DO in groundwater was 23.0 mg/l as measured with the YSI meter.

DO results confirm that socks are liberating oxygen and increasing DO in groundwater within the AWs.

3. Effectiveness Monitoring

Effectiveness monitoring is the periodic chemical and physical analysis of a media (e.g., groundwater) to determine if the remedial action objectives are being achieved.

As presented in the SMP, the objectives of effectiveness monitoring are to:

- Assess groundwater movement patterns at the site using water-level data
- Document concentrations of dissolved BTEX downgradient from AWs
- Document dissolved COC (BTEX and six cPAHs) concentration trends across the site

Effectiveness monitoring for the first year of system operation consisted of:

- Baseline Sampling Event:
  - Collection of initial groundwater level measurements from the 6 PMWs (PMW-1 through PMW-6) and 17 site monitoring wells (MW-1S, MW-1D, MW-2S, MW-2D, MW-4S, MW-6S, MW-7, MW-8S, MW-8D, MW-9S, MW-9D, MW-0304D, MW-0402S, MW-0403S, MW-0404S, MW-0404D and MW-0405S)
  - Sampling of three upgradient PMWs (PMW-1, PMW-3, and PMW-5) for BOD and cBOD
  - Sampling of 10 MWs (MW-2S, MW-4S, MW-6S, MW-7, MW-8S, MW-9S, MW-0402S, MW-0403S, MW-0404S, and MW-0405S) and the three downgradient PMWs (PMW-2, PMW-4, and PMW-6) for analysis of BTEX using USEPA SW-846 Method 8260B and PAHs using USEPA SW-846 Method 8270C
- Quarterly (Q1 through Q4) groundwater level measurements from the six PMWs and 17 monitoring wells (same wells as identified above for the Baseline Sampling Event)

- Semi-annual (Q2 and Q4) sampling of groundwater from 10 monitoring wells for laboratory analysis of BTEX and PAHs (same wells as identified above for the Baseline Sampling Event)

- Semi-annual (Q2) sampling of groundwater from the three hydraulically upgradient PMWs (PMW-1, PMW-3, and PMW-5) for analysis of BOD

- Semi-annual (Q2 and Q4) sampling of groundwater from the three hydraulically downgradient PMWs (PMW-2, PMW-4, and PMW-6) for analysis of BTEX

The results from the effectiveness monitoring are presented below.

3.1 Groundwater Movement

Groundwater movement beneath the site was assessed in two ways:

- preparation of site-wide water table maps

- review of groundwater elevation data from PMWs

The water-level data were collected during the Baseline Sampling Event and quarterly from the following locations:

- 6 performance monitoring wells (PMW-1 through PMW-6).

- 19 application wells (AW-01 through AW-19)

- 17 site monitoring wells (MW-1S, MW-1D, MW-2S, MW-2D, MW-4S, MW-6S, MW-7, MW-8S, MW-8D, MW-9S, MW-9D, MW-0304D, MW-0402S, MW-0403S, MW-0404S, MW-0404D, and MW-0405S).

Table 7 presents water elevation data collected from the Baseline through Q4 sampling events.

Figures 5 through **9** present the water table maps developed from the April 2013 (Baseline), May 2013 (Q1), August 2013 (Q2), November 2013 (Q3), and February 2014 (Q4) gauging events, respectively. As shown on the figures, the general groundwater flow direction at the site is to the south during all gauging events. When comparing water table maps among gauging events, no significant differences are

observable, indicating that no significant changes to site-wide groundwater flow directions occurred during the reporting period.

In addition to site-wide evaluation of groundwater movement, water-level data collected from PMWs were also examined. Upgradient/downgradient PMW pairs were gauged with the objective of confirming groundwater elevations in PMWs designated as "upgradient" were higher than their downgradient counterparts.

The results from gauging events indicate that:

- Groundwater elevations in upgradient well PMW-3 were higher than in downgradient PMW-4 during all gauging events.

- Groundwater elevations at upgradient well PMW-5 were higher than downgradient well PMW-6 during the Baseline and Q1 through Q3 gauging events; however, the groundwater elevation was 0.02 ft higher in PMW-6 than groundwater in upgradient PMW-5 during the Q4 gauging event.

- Groundwater elevations at up/downgradient well pair PMW-1 and PMW-2 were consistently higher in downgradient well PMW-2 (ranging from 0.19 to 1.54 ft higher) during all 5 gauging events (Baseline Event through Q4).

The surface completion at PMW-2 was observed to be deteriorated and the surrounding ground surface settled. The higher groundwater elevation at PMW-2 may be the result of surface water infiltration due to a complete failure of its surface completion. The surface completion at PMW-2 is scheduled to be repaired during the August 2014 semi-annual site visit.).

3.2 Groundwater Quality

An ongoing program of groundwater monitoring was in place at the site since 1985. As reported in the *Supplemental Remedial Investigation Report* (ARCADIS, 2007), results from quantitative trend analysis using available data from 1985 to 2004 concluded that constituent plumes appeared to be shrinking over time due to a variety of naturally occurring processes.

Baseline (April 2013), semi-annual (Q2; August 2013), and annual (Q4; February 2014) sampling of groundwater was conducted during this reporting period. During each event, groundwater from 10 monitoring wells identified in the SMP was collected for

laboratory analysis of BTEX by USEPA SW-846 Method 8260 and PAHs by USEPA SW-846 Method 8270. The analytical results are summarized in **Table 5**. For comparison purposes, historical groundwater quality results collected in April 2004 (the most recent historical data) are also included in the table.

Laboratory data packages from each sampling event were reviewed by an individual approved to validate data in New York State, and *Data Usability Summary Reports* (DUSRs) were prepared. Data review indicated that overall laboratory performance was acceptable and that the overall data quality was within the guidelines specified in the respective methods. A compact disc containing copies of the DUSRs is included as **Appendix B**.

Discussions of laboratory results for BTEX and PAHs are presented below.

3.2.1 Dissolved BTEX

Laboratory data for dissolved BTEX are presented in **Table 5**. Dissolved total BTEX data from the Baseline Sampling Event and the first year of treatment system operation (Q2 and Q4) are presented on **Figure 10**. The most recent historical sampling data (2004) is also presented on the figure.

Total BTEX concentrations in groundwater collected from the 10 MWs during the first year after implementation of the site remedy were all BDL with the exception of MW-7 during the Q4 sampling visit (an estimated value of 0.45 ug/l was reported for benzene – below the 1.0 ug/l groundwater standard). Results from the first year of groundwater sampling are similar to data reported from the 2004 sampling event; monitoring wells around the perimeter of the site did not have any BTEX analytes that exceeded their respective groundwater standard and have remained at non-detectable levels.

3.2.2 Dissolved PAHs

Laboratory data for dissolved PAHs are also presented in **Table 5**. Data from the Baseline Sampling Event and the first year of treatment system operation (Q2 and Q4) for the six PAH COCs, along with total PAHs detected, are presented on **Figure 11**. The most recent historical sampling data (2004) is also presented on the figure.

Results from groundwater collected from the 10 MWs during the first year after implementation of the site remedy (i.e., Q2 and Q4) indicate:

- None of the 6 PAH COCs were detected in groundwater from the 8 wells located around the perimeter of the study area.

- Non-COC PAHs were either:

  - Not detected during all 3 sampling events in the 8 wells located around the perimeter of the study area (4 wells: MW-0402S, MW-0403S, MW-2S, and MW-7)

  - Detected during one sampling event in the 8 wells located around the perimeter of the study area at concentrations below groundwater standards (3 wells: MW-0404S, MW-0405S, and MW-6S)

  - Detected during two sampling events in the 8 wells located around the perimeter of the study area at concentrations below groundwater standards (1 well: MW-8S)

- Groundwater from MW-9S located north of the Trayer Products building did not have any detections of COC or non-COC PAHs (this location has not had detectable concentrations of PAHs since 2004).

- Groundwater from monitoring well MW-4S, located in the former MGP area, had 4 PAH COC analytes (benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, and indeno[1,2,3-cd]pyrene) above drinking water standards during the Baseline Sampling Event; no PAHs were detected during the Q2 or Q4 sampling events.

4. NAPL Monitoring Results

As described in the SMP, the NAPL-monitoring network at the site includes five NAPL recovery wells (NRW-1, NRW-2, NRW-3, NRW-4, and NMW-0402S). The objectives of this task were to identify whether NAPL had accumulated within a well, and to remove NAPL if present and recoverable. Locations of the five wells are shown on **Figure 2**. In addition, NAPL was detected in PMW-3 during several gauging events Consistent with the SMP, NAPL gauging was conducted quarterly during the first year of system operation concurrent with the effectiveness and performance monitoring. A summary of the NAPL gauging data is presented in **Table 7.**

NAPL was detected in two of the five NAPL recovery wells (NRW-2 and NMW-0402S) during the reporting period. NAPL was detected in NMW-0402S during the Baseline Event and each of the four quarterly events (Q1 through Q4) ranging from 0.4 to 2.0 feet in apparent thickness within the well. NAPL was detected in NRW-2 during the Baseline Event and during the Q3 and Q4 sampling events ranging from 0.33 to 0.7 feet in apparent thickness within the well.

A total of approximately 1.6 gallons of NAPL has been removed from NRW-2, NMW-0402S, and PMW-3 during the site visits using a bailer. The recovered dense NAPL (DNAPL) was containerized for disposal by NYSEG.

5. Treatment System Operation and Maintenance

NYSEG is responsible for maintaining any aspect of the site that is associated with remediation activities for the former MGP facility.

In addition to routine site maintenance, operation and maintenance activities during the reporting period included the following:

- Treatment system maintenance (e.g., replacing missing or broken locks, repair/ replacement if ground seals, protective casings, and/or locking caps, etc.).
- Replacement of the oxygen-releasing material.
- Annual site inspection.

A summary of these activities is presented below.

5.1 Treatment System Maintenance

The site remedy does not rely on any mechanical systems to protect public health or the environment. However, the SMP describes measures necessary to perform routine maintenance on the soil cover, monitoring and treatment system components (i.e., well network), and replacement of oxygen-releasing material.

Visual inspections of the surface cover and treatment system wells were conducted during Q4 (annual) site visit. PMWs, NRWs, MWs, and AWs associated with the site were gauged and visually inspected during visits. The objective for gauging wells was to determine if siltation had occurred in sufficient quantity to warrant re-development. Inspections were also conducted to identify and conduct maintenance activities.

Depth to bottom measurements and accumulated thickness of sediments (e.g., silts, sands) for each well are presented in **Table 7**. Depth to bottom measurements were compared to the installed depth as reported on each well's construction log to determine if sediment removal is needed. A summary of results is presented below.

5.1.1 Monitoring Wells

Comparison of depth to bottom measurements collected during the reporting period for each MW to their respective well construction log was conducted to determine accumulation of material within each well.

- Based on gauging data from the Q2 (Aug 2013) event compared to well installation information, nine monitoring wells required sediment removal (MW-1D, MW-2S, MW-2D, MW-4S, MW-6S, MW-7, MW-8S, MW-9D and MW-0404S). The percentage of screen occluded by accumulated sediment at these locations ranged from 0.72 to 7.72 feet (7% to 77%).

  - During the Q3 (Nov 2013) event, manually removal (i.e., bailing) of accumulated sediment from each of these locations was conducted.

  - Sediment removal from MW-1D, MW-6S, MW-7 MW-8S and MW-0404S was successful and resulted in percent occlusion of screen ranging from 0.2 to 0.66 feet (0.2% to 6.6%). The calculated accumulated sediment remaining at these locations is believed to be the result of inaccurate installed depth information resulting in an apparent accumulation of sediment (i.e., results from sediment removal and gauging indicate that no sediment remains at well bottom.

  - Gauging data collected during the Q4 (Feb 2014) visit indicated that further sediment removal at MW-2S, MW-2D, MW-4S, and MW-9D should be attempted using non- manual methods (e.g., Waterra pump, air lift pump, whaler pump)

As presented in **Section 5.3**, repairs to several monitoring wells are required.

5.1.2 Application Wells

Comparison of depth to bottom measurements collected during the reporting period for each AW to their respective well construction log was conducted to determine accumulation of material within each well. Each AW was constructed with a 2-foot-long collection sump.

Results from the gauging indicated that none of the AWs contained significant quantities of accumulated material in the sumps (ranged from 0.0 to 1.6 feet). Therefore, sediment removal from AWs is not required at this time.

As presented in **Section 5.3**, repairs to two AWs are recommended

5.1.3 Performance Monitoring Wells

Comparison of depth to bottom measurements collected during the reporting period for each PMW to their respective well construction log was conducted to determine accumulation of material within each well. Each PMW is constructed with a 2-foot-long collection sump.

Results from the gauging indicated that none of the PMWs contained quantities of accumulated sediments in the sumps greater than 2 ft. (accumulated material ranged from 0.0 to 1.5 feet). Therefore, sediment removal from the PMWs is not required at this time.

As presented in **Section 5.3**, repairs to one PMW is recommended.

5.1.4 NAPL Recovery Wells

Comparison of depth to bottom measurements collected during the reporting period for each NRW to their respective well construction log was conducted to determine accumulation of material within each well. Each NRW is constructed with a 5-foot long collection sump.

Results from the gauging indicated that none of the NRWs contained quantities of accumulated material in the sumps greater than 2 ft. (accumulated material ranged from 0.0 to 1.5 feet). Therefore, based on gauging events conducted during the monitoring period, sediment removal from the NRWs is not required at this time.

As presented in **Section 5.3**, repairs to one NRW is recommended.

5.2 Replacement of Oxygen-Releasing Material

Initial deployment and replacement of Adventus EHC-O oxygen-releasing socks was conducted during the following site visits during this reporting period:

- Initial Deployment: April 2013 (Baseline Event)
- Replacement #1: August 2013 (Q2 semi-annual site visit)
- Replacement #2: February 2014 (Q4 annual site visit)

During initial installation of the EHC-O oxygen-releasing material, field measurements were used to determine the middle of the saturated well screen for each AW. This data was used to set the EHC-O oxygen releasing socks in the wells at a depth such that the middle of the stainless steel canister containing the EHC-O sock was in the middle of the saturated well screen.

During the Q2 semi-annual and Q4 annual replacement of the EHC-O oxygen-releasing socks, the stainless steel canisters that contain the socks were removed and brushed/scrubbed to remove accumulated material prior to re-deployment. The canisters were re-deployed at the same depths determined during their initial installation. After each change out, spent socks were containerized for subsequent disposal by NYSEG.

5.3 Annual Site Inspection

As presented in the ROD, one of the remediation goals for the site is to maintain the surface cover materials that provide continued protection against potential human exposure to subsurface soil potentially containing MGP-related impacts. Surface cover of the site is therefore visually evaluated annually and repaired as needed. Because potential MGP impacts can be encountered at depths as shallow as 2 feet bgs, the annual inspections focus on maintaining physical separation between site workers and the remaining MGP impacts. Visual inspection of the stone, gravel, vegetative, and/or asphalt cover over the site was conducted for evidence of recent excavation/subsurface utility work, erosion or removal of cover materials, settlement, or other pathways that could potentially result in exposure of on-site workers to subsurface MGP impacts. A Site Inspection Form is included in **Appendix C**.

The annual site inspection was conducted February 3, 2014. During the annual inspection, the site was inspected for sparse vegetation, erosion, settling, damaged asphalt (including, but not limited to, cracks and depressions) or cover material, and obvious obstructions within drainage features (e.g., catch basins). A photographic log documenting site conditions at the time of the annual inspection is included as **Appendix D**. The location where each photograph was taken, and the direction that

the photographer was facing, is shown on **Figure 12**. The annual site inspection indicated that overall the site cover is in good condition, and:

- Maintenance to the soil cover across the site was not required.
- Maintenance to the gravel/soil cover above the groundwater treatment system is not required.
- Drainage features were clear of obstructions.

In addition, photographic documentation of the condition of each well associated with the site, including protective covers, locking devices, and overall integrity of the wells is also provided as **Appendix D**.

Inspection of site wells was also conducted during the annual site visit. A list of identified deficiencies along with the repairs and maintenance actions completed and/or recommended are presented in the following table.

Table 8
Observed Deficiencies and Maintenance Activities

Location ID	Observed Deficiency	Action(s) Completed/Recommended
MW-4S	Appears road box has settled or was run over by heavy equipment resulting in a crushed riser section (at the very top). Currently no locking well cap can fit under the road box lid.	Requires crushed portion of well riser to be removed (cut), a locking well cap and resurvey.
MW-6S	Missing locking well cap.	Requires new aluminum locking cap.
MW-9S	Locking tabs are broken on road box such that lid cannot be secured.	Requires new road box, surface completion and re-survey.
MW-9D	Appears rod box has settled or has been run over such that the riser is too high for the lid to be secured.	Requires new road box, surface completion and resurvey.
AW-2	The concrete surface completion has deteriorated and crumbled to pieces.	Requires new concrete surface completion.
AW-11	The steel lid of road box is broken and cracked.	Requires new steel lid for road box.
PMW-2	Ground surface around concrete surface completion has settled such that the entire surface completion rocks and does	Requires new concrete surface completion.

	not make a competent seal.	
NRW-1	Well riser is too tall preventing adequate room for locking well cap.	Requires well riser to be cut, a locking well cap and resurvey.
MW-2S, MW-2D, MW-4S, and MW-9D	Significant accumulation of sediment in well.	Requires sediment removal using non manual methods (e.g., pumping).

5.4 Storage Shed

A permanent storage shed was installed at the site on November 20, 2011. The shed was secured to an existing concrete slab from a former garage (the above ground portion of the garage was removed during implementation of the site remedy). The shed serves as general storage for the water treatment system materials and temporary staging for the purge water accumulation tank and NAPL accumulation bucket.

6. Disturbance Activities in Potentially Impacted Areas

NYSEG is not aware of any intrusive activities that were conducted in potentially impacted areas during the reporting period.

7. Conclusions and Recommendations

Conclusions and recommendations based on the first year of treatment system monitoring and operation are presented below.

7.1 Conclusions

A summary of pertinent conclusions based on the first year of treatment system operation are presented below.

7.1.1 Performance Monitoring

- The groundwater treatment system objective as defined in the ROD and SMP is to introduce oxygen into groundwater within the treatment zone to increase DO concentrations. DO data collected within AWs confirmed that the Adventus EHC-O socks were liberating oxygen to groundwater and the objective of the treatment system was being achieved.

- Limited data is available to establish DO trends in upgradient/downgradient PMWs; the presence of DNAPL in PMW-3 affects trend evaluation.

- Groundwater samples were collected from the three hydraulically downgradient PMWs (PMW-2, PMW-4, and PMW-6) during the Baseline, Q2 and Q4 sampling events for laboratory analysis of BTEX; samples were also analyzed for PAHs during the Baseline event:

  - The lowest concentrations of BTEX and PAHs were detected at the western end of the row of AWs (PMW-2)

  - The highest concentrations of BTEX and PAHs were detected at PMW-4, located midway along the row of AWs

  - Relative concentrations of BTEX and PAH COCs are consistent with observations of subsurface soil conditions documented during installation of the AWs and PMWs

- Groundwater samples were collected from the three hydraulically upgradient PMWs (PMW-1, PMW-3, and PMW-5) during the Baseline and Q2 sampling events for laboratory analysis of BOD:

  - BOD values ranged from BDL at PMW-5 to 99 mg/l at PMW-3 (located midway along the row of AWs)

  - Relative concentrations of reported BOD values correlate well with the distribution of dissolved BTEX and PAH results

- Groundwater samples were collected from the 19 AWs during the Baseline and 4 quarterly sampling events during the reporting period and field analyzed for pH:

  - Average pH of groundwater within the 19 AWs prior to initial deployment of the oxygen-releasing socks was 7.23 SUs; the average pH prior to change out of the socks was 8.30 SUs

  - Higher pH values could be a result of the presence of hydroxide (a byproduct of the oxygen-producing reaction associated with the socks); this is consistent with the DO results and supports the conclusion that oxygen is being released to the groundwater

7.1.2 Effectiveness Monitoring

- Groundwater gauging conducted during the Baseline and Q1 through Q4 events indicates the general groundwater flow direction was to the south during all events.

  - No significant differences in groundwater flow direction were observed among gauging events

  - Comparison of the groundwater flow direction to the historical (i.e., pre-site remedy constructions/installation) flow direction indicates the soil remedy did not result in overall changes to groundwater flow direction

- Total BTEX concentrations in groundwater collected from the 10 MWs identified in the SMP located across the site during the first year after implementation of the site remedy were all BDL with the exception of MW-7 during the Q4 sampling visit (an estimated value of 0.45 ug/l was reported for benzene – below the 1.0 ug/l groundwater standard).

  - Results from the first year of groundwater sampling are similar to data reported from the 2004 sampling event

- Total PAH concentrations in groundwater collected from the 10 MWs identified in the SMP located across the site during the first year after implementation indicated:

  - None of the 6 PAH COCs were detected in groundwater from the 8 wells located around the perimeter of the study area.

  - Non-COC PAHs were either not detected during all 3 sampling events in the 8 wells located around the perimeter of the study area, or detected at concentrations below groundwater standards

  - Groundwater from MW-9S located north of the Trayer Products building did not have any detections of COC or non-COC PAHs

- There is insufficient groundwater quality data to evaluate potential seasonal fluctuations in sampling results

7.1.3 NAPL Monitoring

- NAPL was detected in two of the five NAPL recovery wells (NRW-2 and NMW-0402S) and in PMW-3 during the monitoring period

- The total volume of NAPL removed by manual bailing during the baseline and four quarterly site visits was approximately 1.6 gallons.

7.1.4 Treatment System O&M

- Visual inspections and gauging of treatment system wells were routinely conducted during quarterly site visits.

- Gauging data collected during the Q4 (Feb 2014) visit from site-wide monitoring wells indicated that sufficient sediment accumulation had occurred in MW-2S, MW-2D, MW-4S, and MW-9D to require removal using non-manual methods (e.g., Waterra pump, air lift pump, Whaler pump, etc.).

- Depth to bottom measurements collected during the reporting period for each AW indicated that none of the AWs contain sufficient accumulated material to require removal.

- Depth to bottom measurements collected during the reporting period for each PMW indicated that none of the PMWs contained sufficient accumulated material to require removal.

- Depth to bottom measurements collected during the reporting period for each NRW indicated that none of the NRWs contained significant quantities of accumulated material to require removal.

- Adventus EHC-O oxygen-releasing socks were initially deployed in April 2012 (Baseline Event), and replaced in August 2013 (Q2 event) and February 2014 (Q4 event)

- The first annual site inspection completed during the Q4 event (February 2014) indicated that the site was in good condition (i.e., sparse vegetation, erosion, settling, damaged asphalt or cover materials was not observed).

- Inspection of site wells identified physical deficiencies and/or required maintenance activities at eight locations (MW-4S, MW-6S, MW-9S, MW-9D, AW-2, AW-11, PMW-2, and NRW-1); the observed deficiencies and required maintenance activities are provided in **Table 8** (in Section 5).

7.2 Recommendations

Recommendations based on the first year of treatment system operation are presented below.

