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Annual Periodic Review Report

Q5 through Q8

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

September 2015

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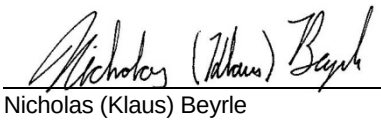
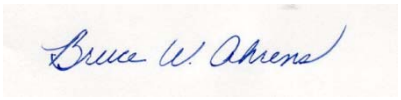


Nicholas (Klaus) Beyrle
Project Geologist



Bruce W. Ahrens
Associate Vice President

Margaret Carrillo-Sheridan, P.E.
Vice President

Annual Periodic Review Report Q5 through Q8

Madison Avenue Former MGP Site

Prepared for:
NYSEG

Prepared by:
ARCADIS of New York, Inc.
295 Woodcliff Drive
Third Floor
Suite 301
Fairport
New York 14450
Tel 585 385 0090
Fax 585 385 4198

Our Ref.:
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Table of Contents

Graphs

Appendix

1. Introduction

This *Annual Periodic Review Report* (report) summarizes monitoring results collected and operation and maintenance (O&M) activities conducted during the second 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 is 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 May 2014 (Q5 Quarterly Visit) through February 2015 (Q8 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 that 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 containing visual evidence of heavy MGP-related impacts from three areas of the site at depths up to 15 feet below ground surface (bgs)

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

- Excavation and removal of an oil/tar separator

In addition, the following were encountered during implementation of the site remedy and were removed for off-site disposal:

- 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

- An abandoned section of railroad

The groundwater remedy 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 identifies 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 groundwater remedy. However, PAHs (particularly the six identified as COCs) are also considered when evaluating the groundwater remedy.

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

NAPL monitoring and removal is also a component of the site remedy. The NAPL collection network consists of five 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 well installed in 2004)

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 and 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 in April 2013 to document pre-treatment conditions. The initiation of oxygen-

enhancement of groundwater was conducted after Baseline groundwater sampling was completed.

As required by the SMP, during this reporting period (Q5 through Q8):

- Performance monitoring, effectiveness monitoring, and ECH-O sock replacement were conducted semi-annually
- NAPL was gauged, and removed as required, on a quarterly basis
- Well inspection and site inspection were conducted 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 site remedy. *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 is delivering oxygen to the groundwater within the AWs (i.e., treatment area). Enhancement of oxygen could stimulate growth of indigenous biological populations and thereby enhance biodegradation of COCs within the treatment area.

As stated above, the technology of enhancing biodegradation targeted at BTEX compounds rather than 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 are also considered during the evaluation of the remedy.

As required by the SMP, performance monitoring was conducted semi-annually during the second year of treatment system operation (August 2014 [Q6] and February 2015 [Q8]).

Performance monitoring consisted of:

- Measuring and recording DO concentrations from each of the 19 AWs 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
- 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 Q6 and Q8 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 also collected on several successive days after change out of the socks during both events. DO within the AWs 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 through Q8 are presented on **Graphs 1 through 3**. Including the baseline data, 7 data sets exist for comparing the two field methods. Based on data collected to date, the two methods generally exhibit similar trends with the exception of PMW-2, PMW-3, and PMW-4 during the Q8 sampling event.

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). However, despite being found to be relatively accurate and reproducible, colorimetric methods can 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). 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).

Regression analysis was used to calculate correlation between YSI readings and CHEMet readings (from the Baseline event through the Q8 sampling event); the analysis indicates a correlation factor (R^2) of 0.93. This correlation factor indicates that the two DO measurement techniques have a moderate correlation.

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 at several time intervals 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 2013) 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 using both measurement techniques indicated that the aquifer was generally considered to be oxygen limited (i.e., average DO less than 1.0 to 2.0 mg/l).

General observations based on data provided in **Table 2** for the Q6 and Q8 events include:

- Average DO concentration in groundwater from upgradient PMWs during the reporting period was 1.12 mg/l / 0.78 mg/l (CHEMets / YSI meter); average DO concentration from downgradient PMWs was 1.63 mg/l / 0.74 mg/l (46% increase using the CHEMets/ 5% decrease using the YSI meter)

- 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 both site visits using both meters

  - PMW-3/PMW-4: DO concentrations in groundwater increased in the down gradient well during both the Q6 and Q8 events as measured by the CHEMet kit; either no change in DO (Q6) or a decrease in DO (Q8) was measured using the YSI meter. Therefore No consistent correlation between the CHEMet kit and YSI meter existed at these locations

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

Comparisons of DO data over time (Baseline Sampling through Q8) for each of the upgradient and downgradient PMW "pairs" are provided in **Graphs 1 through 3**. 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 difficult to interpret, including:

- Variations between the field analytical methods
- Potential variations in localized groundwater flow patterns in the immediate area of the PMWs (described in **Section 3.1**)
- The presence of dissolved BTEX appears to influence/interfere with the CHEMets' DO measurements when DO data over time are compared with dissolved BTEX data over time
- The presence of dense nonaqueous phase liquid (DNAPL) in NRW-2 and NMW-0402S (**Section 4**) confirms problematic compounds/redox species that affect DO readings are dissolved in groundwater near the PMWs

2.3 Biological Oxygen Demand

While not required by the SMP, groundwater samples collected during the Q6 event 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, and to confirm the results from the previous two BOD sampling events. Groundwater samples were also analyzed for carbonaceous BOD (cBOD). BOD analysis is used to determine the amount of oxygen demand that exists in groundwater. In the laboratory initial DO levels in samples are compared to DO levels after 5-days of incubation 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 should be less than or equal to the BOD result. The cBOD measurement is therefore 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 included in **Table 5** and presented on **Figure 3**.

BOD values ranged from below the laboratory detection limits (BDL) of 2.0 mg/l at both PMW-1 and PMW-5, to 6,900 mg/l at PMW-3. Similarly, cBOD values ranged from BDL (< 2.0 mg/l) at PMW-1 and PMW-5, to 10,600 mg/l at PMW-3.

The BOD/cBOD data at PMW-1 appears to be consistent with the concentration of BTEX present at PMW-2 (i.e., non-detectable concentrations of BTEX and no measurable concentrations of BOD/cBOD). Similarly, the BOD/cBOD data at PMW-3 appears to be consistent with the concentration of BTEX present at PMW-4 (dissolved BTEX with associated BOD/cBOD concentrations). However, the data at PMW-5 does not appear to be consistent with the concentrations of BTEX reported at PMW-6 (high dissolved BTEX with both BOD and cBOD below detectable levels).

2.4 pH

Groundwater samples were collected from the AWs and PMWs during the Q6 and Q8 sampling events and field analyzed for pH. The pH values were measured prior to change out of the Adventus oxygen-releasing socks. Results from the pH measurements are presented in **Table 3**.

As measured during Q6, the average pH value for upgradient PMWs was 7.04 Standard Units (SUs), and the average pH for downgradient PMWs was 6.95 SUs (approximately 1% decrease). However, the average pH of groundwater within the AWs prior to change out of the socks was 8.40 SUs (approximately a 19% increase compared to upgradient). A potential connection may exist between higher DO concentrations measured in AWs 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.

During the Q8 visit, the average pH value for upgradient PMWs was 7.23 SUs, and the average pH for downgradient PMWs was 7.01 SUs (approximately 3% decrease). However, the average pH of groundwater within the AWs prior to change out of the

socks was 7.08 SUs. The DO concentrations measured by both the YSI meter and CHEMets were significantly lower in the AWs during Q8 than historically recorded; therefore, the pH measurements in the AWs appear to be consistent with the DO results.

When pH values of groundwater collected during Q6 are looked at in individual AWs, a significant increase in the pH of groundwater occurs in AW-1 through AW-10; however, this increase is not observed in AW-11 through AW-19 located on the eastern end of the system. This is consistent with data collected during the first year of system monitoring.

2.5 DO and pH Values After New Sock Deployment

DO and pH parameters were recorded several times during Q6 and Q8 site visits subsequent to replacement of oxygen-releasing socks to evaluate variations early in the change-out cycle. Parameters were recorded before sock replacement 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.

2.5.1 pH Values in AWs Over Time

Results of groundwater pH measurements in AWs subsequent to replacement of the oxygen-releasing socks for the Q6 and Q8 sampling events are presented below.

- Q6 Sampling Event:
  - Prior to change out of the oxygen-releasing socks, the average pH of groundwater across the 19 AWs was approximately 8.40SUs; at five locations (AW-1, AW-2, AW-5, AW-6, AW-7 and AW-9) the pH prior to change out ranged from 9.86 to 12.25. pH values at the remaining AWs ranged from 6.76 to 7.93 SUs. The high pH values measured during Q6 at five of the six locations (except AW-2) were consistent with the Q4 measurements.
  - Average pH of groundwater across the 19 AWs 24-hours after installation of oxygen-releasing material was approximately 7.59 SUs, with values ranging from 6.55 to 10.07 SUs).

  - Average pH of groundwater across the 19AWs 48-hours after installation of oxygen-releasing material as approximately 7.55 SUs with values ranging from 6.69 to 9.67 SUs.

  - The highest groundwater pH values were measured at the western end of the row of AWs (AW-1, AW-2, AW-5, AW-6, AW-7, and AW-9).

  - Average groundwater pH concentrations decreased within 24-hours after change-out; this is not consistent with historical results.

- Q8 Sampling Visit:

  - Prior to change out of the oxygen-releasing socks, average pH of groundwater across the 19 AWs was 7.22 SUs. The five locations that historically exhibited high pH values prior to change out (AW-1, AW-5, AW-6, AW-7, and AW-9) did not exhibit high pH values during the Q8 visit.

  - 24-hours after change out of the socks, average pH across the 19 AWs was 8.14 SUs with AWs located at the western end of the row exhibiting comparatively higher pH values.

  - 48-hours after change out of the socks, average groundwater pH across the 19 AWs was 8.85 with AWs located at the western end of the row exhibiting comparatively higher pH values over all.

  - Average groundwater pH concentrations increased within 24-hours after change-out; this is consistent with historical results.

During the Q6 event, groundwater within the AWs exhibited a decrease in pH with increasing time after sock change-out that was inconsistent with historical and anticipated results. During the Q8 event, pH results for groundwater within the AWs exhibited the anticipated steady increase with respect to increasing time after sock change-out; this is consistent with the Baseline and Q4 results.

2.5.2 DO Concentrations in AWs Over Time

Results of groundwater DO measurements in AWs subsequent to replacement of the oxygen-releasing socks are presented below.

- Q6 Sampling Event
  - Prior to change out of the oxygen-releasing socks, average DO concentration of groundwater across the 19 AWs was 5.99 mg/l as measured with the CHEMet ampoules (note that at six locations the DO was >12 mg/l; a value of 12 mg/l was used for calculating average) and 9.73 mg/l measured with the YSI meter.
  - 24-hours after change out of the socks, average DO concentrations were 4.71 mg/l as measured with the CHEMet ampoules and 5.02 mg/l as measured with the YSI meter (i.e., measurements indicated a decrease in DO after change out).
  - 48-hours after change out of the socks, average DO concentrations were 3.58 mg/l as measured with the CHEMet ampoules and 3.80 mg/l as measured with the YSI meter (i.e., DO concentrations continued to decrease after change out).
  - The highest groundwater DO values were recorded at AWs located at the western end of the row of AWs.
- Q8 Sampling Event
  - Prior to change out of the oxygen-releasing socks, average DO concentration of groundwater across the 19 AWs was 0.43 mg/l as measured with the CHEMet ampoules and 0.23 mg/l measured with the YSI meter.
  - 24-hours after change out of the socks, DO concentrations were 8.34 mg/l as measured with the CHEMet ampoules and 6.92 mg/l as measured with the YSI meter.
  - 48-hours after change out of the socks, DO concentrations were 8.08 mg/l as measured with the CHEMet ampoules and 6.62 mg/l as measured with the YSI meter.

Similar to the pH data (Section 2.5.1), DO data collected during the Q6 sampling event were not consistent with anticipated (and historical) results. DO results collected during the Q8 sampling event confirm that socks are liberating oxygen and increasing DO in groundwater within the AWs (i.e., consistent with historical results).

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 PAHs) concentration trends across the site

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

- Semi-annual (Q6 and Q8) gauging of 6 PMWs, 19 PMWs, and 17 MWs
- Semi-annual (Q6 and Q8) sampling of groundwater from 10 monitoring wells for laboratory analysis of BTEX and PAHs

In addition, while not required by the SMP, sampling of groundwater from the three hydraulically downgradient PMWs (PMW-2, PMW-4, and PMW-6) for analysis of BTEX was conducted during the Q6 and Q8 visits to confirm the results from the previous sampling events and determine if a trend(s) in dissolved COCs exists subsequent to implementation of the soil remedy.