7.2.1 Performance Monitoring

- Continue with performance monitoring tasks identified in the SMP (Q6 and Q8) to further develop DO concentration and pH data.

- Collect groundwater samples from the three hydraulically upgradient PMWs for laboratory analysis of BOD to obtain a third set of BOD data (if NAPL is present in PMW-3 a sample for BOD analysis will not be collected). Groundwater samples will be collected during the Q6 sampling event.

7.2.2 Effectiveness Monitoring

- Continue with effectiveness monitoring tasks identified in the SMP (Q6 and Q8) to further develop DO concentration and groundwater quality data.

7.2.3 NAPL Monitoring

- Continue quarterly NAPL monitoring, and removal if required, as identified in the SMP.

- Gauge PMW-3 on a quarterly basis for the presence of NAPL; remove if present and recoverable.

7.2.4 Treatment System Operation and Maintenance

- Continue semi-annual (Q6) and annual (Q8) O&M as identified in the SMP.

- Re-develop MW-2S, MW-2D, MW-4S and MW-9D using non manual methods to remove accumulated sediments. Re-development will be conducted during the Q6 site visit.

- Complete repairs to wells and replace missing well caps, locks, road boxes, etc., as described in Section 5.3 (**Table 8**).

8. Certification Statement

A statement from NYSEG confirming that site controls were in place and effective and no changes occurred during the reporting period that would impair the ability of the controls to protect public health and the environment is included as **Appendix F**.

9. References

ARCADIS. 2014. *Site Management Plan.* Prepared for NYSEG, Madison Avenue Former MGP Site, Chemung County, Elmira, New York (March 2014).

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ARCADIS

Tables

Table 1
Monitoring, Operation, and Maintenance Schedule

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Event	Dates	Scheduled Activities					
		Performance Monitoring	Effectiveness Monitoring	NAPL Gauging	O&M		
					Site Inspection	Well Inspections	ECH-O Socks Replacement
Baseline Visit	April 2013	(1)	(1)	X			X
Q1 (Quarterly) Monitoring	May 2013	X	X	X			
Q2 (Semi-annual) Monitoring	August 2013	X	X	X			X
Q3 (Quarterly) Monitoring	November 2013	X	X	X			
Q4 (Annual) Monitoring	February 2014	X	X	X	X	X	X

Notes:

(1) **Baseline Visit** included:
- gauging 19 AWs, 6 PMWs, 5 NRWs, and 17 MWs
- measuring pH and DO in 6 PMWs and 19 AWs
- laboratory analysis for BTEX and PAHs of groundwater from 10 MWs and 3 hydraulically downgradient PMWs
- laboratory analysis for BOD of groundwater from 3 hydraulically upgradient PMWs

- **Performance Monitoring** – included measuring pH and DO concentrations at 6 PMWs and 19 AWs, and depth to bottom in 6 PMWs
- **Effectiveness Monitoring** – included quarterly gauging of 6 PMWs and 17 MWs; sampling 3 PMWs for BOD during the first semi-annual (Q2) site visit and semi-annual sampling of 10 MWs for BTEX and PAHs. Also includes semi-annual change-out of ECH-O socks
- **NAPL Gauging** – included quarterly gauging of depth to water and depth to bottom at 4 NRWs and 1 NMW
- **Site and Well Inspections** – Included visual inspections of MWs, PMWs, NRWs, NMW, and AWs associated with the site and depth to bottom measurements

Table 2
Treatment System Dissolved Oxygen Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Location (Upgradient, Downgradient, Internal)	Baseline Sampling April 1-5, 2013		3-Month Sampling (Q1) May 28-30, 2013		6-Month Sampling (Q2) August 26-30, 2013		9-Month Sampling (Q3) November 19, 2013		12-Month Sampling (Q4) February 6, 2014	
		CHEMet (mg/l)	YSI (mg/l)	CHEMet (mg/l)	YSI (mg/l)	CHEMet (mg/l)	YSI (mg/l)	CHEMet (mg/l)	YSI (mg/l)	CHEMet (mg/l)	YSI (mg/l)
PMW-01	Upgradient	0.35	0.11	0.40	0.29	0.80	0.12	0.60	0.12	1.00	0.79
PMW-02	Downgradient	4.00	3.94	4.50	4.97	1.00	0.70	4.00	3.20	1.50	2.45
PMW-03	Upgradient	NA	0.13	0.80	0.27	NA	0.68	4.00	1.35	0.80	0.76
PMW-04	Downgradient	0.60	0.12	0.70	0.16	1.50	1.15	2.00	2.19	1.50	0.50
PMW-05	Upgradient	1.50	0.73	5.50	5.68	1.00	0.58	1.50	1.35	1.50	0.00
PMW-06	Downgradient	0.70	0.10	0.50	0.11	0.90	0.11	0.80	0.15	0.60	0.62
AW-01	Internal	0.35	0.08	>12*	19.16	8.00	10.26	6.00	8.09	>12*	23.56
AW-02	Internal	0.60	0.07	>12*	19.24	2.00	1.82	2.50	1.54	0.90	0.09
AW-03	Internal	1.00	0.15	5.00	4.49	1.50	1.79	0.95	0.24	1.00	0.84
AW-04	Internal	2.00	2.00	>12*	14.61	3.00	3.52	>12*	22.81	5.50	5.84
AW-05	Internal	0.80	0.10	>12*	21.08	>12*	21.79	>12*	25.19	>12*	24.70
AW-06	Internal	0.40	0.09	>12*	25.08	>12*	23.79	>12*	29.28	>12*	31.04
AW-07	Internal	0.80	0.08	>12*	19.93	>12*	14.68	>12*	20.15	>12*	23.58
AW-08	Internal	0.35	0.07	9.00	8.94	6.00	6.98	>12*	14.34	2.00	1.43
AW-09	Internal	0.70	0.33	>12*	24.32	>12*	22.09	>12*	31.34	>12*	31.59
AW-10	Internal	0.60	0.08	2.50	1.82	1.00	0.98	6.00	6.64	1.50	0.72
AW-11	Internal	0.35	0.08	1.50	1.64	0.40	0.06	2.50	2.56	1.00	0.48
AW-12	Internal	7.00	8.33	10.00	9.67	4.00	3.33	3.00	2.96	3.50	2.68
AW-13	Internal	0.70	0.12	1.50	0.74	0.80	0.34	1.00	1.01	1.50	0.50
AW-14	Internal	5.00	4.93	9.00	9.54	8.00	7.14	12.00	13.11	6.00	5.16
AW-15	Internal	0.70	0.11	4.00	7.27	3.00	2.99	5.00	5.13	4.50	3.84
AW-16	Internal	1.00	0.08	1.00	0.58	0.80	0.2	1.50	1.19	1.50	0.00
AW-17	Internal	0.90	0.06	3.00	2.99	0.80	0.12	0.90	0.39	1.00	0.15
AW-18	Internal	2.50	0.94	1.50	1.3	1.00	0.43	3.00	2.31	2.50	1.43
AW-19	Internal	1.50	0.50	1.50	1.7	1.50	0.87	1.50	2.22	2.50	1.56
Average Conc. (all PMWs)		1.43	0.86	2.07	1.91	1.04	0.56	2.15	1.39	1.15	0.85
Average Conc. (Upgradient PMWs)		0.93	0.32	2.23	2.08	0.90	0.46	2.03	0.94	1.10	0.52
Average Conc. (Downgradient PMWs)		1.77	1.39	1.90	1.75	1.13	0.65	2.27	1.85	1.20	1.19

Notes:

mg/l = milligrams per liter

Upgradient = Indicates well is located hydraulically upgradient from the treatment system

Downgradient = Indicates well is located hydraulically downgradient from the treatment system

Internal = Indicates well is located within the treatment system

DO measurements collected prior to deployment / replacement of oxygen-releasing socks (Baseline, Q2, and Q4 events)

* = DO concentration exceeded operating range of CHEMets

Table 3
Treatment System pH Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Location (Upgradient, Downgradient, Internal)	Baseline Sampling	3-Month Sampling	6-Month Sampling	9-Month Sampling	12-Month Sampling
		April 1-5, 2013	Q1 (May 28-30, 2013)	Q2 August 26-30, 2013	Q3 November 19, 2013	Q4 February 6, 2014
		pH	pH	pH	pH	pH
PMW-01	Upgradient	7.09	7.08	7.00	6.86	7.10
PMW-02	Downgradient	7.06	7.05	6.67	6.59	6.95
PMW-03	Upgradient	7.23	7.10	7.09	7.28	7.39
PMW-04	Downgradient	7.24	7.18	7.04	7.32	7.09
PMW-05	Upgradient	7.05	7.08	6.87	6.98	6.91
PMW-06	Downgradient	7.10	6.95	6.97	6.87	7.06
AW-01	Internal	7.03	10.11	9.52	8.55	11.18
AW-02	Internal	7.21	10.18	7.13	7.33	7.17
AW-03	Internal	7.08	8.5	7.41	6.96	7.07
AW-04	Internal	7.31	7.78	7.05	7.7	7.36
AW-05	Internal	7.25	12.32	9.97	12.04	12.31
AW-06	Internal	7.34	12.17	10.32	11.66	11.21
AW-07	Internal	7.16	11.52	9.38	10.2	11.21
AW-08	Internal	7.39	9.22	8.03	9.12	7.97
AW-09	Internal	7.45	11.91	11.34	12.27	12.25
AW-10	Internal	7.29	7.33	7.28	7.47	7.27
AW-11	Internal	7.17	7.19	7.04	7.78	7.13
AW-12	Internal	7.92	8.57	7.32	7.78	7.33
AW-13	Internal	7.2	7.04	7.02	7.14	7.07
AW-14	Internal	7.21	7.33	7.22	7.67	7.14
AW-15	Internal	7.25	7.09	6.94	6.99	7.03
AW-16	Internal	7.08	6.84	6.73	6.68	6.74
AW-17	Internal	6.86	6.67	6.64	6.77	6.86
AW-18	Internal	7.07	6.83	6.69	6.73	6.93
AW-19	Internal	7.02	6.83	6.64	6.59	6.72
Average Conc. (all AWs)		7.23	8.71	7.88	8.29	8.31
Average Conc. (Upgradient PWMs)		7.12	7.09	6.99	7.04	7.13
Average Conc. (Downgradient PMWs)		7.13	7.06	6.89	6.93	7.03

Notes:
Upgradient = Indicates well is located hydraulically upgradient from the treatment system
Downgradient = Indicates well is located hydraulically downgradient from the treatment system
Internal = Indicates well is located within the line of Application Wells (i.e., treatment system)

Table 4
Dissolved Oxygen in Application Wells Over Time

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Baseline Event				Q4 Sampling					
	April 2-3, 2013		April 5, 2013		February 4-5, 2013		February 6, 2014		February 7, 2014	
	Before Sock Replacement		24 Hours		Before Sock Replacement		24 Hours		48 Hours	
	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI
	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
AW-01	0.35	0.08	>12*	18.44	>12*	23.56	>12*	41.17	>12*	40.31
AW-02	0.60	0.07	>12*	15.15	0.90	0.09	>12*	24.40	>12*	19.24
AW-03	1.00	0.15	9.00	8.69	1.00	0.84	7.00	9.01	5.50	6.50
AW-04	2.00	2.00	>12*	17.33	5.50	5.84	>12*	31.79	>12*	27.79
AW-05	0.80	0.10	>12*	17.30	>12*	24.70	>12*	30.56	>12*	31.00
AW-06	0.40	0.09	>12*	16.79	>12*	31.04	>12*	28.16	>12*	31.40
AW-07	0.80	0.08	>12*	15.63	>12*	23.58	>12*	32.91	>12*	31.70
AW-08	0.35	0.07	>12*	13.40	2.00	1.43	>12*	25.64	>12*	22.38
AW-09	0.70	0.33	>12*	15.54	>12*	31.59	>12*	38.81	>12*	39.25
AW-10	0.60	0.08	11.00	10.42	1.50	0.72	>12*	19.88	>12*	18.79
AW-11	0.35	0.08	8.00	8.32	1.00	0.48	>12*	18.48	>12*	13.40
AW-12	7.00	8.33	11.00	11.02	3.50	2.68	>12*	19.02	>12*	15.00
AW-13	0.70	0.12	11.00	10.00	1.50	0.50	>12*	15.14	8.00	10.00
AW-14	5.00	4.93	11.00	11.96	6.00	5.16	>12*	32.67	>12*	31.40
AW-15	0.70	0.11	9.00	9.35	4.50	3.84	>12*	35.12	>12*	25.30
AW-16	1.00	0.08	9.00	9.15	1.50	0.00	>12*	35.90	>12*	32.52
AW-17	0.90	0.06	8.50	8.15	1.00	0.15	>12*	31.64	>12*	29.40
AW-18	2.50	0.94	4.00	3.47	2.50	1.43	4.50	4.84	3.50	4.00
AW-19	1.50	0.50	2.50	2.56	2.50	1.56	>12*	15.15	5.50	7.80
Average Conc. (all wells)	1.43	0.96	10.00	11.72	4.99	8.38	11.34	25.80	10.66	23.01

Notes:
'Before Sock Replacement' readings collected prior to replacing the Adventus ECH-O socks
mg/l = milligrams per liter
* = DO concentration exceeded operating range of CHEMets

Table 5
Groundwater Analytical Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Location ID:	NYSDEC TOGS 1.1.1 Guidance Values	Units	MW-2S				MW-4S					MW-6S				MW-7				MW-8S			
Date Collected:			04/21/04	04/04/13	08/27/13	02/06/14	04/22/04	08/23/11	04/04/13	08/27/13	02/06/14	04/22/04	04/04/13	08/27/13	02/06/14	04/22/04	04/04/13	08/27/13	02/06/14	04/22/04	04/05/13	08/27/13	02/07/14
BTEX																							
Benzene	1	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.45 J**	**0.5 J**	1 U	1 U	1 U
Ethylbenzene	5	ug/L	4 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	**1.3 J**	1 U	1 U	1 U
Toluene	5	ug/L	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
Xylenes (total)	5	ug/L	5 U	2 U	2 U	2 U	5 U	NA	2 U	2 U	2 U	5 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	**6**	2 U	2 U	2 U
Total BTEX	- -	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.45 J**	**7.8 J**	ND	ND	ND
PAHs																							
Acenaphthene	20	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	**0.07**	4.9 U	4.8 U	4.8 UJ	10 U	4.8 U	4.7 U	4.8 UJ	10 U	4.9 U	4.9 U	4.9 UJ	**2 J**	4.8 U	4.8 U	**6 J**
Acenaphthylene	- -	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	**0.1**	4.9 U	4.8 U	4.8 UJ	10 U	4.8 U	4.7 U	4.8 UJ	**1.1 J**	4.9 U	4.9 U	4.9 UJ	10 U	4.8 U	4.8 U	23 UJ
Anthracene	50	ug/L	10 U	4.8 U	4.8 UB	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 U	10 U	4.8 U	4.7 U	4.8 U	10 U	4.9 U	4.9 U	4.9 U	10 U	4.8 U	4.8 U	23 UJ
Benzo(a)anthracene	0.002	ug/L	1 U	4.8 U	4.8 U	4.8 U	1 U	**0.06**	4.9 U	4.8 U	4.8 U	1 U	4.8 U	4.7 U	4.8 UJ	1 U	4.9 U	4.9 U	4.9 U	1 U	4.8 U	4.8 U	23 UJ
Benzo(a)pyrene	0	ug/L	1 U	4.8 U	4.8 U	4.8 U	1 U	0.05 U	**1.2 J**	4.8 U	4.8 U	1 U	4.8 U	4.7 U	4.8 U	1 U	4.9 U	4.9 U	4.9 U	1 U	4.8 U	4.8 UJ	23 UJ
Benzo(b)fluoranthene	0.002	ug/L	1 U	4.8 U	4.8 U	4.8 U	1 U	**0.07**	**1.2 J**	4.8 U	4.8 U	1 U	4.8 U	4.7 U	4.8 U	1 U	4.9 U	4.9 U	4.9 UJ	1 U	4.8 U	4.8 UJ	23 UJ
Benzo(g,h,i)perylene	- -	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	3 U	4.9 U	4.8 U	4.8 U	10 U	4.8 U	4.7 U	4.8 U	10 U	4.9 U	4.9 U	4.9 UJ	10 U	4.8 U	4.8 UJ	23 UJ
Benzo(k)fluoranthene	0.002	ug/L	1 UJ	4.8 U	4.8 U	4.8 U	1 UJ	0.05 U	**0.75 J**	4.8 U	4.8 U	1 UJ	4.8 U	4.7 U	4.8 U	1 UJ	4.9 U	4.9 U	4.9 U	1 UJ	4.8 U	4.8 UJ	23 UJ
Chrysene	0.002	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	0.05 U	4.9 U	4.8 U	4.8 U	10 U	4.8 U	4.7 U	4.8 UJ	10 U	4.9 U	4.9 U	4.9 UJ	10 U	4.8 U	4.8 UJ	23 UJ
Dibenzo(a,h)anthracene	- -	ug/L	1 U	4.8 U	4.8 U	4.8 U	1 U	**0.03**	4.9 U	4.8 U	4.8 U	1 U	4.8 U	4.7 U	4.8 U	1 U	4.9 U	4.9 U	4.9 UJ	1 U	4.8 U	4.8 UJ	23 UJ
Fluoranthene	50	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 U	10 U	4.8 U	4.7 U	4.8 U	10 U	4.9 U	4.9 U	4.9 U	**0.4 J**	4.8 U	4.8 U	23 UJ
Fluorene	50	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 UJ	10 U	4.8 U	4.7 U	4.8 UJ	10 U	4.9 U	4.9 U	4.9 UJ	**1.7 J**	4.8 U	4.8 U	**3.5 J**
Indeno(1,2,3-cd)pyrene	0.002	ug/L	1 U	4.8 U	4.8 U	4.8 U	1 U	0.05 U	**1.7 J**	4.8 U	4.8 U	1 U	4.8 U	4.7 U	4.8 U	1 U	4.9 U	4.9 U	4.9 UJ	1 U	4.8 U	4.8 UJ	23 UJ
Naphthalene	10	ug/L	10 U	4.8 U	4.8 U	4.8 UJ	10 U	5 U	4.9 U	4.8 U	4.8 UJ	10 U	4.8 U	4.7 U	4.8 UJ	**17**	4.9 U	4.9 U	4.9 UJ	**14**	4.8 U	4.8 U	23 UJ
Phenanthrene	50	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	**0.09**	4.9 U	4.8 U	4.8 U	10 U	4.8 U	**0.45 J**	4.8 U	10 U	4.9 U	4.9 U	4.9 U	**0.2 J**	4.8 U	**0.44 J**	23 UJ
Pyrene	50	ug/L	10 U	4.8 U	4.8 U	4.8 U	10 U	5 U	**0.42 J**	4.8 U	4.8 U	10 U	4.8 U	4.7 U	4.8 UJ	10 U	4.9 U	4.9 U	4.9 U	**0.3 J**	4.8 U	4.8 U	23 UJ
Total PAHs	- -	ug/L	ND	ND	ND	ND	ND	**0.42**	**5.27 J**	ND	ND	ND	ND	**0.45 J**	ND	**18.1 J**	ND	ND	ND	**18.6 J**	ND	**0.44 J**	**9.5 J**
Oxygen Demand																							
Biochemical Oxygen Demand	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1. Samples were submitted to Test America, Amherst, New York for analysis using USEPA SW-846 Methods 8260B (VOCs) and 8270C (SVOCs)
2. Results are presented in units of micrograpms per liter (µg/L).
3. D - Compound quantitated using a secondary dilution.
4. J - Indicates that the analyte was detected at a concentration less than the practical quantitation limit (PQL).
5. U - Indicates the constituent was not detected at the PQL. The value preceding the U indicates the PQL.
6. UB - Indicates the constituent was not detected at a concentration less thatn the PQL due to associated blank contamination.
7. ND - not detected
8. NA - not analyzed
9. Sample results detected above the Method Detection Limit (MDL) are presented in bold font.
10. Shading indicates that the result exceeds the NYSDEC TOGS 1.1.1 Water Quality Standard or Guidance Value.
11. Only Benzene, Ethlybenzene, Toluene, Xylenes [BTEX] and Polycyclic Aromatic Hydrocarbons [PAH] data are presented.

Table 5
Groundwater Analytical Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Location ID:	NYSDEC TOGS 1.1.1 Guidance Values	Units	MW-9S				MW-0402S				MW-0403S				MW-0404S				MW-0405S			
Date Collected:			04/27/04	04/05/13	08/27/13	02/07/14	04/28/04	04/04/13	08/27/13	02/06/14	04/28/04	04/04/13	08/27/13	02/06/14	04/29/04	04/04/13	08/27/13	02/06/14	04/29/04	04/04/13	08/27/13	02/06/14
BTEX																						
Benzene	1	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	ug/L	4 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U
Toluene	5	ug/L	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
Xylenes (total)	5	ug/L	5 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U
Total BTEX	- -	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs																						
Acenaphthene	20	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 U	4.6 U	4.7 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	**1.3 J**	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Acenaphthylene	- -	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 UJ	4.6 U	4.7 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	4.6 U	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Anthracene	50	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 UJ	4.6 U	4.7 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	4.6 U	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Benzo(a)anthracene	0.002	ug/L	1.1 U	5.1 U	4.8 U	4.9 U	1 U	4.8 UJ	4.6 U	4.7 UJ	1 U	4.8 U	4.7 U	4.6 U	1 U	4.7 U	4.6 U	4.7 U	1 U	4.7 U	4.7 U	4.6 U
Benzo(a)pyrene	0	ug/L	1.1 U	5.1 U	4.8 U	4.9 U	1 U	4.8 U	4.6 U	4.7 UJ	1 U	4.8 U	4.7 U	4.6 U	1 U	4.7 U	4.6 U	4.7 U	1 U	4.7 U	4.7 U	4.6 U
Benzo(b)fluoranthene	0.002	ug/L	1.1 U	5.1 U	4.8 U	4.9 U	1 U	4.8 U	4.6 U	4.7 UJ	1 U	4.8 U	4.7 U	4.6 U	1 U	4.7 U	4.6 U	4.7 U	1 U	4.7 U	4.7 U	4.6 U
Benzo(g,h,i)perylene	- -	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 UJ	4.6 U	4.7 UJ	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	4.6 U	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Benzo(k)fluoranthene	0.002	ug/L	1.1 U	5.1 U	4.8 U	4.9 U	1 U	4.8 U	4.6 U	4.7 UJ	1 U	4.8 U	4.7 U	4.6 U	1 U	4.7 U	4.6 U	4.7 U	1 U	4.7 U	4.7 U	4.6 U
Chrysene	0.002	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 UJ	4.6 U	4.7 UJ	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	4.6 U	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Dibenzo(a,h)anthracene	- -	ug/L	1.1 U	5.1 U	4.8 U	4.9 U	1 U	4.8 U	4.6 U	4.7 UJ	1 U	4.8 U	4.7 U	4.6 U	1 U	4.7 U	4.6 U	4.7 U	1 U	4.7 U	4.7 U	4.6 U
Fluoranthene	50	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 U	4.6 U	4.7 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	**0.49 J**	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Fluorene	50	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 UJ	4.6 U	4.7 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	**1.2 J**	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Indeno(1,2,3-cd)pyrene	0.002	ug/L	1.1 U	5.1 U	4.8 U	4.9 U	1 U	4.8 UJ	4.6 U	4.7 UJ	1 U	4.8 U	4.7 U	4.6 U	1 U	4.7 U	4.6 U	4.7 U	1 U	4.7 U	4.7 U	4.6 U
Naphthalene	10	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 U	4.6 U	4.7 UJ	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	4.6 U	4.7 UJ	10 U	4.7 U	4.7 U	4.6 U
Phenanthrene	50	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 U	4.6 U	4.7 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	**0.45 J**	4.7 U	10 U	4.7 U	**0.45 J**	4.6 U
Pyrene	50	ug/L	11 U	5.1 U	4.8 U	4.9 U	10 U	4.8 U	4.6 U	4.7 UJ	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	**0.38 J**	4.7 U	10 U	4.7 U	4.7 U	4.6 U
Total PAHs	- -	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.82 J**	ND	ND	ND	**0.45 J**	ND
Oxygen Demand																						
Biochemical Oxygen Demand	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1. Samples were submitted to Test America, Amherst, New York for analysis using USEPA SW-846 Methods 8260B (VOCs) and 8270C (SVOCs)
2. Results are presented in units of micrograms per liter (µg/L).
3. D - Compound quantitated using a secondary dilution.
4. J - Indicates that the analyte was detected at a concentration less than the practical quantitation limit (PQL).
5. U - Indicates the constituent was not detected at the PQL. The value preceding the U indicates the PQL.
6. UB - Indicates the constituent was not detected at a concentration less thatn the PQL due to associated blank contamination.
7. ND - not detected
8. NA - not analyzed
9. Sample results detected above the Method Detection Limit (MDL) are presented in bold font.
10. Shading indicates that the result exceeds the NYSDEC TOGS 1.1.1 Water Quality Standard or Guidance Value.
11. Only Benzene, Ethlybenzene, Toluene, Xylenes [BTEX] and Polycyclic Aromatic Hydrocarbons [PAH] data are presented.