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 collected from PMWs

The water-level data were collected during the Q6 and Q8 visits from the following locations:

- 6 PMWs (PMW-1 through PMW-6)
- 19 AWs (AW-1 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 Q8 sampling events.

Figures 5 and **6** present the water table maps developed from the Q6 and Q8 gauging events, respectively. As shown on the figures, the general groundwater flow direction at the site is to the south during both gauging events. When comparing the water table maps between the two gauging events, no significant differences are observable, indicating that no significant changes to site-wide groundwater flow directions occurred during the reporting period. Additionally, site-wide groundwater flow directions during this reporting period were very similar to the previous reporting period (i.e., Baseline event through Q4).

In addition to site-wide evaluation of groundwater movement, water-level data collected from PMWs were also examined to evaluate localized groundwater flow at the AWs. 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-5 were higher than in downgradient PMW-6 during both Q6 and Q8 monitoring events.
- During the Q6 gauging event the groundwater elevation at upgradient well PMW-3 was higher than downgradient well PMW-4. However, during the Q8 event the groundwater elevation in PMW-4 was 0.04 feet higher than PMW-3.
- Groundwater elevations at up/downgradient well pair PMW-1 and PMW-2 were consistently higher in downgradient well PMW-2 (ranging from 0.70 to 1.20 feet higher) during the Q6 and Q8 gauging events, respectively.

As presented in the *Annual Periodic Review Report, Baseline Event through Q4* (ARCADIS 2015) the surface completion at PMW-2 was observed to be deteriorated and the surrounding ground surface settled. It was suspected that the higher groundwater elevation at PMW-2 was the result of surface water infiltration due to failure of its surface completion. The surface completion at PMW-2 was repaired during the Q6 event and while groundwater elevations still indicate a higher elevation at the "downgradient" location, the difference was smaller during the Q8. However, this pattern seems to follow a seasonal trend for this well pair and is likely not a result of the surface completion at PMW-2.

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.

Semi-annual (Q6) and annual (Q8) sampling of groundwater was conducted during this reporting period. During both events, groundwater from 10 monitoring wells identified in the SMP was collected for laboratory analysis of BTEX by United States Environmental Protection Agency (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 results collected in April 2004 and the Q1 through Q4 results 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 A**.

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 are presented on **Figure 7**. The most recent historical sampling data (2004) and

data collected during the first year of treatment system operation are also presented in **Table 5** and on **Figure 7**.

Total BTEX concentrations in groundwater collected from the 10 MWs during both the Q6 and Q8 reporting period were all below detection limits (BDL). Results from the second year of groundwater sampling are consistent with data reported since the 2004 sampling event.

3.2.2 Dissolved PAH COCs

Laboratory data for dissolved PAHs are also presented in **Table 5**; data for the six PAH COCs are presented on **Figure 8**. The most recent historical sampling data (2004) and data collected during the first year of treatment system operation are also presented in **Table 5** and on **Figure 8**. Total PAHs (tPAHs) are also presented on **Figure 8**.

Results from groundwater collected from the 10 MWs during the reporting period are summarized below.

Q6 Sampling:

- None of the 6 PAH COCs were detected in groundwater from any of the 10 MWs
- None of the non-COC PAHs exceeded a groundwater guidance value (only low concentrations of acenaphthene and fluorene were detected at one well [MW-8S])

Q8 Sampling:

- None of the 6 PAH COCs were detected in groundwater from 6 of the 10 MWs (MW-2S, MW-6S, MW-7, MW-9S, MW-0402S, and MW-0403S)
- Benzo(b)fluoranthene was detected at 3 of the 10 MWs (MW-4S, MW-0404S, and MW-0405S) above its groundwater guidance value. At each of these locations benzo(b)fluoranthene was detected well below the laboratory reporting limit (RL), however; slightly above the method detection limit (MDL), so, each of the results were reported with a "J" qualifier (i.e., estimated value).
- 5 of the 6 PAH COCs were present above their respective groundwater guidance values at MW-8S. While these are just guidance values (i.e., not groundwater

standards), this event represents the first detections of these analytes at this location.

- Concentrations of dissolved tPAHs in groundwater at MW-8S appear to be increasing

- Groundwater from MW-9S (located north/hydraulically upgradient of the Trayer Products building) did not have any detections of PAHs (consistent with previous sampling events).

- Groundwater from monitoring well MW-4S, located in the former MGP area, had 1 PAH COC analyte (benzo[b]fluoranthene) above its groundwater guidance value; historically at this location up to 4 PAH COCs have been reported at this location (benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, and indeno[1,2,3-cd]pyrene).

- Dissolved tPAH concentrations increased at 3 locations (MW-4S MW-0404S, and MW-0405S) when compared to recent sampling results (i.e., Q2 and Q4); however, concentrations were lower than results from the baseline sampling event.

3.3 Dissolved BTEX in Performance Monitoring Wells

Groundwater samples were collected from the three hydraulically downgradient PMWs (PMW-2, PMW-4, and PMW-6) during the Q6 and Q8 sampling events for laboratory analysis of BTEX by USEPA Method 8260b. Analysis of groundwater from these locations was conducted to monitor the concentrations of dissolved BTEX downgradient from the AWs over time.

Results from the laboratory analyses are presented in **Table 5** along with previous data collected since the Baseline event. The laboratory data are presented on **Figure 3**.

Dissolved BTEX in PMWs during the reporting period ranged from BDL at PMW-2 (Q6 and Q8 events) to 1,790 micrograms per liter (µg/l) at PMW-6 (Q8 event). Concentrations of dissolved BTEX over time in the three downgradient PMWs are presented on **Graphs 4 through 6**.

The lowest concentration of total BTEX was detected at PMW-2 (**Graph 4**), located at the western end of the row of AWs. The BTEX results from PMW-2 are consistent with

historical results (i.e., typically BDL). The lower concentrations of dissolved BTEX detected at PMW-2 appears to be consistent with observations of subsurface soil conditions documented during installation of the AWs and PMWs (no visual evidence of staining, blebs, etc. was observed at AW-1, AW-2, or AW-3 [the western three AWs]).