Table 5
Groundwater Analytical Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Location ID: / Date Collected:	NYSDEC TOGS 1.1.1 Guidance Values	Units	PMW-01		PMW-02			PMW-03		PMW-04			PMW-05		PMW-06		
			04/03/13	08/28/13	04/03/13	08/28/13	02/05/14	04/03/13	08/30/13	04/03/13	08/28/13	02/05/14	04/03/13	08/28/13	04/03/13	08/28/13	02/05/14
BTEX																	
Benzene	1	ug/L	NA	NA	1 U	1 U	1 U	NA	NA	**230 D**	**81**	**150**	NA	NA	**3.4**	**25**	**89**
Ethylbenzene	5	ug/L	NA	NA	1 U	1 U	**0.92 J**	NA	NA	**110 D**	**36**	**55**	NA	NA	**1.4**	**6.4**	**42**
Toluene	5	ug/L	NA	NA	1 U	1 U	1 U	NA	NA	**9.3**	**2.9 J**	**5.4**	NA	NA	1 U	**0.54 J**	**1**
Xylenes (total)	5	ug/L	NA	NA	2 U	2 U	2 U	NA	NA	**80**	**21**	**33**	NA	NA	**1.1 J**	**8.9**	**30**
Total BTEX	- -	ug/L	NA	NA	ND	ND	**0.92 J**	NA	NA	**429**	**141 J**	**243**	NA	NA	**5.9 J**	**40.8 J**	**162**
PAHs																	
Acenaphthene	20	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**110 D**	NA	NA	NA	NA	**7.2**	NA	NA
Acenaphthylene	- -	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**6.2**	NA	NA	NA	NA	4.8 U	NA	NA
Anthracene	50	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**8.8**	NA	NA	NA	NA	4.8 U	NA	NA
Benzo(a)anthracene	0.002	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**0.88 J**	NA	NA	NA	NA	4.8 U	NA	NA
Benzo(a)pyrene	0	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**1.3 J**	NA	NA	NA	NA	4.8 U	NA	NA
Benzo(b)fluoranthene	0.002	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**1.3 J**	NA	NA	NA	NA	4.8 U	NA	NA
Benzo(g,h,i)perylene	- -	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**1 J**	NA	NA	NA	NA	4.8 U	NA	NA
Benzo(k)fluoranthene	0.002	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**0.71 J**	NA	NA	NA	NA	4.8 U	NA	NA
Chrysene	0.002	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**0.7 J**	NA	NA	NA	NA	4.8 U	NA	NA
Dibenzo(a,h)anthracene	- -	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	4.7 U	NA	NA	NA	NA	4.8 U	NA	NA
Fluoranthene	50	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**5.4**	NA	NA	NA	NA	4.8 U	NA	NA
Fluorene	50	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**29**	NA	NA	NA	NA	4.8 U	NA	NA
Indeno(1,2,3-cd)pyrene	0.002	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	4.7 U	NA	NA	NA	NA	4.8 U	NA	NA
Naphthalene	10	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**800 D**	NA	NA	NA	NA	**7.3**	NA	NA
Phenanthrene	50	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**33**	NA	NA	NA	NA	4.8 U	NA	NA
Pyrene	50	ug/L	NA	NA	4.8 U	NA	NA	NA	NA	**9.5**	NA	NA	NA	NA	4.8 U	NA	NA
Total PAHs	- -	ug/L	NA	NA	ND	NA	NA	NA	NA	**1,008 J**	NA	NA	NA	NA	**14.5**	NA	NA
Oxygen Demand																	
Biochemical Oxygen Demand	- -	ug/L	**4,500**	**3,500**	NA	NA	NA	**99,000**	**13,000**	NA	NA	NA	2,000 U	2,000 U	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	ug/L	**2,400**	NA	NA	NA	NA	**79,400**	NA	NA	NA	NA	2,000 U	NA	NA	NA	NA

Notes:
1. Samples were submitted to Test America, Amherst, New York for analysis using USEPA SW-846 Methods 8260B (VOCs) and 8270C (SVOCs)
2. Results are presented in units of micrograpms per liter (µg/L).
3. D - Compound quantitated using a secondary dilution.
4. J - Indicates that the analyte was detected at a concentration less than the practical quantitation limit (PQL).
5. U - Indicates the constituent was not detected at the PQL. The value preceding the U indicates the PQL.
6. UB - Indicates the constituent was not detected at a concentration less thatn the PQL due to associated blank contamination.
7. ND - not detected
8. NA - not analyzed
9. Sample results detected above the Method Detection Limit (MDL) are presented in bold font.
10. Shading indicates that the result exceeds the NYSDEC TOGS 1.1.1 Water Quality Standard or Guidance Value.
11. Only Benzene, Ethlybenzene, Toluene, Xylenes [BTEX] and Polycyclic Aromatic Hydrocarbons [PAH] data are presented.

Table 6
pH in Application Wells Over Time

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Baseline Event		Q4 Sampling		
	April 2-3, 2013	April 5, 2013	February 4-5, 2014	February 6, 2014	February 7, 2014
	Before Sock Deployment	24 Hours	Before Sock Replacement	24 Hours	48 Hours
	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units
AW-01	7.03	12.07	11.18	12.85	12.97
AW-02	7.21	10.34	7.17	10.05	9.26
AW-03	7.08	8.98	7.07	8.39	8.34
AW-04	7.31	11.54	7.36	12.55	12.56
AW-05	7.25	11.70	12.31	12.51	12.62
AW-06	7.34	12.54	11.21	12.23	12.47
AW-07	7.16	10.67	11.21	12.12	12.37
AW-08	7.39	10.99	7.97	12.30	12.36
AW-09	7.45	12.70	12.25	12.74	12.94
AW-10	7.29	8.15	7.27	8.68	8.82
AW-11	7.17	8.01	7.13	9.07	7.80
AW-12	7.92	9.15	7.33	8.20	8.02
AW-13	7.20	8.25	7.07	7.90	7.44
AW-14	7.21	10.22	7.14	10.21	10.05
AW-15	7.25	9.40	7.03	10.13	9.99
AW-16	7.08	10.45	6.74	9.50	9.48
AW-17	6.86	10.60	6.86	9.64	9.43
AW-18	7.07	6.99	6.93	7.05	7.05
AW-19	7.02	6.89	6.72	7.16	6.95
Average pH Concentration	7.23	9.98	8.31	10.17	10.05

Notes:
'Before Sock Replacement" indicates readings collected prior to replacing the Adventus ECH-O socks

Table 7
Gauging Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Measuring Point Elevation	Actual Depth to Bottom (feet TOC)	Date	Depth to Water (feet TOC)	Groundwater Elevation	Depth to Product (feet TOC)	Depth to Bottom (feet TOC)	Accumulated Thickness of Sediments (feet)
MW-1S	852.88	13.78	04/01/13	8.44	844.44	--	13.75	0.03
			05/28/13	8.55	844.33	--	13.75	0.03
			08/26/13	8.63	844.25	--	13.71	0.07
			11/18/13	8.60	844.28	--	13.69	0.09
			02/03/14	8.50	844.38	--	13.75	0.03
MW-1D	852.98	61.44	04/01/13	10.54	842.44	--	60.77	0.67
			05/28/13	10.75	842.23	--	60.76	0.68
			08/26/13	10.83	842.15	--	60.72	0.72
			11/18/13	10.87	842.11	--	60.67	0.77
			02/03/14	10.70	842.28	--	60.91	0.53
MW-2S	854.06	20.22	04/01/13	10.02	844.04	--	16.54	3.68
			05/28/13	10.06	844.00	--	16.20	4.02
			08/26/13	10.03	844.03	--	16.60	3.62
			11/18/13	10.03	844.03	--	17.00	3.22
			02/04/14	10.27	843.79	--	18.50	1.72
MW-2D	855.66	68.19	04/01/13	14.87	840.79	--	64.51	3.68
			05/28/13	15.16	840.50	--	64.54	3.65
			08/26/13	15.35	840.31	--	64.53	3.66
			11/18/13	15.43	840.23	--	64.44	3.75
			02/03/14	15.09	840.57	--	64.64	3.55
MW-4S	851.34	16.80	04/01/13	7.65	843.69	--	15.65	1.15
			05/28/13	7.80	843.54	--	15.56	1.24
			08/26/13	7.78	843.56	--	15.55	1.25
			11/18/13	7.98	843.36	--	15.30	1.50
			02/04/14	8.09	843.25	--	16.10	0.70
MW-6S	852.54	24.84	04/01/13	5.41	847.13	--	20.91	3.93
			05/28/13	5.70	846.84	--	20.90	3.94
			08/26/13	5.39	847.15	--	20.85	3.99
			11/18/13	5.68	846.86	--	20.72	4.12
			02/03/14	4.66	847.88	--	24.80	0.04
MW-7	854.14	39.56	04/01/13	10.62	843.52	--	32.80	6.76
			05/28/13	10.71	843.43	--	32.76	6.80
			08/26/13	10.68	843.46	--	33.00	6.56
			11/18/13	10.69	843.45	--	33.07	6.49
			02/03/14	10.68	843.46	--	39.33	0.23
MW-8S	850.38	14.70	04/01/13	6.76	843.62	--	6.93	7.77
			05/28/13	6.89	843.49	--	6.94	7.76
			08/26/13	6.79	843.59	--	6.98	7.72
			11/18/13	6.85	843.53	--	7.02	7.68
			02/03/14	6.84	843.54	--	14.01	0.69
MW-8D	850.08	69.58	04/01/13	10.17	839.91	--	69.28	0.30
			05/28/13	10.57	839.51	--	69.24	0.34
			08/26/13	10.56	839.52	--	69.30	0.28
			11/18/13	10.73	839.35	--	70.43	-0.85
			02/03/14	10.42	839.66	--	69.36	0.22
MW-9S	848.68	14.82	04/01/13	5.67	843.01	--	14.43	0.39
			05/28/13	5.91	842.77	--	14.41	0.41
			08/26/13	6.09	842.59	--	14.50	0.32
			11/18/13	6.32	842.36	--	14.47	0.35
			02/03/14	5.93	842.75	--	14.55	0.27
MW-9D	848.72	71.78	04/01/13	8.05	840.67	--	67.96	3.82
			05/28/13	8.36	840.36	--	67.90	3.88
			08/26/13	8.39	840.33	--	67.93	3.85
			11/18/13	8.51	840.21	--	67.89	3.89
			02/03/14	8.20	840.52	--	67.95	3.83

Table 7
Gauging Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Measuring Point Elevation	Actual Depth to Bottom (feet TOC)	Date	Depth to Water (feet TOC)	Groundwater Elevation	Depth to Product (feet TOC)	Depth to Bottom (feet TOC)	Accumulated Thickness of Sediments (feet)
MW-0304D	851.18	59.64	04/01/13	9.78	841.40	--	59.60	0.04
			05/28/13	9.89	841.29	--	59.55	0.09
			08/26/13	9.57	841.61	--	59.60	0.04
			11/18/13	9.78	841.40	--	59.58	0.06
			02/03/14	9.78	841.40	--	59.65	-0.01
MW-0402S	850.09	22.38	04/01/13	7.78	842.31	--	22.48	-0.10
			05/28/13	7.89	842.20	--	22.49	-0.11
			08/26/13	7.97	842.12	--	22.50	-0.12
			11/18/13	8.15	841.94	--	22.49	-0.11
			02/03/14	7.94	842.15	--	22.54	-0.16
MW-0403S	849.66	39.32	04/01/13	9.45	840.21	--	39.40	-0.08
			05/28/13	9.75	839.91	--	39.36	-0.04
			08/26/13	9.81	839.85	--	39.32	0.00
			11/18/13	9.97	839.69	--	39.34	-0.02
			02/03/14	9.54	840.12	--	39.38	-0.06
MW-0404S	849.99	28.57	04/01/13	9.71	840.28	--	27.94	0.63
			05/28/13	10.02	839.97	--	27.89	0.68
			08/26/13	10.06	839.93	--	27.81	0.76
			11/18/13	10.19	839.80	--	27.85	0.72
			02/03/14	9.80	840.19	--	28.25	0.32
MW-0404D	849.55	59.77	04/01/13	9.45	840.10	--	59.43	0.34
			05/28/13	9.89	839.66	--	59.45	0.32
			08/26/13	9.94	839.61	--	59.38	0.39
			11/18/13	10.22	839.33	--	60.21	-0.44
			02/03/14	9.73	839.82	--	59.40	0.37
MW-0405S	850.59	35.27	04/01/13	10.33	840.26	--	35.43	-0.16
			05/28/13	10.81	839.78	--	35.44	-0.17
			08/26/13	10.83	839.76	--	35.38	-0.11
			11/18/13	11.16	839.43	--	35.41	-0.14
			02/03/14	10.66	839.93	--	35.50	-0.23
AW-01	850.94	19.78	04/01/13	7.04	843.90	--	20.00	-0.22
			05/28/13	7.05	843.89	--	19.99	-0.21
			08/26/13	7.00	843.94	--	19.92	-0.14
			11/18/13	7.17	843.77	--	19.91	-0.13
			02/03/14	7.21	843.73	--	19.94	-0.16
AW-02	850.95	20.32	04/01/13	7.51	843.44	--	20.17	0.15
			05/28/13	7.25	843.70	--	20.19	0.13
			08/26/13	7.61	843.34	--	20.18	0.14
			11/18/13	7.76	843.19	--	20.15	0.17
			02/03/14	7.75	843.20	--	20.13	0.19
AW-03	850.38	19.10	04/01/13	6.83	843.55	--	19.59	-0.49
			05/28/13	6.84	843.54	--	19.60	-0.50
			08/26/13	7.02	843.36	--	19.55	-0.45
			11/18/13	6.98	843.40	--	19.81	-0.71
			02/03/14	6.94	843.44	--	19.59	-0.49
AW-04	850.62	19.77	04/01/13	6.30	844.32	--	20.01	-0.24
			05/28/13	6.22	844.40	--	19.83	-0.06
			08/26/13	6.91	843.71	--	19.96	-0.19
			11/18/13	7.74	842.88	--	19.97	-0.20
			02/03/14	7.50	843.12	--	19.98	-0.21

Table 7
Gauging Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Measuring Point Elevation	Actual Depth to Bottom (feet TOC)	Date	Depth to Water (feet TOC)	Groundwater Elevation	Depth to Product (feet TOC)	Depth to Bottom (feet TOC)	Accumulated Thickness of Sediments (feet)
AW-05	850.38	19.80	04/01/13	7.16	843.22	--	19.78	0.02
			05/28/13	7.24	843.14	--	19.73	0.07
			08/26/13	7.30	843.08	--	19.73	0.07
			11/18/13	7.71	842.67	--	19.70	0.10
			02/03/14	7.26	843.12	--	19.75	0.05
AW-06	849.85	19.28	04/01/13	7.72	842.13	--	19.04	0.24
			05/28/13	7.87	841.98	--	19.10	0.18
			08/26/13	7.87	841.98	--	19.03	0.25
			11/18/13	8.24	841.61	--	18.98	0.30
			02/03/14	7.77	842.08	--	19.02	0.26
AW-07	849.72	18.74	04/01/13	8.49	841.23	--	18.86	-0.12
			05/28/13	8.72	841.00	--	18.85	-0.11
			08/26/13	8.72	841.00	--	18.82	-0.08
			11/18/13	9.00	840.72	--	18.80	-0.06
			02/03/14	8.59	841.13	--	18.85	-0.11
AW-08	849.78	19.32	04/01/13	8.86	840.92	--	19.35	-0.03
			05/28/13	9.07	840.71	--	19.34	-0.02
			08/26/13	9.13	840.65	--	19.31	0.01
			11/18/13	9.35	840.43	--	19.25	0.07
			02/03/14	8.90	840.88	--	19.22	0.10
AW-09	849.61	22.27	04/01/13	8.30	841.31	--	22.22	0.05
			05/28/13	9.00	840.61	--	21.88	0.39
			08/26/13	9.05	840.56	--	21.92	0.35
			11/18/13	9.21	840.40	--	22.11	0.16
			02/03/14	8.87	840.74	--	22.10	0.17
AW-10	849.60	24.20	04/01/13	9.18	840.42	--	24.28	-0.08
			05/28/13	9.42	840.18	--	24.27	-0.07
			08/26/13	9.51	840.09	--	24.20	0.00
			11/18/13	9.91	839.69	--	24.20	0.00
			02/03/14	9.25	840.35	--	24.18	0.02
AW-11	849.49	24.27	04/01/13	8.99	840.50	--	24.14	0.13
			05/28/13	9.22	840.27	--	24.13	0.14
			08/26/13	9.34	840.15	--	24.02	0.25
			11/18/13	9.45	840.04	--	24.06	0.21
			02/03/14	9.01	840.48	--	24.10	0.17
AW-12	849.19	37.58	04/01/13	8.68	840.51	--	37.67	-0.09
			05/28/13	9.00	840.19	--	37.68	-0.10
			08/26/13	9.15	840.04	--	37.50	0.08
			11/18/13	9.29	839.90	--	37.50	0.08
			02/03/14	8.90	840.29	--	37.52	0.06
AW-13	849.07	27.46	04/01/13	8.59	840.48	--	27.40	0.06
			05/28/13	9.42	839.65	--	27.34	0.12
			08/26/13	8.98	840.09	--	27.24	0.22
			11/18/13	9.10	839.97	--	27.28	0.18
			02/03/14	8.72	840.35	--	27.32	0.14

Table 7
Gauging Data

Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Measuring Point Elevation	Actual Depth to Bottom (feet TOC)	Date	Depth to Water (feet TOC)	Groundwater Elevation	Depth to Product (feet TOC)	Depth to Bottom (feet TOC)	Accumulated Thickness of Sediments (feet)
AW-14	849.45	28.88	04/01/13	8.86	840.59	--	30.90	-2.02
			05/28/13	9.22	840.23	--	30.57	-1.69
			08/26/13	9.27	840.18	--	30.54	-1.66
			11/18/13	9.34	840.11	--	30.57	-1.69
			02/03/14	8.99	840.46	--	30.44	-1.56
AW-15	849.11	34.68	04/01/13	8.67	840.44	--	34.57	0.11
			05/28/13	8.92	840.19	--	34.40	0.28
			08/26/13	9.02	840.09	--	34.20	0.48
			11/18/13	9.23	839.88	--	34.42	0.26
			02/03/14	8.75	840.36	--	33.85	0.83
AW-16	849.12	34.80	04/01/13	8.56	840.56	--	34.44	0.36
			05/28/13	8.72	840.40	--	34.31	0.49
			08/26/13	8.85	840.27	--	34.20	0.60
			11/18/13	8.97	840.15	--	34.25	0.55
			02/03/14	8.60	840.52	--	34.23	0.57
AW-17	849.08	31.84	04/01/13	8.53	840.55	--	34.56	-2.72
			05/28/13	8.75	840.33	--	31.34	0.50
			08/26/13	8.81	840.27	--	31.52	0.32
			11/18/13	8.99	840.09	--	31.43	0.41
			02/03/14	8.62	840.46	--	31.10	0.74
AW-18	848.81	33.51	04/01/13	7.94	840.87	--	33.75	-0.24
			05/28/13	7.49	841.32	--	33.75	-0.24
			08/26/13	8.36	840.45	--	33.69	-0.18
			11/18/13	8.62	840.19	--	33.67	-0.16
			02/03/14	8.10	840.71	--	33.40	0.11
AW-19	849.01	34.33	04/01/13	7.99	841.02	--	33.91	0.42
			05/28/13	8.29	840.72	--	33.89	0.44
			08/26/13	8.59	840.42	--	33.87	0.46
			11/18/13	8.74	840.27	--	33.90	0.43
			02/03/14	8.27	840.74	--	33.15	1.18
PMW-01	851.19	18.81	04/01/13	7.78	843.41	--	19.24	-0.43
			05/28/13	7.89	843.30	--	19.35	-0.54
			08/26/13	8.02	843.17	--	19.29	-0.48
			11/18/13	8.35	842.84	--	19.41	-0.60
			02/03/14	7.97	843.22	--	19.38	-0.57
PMW-02	849.85	19.84	04/01/13	5.45	844.40	--	19.67	0.17
			05/28/13	5.01	844.84	--	19.65	0.19
			08/26/13	6.00	843.85	--	19.64	0.20
			11/18/13	5.68	844.17	--	19.62	0.22
			02/03/14	6.44	843.41	--	19.62	0.22
PMW-03	849.64	19.29	04/01/13	8.45	841.19	--	14.60	4.69
			05/28/13	8.98	840.66	--	15.33	3.96
			08/26/13	8.73	840.91	--	15.41	3.88
			11/18/13	8.76	840.88	--	15.15	4.14
			02/03/14	8.37	841.27	--	18.19	1.10
PMW-04	850.02	19.78	04/01/13	9.20	840.82	--	19.85	-0.07
			05/28/13	9.45	840.57	--	19.85	-0.07
			08/26/13	9.51	840.51	--	19.85	-0.07
			11/18/13	9.73	840.29	--	19.81	-0.03
			02/03/14	9.26	840.76	--	19.82	-0.04