The highest concentrations of BTEX were detected at PMW-6 (**Graph 6**), which is located near the eastern end of the row of AWs. The concentrations of each of the BTEX analytes has been increasing in PMW-6 since the Baseline sampling event, and increased significantly during the Q8 sampling event. More frequent observations of staining and heavy impacts in soil were documented during installation of the AWs located along the central and eastern portions of the treatment zone. Additionally, NAPL was detected in AW-17 (approximately 30 feet east of PMW-6) during the Q8 monitoring event.

As shown on **Graph 5**, the concentration of total BTEX at PMW-4 has been trending downward over time.

4. NAPL Monitoring Results

Consistent with the SMP, NAPL gauging was conducted quarterly during the second year of system operation. 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**. A summary of the NAPL gauging data is included in **Table 7**.

Similar to previous gauging events, DNAPL was detected in two of the five NAPL recovery wells (NRW-2 and NMW-0402S) during the reporting period. DNAPL was detected in NMW-0402S during all four gauging events ranging from 1.1 to 1.5 feet in apparent thickness within the well. DNAPL was detected in NRW-2 during the Q6, Q7, and Q8 sampling events ranging in apparent thickness from 0.4 to 1.2 feet within the well. In addition, trace amounts of DNAPL had been historically detected on the probe in PMW-3 (April and May 2013), however; the quantity was not sufficient to measure or recover. During this reporting period, no trace of DNAPL was detected at PMW-3.

During the Q8 event, trace amounts of NAPL were observed on the sock canister suspended in AW-17. AW-17 will be monitored semi-annually for recoverable NAPL. In the event recoverable NAPL is observed, it will be removed and the well will be added to the quarterly NAPL gauging schedule.

Since the Baseline event in 2013, a total of approximately 2.3 gallons of DNAPL has been manually removed using a bailer from NRW-2 and NMW-0402S (a total of 1.6 gallons removed during the first year of operation and 0.7 gallons during the second year). As shown on the summary table and graph in **Appendix B**, the quantity of DNAPL recovered from the wells is decreasing over time. Recovered 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.

Operation and maintenance activities during the reporting period included the following:

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

In addition, deficiencies and maintenance activities recommended in the *Annual Periodic Review Report, Baseline Event through Q4* were addressed during the Q6 visit.

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 site cover materials, 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 conducted during the previous annual site visit (Q4) identified deficiencies that were reported in the first *Annual Periodic Review Report, Baseline Event through Q4* (ARCADIS 2015). These deficiencies were repaired during the Q6 site visit, and included:

- Surface completions were replaced at AW-2, PMW-2, MW-9S, and MW-9D by Nothnagle Drilling, Inc. (ARCADIS subcontractor)
- Risers were cut down to allow for better seal of covers at road boxes at PMW-2, MW-4S, and NRW-1

- Accumulated sediment was removed from MW-2S, MW-2D, MW-4S, and MW-9D by Nothnagle Drilling, Inc. using an air lift pump
- A replacement aluminum locking well cap was installed at MW-6S
- The steel lid to the road box was replaced at AW-11
- The tops of casing and ground surface elevations at MW-4S, MW-9S, MW-9D, AW-2, PMW-2, and NRW-1 were re-surveyed by Keystone Associates (ARCADIS subcontractor)

In addition to the deficiencies noted during the Q4 visit, the following additional tasks were completed during the Q6 visit:

- Accumulated sediment was manually removed with a bailer from AW-15, AW-16, AW-19, PMW-3, PMW-5, and PMW-6
- Locking well caps were replaced/installed at MW-4S and NRW-1

Per the SMP, PMWs, MWs, and AWs associated with the site were gauged during the Q6 and Q8 visits. The objective for gauging wells was to determine if siltation had occurred in sufficient quantity to warrant additional development/sediment removal. Depth to bottom measurements and accumulated thickness of sediments (e.g., silts, sands) for each well are presented in **Table 7** (note that gauging data reported in **Table 7** for the Q6 visit were collected subsequent to removal of sediments from the wells identified above). 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 of the 17 MWs to their respective well construction logs was conducted to determine accumulation of material within each well.

- Based on gauging data from the Q6 event compared to well installation information, only one well (MW-2S) contained sediments that occluded greater than 10% of the well screen (approximately 17% of the screen was still occluded after re-development)

- Based on gauging data from the Q8 event compared to well installation information, two MWs (MW-2S and MW-9S) contained sediments that occluded greater than 10% of the well screen (approximately 16 and 20%, respectively)

- Three additional MWs (MW-1D, MW-2D, and MW-4S) contained sediments that occluded between 5 to 9% of their well screens during both the Q6 and Q8 visits

Sediment removal at MW-2S and MW-9S should be attempted again during future site visits using non- manual methods (e.g., Waterra pump, air lift pump, whaler pump).

Based on visual inspections, no additional repairs to 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 logs was also conducted to determine accumulation of material within each well (note that each AW was constructed with a 2-foot-long collection sump). As mentioned above, accumulated sediment was manually removed with a bailer from AW-15, AW-16, and AW-19 during the Q6 event; depth to bottom measurements and accumulated thickness of sediments reported in **Table 7** were collected subsequent to removal of sediments.

Results from the gauging indicated:

- Gauging data from the Q6 event indicated that none of the AWs contained appreciable accumulation of sediments within the sumps; accumulation ranged from 0 to 0.57 feet.

- Gauging data from the Q8 event indicated that AW-16 contained approximately 3.0 feet of accumulated sediments (i.e., sediments accumulation exceeded the sump depth), and two AWs (AW-17 and AW-19) contained approximately 1.4 and 1.6 feet of sediments within their sumps, respectively.

- Sediment appears to be accumulating in many of the wells over time

While only AW-16 contained sediments greater than the sump depth and requires removal, removal of sediments from AW-17 and AW-19 is also recommended.

Based on visual inspections, no additional repairs to AWs are required.

5.1.3 Performance Monitoring Wells

Comparison of depth to bottom measurements collected during the reporting period for each of the six PMW to their respective well construction log was also conducted to determine accumulation of material within each well (note that each PMW was constructed with a 2-foot-long collection sump). As mentioned above, accumulated sediment was manually removed with a bailer from PMW-3, PMW-5, and PMW-6 during the Q6 event; depth to bottom measurements and accumulated thickness of sediments reported in **Table 7** were collected subsequent to removal of sediments.

Results from the gauging indicate:

- Sediment accumulation within PMW-1, PMW-2, PMW-4, and PMW-5 does not appear to be an issue (i.e., only occasional removal of sediments is required using a bailer as accumulated thickness is generally 0.5 to 1.0 feet)

- Continued removal of sediments using a bailer has not been successful at PMW-3; accumulated thicknesses of sediments within the well consistently range for 3.9 to 5 feet because the well was initially gauged in April 2013 (Baseline event)

Re-development of PMW-3 is recommended. If sediment accumulation continues to be an issue, the integrity of the well should be evaluated.

Based on visual inspections, no additional repairs to PMWs are required.

5.1.4 NAPL Recovery Wells

Comparison of depth to bottom measurements collected during the reporting period for each of the four NRWs and NMW-0402S to their respective well construction logs was also conducted to determine accumulation of material within each well. Each NRW was 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 feet. (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.

5.2 Replacement of Oxygen-Releasing Material

Replacement of Adventus EHC-O oxygen-releasing socks was conducted during the following site visits during this reporting period:

- Replacement #3: August 2014 (Q6 semi-annual site visit)
- Replacement #4: February 2015 (Q8 annual site visit)

During initial installation of the EHC-O oxygen-releasing material (Baseline event), 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 Q6 semi-annual and Q8 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. As required by the SMP, surface cover of the site (stone, gravel, vegetative, and/or asphalt cover) 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.

The annual site inspection was conducted February 23, 2015. During the annual inspection significant snow cover (0.5 to 1.5 feet) covered the site; however, no evidence of settling, obvious obstructions within drainage features (e.g., catch basins) or disturbance activities were observed. A Site Inspection Form is included in **Appendix C**; however, for verification purposes, the site will be re-inspected during the Q10 (August 2015) semi-annual site visit and a Site Inspection Form completed 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 9**.

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 E**. No deficiencies were identified.

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 second year of treatment system monitoring and operation are presented below.

7.1 Conclusions

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

7.1.1 Performance Monitoring

- DO data collected within AWs during the Q8 monitoring event confirmed that the Adventus EHC-O socks were liberating oxygen to groundwater and the objective of the treatment system was being achieved. This is consistent with data collected during the Baseline and Q4 monitoring events. However, DO data collected during the Q6 monitoring event is suspect, with 10 to 14 AWs showing a decrease in DO immediately after change out of oxygen-releasing socks.

- Establishing DO and pH trends in upgradient/downgradient PMW "pairs" has been difficult due to a number of site characteristics, including establishing localized groundwater flow directions in the immediate vicinity if the AWs, the presence of impacted soil identified during the installation of several AWs and PMWs, the historic presence of DNAPL in PMW-3, and the presence of DNAPL at NMW-0402S and NRW-2.

- Groundwater samples were collected from the three hydraulically downgradient PMWs (PMW-2, PMW-4, and PMW-6) during the Q6 and Q8 sampling events for laboratory analysis of BTEX:

  - During both events, the lowest concentrations of BTEX were detected at the western end of the row of AWs (PMW-2); this is consistent with previous sampling events

  - During both sampling events, the highest concentrations of BTEX were detected at PMW-6, located near the eastern end of the row of AWs; dissolved BTEX concentrations have been increasing at this location since the Baseline sampling event

  - Dissolved BTEX has been decreasing at PMW-4 since the Baseline sampling event and appears to exhibit a seasonal cyclic pattern (comparably lower dissolved BTEX concentrations are reported during the summer sampling event and higher concentrations reported during the winter sampling event).

  - Relative concentrations of BTEX are consistent with observations of subsurface soil conditions documented during installation of the AWs and PMWs (**Figure 4**)

- BOD data collected during the Q6 visit indicated that relative concentrations of BOD correlated well with the distribution of dissolved BTEX at PMW "pairs" PMW-1/PMW-2 and PMW-3/PMW-4; however, do not correlate well at PMW-5/PMW-6

- Groundwater samples were collected from the 19 AWs during both the Q6 and Q8 sampling events during the reporting period and field analyzed for pH:

  - During the Q6 event, the average pH of groundwater within the 19 AWs decreased after the new oxygen-releasing socks were installed. These results were not consistent with the anticipated (or historical) results. The pH in water within the AWs results also dropped, which may support the position that oxygen was not yet being liberated from the socks (rather than both DO instruments and the pH meter were not working properly).

  - During the Q8 event, the average pH of groundwater within the 19 AWs increased after the new oxygen-releasing socks were installed and the pH within the AWs increased. These results were consistent with the anticipated (and historical) results, and support the conclusion that oxygen was being released to the groundwater.

7.1.2 Effectiveness Monitoring

- Groundwater gauging conducted during the Q6 and Q8 events indicated that:

  - Site-wide groundwater flow direction was to the south

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

  - the soil remedy did not result in changes to site-wide groundwater flow direction when compared to pre-site remedy constructions/installation

- Total BTEX concentrations in groundwater collected from the 10 MWs located across the site were all BDL during both the Q6 and Q8 sampling events; results from the second year are similar to data reported from the first year of groundwater sampling and from the 2004 sampling event

- None of the PAH COCs were detected during the Q6 sampling event from the 10 MWs located across the site

- PAH concentrations in groundwater collected during the Q8 sampling event from the 10 MWs located across the site indicated:

  - One of the 6 PAH COCs (benzo(b)fluoranthene) was detected in groundwater from 3 of the 8 wells located around the perimeter of the study area (also detected in 1 interior well)

  - MW-8S had detectable concentrations of 5 of the 6 PAH COCs

  - None of the non-COC PAHs were detected in the 8 wells located around the perimeter of the study area at concentrations above groundwater guidance vales

7.1.3 NAPL Monitoring

- NAPL was detected in the same two NAPL recovery wells (NRW-2 and NMW-0402S) as previous monitoring periods

- The total volume of NAPL removed to date by manual bailing is approximately 2.3 gallons; the quantity of recovered NAPL during each site visit is decreasing over time

7.1.4 Treatment System O&M

- Required repairs identified in the first annual periodic report were completed during the Q6 site visit

- Visual inspection of site wells was conducted during the Q6 site visit; no damages requiring repairs were observed. Significant snow cover present during the Q8 site visit prevented a complete site inspection

- Depth to bottom measurements collected during Q8 indicated that:

  - AW-16, AW-17, and AW-19 had significant quantities of accumulated sediments (1.4 to 3 feet)