Table 7
Gauging Data

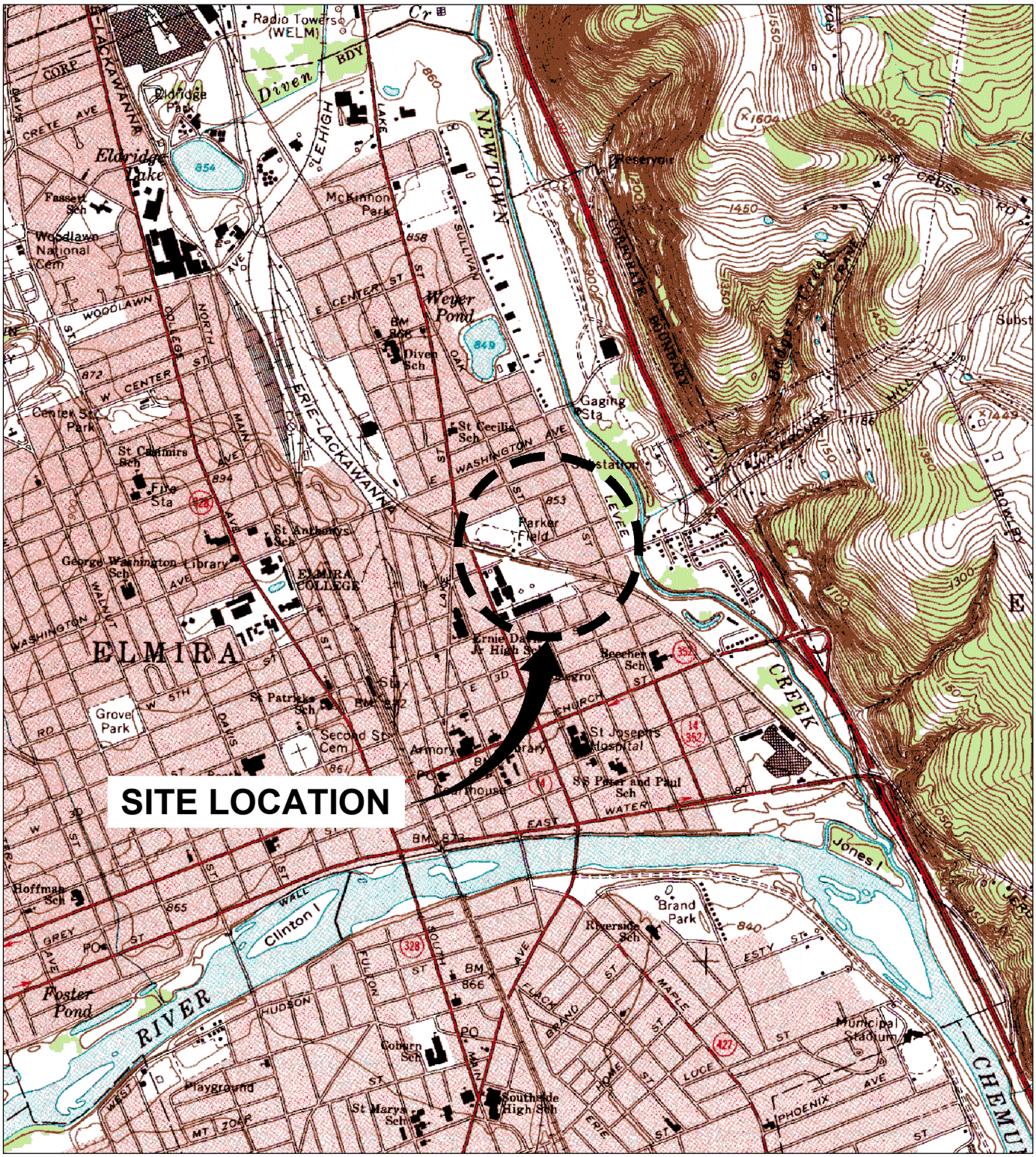
Annual Periodic Review Report
Madison Avenue Former MGP Site, Elmira, New York

Well ID	Measuring Point Elevation	Actual Depth to Bottom (feet TOC)	Date	Depth to Water (feet TOC)	Groundwater Elevation	Depth to Product (feet TOC)	Depth to Bottom (feet TOC)	Accumulated Thickness of Sediments (feet)
PMW-05	849.08	32.77	04/01/13	8.58	840.50	--	32.65	0.12
			05/28/13	8.77	840.31	--	32.36	0.41
			08/26/13	8.95	840.13	--	32.26	0.51
			11/18/13	9.11	839.97	--	32.20	0.57
			02/03/14	8.74	840.34	--	32.30	0.47
PMW-06	849.59	38.81	04/01/13	9.19	840.40	--	37.97	0.84
			05/28/13	9.35	840.24	--	37.45	1.36
			08/26/13	9.50	840.09	--	37.35	1.46
			11/18/13	9.68	839.91	--	37.23	1.58
			02/03/14	9.23	840.36	--	37.25	1.56
NMW-0402S	849.77	31.29	04/01/13	9.24	840.53	29.87	31.07	0.22
			05/28/13	9.59	840.18	30.77	31.17	0.12
			08/26/13	9.89	839.88	29.25	31.25	0.04
			11/18/13	9.98	839.79	29.25	31.25	0.04
			02/03/14	5.42	844.35	30.08	31.28	0.01
NRW-01	852.36	33.83	04/01/13	11.21	841.15	--	33.82	0.01
			05/28/13	11.48	840.88	--	33.75	0.08
			08/26/13	11.42	840.94	--	33.70	0.13
			11/18/13	11.61	840.75	--	33.68	0.15
			02/03/14	11.29	841.07	--	33.75	0.08
NRW-02	849.80	58.25	04/01/13	9.36	840.44	57.54	57.87	0.38
			05/28/13	9.62	840.18	--	57.31	0.94
			08/26/13	9.80	840.00	56.73	57.20	1.05
			11/18/13	9.98	839.82	56.93	57.63	0.62
			02/03/14	7.20	842.60	--	57.70	0.55
NRW-03	849.78	53.76	04/01/13	9.33	840.45	--	52.97	0.79
			05/28/13	9.59	840.19	--	52.49	1.27
			08/26/13	9.77	840.01	--	52.13	1.63
			11/18/13	9.93	839.85	--	52.34	1.42
			02/03/14	9.43	840.35	--	52.30	1.46
NRW-04	849.52	56.68	04/01/13	9.06	840.46	--	57.40	-0.72
			05/28/13	9.35	840.17	--	57.34	-0.66
			08/26/13	9.53	839.99	--	56.57	0.11
			11/18/13	9.69	839.83	--	56.59	0.09
			02/03/14	9.21	840.31	--	56.99	-0.31

Notes:
All measurements from Top of Casing (TOC).
Elevations in feet above mean sea level (ft amsl), 1988 North American Vertical Datum (NAVD88).
-- = Indicates measurement not taken or not avaliable.

ARCADIS

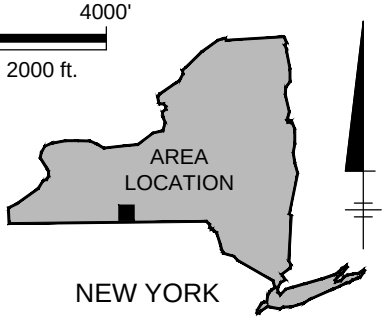
Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., ELMIRA, NY-PA., 1969.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

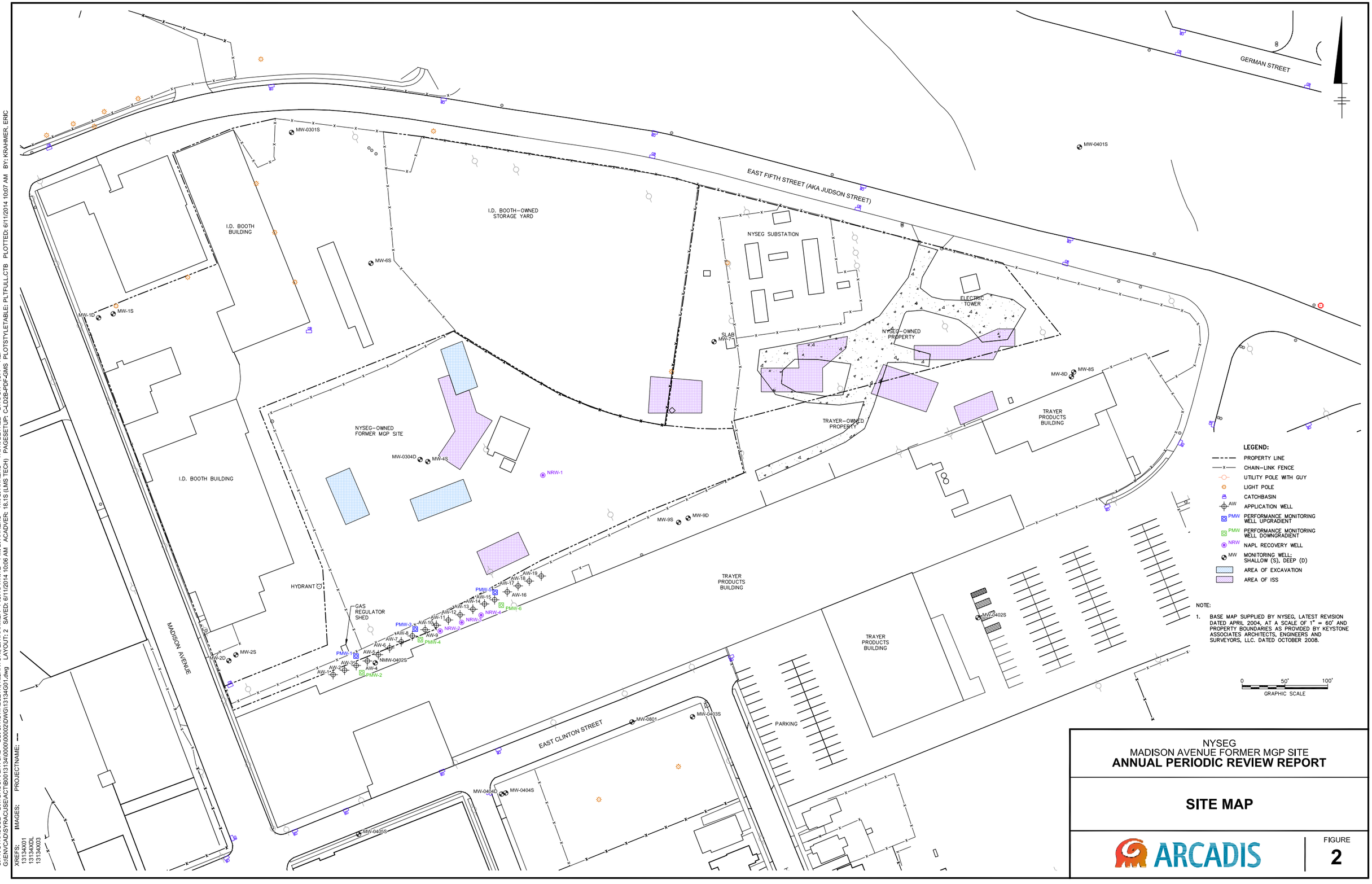


NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

SITE LOCATION MAP

ARCADIS

FIGURE
1

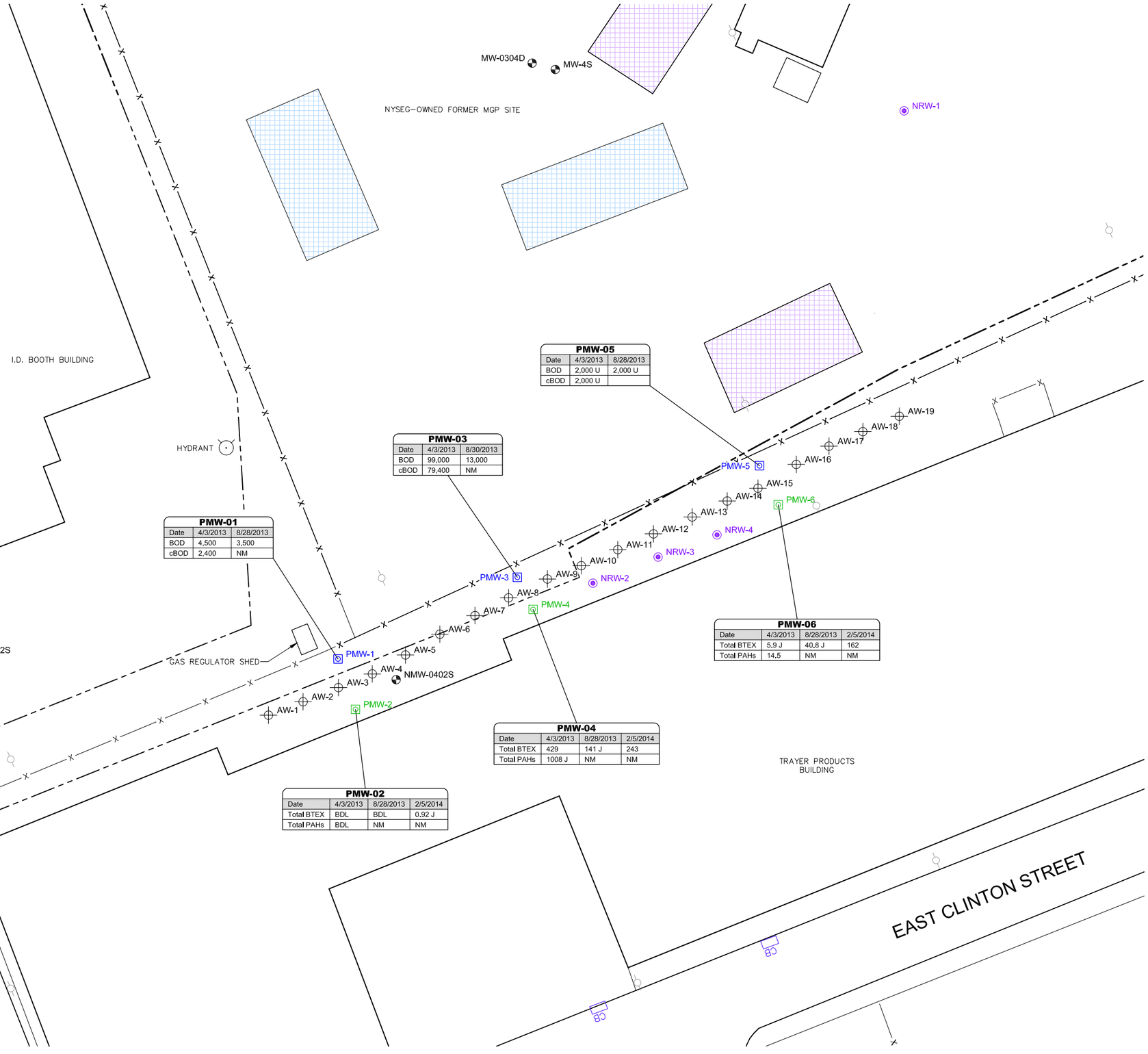


NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

SITE MAP

ARCADIS

FIGURE
2



PMW-01

Date	4/3/2013	8/28/2013
BOD	4,500	3,500
cBOD	2,400	NM

PMW-02

Date	4/3/2013	8/28/2013	2/5/2014
Total BTEX	BDL	BDL	0.92 J
Total PAHs	BDL	NM	NM

PMW-03

Date	4/3/2013	8/30/2013
BOD	99,000	13,000
cBOD	79,400	NM

PMW-04

Date	4/3/2013	8/28/2013	2/5/2014
Total BTEX	429	141 J	243
Total PAHs	1008 J	NM	NM

PMW-05

Date	4/3/2013	8/28/2013
BOD	2,000 U	2,000 U
cBOD	2,000 U	

PMW-06

Date	4/3/2013	8/28/2013	2/5/2014
Total BTEX	5.9 J	40.8 J	162
Total PAHs	14.5	NM	NM

LEGEND:

- PROPERTY LINE
- CHAIN–LINK FENCE
- UTILITY POLE WITH GUY
- LIGHT POLE
- CATCHBASIN
- AW — APPLICATION WELL
- PMW — PERFORMANCE MONITORING WELL UPGRADIENT
- PMW — PERFORMANCE MONITORING WELL DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS

NOTES:

1. ALL RESULTS ARE IN MICROGRAMS PER LITER (µg/L).
2. BTEX = BENZENE, TOLUENE, ETHYLBENZENE, XYLENE.
3. PAH = POLYCYCLIC AROMATIC HYDROCARBONS.
4. BDL = BELOW DETECTION LIMITS.
5. NM = NOT MEASURED.
6. BOD = BIOCHEMICAL OXYGEN DEMAND.
7. cBOD = CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND.
8. J = QUALIFIER INDICATES AN ESTIMATED VALUE.
9. U = QUALIFIER INDICATES CONSTITUENT NOT DETECTED ABOVE THE LIMIT OF DETECTION. THE PRECEDING VALUE IS THE LIMIT OF DETECTION.
10. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

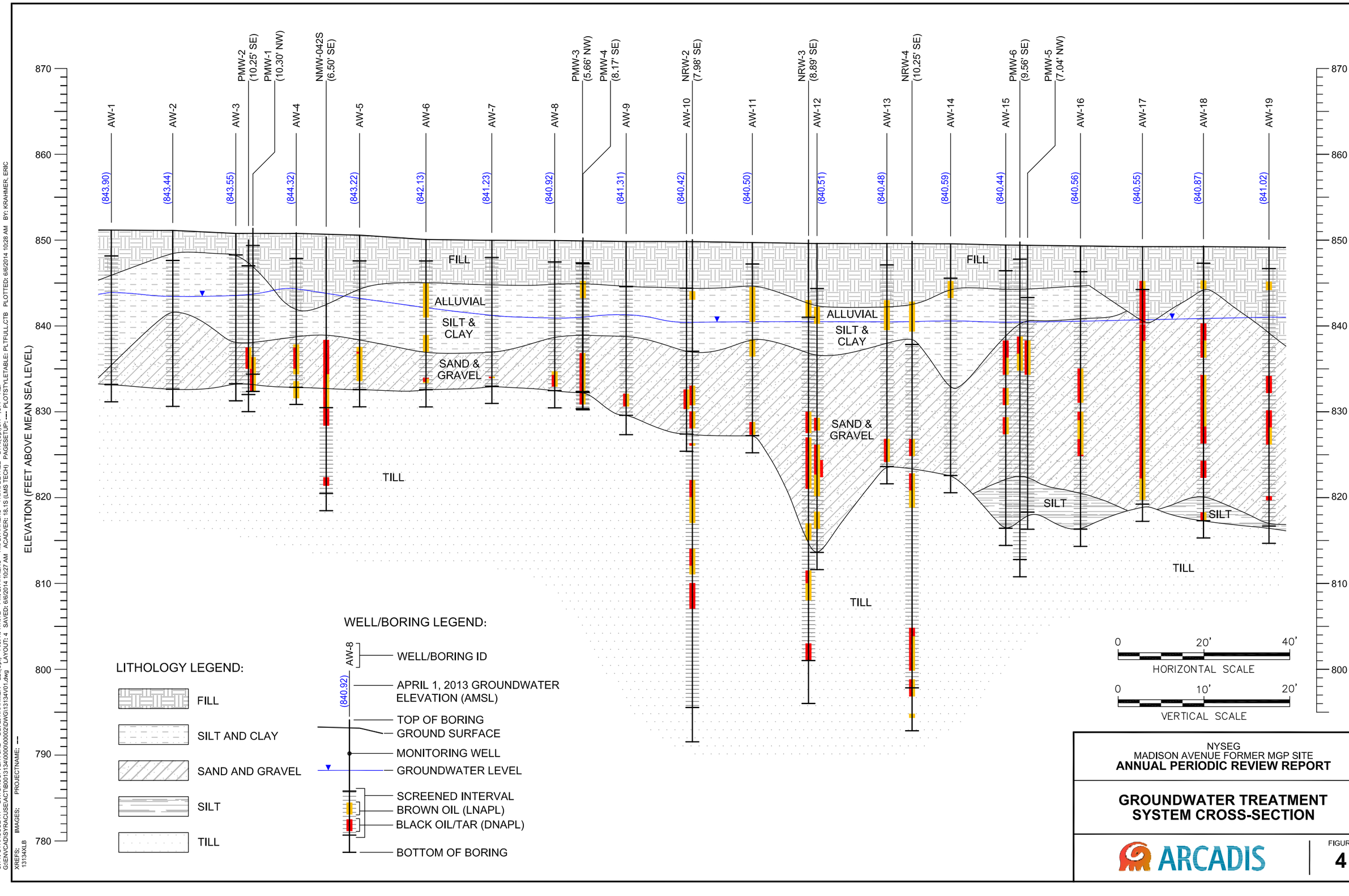
0 20' 40'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