  - PMW-3 consistently contains accumulated sediments above the capacity of the sump

  - None of the NRWs contained significant quantities of accumulated material

- Adventus EHC-O oxygen-releasing socks were replaced in during the Q6 and Q8 events; performance of the socks could not be documented subsequent to the Q6 change out

7.2 Recommendations

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

7.2.1 Performance Monitoring

- Continue with performance monitoring tasks identified in the SMP (Q10 and Q12) to further develop DO concentration and pH data

7.2.2 Effectiveness Monitoring

- Continue with effectiveness monitoring tasks identified in the SMP (Q10 and Q12) to further develop groundwater quality data

7.2.3 NAPL Monitoring

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

- Continue to gauge PMW-3 on a semi-annual basis for the presence of NAPL; remove if present and recoverable (NAPL not been present since 2013)

- Based on the staining observed on the canister during the Q8 event, gauge AW-17 during the quarterly site events for the presence of NAPL

7.2.4 Treatment System Operation and Maintenance

- Continue semi-annual (Q10) and annual (Q12) O&M as identified in the SMP

- Removal of sediments using a bailer has not been successful at PMW-3; accumulated thicknesses of sediments within the well consistently range for 3.9 to 5 feet since O&M was initiated. Therefore, re-development of PMW-3 is recommended. If sediment accumulation continues to be an issue, the integrity of the well should be evaluated

- Sediment removal at MW-2S, MW-9S, AW-16 (contained sediments greater than the sump depth), AW-17, and AW-19 should be performed

- Perform site-wide inspection during Q10 semi-annual site visit (snow cover prevented inspection during Q8 visit)

8. Certification Statement

A statement from NYSEG confirming that site controls were in place and effective and, based on information provided and site conditions to the extent that they could be observed, 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, 2015. *Annual Periodic Review Report, Baseline Event through Q4*. Madison Avenue Former MGP Site, Elmira, New York (February 2015).

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

ARCADIS. 2007. *Supplemental Remedial Investigation Report*, Madison Avenue MGP Site, Elmira, New York (February 2007).

New York State Department of Environmental Conservation. 2008. *Record of Decision*, Madison Avenue Former manufactured Gas Plant (MGP) Site, City of Elmira, Chemung County, New York. Site Number 8-08-018. 2008.

Walton-Day, Katherine, Donald L. Macalady, Myron H. Brooks, and Vernon T. Tate. 1990. Field methods for measurement of ground water redox chemical parameters. *Ground Water Monitoring Review.* Vol.10, No. 4: 81-89.

White, Art F., Maria L. Peterson, and Ray D. Solbau. 1990. Measurement and interpretation of low levels of dissolved oxygen in ground water. *Ground Water* Vol. 28, No. 4: 584-590.

Wilkin, Richard T., Mary S. McNeil, Cherri J Adair, and John T. Wilson. 2001. Field measurement of dissolved oxygen: a comparison of methods. *Ground Water Monitoring Review.* Vol.21, No. 4: 124-132.

ARCADIS

Tables

Table 1
Monitoring, Gauging, and Operation & Maintenance Schedule

Annual Periodic Review Report, Q5 through Q8
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
Q5 (Quarterly) Monitoring	May 2014			X			
Q6 (Semi-annual) Monitoring	August 2014	X	X	X			X
Q7 (Quarterly) Monitoring	November 2014			X			
Q8 (Annual) Monitoring	February 2015	X	X	X	X	X	X

Notes:

- **Performance Monitoring** – Included measuring pH and DO concentrations at 6 PMWs and 19 AWs
- **Effectiveness Monitoring** – Included semi-annual gauging of 6 PMWs and 17 MWs; sampling 3 PMWs for BOD and cBOD during the Q6 site visit, and semi-annual sampling of 10 site MWs for BTEX and PAHs. Also included 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, and removal of NAPL if present.
- **Site and Well Inspections** – Included visual inspections of the site cover materials and MWs, PMWs, NRWs, NMW, and AWs associated with the site

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		3-Month Sampling (Q1)		6-Month Sampling (Q2)		9-Month Sampling (Q3)		12-Month Sampling (Q4)		18-Month Sampling (Q6)		24-Month Sampling (Q8)	
		April 1-5, 2013		May 28-30, 2013		August 26-30, 2013		November 19, 2013		February 6, 2014		August 4-7, 2014		February 23-27, 2015	
		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)	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	0.80	0.11	0.80	0.19
PMW-02	Downgradient	4.00	3.94	4.50	4.97	1.00	0.70	4.00	3.20	1.50	2.45	2.00	1.54	2.00	0.41
PMW-03	Upgradient	NA	0.13	0.80	0.27	NA	0.68	4.00	1.35	0.80	0.76	1.00	1.95	2.00	0.96
PMW-04	Downgradient	0.60	0.12	0.70	0.16	1.50	1.15	2.00	2.19	1.50	0.50	1.50	1.99	3.00	0.13
PMW-05	Upgradient	1.50	0.73	5.50	5.68	1.00	0.58	1.50	1.35	1.50	0.00	1.50	1.18	0.60	0.29
PMW-06	Downgradient	0.70	0.10	0.50	0.11	0.90	0.11	0.80	0.15	0.60	0.62	0.90	0.07	0.40	0.32
AW-01	Internal	0.35	0.08	>12*	19.16	8.00	10.26	6.00	8.09	>12*	23.56	>12*	28.67	0.60	0.21
AW-02	Internal	0.60	0.07	>12*	19.24	2.00	1.82	2.50	1.54	0.90	0.09	>12*	19.18	2.00	0.13
AW-03	Internal	1.00	0.15	5.00	4.49	1.50	1.79	0.95	0.24	1.00	0.84	0.80	0.37	0.60	0.29
AW-04	Internal	2.00	2.00	>12*	14.61	3.00	3.52	>12*	22.81	5.50	5.84	7.00	6.19	0.80	0.20
AW-05	Internal	0.80	0.10	>12*	21.08	>12*	21.79	>12*	25.19	>12*	24.70	>12*	21.48	0.40	0.11
AW-06	Internal	0.40	0.09	>12*	25.08	>12*	23.79	>12*	29.28	>12*	31.04	>12*	21.12	0.00	0.23
AW-07	Internal	0.80	0.08	>12*	19.93	>12*	14.68	>12*	20.15	>12*	23.58	>12*	22.77	0.10	0.11
AW-08	Internal	0.35	0.07	9.00	8.94	6.00	6.98	>12*	14.34	2.00	1.43	6.00	5.73	0.20	0.10
AW-09	Internal	0.70	0.33	>12*	24.32	>12*	22.09	>12*	31.34	>12*	31.59	>12*	35.23	0.00	0.77
AW-10	Internal	0.60	0.08	2.50	1.82	1.00	0.98	6.00	6.64	1.50	0.72	5.50	5.70	0.40	0.31
AW-11	Internal	0.35	0.08	1.50	1.64	0.40	0.06	2.50	2.56	1.00	0.48	1.50	0.60	0.40	0.18
AW-12	Internal	7.00	8.33	10.00	9.67	4.00	3.33	3.00	2.96	3.50	2.68	4.50	4.29	0.15	0.16
AW-13	Internal	0.70	0.12	1.50	0.74	0.80	0.34	1.00	1.01	1.50	0.50	1.00	0.38	0.40	0.17
AW-14	Internal	5.00	4.93	9.00	9.54	8.00	7.14	12.00	13.11	6.00	5.16	9.00	9.00	0.20	0.15
AW-15	Internal	0.70	0.11	4.00	7.27	3.00	2.99	5.00	5.13	4.50	3.84	1.00	0.44	0.50	0.20
AW-16	Internal	1.00	0.08	1.00	0.58	0.80	0.2	1.50	1.19	1.50	0.00	1.00	0.87	0.00	0.26
AW-17	Internal	0.90	0.06	3.00	2.99	0.80	0.12	0.90	0.39	1.00	0.15	1.50	0.58	0.50	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	1.00	0.25	0.50	0.25
AW-19	Internal	1.50	0.50	1.50	1.7	1.50	0.87	1.50	2.22	2.50	1.56	2.00	2.11	0.40	0.30
MW-2S	(site monitoring well)	1.00	0.15	--	--	0.60	0.23	--	--	1.00	0.00	1.50	0.24	0.40	0.33
MW-4S	(site monitoring well)	1.50	0.30	--	--	0.80	0.05	--	--	1.00	0.00	0.90	0.23	0.50	0.16
MW-6S	(site monitoring well)	1.50	0.85	--	--	0.80	0.42	--	--	2.00	0.69	0.90	0.83	2.50	2.98
MW-7	(site monitoring well)	1.50	0.88	--	--	0.70	0.1	--	--	1.50	0.71	1.50	0.56	1.50	1.49
MW-8S	(site monitoring well)	1.00	0.41	--	--	0.80	0.09	--	--	0.80	0.00	1.00	0.06	0.80	0.32
MW-9S	(site monitoring well)	5.50	4.42	--	--	1.50	0.55	--	--	5.00	3.65	2.50	1.61	2.00	1.65
MW-0402S	(site monitoring well)	0.50	0.34	--	--	0.60	0.1	--	--	1.00	0.00	1.00	0.10	0.60	0.23
MW-0403S	(site monitoring well)	0.70	0.71	--	--	1.00	0.9	--	--	1.00	0.14	0.90	0.88	2.00	1.10
MW-0404S	(site monitoring well)	0.30	0.12	--	--	0.70	0.12	--	--	0.80	0.00	0.50	0.09	0.80	0.21
MW-0405S	(site monitoring well)	0.60	0.10	--	--	0.30	0.11	--	--	0.80	0.00	0.60	0.12	0.40	0.24
Average Conc. (all PMWs)		1.43	0.86	2.07	1.91	1.04	0.56	2.15	1.39	1.15	0.85	1.28	1.14	1.47	0.38
Average Conc. (Upgradient PMWs)		0.93	0.32	2.23	2.08	0.90	0.46	2.03	0.94	1.10	0.52	1.10	1.08	1.13	0.48
Average Conc. (Downgradient PMWs)		1.77	1.39	1.90	1.75	1.13	0.65	2.27	1.85	1.20	1.19	1.47	1.20	1.80	0.29

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, Q4, Q6 and Q8 events)
* = DO concentration exceeded operating range of CHEMets

Table 3
pH Within AWs and PMWs

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	18-Month Sampling	24-Month Sampling
		April 1-5, 2013	Q1 (May 28-30, 2013)	Q2 August 26-30, 2013	Q3 November 19, 2013	Q4 February 6, 2014	Q6 August 4-5, 2014	Q8 February 23-27, 2015
		pH	pH	pH	pH	pH	pH	pH
PMW-01	Upgradient	7.09	7.08	7.00	6.86	7.10	7.05	7.19
PMW-02	Downgradient	7.06	7.05	6.67	6.59	6.95	6.92	6.87
PMW-03	Upgradient	7.23	7.10	7.09	7.28	7.39	7.19	7.45
PMW-04	Downgradient	7.24	7.18	7.04	7.32	7.09	6.96	7.24
PMW-05	Upgradient	7.05	7.08	6.87	6.98	6.91	6.89	7.04
PMW-06	Downgradient	7.10	6.95	6.97	6.87	7.06	6.96	6.92
AW-01	Internal	7.03	10.11	9.52	8.55	11.18	11.79	6.91
AW-02	Internal	7.21	10.18	7.13	7.33	7.17	9.86	7.33
AW-03	Internal	7.08	8.5	7.41	6.96	7.07	7.20	6.99
AW-04	Internal	7.31	7.78	7.05	7.7	7.36	7.14	7.41
AW-05	Internal	7.25	12.32	9.97	12.04	12.31	10.77	7.15
AW-06	Internal	7.34	12.17	10.32	11.66	11.21	10.64	7.08
AW-07	Internal	7.16	11.52	9.38	10.2	11.21	11.49	7.11
AW-08	Internal	7.39	9.22	8.03	9.12	7.97	7.93	6.67
AW-09	Internal	7.45	11.91	11.34	12.27	12.25	12.25	6.63
AW-10	Internal	7.29	7.33	7.28	7.47	7.27	7.40	7.23
AW-11	Internal	7.17	7.19	7.04	7.78	7.13	7.07	7.24
AW-12	Internal	7.92	8.57	7.32	7.78	7.33	7.42	7.31
AW-13	Internal	7.2	7.04	7.02	7.14	7.07	7.01	7.22
AW-14	Internal	7.21	7.33	7.22	7.67	7.14	7.19	7.27
AW-15	Internal	7.25	7.09	6.94	6.99	7.03	7.17	7.09
AW-16	Internal	7.08	6.84	6.73	6.68	6.74	6.76	6.97
AW-17	Internal	6.86	6.67	6.64	6.77	6.86	6.90	6.93
AW-18	Internal	7.07	6.83	6.69	6.73	6.93	6.84	7.05
AW-19	Internal	7.02	6.83	6.64	6.59	6.72	6.82	6.95
Average Conc. (all AWs)		7.23	8.71	7.88	8.29	8.31	8.06	7.09
Average Conc. (Upgradient PWMs)		7.12	7.09	6.99	7.04	7.13	7.04	7.23
Average Conc. (Downgradient PMWs)		7.13	7.06	6.89	6.93	7.03	6.95	7.01