PERFORMANCE MONITORING WELL DATA

ARCADIS

FIGURE
3



NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

GROUNDWATER TREATMENT SYSTEM CROSS-SECTION

ARCADIS

FIGURE
4

CITY: SYRACUSE NY DIV/GROUP: ENVCAD DB: E. KRAHMER LD:(Opt) PIC: K. WHITE PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR:(Opt)ON=*;OFF=*REF*
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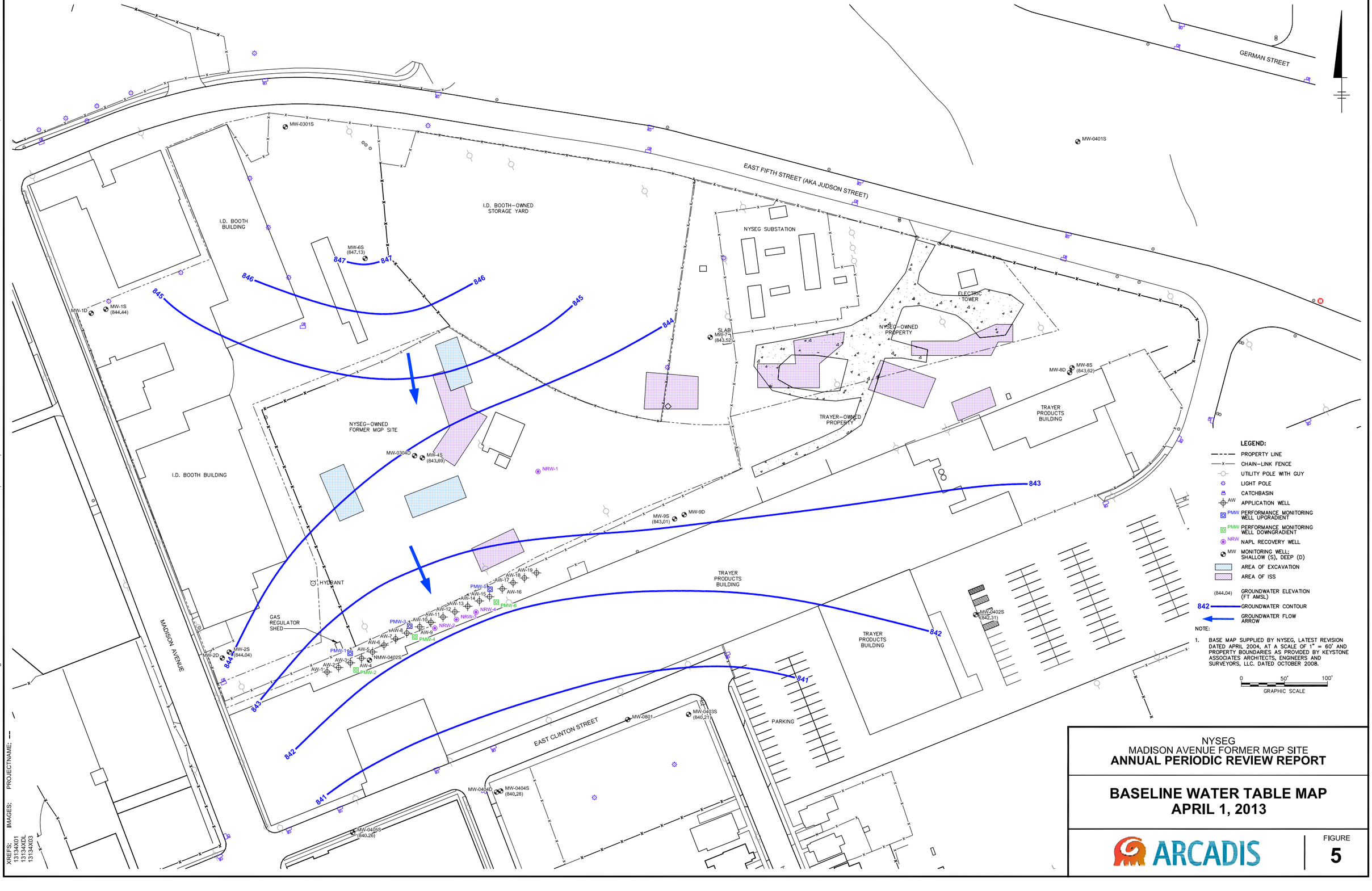

LEGEND:

- PROPERTY LINE
- CHAIN—LINK FENCE
- UTILITY POLE WITH GUY
- LIGHT POLE
- CATCHBASIN
- AW — APPLICATION WELL
- PMW — PERFORMANCE MONITORING WELL UPGRADIENT
- PMW — PERFORMANCE MONITORING WELL DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS
- (844.04) GROUNDWATER ELEVATION (FT AMSL)
- 842 GROUNDWATER CONTOUR
- GROUNDWATER FLOW ARROW

NOTE:

1. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

BASELINE WATER TABLE MAP APRIL 1, 2013

ARCADIS

FIGURE **5**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: S. KOWALCZYK, K.SARTORI, E. KRAHMER PIC: K. WHITE PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR: ON="OFF=*REF*
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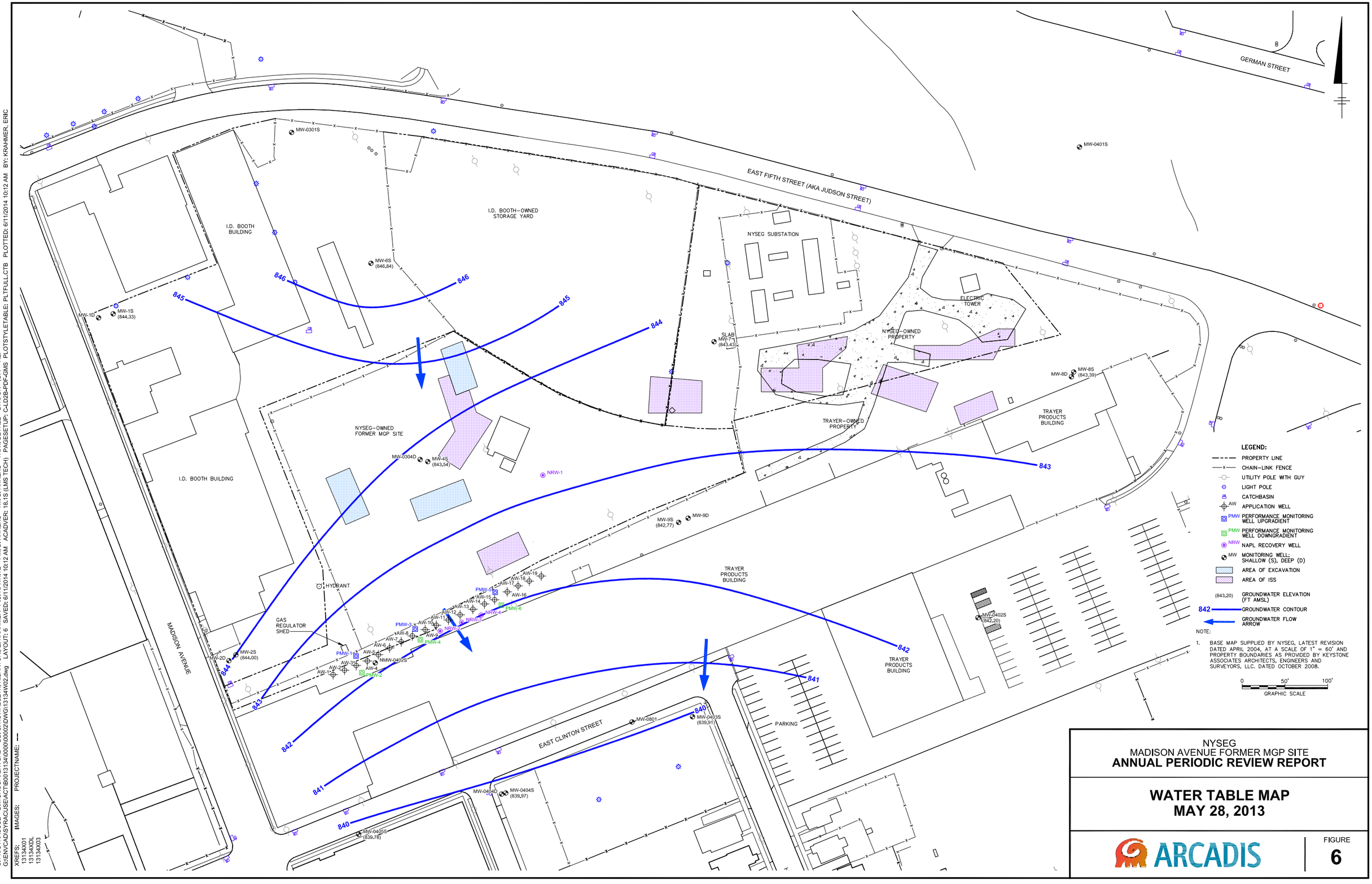
13134X01
13134XDL
13134X03



LEGEND:

- PROPERTY LINE
- CHAIN–LINK FENCE
- UTILITY POLE WITH GUY
- LIGHT POLE
- CATCHBASIN
- AW — APPLICATION WELL
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- PMW — PERFORMANCE MONITORING WELL DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS
- (843,20) GROUNDWATER ELEVATION (FT AMSL)
- 842 GROUNDWATER CONTOUR
- GROUNDWATER FLOW ARROW

NOTE:

1. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

WATER TABLE MAP
MAY 28, 2013

ARCADIS

FIGURE
6

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: S. KOWALCZYK, K.SARTORI, E. KRAHMER PIC: K. WHITE PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR: ON=*;OFF=*REF*
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XREFS: 13134X01 13134XDL 13134X03 IMAGES: PROJECTNAME: ---

GERMAN STREET

EAST FIFTH STREET (AKA JUDSON STREET)

MADISON AVENUE

EAST CLINTON STREET

I.D. BOOTH BUILDING

I.D. BOOTH–OWNED STORAGE YARD

NYSEG SUBSTATION

ELECTRIC TOWER

NYSEG–OWNED PROPERTY

NYSEG–OWNED FORMER MGP SITE

TRAYER–OWNED PROPERTY

TRAYER PRODUCTS BUILDING

PARKING

HYDRANT

GAS REGULATOR SHED

SLAB

MW-0301S

MW-0401S

MW-1D

MW-1S (844.25)

MW-2D

MW-2S (844.03)

MW-4D

MW-4S (843.56)

MW-6S (847.15)

MW-7 (843.46)

MW-8D

MW-8S (843.59)

MW-9D

MW-9S (842.59)

MW-0304D

MW-0402S

MW-0402S (842.12)

MW-0403S (839.85)

MW-0404D

MW-0404S (839.93)

MW-0405S (839.76)

NRW-1

NRW-2

NRW-3

NRW-4

PMW-1

PMW-2

PMW-3

PMW-4

PMW-5

PMW-6

AW-1 AW-2 AW-3 AW-4 AW-5 AW-6 AW-7 AW-8 AW-9 AW-10 AW-11 AW-12 AW-13 AW-14 AW-15 AW-16 AW-17 AW-18 AW-19

844 845 846 847 843 842 841 840

LEGEND:

- PROPERTY LINE
- CHAIN–LINK FENCE
- UTILITY POLE WITH GUY
- LIGHT POLE
- CATCHBASIN
- AW — APPLICATION WELL
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- PMW — PERFORMANCE MONITORING WELL DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS
- (842.20) GROUNDWATER ELEVATION (FT AMSL)
- 842 GROUNDWATER CONTOUR
- GROUNDWATER FLOW ARROW

NOTE:

1. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

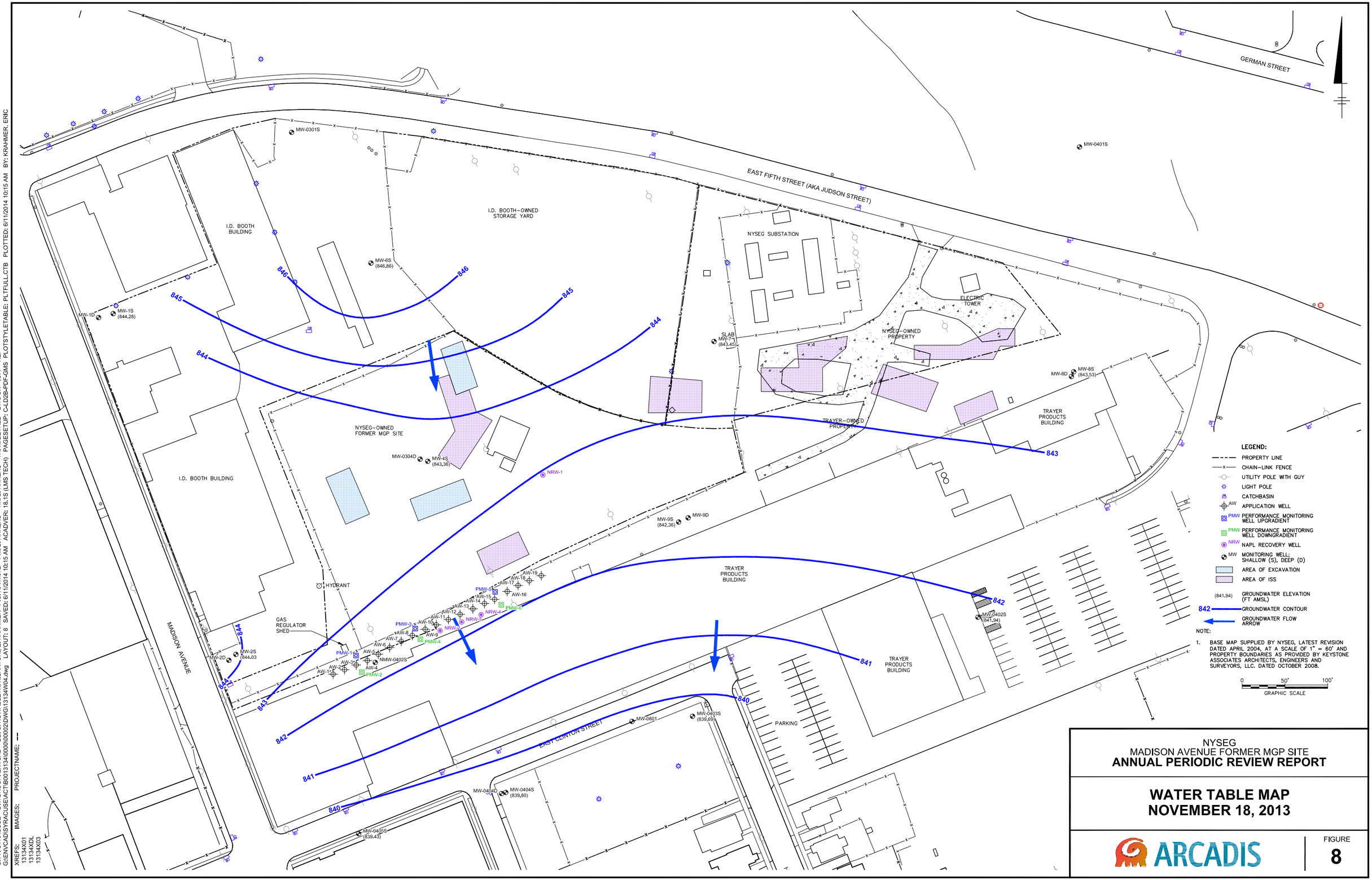
0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

WATER TABLE MAP
AUGUST 26, 2013

ARCADIS

FIGURE
7



LEGEND:

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- PMW — PERFORMANCE MONITORING WELL DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS
- (841.94) — GROUNDWATER ELEVATION (FT AMSL)
- 842 — GROUNDWATER CONTOUR
- GROUNDWATER FLOW ARROW

NOTE:

1. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

WATER TABLE MAP
NOVEMBER 18, 2013

ARCADIS

FIGURE
8

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: S. KOWALCZYK, K.SARTORI, E. KRAHMER PIC: K. WHITE PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR: ON="OFF=*REF*"
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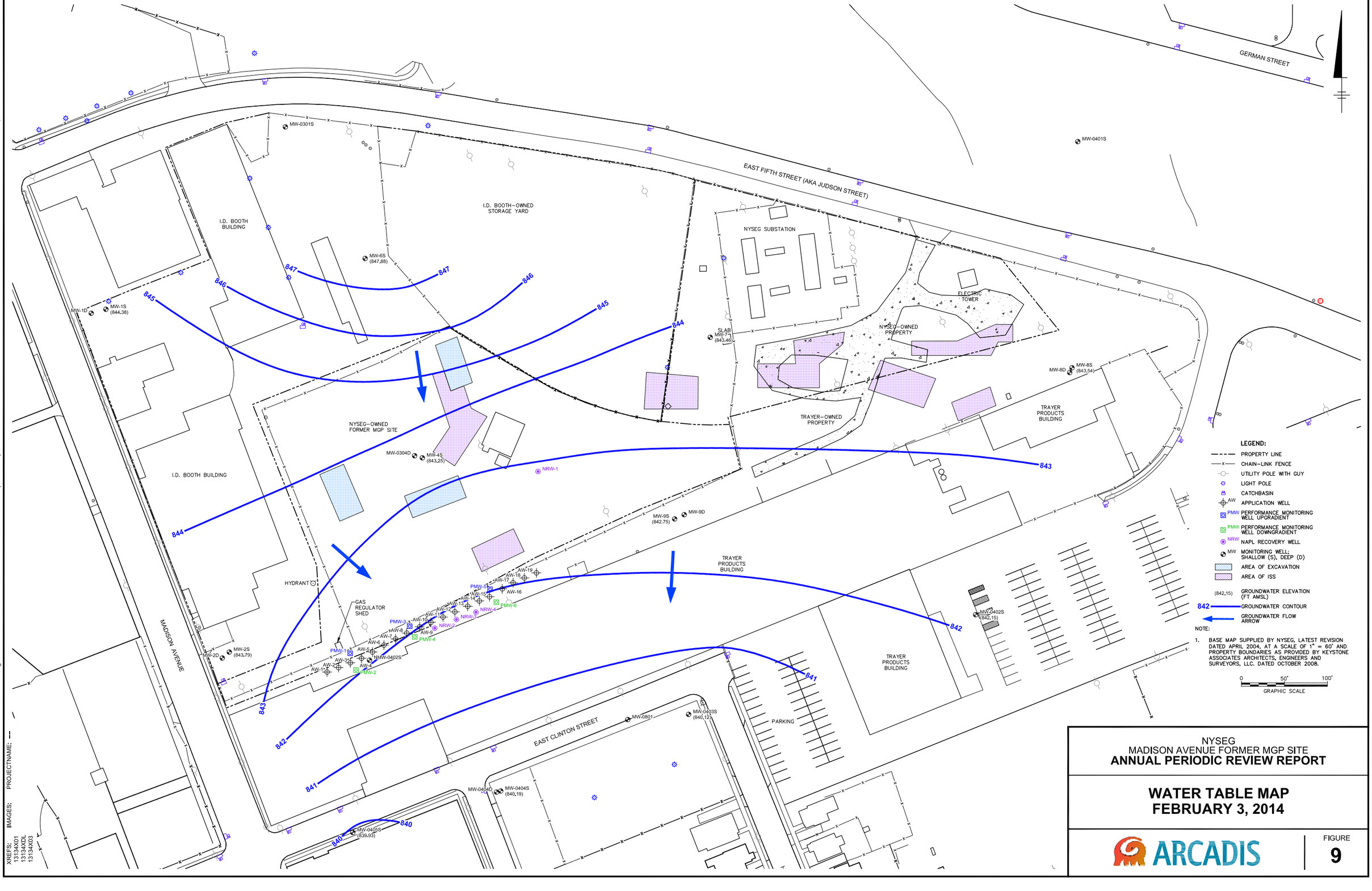
13134XDL
13134X03



NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

WATER TABLE MAP
FEBRUARY 3, 2014

ARCADIS

FIGURE
9

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: S. KOWALCZYK, K.SARTORI, E. KRAHMER PIC: K. WHITE PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR: ON=*;OFF=*REF*
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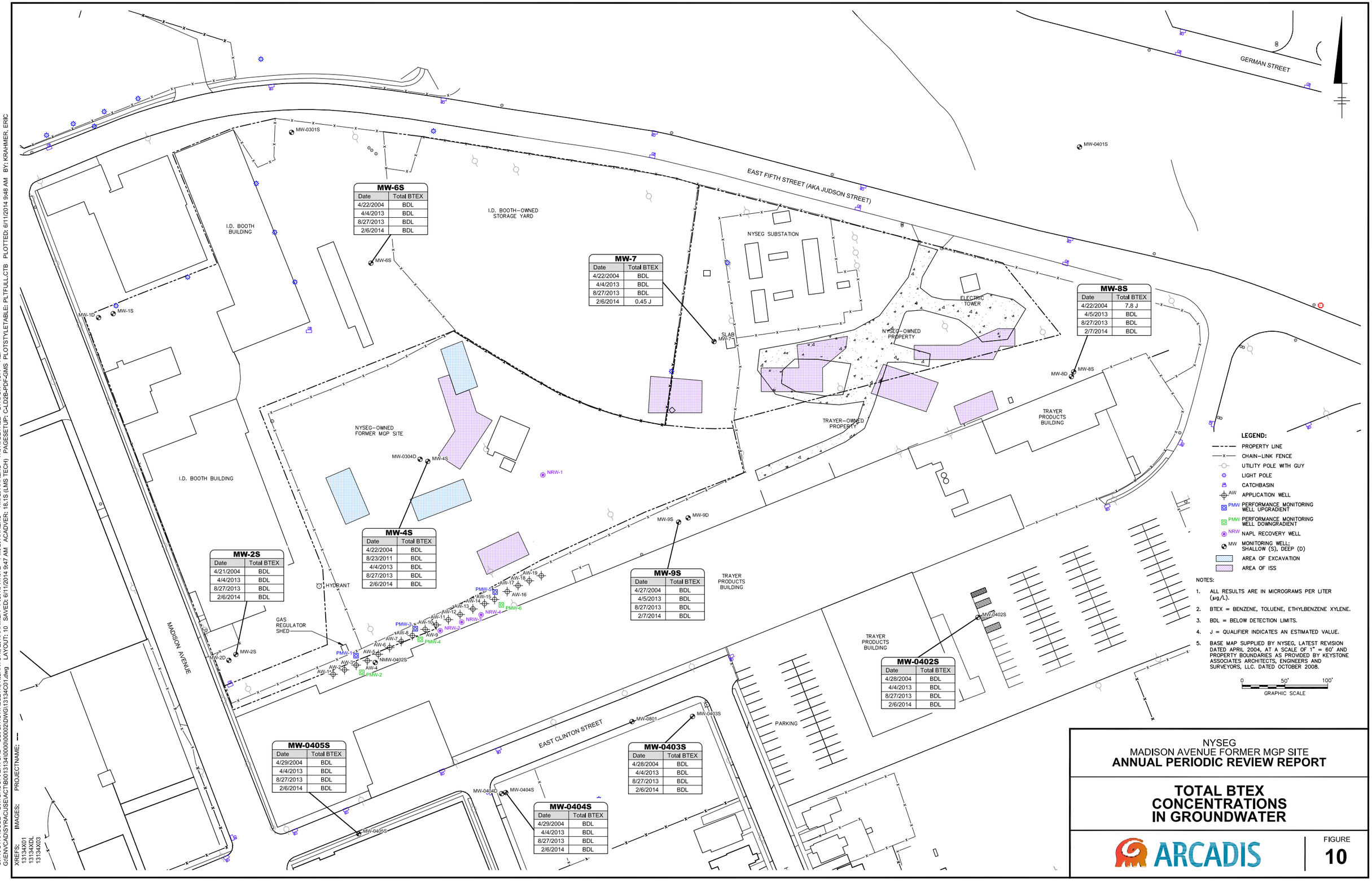


MW-6S

Date	Total BTEX
4/22/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

MW-7

Date	Total BTEX
4/22/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	0.45 J

MW-8S

Date	Total BTEX
4/22/2004	7.8 J
4/5/2013	BDL
8/27/2013	BDL
2/7/2014	BDL

MW-2S

Date	Total BTEX
4/21/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

MW-4S

Date	Total BTEX
4/22/2004	BDL
8/23/2011	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

MW-9S

Date	Total BTEX
4/27/2004	BDL
4/5/2013	BDL
8/27/2013	BDL
2/7/2014	BDL

MW-0402S

Date	Total BTEX
4/28/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

MW-0405S

Date	Total BTEX
4/29/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

MW-0403S

Date	Total BTEX
4/28/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

MW-0404S

Date	Total BTEX
4/29/2004	BDL
4/4/2013	BDL
8/27/2013	BDL
2/6/2014	BDL

LEGEND:

- PROPERTY LINE
- CHAIN-LINK FENCE
- UTILITY POLE WITH GUY
- LIGHT POLE
- CATCHBASIN
- AW — APPLICATION WELL
- PMW — PERFORMANCE MONITORING WELL UPGRADIENT
- PMW — PERFORMANCE MONITORING WELL DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS

NOTES:

1. ALL RESULTS ARE IN MICROGRAMS PER LITER (µg/L).
2. BTEX = BENZENE, TOLUENE, ETHYLBENZENE XYLENE.
3. BDL = BELOW DETECTION LIMITS.
4. J = QUALIFIER INDICATES AN ESTIMATED VALUE.
5. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

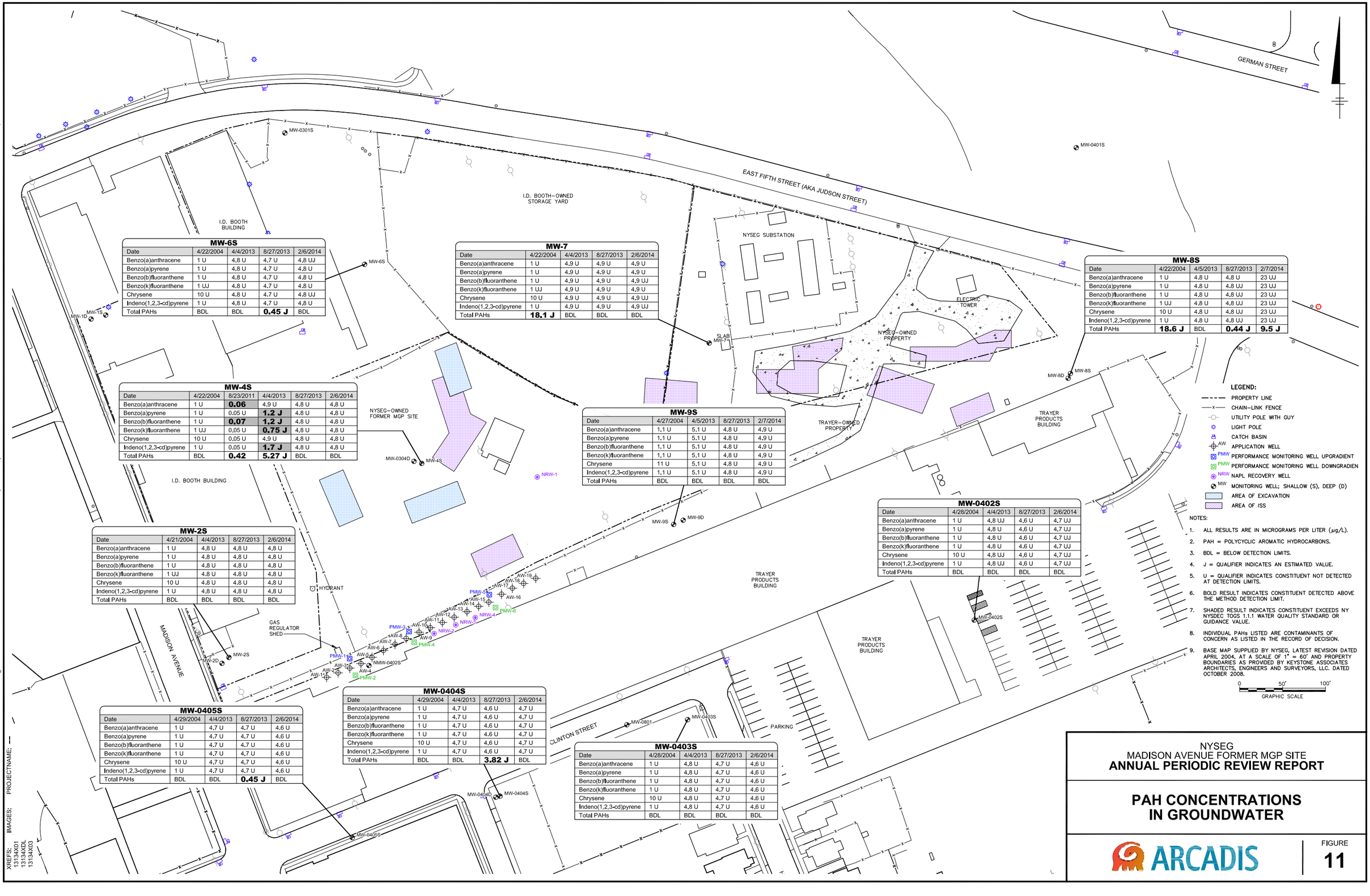
0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

TOTAL BTEX CONCENTRATIONS IN GROUNDWATER

ARCADIS

FIGURE
10



MW-6S

Date	4/22/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.8 U	4.7 U	4.8 UJ
Benzo(a)pyrene	1 U	4.8 U	4.7 U	4.8 U
Benzo(b)fluoranthene	1 U	4.8 U	4.7 U	4.8 U
Benzo(k)fluoranthene	1 UJ	4.8 U	4.7 U	4.8 U
Chrysene	10 U	4.8 U	4.7 U	4.8 UJ
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.7 U	4.8 U
Total PAHs	BDL	BDL	**0.45 J**	BDL

MW-7

Date	4/22/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.9 U	4.9 U	4.9 U
Benzo(a)pyrene	1 U	4.9 U	4.9 U	4.9 U
Benzo(b)fluoranthene	1 U	4.9 U	4.9 U	4.9 UJ
Benzo(k)fluoranthene	1 UJ	4.9 U	4.9 U	4.9 U
Chrysene	10 U	4.9 U	4.9 U	4.9 UJ
Indeno(1,2,3-cd)pyrene	1 U	4.9 U	4.9 U	4.9 UJ
Total PAHs	**18.1 J**	BDL	BDL	BDL

MW-8S

Date	4/22/2004	4/5/2013	8/27/2013	2/7/2014
Benzo(a)anthracene	1 U	4.8 U	4.8 U	23 UJ
Benzo(a)pyrene	1 U	4.8 U	4.8 UJ	23 UJ
Benzo(b)fluoranthene	1 U	4.8 U	4.8 UJ	23 UJ
Benzo(k)fluoranthene	1 UJ	4.8 U	4.8 UJ	23 UJ
Chrysene	10 U	4.8 U	4.8 UJ	23 UJ
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.8 UJ	23 UJ
Total PAHs	**18.6 J**	BDL	**0.44 J**	**9.5 J**

MW-4S

Date	4/22/2004	8/23/2011	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	**0.06**	4.9 U	4.8 U	4.8 U
Benzo(a)pyrene	1 U	0.05 U	**1.2 J**	4.8 U	4.8 U
Benzo(b)fluoranthene	1 U	**0.07**	**1.2 J**	4.8 U	4.8 U
Benzo(k)fluoranthene	1 UJ	0.05 U	**0.75 J**	4.8 U	4.8 U
Chrysene	10 U	0.05 U	4.9 U	4.8 U	4.8 U
Indeno(1,2,3-cd)pyrene	1 U	0.05 U	**1.7 J**	4.8 U	4.8 U
Total PAHs	BDL	**0.42**	**5.27 J**	BDL	BDL

MW-9S

Date	4/27/2004	4/5/2013	8/27/2013	2/7/2014
Benzo(a)anthracene	1.1 U	5.1 U	4.8 U	4.9 U
Benzo(a)pyrene	1.1 U	5.1 U	4.8 U	4.9 U
Benzo(b)fluoranthene	1.1 U	5.1 U	4.8 U	4.9 U
Benzo(k)fluoranthene	1.1 U	5.1 U	4.8 U	4.9 U
Chrysene	11 U	5.1 U	4.8 U	4.9 U
Indeno(1,2,3-cd)pyrene	1.1 U	5.1 U	4.8 U	4.9 U
Total PAHs	BDL	BDL	BDL	BDL

MW-0402S

Date	4/28/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.8 UJ	4.6 U	4.7 UJ
Benzo(a)pyrene	1 U	4.8 U	4.6 U	4.7 UJ
Benzo(b)fluoranthene	1 U	4.8 U	4.6 U	4.7 UJ
Benzo(k)fluoranthene	1 U	4.8 U	4.6 U	4.7 UJ
Chrysene	10 U	4.8 UJ	4.6 U	4.7 UJ
Indeno(1,2,3-cd)pyrene	1 U	4.8 UJ	4.6 U	4.7 UJ
Total PAHs	BDL	BDL	BDL	BDL

MW-2S

Date	4/21/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.8 U	4.8 U	4.8 U
Benzo(a)pyrene	1 U	4.8 U	4.8 U	4.8 U
Benzo(b)fluoranthene	1 U	4.8 U	4.8 U	4.8 U
Benzo(k)fluoranthene	1 UJ	4.8 U	4.8 U	4.8 U
Chrysene	10 U	4.8 U	4.8 U	4.8 U
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.8 U	4.8 U
Total PAHs	BDL	BDL	BDL	BDL

MW-0404S

Date	4/29/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.7 U	4.6 U	4.7 U
Benzo(a)pyrene	1 U	4.7 U	4.6 U	4.7 U
Benzo(b)fluoranthene	1 U	4.7 U	4.6 U	4.7 U
Benzo(k)fluoranthene	1 U	4.7 U	4.6 U	4.7 U
Chrysene	10 U	4.7 U	4.6 U	4.7 U
Indeno(1,2,3-cd)pyrene	1 U	4.7 U	4.6 U	4.7 U
Total PAHs	BDL	BDL	**3.82 J**	BDL

MW-0405S

Date	4/29/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.7 U	4.7 U	4.6 U
Benzo(a)pyrene	1 U	4.7 U	4.7 U	4.6 U
Benzo(b)fluoranthene	1 U	4.7 U	4.7 U	4.6 U
Benzo(k)fluoranthene	1 U	4.7 U	4.7 U	4.6 U
Chrysene	10 U	4.7 U	4.7 U	4.6 U
Indeno(1,2,3-cd)pyrene	1 U	4.7 U	4.7 U	4.6 U
Total PAHs	BDL	BDL	**0.45 J**	BDL

MW-0403S

Date	4/28/2004	4/4/2013	8/27/2013	2/6/2014
Benzo(a)anthracene	1 U	4.8 U	4.7 U	4.6 U
Benzo(a)pyrene	1 U	4.8 U	4.7 U	4.6 U
Benzo(b)fluoranthene	1 U	4.8 U	4.7 U	4.6 U
Benzo(k)fluoranthene	1 U	4.8 U	4.7 U	4.6 U
Chrysene	10 U	4.8 U	4.7 U	4.6 U
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.7 U	4.6 U
Total PAHs	BDL	BDL	BDL	BDL

LEGEND:

- PROPERTY LINE
- CHAIN–LINK FENCE
- UTILITY POLE WITH GUY
- LIGHT POLE
- CATCH BASIN
- AW APPLICATION WELL
- PMW PERFORMANCE MONITORING WELL UPGRADIENT
- PMW PERFORMANCE MONITORING WELL DOWNGRADIEN
- NRW NAPL RECOVERY WELL
- MW MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS

NOTES:

1. ALL RESULTS ARE IN MICROGRAMS PER LITER (µg/L).
2. PAH = POLYCYCLIC AROMATIC HYDROCARBONS.
3. BDL = BELOW DETECTION LIMITS.
4. J = QUALIFIER INDICATES AN ESTIMATED VALUE.
5. U = QUALIFIER INDICATES CONSTITUENT NOT DETECTED AT DETECTION LIMITS.
6. BOLD RESULT INDICATES CONSTITUENT DETECTED ABOVE THE METHOD DETECTION LIMIT.
7. SHADED RESULT INDICATES CONSTITUENT EXCEEDS NY NYSDEC TOGS 1.1.1 WATER QUALITY STANDARD OR GUIDANCE VALUE.
8. INDIVIDUAL PAHs LISTED ARE CONTAMINANTS OF CONCERN AS LISTED IN THE RECORD OF DECISION.
9. BASE MAP SUPPLIED BY NYSEG, LATEST REVISION DATED APRIL 2004, AT A SCALE OF 1" = 60' AND PROPERTY BOUNDARIES AS PROVIDED BY KEYSTONE ASSOCIATES ARCHITECTS, ENGINEERS AND SURVEYORS, LLC. DATED OCTOBER 2008.

0 50' 100'
GRAPHIC SCALE

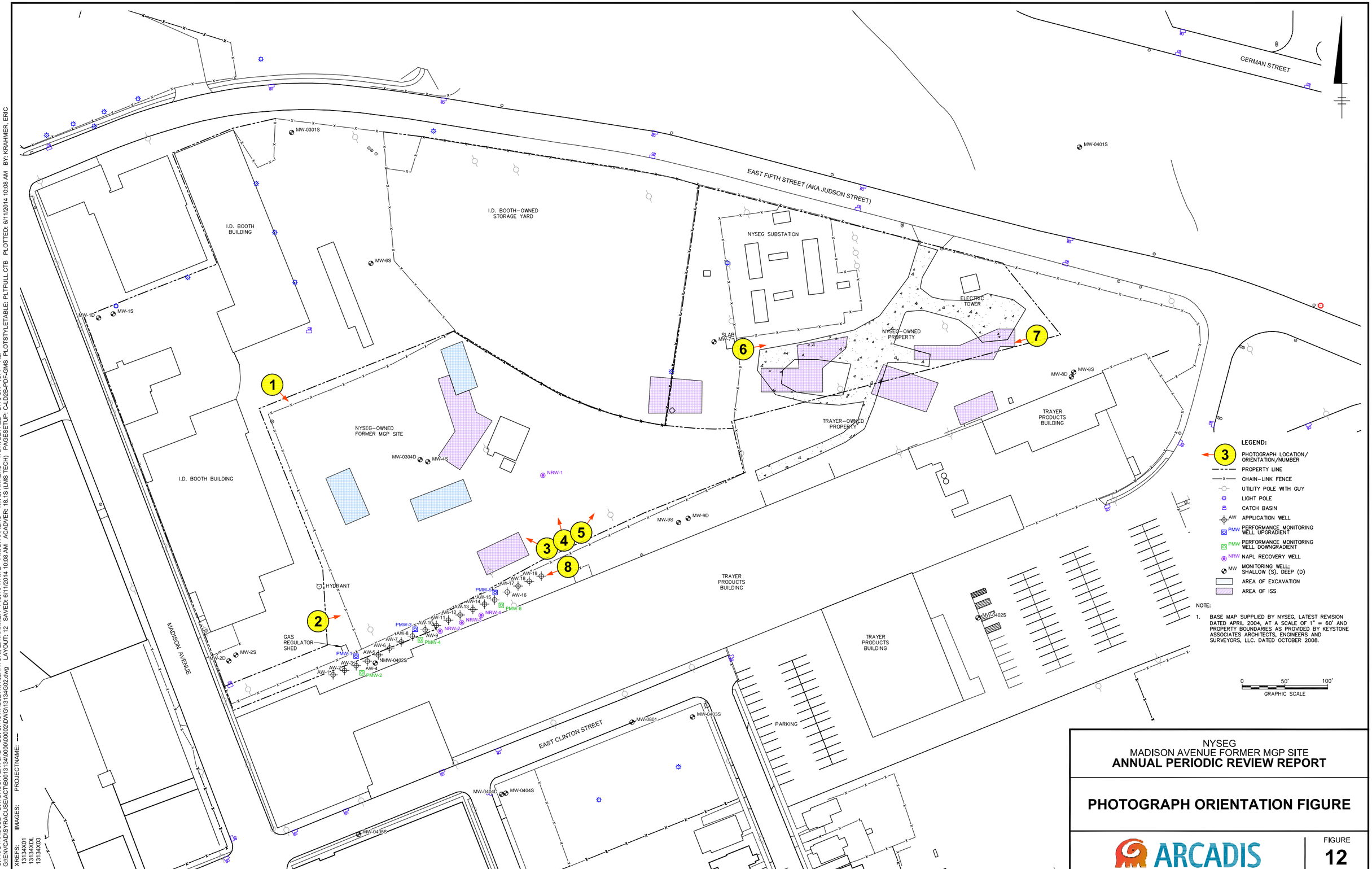
NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

PAH CONCENTRATIONS IN GROUNDWATER

ARCADIS

FIGURE
11

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: S. KOWALCZYK, K.SARTORI, E. KRAHMER PIC: K. WHITE PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR: ON="OFF"REF"
G:\ENVCAD\SYRACUSE\ACTIB0013134\0000\00002\DWG\131334C02.dwg LAYOUT: 11 SAVED: 6/13/2014 12:51 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 6/13/2014 12:51 PM BY: KRAHMER, ERIC
XREFS: 13134X01 13134XDL 13134X03 IMAGES: PROJECTNAME: ---



NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

PHOTOGRAPH ORIENTATION FIGURE

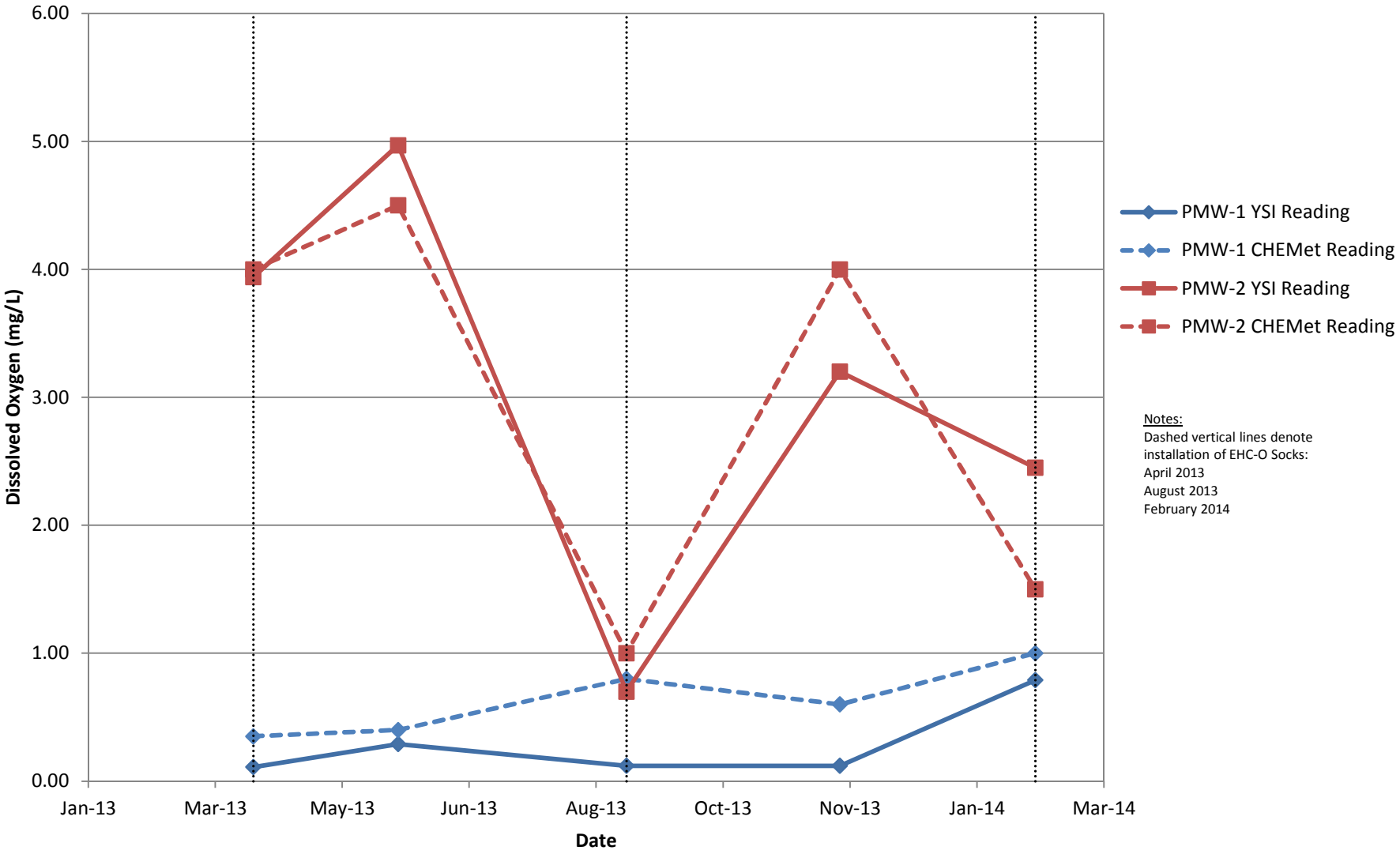
ARCADIS

FIGURE
12

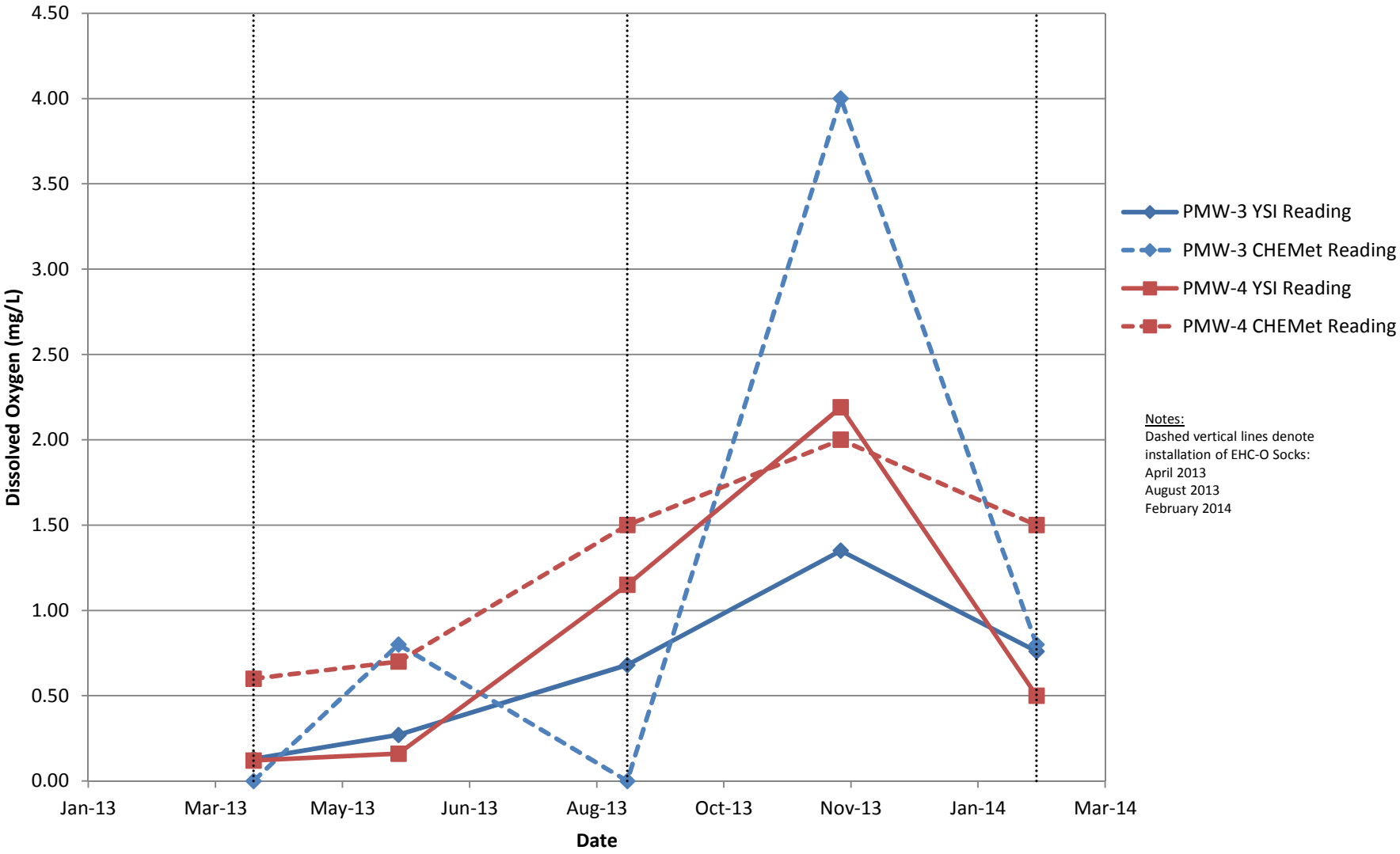
Appendix A

DO Concentration Graphs

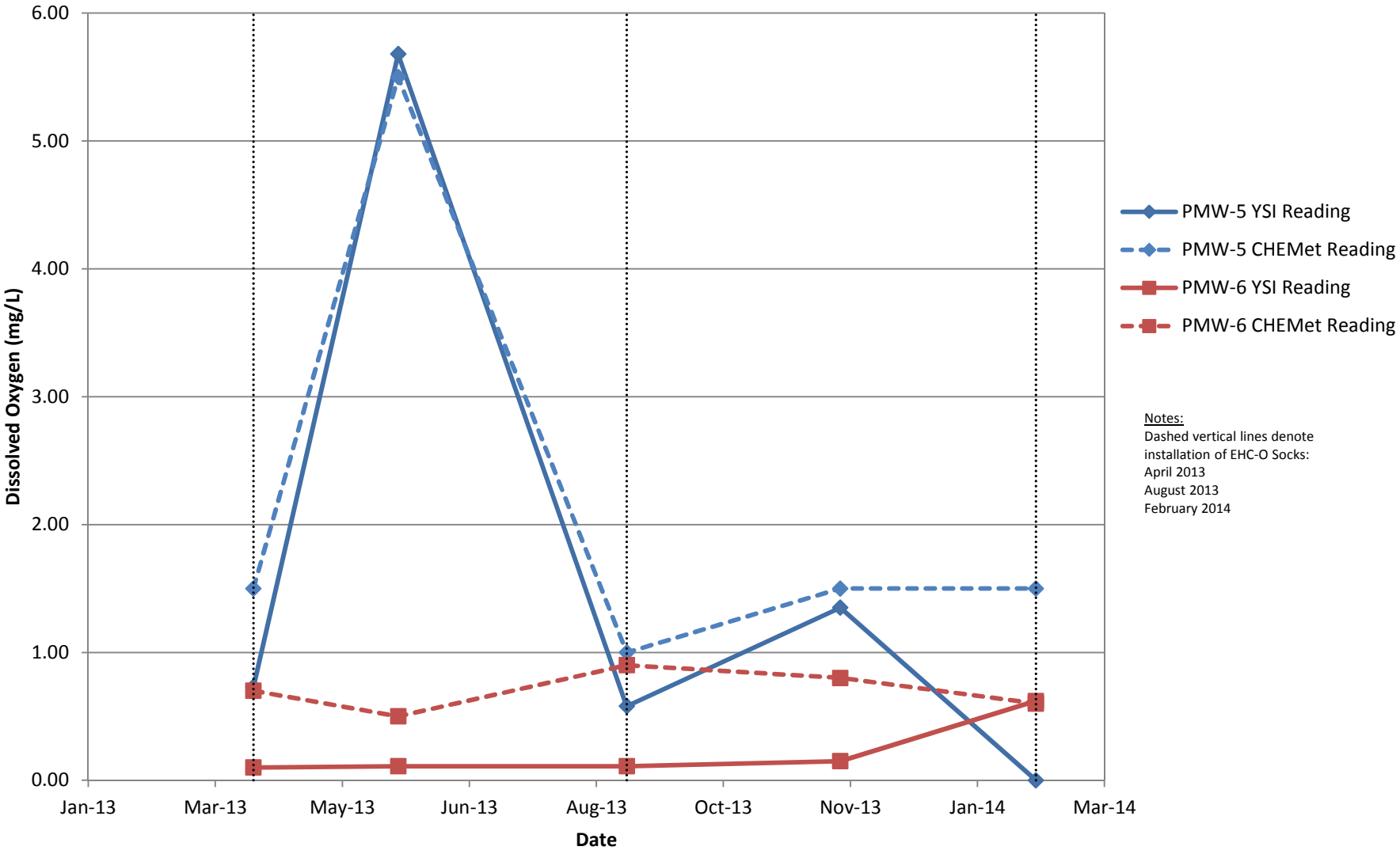
Graph 1 - Dissolved Oxygen Readings from PMW-1 and PMW-2



Graph 2 - Dissolved Oxygen Readings from PMW-3 and PMW-4



Graph 3 - Dissolved Oxygen Readings from PMW-5 and PMW-6



ARCADIS

Appendix B

Data Usability Summary Reports
(on Compact Disc)

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

NYSEG Elmira Madison Avenue Former MGP Site

Data Usability Summary Report (DUSR)

ELMIRA, NEW YORK

Volatile and Semivolatile Analyses

SDG #480-54419-1

Analyses Performed By:
TestAmerica
Amherst, New York

Report #21447R
Review Level: Tier III
Project: B0013134.0000.00002

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 480-54419-1 for samples collected in association with the NYSEG Elmira Madison Avenue Former MGP Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
PMW-02	480-54419-1	Water	2/5/2014		X				
MW-0404S	480-54419-10	Water	2/6/2014		X	X			
MW-0405S	480-54419-11	Water	2/6/2014		X	X			
DUP-020614	480-54419-12	Water	2/6/2014	MW-0405S	X	X			
MW-8S	480-54419-13	Water	2/7/2014		X	X			
MW-9S	480-54419-14	Water	2/7/2014		X	X			
TRIP BLANK	480-54419-15	Water	2/7/2014		X				
FB-020614	480-54419-16	Water	2/6/2014		X	X			
PMW-04	480-54419-2	Water	2/5/2014		X				
PMW-06	480-54419-3	Water	2/5/2014		X				
MW-7	480-54419-4	Water	2/6/2014		X	X			
MW-2S	480-54419-5	Water	2/6/2014		X	X			
MW-6S	480-54419-6	Water	2/6/2014		X	X			
MW-4S	480-54419-7	Water	2/6/2014		X	X			
MW-0402S	480-54419-8	Water	2/6/2014		X	X			
MW-0403S	480-54419-9	Water	2/6/2014		X	X			

Note:
1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location MW-7.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 8260C and 8270D as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA Region II SOP HW-24 - Validating Volatile Organic Compounds by SW-846 Method 8260B of October 2006 and New York State ASP 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

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

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis (7 days if unpreserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	14 days from collection to analysis	Cool to <6 °C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-0405S/DUP-020614	All compounds	U	U	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present				X	

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C.
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C.

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
DUP-020614	2-Fluorobiphenyl	< LL but > 10%
	Nitrobenzene-d5	AC
	p-Terphenyl-d14	AC
MW-8S	2-Fluorobiphenyl	< LL but > 10%
	Nitrobenzene-d5	AC
	p-Terphenyl-d14	< LL but > 10%

UL Upper control limit
AC Acceptable
DL Dilution analysis

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

Sample locations associated with internal standards exhibiting responses outside of the control limits are presented in the following table.

Sample Locations	Internal Standard	Response
MW-7 MW-4S FB-020614	1,4-Dichlorobenzene-d4	AC
	Naphthalene-d8	< LL but > 25%
	Acenaphthene-d10	< LL but > 25%
	Phenanthrene-d10	AC
	Chrysene-d12	AC
	Perylene-d12	AC
MW-2S MW-0404S DUP-020614 MW-8S	1,4-Dichlorobenzene-d4	AC
	Naphthalene-d8	< LL but > 25%
	Acenaphthene-d10	AC
	Phenanthrene-d10	AC
	Chrysene-d12	AC
	Perylene-d12	AC
MW-6S	1,4-Dichlorobenzene-d4	AC
	Naphthalene-d8	< LL but > 25%
	Acenaphthene-d10	< LL but > 25%
	Phenanthrene-d10	AC
	Chrysene-d12	< LL but > 25%
	Perylene-d12	AC
MW-0402S	1,4-Dichlorobenzene-d4	AC
	Naphthalene-d8	< LL but > 25%
	Acenaphthene-d10	AC
	Phenanthrene-d10	AC
	Chrysene-d12	< LL but > 25%

Sample Locations	Internal Standard	Response
	Perylene-d12	< LL but > 25%

AC Acceptable

The criteria used to evaluate the internal standard responses are presented in the following table. In the case of an internal standard deviation, the compounds quantitated under the deviant internal standard are qualified as documented in the table below.

Control limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action
	Detect	J
< the lower control limit (LL) but > 25%	Non-detect	UJ
	Detect	J
< 25%	Non-detect	R
	Detect	J

Note: Sample results were not qualified as rejected (R) due to the deviations listed above.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
MW-7	Benzo(g,h,i)perylene	<LL but >10%	<LL but >10%
	Indeno(1,2,3-cd)pyrene		
	Dibenzo(a,h)anthracene	<LL but >10%	AC

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
MW-7	Benzo(b)fluoranthene
	Chrysene
	Flourene

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-0405S/DUP-020614	All compounds	U	U	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X	X		
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present				X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

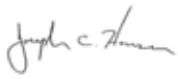
%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
480-54419-1	2/5/2014	ASP 2005	PMW-02	Water	Yes	--	--	--	--	
	2/6/2014	ASP 2005	MW-0404S	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/6/2014	ASP 2005	MW-0405S	Water	Yes	Yes	--	--	--	
	2/6/2014	ASP 2005	DUP-020614	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/7/2014	ASP 2005	MW-8S	Water	Yes	No	--	--	--	SVOC – Surrogate %Recovery, Internal standard
	2/7/2014	ASP 2005	MW-9S	Water	Yes	Yes	--	--	--	
	2/7/2014	ASP 2005	TRIP BLANK	Water	Yes	--	--	--	--	
	2/6/2014	ASP 2005	FB-020614	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/5/2014	ASP 2005	PMW-04	Water	Yes	--	--	--	--	
	2/5/2014	ASP 2005	PMW-06	Water	Yes	--	--	--	--	
	2/6/2014	ASP 2005	MW-7	Water	Yes	No	--	--	--	SVOC – Internal standard, MS/MSD %Recovery, RPD
	2/6/2014	ASP 2005	MW-2S	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/6/2014	ASP 2005	MW-6S	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/6/2014	ASP 2005	MW-4S	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/6/2014	ASP 2005	MW-0402S	Water	Yes	No	--	--	--	SVOC – Internal standard
	2/6/2014	ASP 2005	MW-0403S	Water	Yes	Yes	--	--	--	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

VALIDATION PERFORMED BY: Joseph C. Houser

SIGNATURE: 

DATE: March 21, 2014

PEER REVIEW: Dennis Capria

DATE: March 31, 2014

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **PMW-02**

Lab Sample ID: 480-54419-1
Client Matrix: Water

Date Sampled: 02/05/2014 1305
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36894.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0106			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0106				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	0.92	J	0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		66 - 137
Toluene-d8 (Surr)	108		71 - 126
4-Bromofluorobenzene (Surr)	109		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **PMW-04**

Lab Sample ID: 480-54419-2
Client Matrix: Water

Date Sampled: 02/05/2014 1430
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36895.D
Dilution:	4.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0131			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0131				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	150		1.6	4.0
Toluene	5.4		2.0	4.0
Ethylbenzene	55		3.0	4.0
m-Xylene & p-Xylene	14		2.6	8.0
o-Xylene	19		3.0	4.0
Xylenes, Total	33		2.6	8.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
Toluene-d8 (Surr)	104		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **PMW-06**

Lab Sample ID: 480-54419-3
Client Matrix: Water

Date Sampled: 02/05/2014 1400
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36896.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0157			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0157				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	89		0.41	1.0
Toluene	1.0		0.51	1.0
Ethylbenzene	42		0.74	1.0
m-Xylene & p-Xylene	17		0.66	2.0
o-Xylene	13		0.76	1.0
Xylenes, Total	30		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		66 - 137
Toluene-d8 (Surr)	106		71 - 126
4-Bromofluorobenzene (Surr)	112		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-7**

Lab Sample ID: 480-54419-4
Client Matrix: Water

Date Sampled: 02/06/2014 1015
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36897.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0222			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0222				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	0.45	J	0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
Toluene-d8 (Surr)	106		71 - 126
4-Bromofluorobenzene (Surr)	111		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-2S**

Lab Sample ID: 480-54419-5
Client Matrix: Water

Date Sampled: 02/06/2014 1210
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36898.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0247			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0247				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		66 - 137
Toluene-d8 (Surr)	107		71 - 126
4-Bromofluorobenzene (Surr)	108		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-6S**

Lab Sample ID: 480-54419-6
Client Matrix: Water

Date Sampled: 02/06/2014 1315
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36899.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0313			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	112		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-4S**

Lab Sample ID: 480-54419-7
Client Matrix: Water

Date Sampled: 02/06/2014 1525
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36900.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0338			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0338				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	107		71 - 126
4-Bromofluorobenzene (Surr)	110		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0402S**

Lab Sample ID: 480-54419-8
Client Matrix: Water

Date Sampled: 02/06/2014 1350
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36901.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0403			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0403				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		66 - 137
Toluene-d8 (Surr)	106		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0403S**

Lab Sample ID: 480-54419-9
Client Matrix: Water

Date Sampled: 02/06/2014 1240
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36902.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0428			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0428				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		66 - 137
Toluene-d8 (Surr)	105		71 - 126
4-Bromofluorobenzene (Surr)	109		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0404S**

Lab Sample ID: 480-54419-10
Client Matrix: Water

Date Sampled: 02/06/2014 1100
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36903.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0454			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0454				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
Toluene-d8 (Surr)	106		71 - 126
4-Bromofluorobenzene (Surr)	109		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0405S**

Lab Sample ID: 480-54419-11
Client Matrix: Water

Date Sampled: 02/06/2014 0915
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36904.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0519			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0519				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		66 - 137
Toluene-d8 (Surr)	108		71 - 126
4-Bromofluorobenzene (Surr)	111		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **DUP-020614**

Lab Sample ID: 480-54419-12
Client Matrix: Water

Date Sampled: 02/06/2014 0000
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36905.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0544			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0544				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		66 - 137
Toluene-d8 (Surr)	108		71 - 126
4-Bromofluorobenzene (Surr)	109		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-8S**

Lab Sample ID: 480-54419-13
Client Matrix: Water

Date Sampled: 02/07/2014 0930
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36906.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0608			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0608				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	108		71 - 126
4-Bromofluorobenzene (Surr)	111		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-9S**

Lab Sample ID: 480-54419-14
Client Matrix: Water

Date Sampled: 02/07/2014 0910
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36907.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0634			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0634				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	116		66 - 137
Toluene-d8 (Surr)	109		71 - 126
4-Bromofluorobenzene (Surr)	111		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-54419-15
Client Matrix: Water

Date Sampled: 02/07/2014 0000
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36908.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0659			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0659				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		66 - 137
Toluene-d8 (Surr)	109		71 - 126
4-Bromofluorobenzene (Surr)	112		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **FB-020614**

Lab Sample ID: 480-54419-16
Client Matrix: Water

Date Sampled: 02/06/2014 1400
Date Received: 02/08/2014 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-165315	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C36909.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 0724			Final Weight/Volume:	5 mL
Prep Date:	02/11/2014 0724				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	ND		0.41	1.0
Toluene	ND		0.51	1.0
Ethylbenzene	ND		0.74	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
o-Xylene	ND		0.76	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	120		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	112		73 - 120

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-7**

Lab Sample ID: 480-54419-4
Client Matrix: Water

Date Sampled: 02/06/2014 1015
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04197.D
Dilution:	1.0			Initial Weight/Volume:	254.8 mL
Analysis Date:	02/11/2014 0946			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND	* UJ	0.40	4.9
Acenaphthylene	ND	* UJ	0.37	4.9
Anthracene	ND		0.27	4.9
Benz(a)anthracene	ND		0.35	4.9
Benzo(a)pyrene	ND		0.46	4.9
Benzo(b)fluoranthene	ND	UJ	0.33	4.9
Benzo(g,h,i)perylene	ND	UJ	0.34	4.9
Benzo(k)fluoranthene	ND		0.72	4.9
Chrysene	ND	UJ	0.32	4.9
Dibenz(a,h)anthracene	ND	UJ	0.41	4.9
Fluoranthene	ND		0.39	4.9
Fluorene	ND	* UJ	0.35	4.9
Indeno(1,2,3-c,d)pyrene	ND	UJ	0.46	4.9
Naphthalene	ND	* UJ	0.75	4.9
Phenanthrene	ND		0.43	4.9
Pyrene	ND		0.33	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	83	*	46 - 120
2-Fluorobiphenyl	71	*	48 - 120
p-Terphenyl-d14	97		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-2S**

Lab Sample ID: 480-54419-5
Client Matrix: Water

Date Sampled: 02/06/2014 1210
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04198.D
Dilution:	1.0			Initial Weight/Volume:	261.7 mL
Analysis Date:	02/11/2014 1010			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.39	4.8
Acenaphthylene	ND		0.36	4.8
Anthracene	ND		0.27	4.8
Benz(a)anthracene	ND		0.34	4.8
Benzo(a)pyrene	ND		0.45	4.8
Benzo(b)fluoranthene	ND		0.32	4.8
Benzo(g,h,i)perylene	ND		0.33	4.8
Benzo(k)fluoranthene	ND		0.70	4.8
Chrysene	ND		0.32	4.8
Dibenz(a,h)anthracene	ND		0.40	4.8
Fluoranthene	ND		0.38	4.8
Fluorene	ND		0.34	4.8
Indeno(1,2,3-c,d)pyrene	ND		0.45	4.8
Naphthalene	ND	* U	0.73	4.8
Phenanthrene	ND		0.42	4.8
Pyrene	ND		0.32	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	92	*	46 - 120
2-Fluorobiphenyl	73		48 - 120
p-Terphenyl-d14	93		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-6S**

Lab Sample ID: 480-54419-6
Client Matrix: Water

Date Sampled: 02/06/2014 1315
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04199.D
Dilution:	1.0			Initial Weight/Volume:	262.4 mL
Analysis Date:	02/11/2014 1034			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND	← UJ	0.39	4.8
Acenaphthylene	ND	← UJ	0.36	4.8
Anthracene	ND		0.27	4.8
Benz(a)anthracene	ND	← UJ	0.34	4.8
Benzo(a)pyrene	ND		0.45	4.8
Benzo(b)fluoranthene	ND		0.32	4.8
Benzo(g,h,i)perylene	ND		0.33	4.8
Benzo(k)fluoranthene	ND		0.70	4.8
Chrysene	ND	← UJ	0.31	4.8
Dibenz(a,h)anthracene	ND		0.40	4.8
Fluoranthene	ND		0.38	4.8
Fluorene	ND	← UJ	0.34	4.8
Indeno(1,2,3-c,d)pyrene	ND		0.45	4.8
Naphthalene	ND	← UJ	0.72	4.8
Phenanthrene	ND		0.42	4.8
Pyrene	ND	← UJ	0.32	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	88	*	46 - 120
2-Fluorobiphenyl	74	*	48 - 120
p-Terphenyl-d14	86	*	67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-4S**

Lab Sample ID: 480-54419-7
Client Matrix: Water

Date Sampled: 02/06/2014 1525
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04200.D
Dilution:	1.0			Initial Weight/Volume:	261.2 mL
Analysis Date:	02/11/2014 1059			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND	U J	0.39	4.8
Acenaphthylene	ND	U J	0.36	4.8
Anthracene	ND		0.27	4.8
Benz(a)anthracene	ND		0.34	4.8
Benzo(a)pyrene	ND		0.45	4.8
Benzo(b)fluoranthene	ND		0.33	4.8
Benzo(g,h,i)perylene	ND		0.33	4.8
Benzo(k)fluoranthene	ND		0.70	4.8
Chrysene	ND		0.32	4.8
Dibenz(a,h)anthracene	ND		0.40	4.8
Fluoranthene	ND		0.38	4.8
Fluorene	ND	U J	0.34	4.8
Indeno(1,2,3-c,d)pyrene	ND		0.45	4.8
Naphthalene	ND	U J	0.73	4.8
Phenanthrene	ND		0.42	4.8
Pyrene	ND		0.33	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	77	*	46 - 120
2-Fluorobiphenyl	58	*	48 - 120
p-Terphenyl-d14	86		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0402S**

Lab Sample ID: 480-54419-8
Client Matrix: Water

Date Sampled: 02/06/2014 1350
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04201.D
Dilution:	1.0			Initial Weight/Volume:	264.2 mL
Analysis Date:	02/11/2014 1123			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.39	4.7
Acenaphthylene	ND		0.36	4.7
Anthracene	ND		0.26	4.7
Benz(a)anthracene	ND	UJ	0.34	4.7
Benzo(a)pyrene	ND	UJ	0.44	4.7
Benzo(b)fluoranthene	ND	UJ	0.32	4.7
Benzo(g,h,i)perylene	ND	UJ	0.33	4.7
Benzo(k)fluoranthene	ND	UJ	0.69	4.7
Chrysene	ND	UJ	0.31	4.7
Dibenz(a,h)anthracene	ND	UJ	0.40	4.7
Fluoranthene	ND		0.38	4.7
Fluorene	ND		0.34	4.7
Indeno(1,2,3-c,d)pyrene	ND	UJ	0.44	4.7
Naphthalene	ND	UJ	0.72	4.7
Phenanthrene	ND		0.42	4.7
Pyrene	ND	UJ	0.32	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	77	*	46 - 120
2-Fluorobiphenyl	60		48 - 120
p-Terphenyl-d14	79	*	67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0403S**

Lab Sample ID: 480-54419-9
Client Matrix: Water

Date Sampled: 02/06/2014 1240
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04202.D
Dilution:	1.0			Initial Weight/Volume:	270.2 mL
Analysis Date:	02/11/2014 1147			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.38	4.6
Acenaphthylene	ND		0.35	4.6
Anthracene	ND		0.26	4.6
Benz(a)anthracene	ND		0.33	4.6
Benzo(a)pyrene	ND		0.43	4.6
Benzo(b)fluoranthene	ND		0.31	4.6
Benzo(g,h,i)perylene	ND		0.32	4.6
Benzo(k)fluoranthene	ND		0.68	4.6
Chrysene	ND		0.31	4.6
Dibenz(a,h)anthracene	ND		0.39	4.6
Fluoranthene	ND		0.37	4.6
Fluorene	ND		0.33	4.6
Indeno(1,2,3-c,d)pyrene	ND		0.43	4.6
Naphthalene	ND		0.70	4.6
Phenanthrene	ND		0.41	4.6
Pyrene	ND		0.31	4.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	72		46 - 120
2-Fluorobiphenyl	60		48 - 120
p-Terphenyl-d14	85		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0404S**

Lab Sample ID: 480-54419-10
Client Matrix: Water

Date Sampled: 02/06/2014 1100
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04203.D
Dilution:	1.0			Initial Weight/Volume:	266.1 mL
Analysis Date:	02/11/2014 1211			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.39	4.7
Acenaphthylene	ND		0.36	4.7
Anthracene	ND		0.26	4.7
Benz(a)anthracene	ND		0.34	4.7
Benzo(a)pyrene	ND		0.44	4.7
Benzo(b)fluoranthene	ND		0.32	4.7
Benzo(g,h,i)perylene	ND		0.33	4.7
Benzo(k)fluoranthene	ND		0.69	4.7
Chrysene	ND		0.31	4.7
Dibenz(a,h)anthracene	ND		0.39	4.7
Fluoranthene	ND		0.38	4.7
Fluorene	ND		0.34	4.7
Indeno(1,2,3-c,d)pyrene	ND		0.44	4.7
Naphthalene	ND	U	0.71	4.7
Phenanthrene	ND		0.41	4.7
Pyrene	ND		0.32	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	86	*	46 - 120
2-Fluorobiphenyl	63		48 - 120
p-Terphenyl-d14	98		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-0405S**

Lab Sample ID: 480-54419-11
Client Matrix: Water

Date Sampled: 02/06/2014 0915
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04204.D
Dilution:	1.0			Initial Weight/Volume:	270.3 mL
Analysis Date:	02/11/2014 1235			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.38	4.6
Acenaphthylene	ND		0.35	4.6
Anthracene	ND		0.26	4.6
Benz(a)anthracene	ND		0.33	4.6
Benzo(a)pyrene	ND		0.43	4.6
Benzo(b)fluoranthene	ND		0.31	4.6
Benzo(g,h,i)perylene	ND		0.32	4.6
Benzo(k)fluoranthene	ND		0.68	4.6
Chrysene	ND		0.31	4.6
Dibenz(a,h)anthracene	ND		0.39	4.6
Fluoranthene	ND		0.37	4.6
Fluorene	ND		0.33	4.6
Indeno(1,2,3-c,d)pyrene	ND		0.43	4.6
Naphthalene	ND		0.70	4.6
Phenanthrene	ND		0.41	4.6
Pyrene	ND		0.31	4.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	85		46 - 120
2-Fluorobiphenyl	75		48 - 120
p-Terphenyl-d14	95		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **DUP-020614**

Lab Sample ID: 480-54419-12
Client Matrix: Water

Date Sampled: 02/06/2014 0000
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04205.D
Dilution:	1.0			Initial Weight/Volume:	266 mL
Analysis Date:	02/11/2014 1258			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.39	4.7
Acenaphthylene	ND		0.36	4.7
Anthracene	ND		0.26	4.7
Benz(a)anthracene	ND		0.34	4.7
Benzo(a)pyrene	ND		0.44	4.7
Benzo(b)fluoranthene	ND		0.32	4.7
Benzo(g,h,i)perylene	ND		0.33	4.7
Benzo(k)fluoranthene	ND		0.69	4.7
Chrysene	ND		0.31	4.7
Dibenz(a,h)anthracene	ND		0.39	4.7
Fluoranthene	ND		0.38	4.7
Fluorene	ND		0.34	4.7
Indeno(1,2,3-c,d)pyrene	ND		0.44	4.7
Naphthalene	ND	UJ	0.71	4.7
Phenanthrene	ND		0.41	4.7
Pyrene	ND		0.32	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	55	*	46 - 120
2-Fluorobiphenyl	37	X	48 - 120
p-Terphenyl-d14	70		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-8S**

Lab Sample ID: 480-54419-13
Client Matrix: Water

Date Sampled: 02/07/2014 0930
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04211.D
Dilution:	5.0			Initial Weight/Volume:	266.8 mL
Analysis Date:	02/11/2014 1521			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	6.0	J	1.9	23
Acenaphthylene	ND	UJ	1.8	23
Anthracene	ND		1.3	23
Benz(a)anthracene	ND		1.7	23
Benzo(a)pyrene	ND		2.2	23
Benzo(b)fluoranthene	ND		1.6	23
Benzo(g,h,i)perylene	ND		1.6	23
Benzo(k)fluoranthene	ND		3.4	23
Chrysene	ND		1.5	23
Dibenz(a,h)anthracene	ND		2.0	23
Fluoranthene	ND		1.9	23
Fluorene	3.5	J	1.7	23
Indeno(1,2,3-c,d)pyrene	ND	UJ	2.2	23
Naphthalene	ND		3.6	23
Phenanthrene	ND		2.1	23
Pyrene	ND		1.6	23

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	47	*	46 - 120
2-Fluorobiphenyl	28	X	48 - 120
p-Terphenyl-d14	47	X	67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **MW-9S**

Lab Sample ID: 480-54419-14
Client Matrix: Water

Date Sampled: 02/07/2014 0910
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04207.D
Dilution:	1.0			Initial Weight/Volume:	255.3 mL
Analysis Date:	02/11/2014 1346			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.40	4.9
Acenaphthylene	ND		0.37	4.9
Anthracene	ND		0.27	4.9
Benz(a)anthracene	ND		0.35	4.9
Benzo(a)pyrene	ND		0.46	4.9
Benzo(b)fluoranthene	ND		0.33	4.9
Benzo(g,h,i)perylene	ND		0.34	4.9
Benzo(k)fluoranthene	ND		0.71	4.9
Chrysene	ND		0.32	4.9
Dibenz(a,h)anthracene	ND		0.41	4.9
Fluoranthene	ND		0.39	4.9
Fluorene	ND		0.35	4.9
Indeno(1,2,3-c,d)pyrene	ND		0.46	4.9
Naphthalene	ND		0.74	4.9
Phenanthrene	ND		0.43	4.9
Pyrene	ND		0.33	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	90		46 - 120
2-Fluorobiphenyl	71		48 - 120
p-Terphenyl-d14	100		67 - 150

Client: New York State Electric & Gas

Job Number: 480-54419-1

Client Sample ID: **FB-020614**

Lab Sample ID: 480-54419-16
Client Matrix: Water

Date Sampled: 02/06/2014 1400
Date Received: 02/08/2014 0945

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-165328	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-165280	Lab File ID:	W04208.D
Dilution:	1.0			Initial Weight/Volume:	266.8 mL
Analysis Date:	02/11/2014 1410			Final Weight/Volume:	1 mL
Prep Date:	02/10/2014 1438			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND	UJ	0.38	4.7
Acenaphthylene	ND	UJ	0.36	4.7
Anthracene	ND		0.26	4.7
Benz(a)anthracene	ND		0.34	4.7
Benzo(a)pyrene	ND		0.44	4.7
Benzo(b)fluoranthene	ND		0.32	4.7
Benzo(g,h,i)perylene	ND		0.33	4.7
Benzo(k)fluoranthene	ND		0.68	4.7
Chrysene	ND		0.31	4.7
Dibenz(a,h)anthracene	ND		0.39	4.7
Fluoranthene	ND		0.37	4.7
Fluorene	ND	UJ	0.34	4.7
Indeno(1,2,3-c,d)pyrene	ND		0.44	4.7
Naphthalene	ND	UJ	0.71	4.7
Phenanthrene	ND		0.41	4.7
Pyrene	ND		0.32	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	91	*	46 - 120
2-Fluorobiphenyl	71	*	48 - 120
p-Terphenyl-d14	104		67 - 150

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
NYSEG/ARCADIS	Bruce Ahrens	2/7/2014	270202
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
295 Woodcliff Drive, Suite 301	585-662-4034		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Fairport / NY / 14450	Klaus Beyrle	Melissa Deyo	
Project Name and Location (State)	**Carrier/Waybill Number**		
Madison Avenue Former MGP site / Elmira, NY			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: BTEX	PAH's	Special Instructions/ Conditions of Receipt
PMW-02	2-5-14	1305		X						2			X		
PMW-04	2-5-14	1430		X						2			X		
PMW-06	2-5-14	1400		X						3			X		
MW-7	2-6-14	1015		X			6			9			X	X	MS/MSD
MW-2S	2-6-14	1210		X			2			3			X	X	
MW-6S	2-6-14	1315		X			2			3			X	X	
MW-[redacted]45	2-6-14	1525		X			2			3			X	X	
MW-0402S	2-6-14	1350		X			2			3			X	X	
MW-0403S	2-6-14	1240		X			2			3			X	X	
MW-0404S	2-6-14	1100		X			2			3			X	X	
MW-0405S	2-6-14	0915		X			2			3			X	X	
DUP-020614	2-6-14			X			2			3			X	X	

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

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other standard

QC Requirements (Specify)

	Date	Time
1. Relinquished By: Ryan Clare	2-7-14	1230
2. Relinquished By:		
3. Relinquished By:		

	Date	Time
1. Received By: FedEx		
2. Received By: [illegible] TA	2/8/14	0945
3. Received By:		

02/17/2014

Comments

Temp 3.3 2.8 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
NYSEG / ARCADIS	Bruce Ahrens	2/7/2014	270203
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 2**
295 Woodcliff Drive, Suite 301	585-662-4034		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Fairport / NY / 14450	Kim Beyrle	Melissa Deyo	
Project Name and Location (State)	**Carrier/Waybill Number**		
Madison Ave Former MGP Site (New York)			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	$ZnAc/NaOH$	Analysis: BTEX	PAH's	Special Instructions/ Conditions of Receipt
MW-85	2-7-14	0930		X			2			3			X	X	
MW-95	2-7-14	0910		X			2			3			X	X	
TRIP BLANK	—	—		X						1			X		
FB-020614	2-6-14	1400		X			2			3			X	X	

Page 369 OF 370

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

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	2-7-14	1230	1. Received By FedEx		
2. Relinquished By			2. Received By Workcenter TA	2/8/14	0945
3. Relinquished By			3. Received By		

02/17/2014

Comments

Temp 3.3 2.6 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Appendix C

Site Inspection Form

Site Inspection Form

Madison Avenue Former MGP Site - Elmira, New York

Date/Time: Feb 3, 2014 / morning

Weather: Breezy cold

Personnel: NJB

Temperature: cold 25°F

General Requirements

Photographs will be attached to document the condition of each inspection item identified below. A written description of any item(s) that is considered to be in poor condition is required.

1. General Site Conditions:

Monitoring wells	☒ Good	☐ Poor*	Except where noted below
Application wells	☒ Good	☐ Poor*	Except where noted below
Performance Monitoring wells	☒ Good	☐ Poor*	Except where noted below
NAPL Monitoring/Recovery wells	☒ Good	☐ Poor*	Except where noted below
Cover Areas (Grass and Stone)	☒ Good	☐ Poor*	
Signs of intrusive activities	☒ No	☐ Yes*	
Evidence of Settlement	☐ No	☐ Yes*	

Note:
-Cover area inspection is to determine if intrusive activities may have occurred since the previous site visit.

2. Site Cover Systems:

Borrowing/Depressions	☒ No	☐ Yes*
Standing Water	☒ No	☐ Yes*
Missing Stone	☒ No	☐ Yes*
Vegetative Growth	☒ No	☐ Yes*
Evidence of Settlement	☒ No	☐ Yes*
Sedimentation	☒ No	☐ Yes*
Damage/Failure	☒ No	☐ Yes*

3. Notes:

MW-4S needs new locking well cap and riser cut down. MW-6S needs locking well cap. MW-9D needs new road box; road box has settled. MW-9S needs new road box; locking tabs are broken. AW-02 needs new concrete surface completion; concrete is crumbling. AW-11 needs new steel lid; lid is cracked and broken. PMW-02; needs new surface completion; ground around has settled and surface completion leaks. NAW-01 needs riser cut down to fit locking well cap. NJB 2/3/14.

Site Inspection Form

Madison Avenue Former MGP Site - Elmira, New York

* Indicates condition should be reported to NYSEG Project Manager/OM&M Coordinator.

Appendix D

Site Inspection Photographic Logs

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 1	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: SE	
COMMENT: Picture showing stone coverage over former manufactured gas plant (MGP). Photo indicates cover in good condition; no repair required.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 2	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: E	
COMMENT: Picture showing stone coverage over former MGP. Photo indicates cover in good condition; no repair required.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 3	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: NW	
COMMENT: Picture showing stone coverage over former MGP. Photo indicates cover in good condition; no repair required. Area in foreground used for staging of steel sheetpile.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 4	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: N	
COMMENT: Picture showing stone coverage over former MGP property. Staged steel sheet piles in foreground; storage shed in center of picture. Photo indicates cover in good condition; no repair required.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 5	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: NE	
COMMENT: Picture showing stone and vegetation coverage over PCB IRM removal areas (1997) and purifier waste removal area (2011). Photo indicates cover in good condition; no repair required. Area used for staging of steel sheet piles.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 6	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: E	
COMMENT: Picture showing stone coverage and stock piled materials over ISS areas. Coverage appears in good condition, no repairs required.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 7	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: SW	
COMMENT: Picture showing grass area and stone coverage over ISS area, purifier waste IRM removal area (2004), and purifier waste removal area (2011). Photo indicates cover is in good condition; no repairs required.	

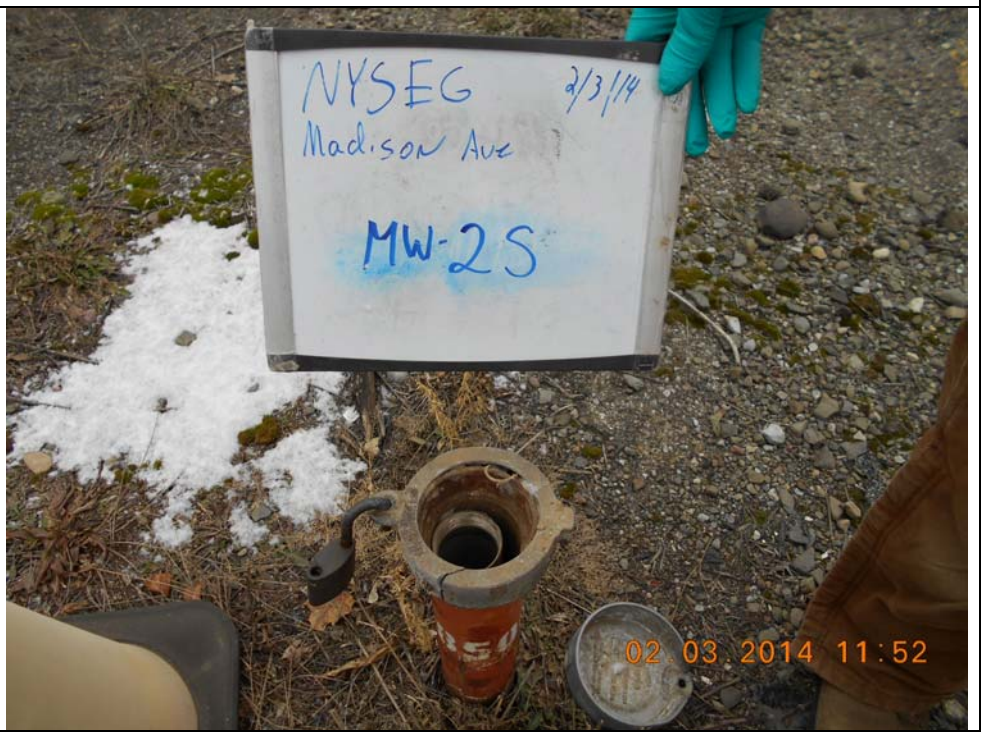
CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 8	
PHOTOGRAPHER: NJB	
DATE: 02/04/14	
DIRECTION: WSW	
COMMENT: Picture showing groundwater treatment system area. Photo indicates property is in good condition; no repairs required.	

Appendix E

Photographic Logs of Well Conditions

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-1S	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing MW-1S. Well is in good condition with cap and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-1D	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing MW-1D. Well is in good condition with cap and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-2S	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing E	
COMMENT: Photograph showing MW-2S. Cap mounting rig is cracked but competent. Well is in good condition with locking cap.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-2D	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing E	
COMMENT: Photograph showing MW-2D. Well is in good condition with locking cap.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-4S	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing W	
COMMENT: Photograph showing MW-4S. Well is in poor condition and requires repair; riser needs to be cut down to make room for locking well plug. Well cover is competent.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-6S	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing S	
COMMENT: Photograph showing MW-6S. Well is in good condition, but requires a locking cap. Well cover is competent.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-7 **PHOTOGRAPHER: NJB** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing MW-7. Well is in good condition. Well has well plug and locking well cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-8S **PHOTOGRAPHER: NJB** **DATE: 02/03/2014** **DIRECTION: facing S** **COMMENT:** Photograph of MW-8S. Well is in good condition with locking well cap and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-8D	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing S	
COMMENT: Photograph showing MW-8D. Well is in good condition with locking well cap and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-9S	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing S	
COMMENT: Photograph showing MW-9S. Tabs on road box are broken; well requires new road box set in concrete.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-9D	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing S	
COMMENT: Photograph showing MW-9D. Road box has settled and well lid is not able to be secured. Well requires new road box set in concrete.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0304D	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing W	
COMMENT: Photograph showing MW-0304D. Well is in good condition with well and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0402S	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing E	
COMMENT: Photograph showing MW-0402S. Well is in good condition with locking well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0403S	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing W	
COMMENT: Photograph showing MW-0403S. Well is in good condition with locking well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0404S **PHOTOGRAPHER: NJB** **DATE: 02/03/2014** **DIRECTION: facing E** **COMMENT:** Photograph showing MW-0404S. Well is in good condition with locking well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0404D **PHOTOGRAPHER: NJB** **DATE: 02/03/2014** **DIRECTION: facing E** **COMMENT:** Photograph of MW-0404D. Well is in good condition with locking well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0405S	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing E	
COMMENT: Photograph of MW-0405S. Well is in good condition with locking well plug and competent cover. Surrounding concrete flags are cracked, but road box is secure.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-01	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-01. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-02	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-02. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover. Concrete at surface completion is brittle and degrading; needs to be replaced.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-03	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-03. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-04	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-04. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-05	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-05. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-06	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-06. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-07	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-07. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-08	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-08. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-09	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-09. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-10	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-10. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-11	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-11. Well and stainless steel canister/assembly is in good condition. Well has well plug. Well cover is cracked and broken and requires replacement.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-12	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-12. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-13	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-13. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-14 **PHOTOGRAPHER: RDC** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing AW-14. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-15 **PHOTOGRAPHER: RDC** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing AW-15. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

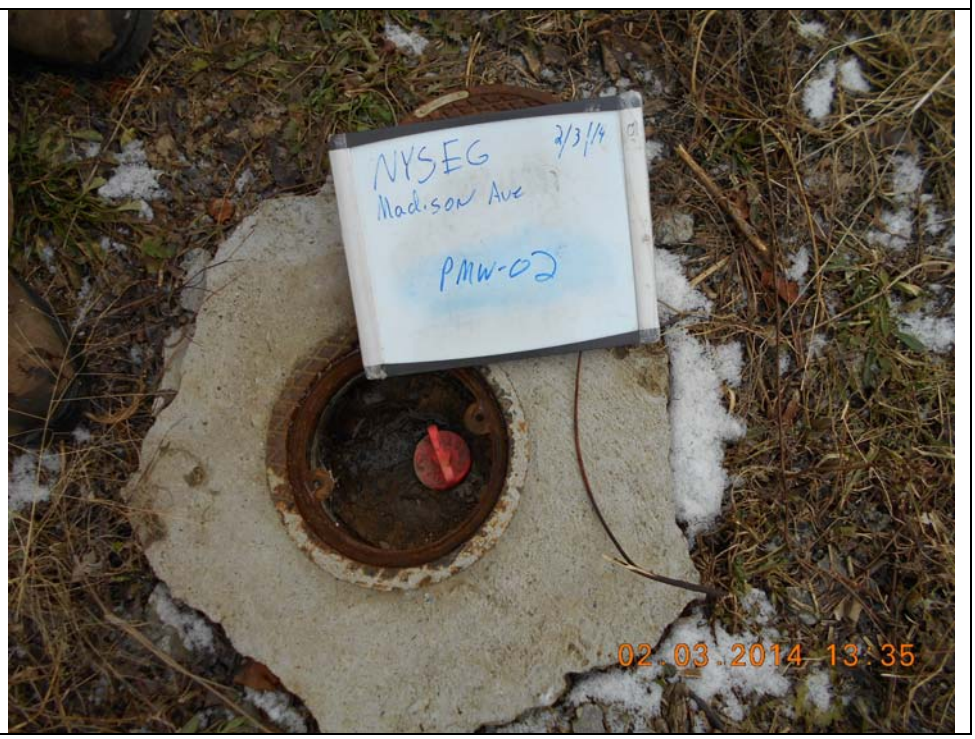
CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-16 **PHOTOGRAPHER: RDC** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing AW-16. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-17 **PHOTOGRAPHER: RDC** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing AW-17. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-18	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-18. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : AW-19	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing AW-19. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-01	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing PMW-01. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-02	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing PMW-02. Ground around surface completion has settled. New surface completion (concrete apron and road box) is required.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-03 **PHOTOGRAPHER: NJB** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing PMW-03. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-04 **PHOTOGRAPHER: NJB** **DATE: 02/03/2014** **DIRECTION: facing N** **COMMENT:** Photograph showing PMW-04. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-05	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing PMW-05. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-06	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing PMW-06. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	SITE NAME: Madison Avenue Former MGP Site
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-01	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing NRW-01. Well is in good condition with well plug and competent cover. Riser needs to be cut down to provide adequate room for well plug.	

CLIENT: NYSEG	SITE NAME: Madison Avenue Former MGP Site
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-02	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing NRW-02. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-03	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing NRW-03. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-04	
PHOTOGRAPHER: RDC	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing NRW-04. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0000	**SITE LOCATION: Elmira, New York**
WELL ID : NMW-0402S	
PHOTOGRAPHER: NJB	
DATE: 02/03/2014	
DIRECTION: facing N	
COMMENT: Photograph showing NMW-0402S. Well is in good condition with well plug and competent cover.	

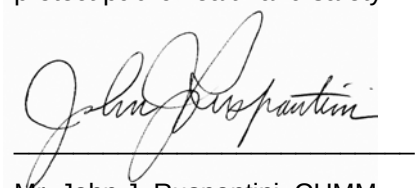
Appendix F

Certification Statement

Appendix F
Certification Statement

Based on information provided to NYSEG, NYSEG verifies that the site engineering controls described in the ROD (NYSDEC 2008) were in place during the reporting period, and has no knowledge that changes have occurred at the Madison Avenue Former MGP Site that would impair the ability of the engineering controls to protect public health and the environment, or constitute a violation or failure to comply with the operation and maintenance plan described in the *Site Management Plan*.

During the reporting period, NYSDEC, NYSEG and the City of Elmira have worked to define and are working to establish Institutional Controls at the Site that would further protect public health and safety.



Mr. John J. Ruspantini, CHMM
NYSEG, Lead Environmental Analyst