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						Q6 Sampling						Q8 Sampling					
	April 2-3, 2013		April 5, 2013		February 4-5, 2013		February 6, 2014		February 7, 2014		August 4-5, 2013		August 7, 2014		August 8, 2014		February 23-25, 2015		February 26, 2015		February 27, 2015	
	Before Sock Replacement		24 Hours		Before Sock Replacement		24 Hours		48 Hours		Before Sock Replacement		24 Hours		48 Hours		Before Sock Replacement		24 Hours		48 Hours	
	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI	CHEMet	YSI	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)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
AW-1	0.35	0.08	>12*	18.44	>12*	23.56	>12*	41.17	>12*	40.31	>12*	28.67	>12*	12.53	5.00	5.13	0.60	0.21	4.50	1.7	3.00	2.92
AW-2	0.60	0.07	>12*	15.15	0.90	0.09	>12*	24.40	>12*	19.24	>12*	19.18	3.50	3.14	4.50	4.23	2.00	0.13	4.50	3.95	3.50	3.30
AW-3	1.00	0.15	9.00	8.69	1.00	0.84	7.00	9.01	5.50	6.50	0.80	0.37	1.00	0.94	1.00	1.01	0.60	0.29	5.00	4.40	3.50	3.30
AW-4	2.00	2.00	>12*	17.33	5.50	5.84	>12*	31.79	>12*	27.79	7.00	6.19	2.00	2.32	1.50	2.33	0.80	0.20	>12*	5.27	12.00	6.50
AW-5	0.80	0.10	>12*	17.30	>12*	24.70	>12*	30.56	>12*	31.00	>12*	21.48	11.00	12.70	10.00	10.12	0.40	0.11	11.00	7.20	8.00	5.23
AW-6	0.40	0.09	>12*	16.79	>12*	31.04	>12*	28.16	>12*	31.40	>12*	21.12	>12*	12.84	9.00	9.90	0.00	0.23	6.00	5.99	4.50	4.60
AW-7	0.80	0.08	>12*	15.63	>12*	23.58	>12*	32.91	>12*	31.70	>12*	22.77	10.00	10.83	9.00	8.70	0.10	0.11	5.50	5.00	7.00	5.18
AW-8	0.35	0.07	>12*	13.40	2.00	1.43	>12*	25.64	>12*	22.38	6.00	5.73	4.00	4.46	1.50	2.34	0.20	0.10	4.00	3.06	3.50	3.35
AW-9	0.70	0.33	>12*	15.54	>12*	31.59	>12*	38.81	>12*	39.25	>12*	35.23	>12*	15.20	12.00	12.88	0.00	0.77	5.00	3.98	10.00	5.93
AW-10	0.60	0.08	11.00	10.42	1.50	0.72	>12*	19.88	>12*	18.79	5.50	5.70	1.00	0.93	1.00	1.27	0.40	0.31	12.00	8.04	10.00	7.45
AW-11	0.35	0.08	8.00	8.32	1.00	0.48	>12*	18.48	>12*	13.40	1.50	0.60	0.80	0.79	1.00	1.02	0.40	0.18	12.00	7.42	8.00	7.49
AW-12	7.00	8.33	11.00	11.02	3.50	2.68	>12*	19.02	>12*	15.00	4.50	4.29	4.50	4.59	2.50	3.06	0.15	0.16	8.00	8.00	10.00	6.84
AW-13	0.70	0.12	11.00	10.00	1.50	0.50	>12*	15.14	8.00	10.00	1.00	0.38	1.00	1.00	0.90	0.83	0.40	0.17	8.00	7.51	10.00	7.75
AW-14	5.00	4.93	11.00	11.96	6.00	5.16	>12*	32.67	>12*	31.40	9.00	9.00	5.00	5.47	4.00	4.30	0.20	0.15	12.00	10.05	12.00	9.14
AW-15	0.70	0.11	9.00	9.35	4.50	3.84	>12*	35.12	>12*	25.30	1.00	0.44	5.50	4.79	1.50	1.30	0.50	0.20	6.00	6.15	5.50	5.52
AW-16	1.00	0.08	9.00	9.15	1.50	0.00	>12*	35.90	>12*	32.52	1.00	0.87	1.50	0.59	0.20	0.85	0.00	0.26	>12*	11.36	12.00	11.24
AW-17	0.90	0.06	8.50	8.15	1.00	0.15	>12*	31.64	>12*	29.40	1.50	0.58	0.90	0.66	1.00	0.88	0.50	0.15	10.00	10.61	12.00	11.45
AW-18	2.50	0.94	4.00	3.47	2.50	1.43	4.50	4.84	3.50	4.00	1.00	0.25	0.80	0.83	1.00	0.96	0.50	0.25	10.00	10.26	9.00	8.69
AW-19	1.50	0.50	2.50	2.56	2.50	1.56	>12*	15.15	5.50	7.80	2.00	2.11	0.90	0.70	1.50	1.10	0.40	0.30	11.00	11.60	10.00	9.95
Average Conc. (all wells)	1.43	0.96	10.00	11.72	4.99	8.38	11.34	25.80	10.66	23.01	5.99	9.73	4.71	5.02	3.58	3.80	0.43	0.23	8.34	6.92	8.08	6.62

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 Std. or Guidance Values	Units	MW-2S						MW-4S							MW-6S					
			Historical	Baseline	Q2	Q4	Q6	Q8	Historical	Historical	Baseline	Q2	Q4	Q6	Q8	Historical	Baseline	Q2	Q4	Q6	Q8
Date Collected:			04/21/04	04/04/13	08/27/13	02/06/14	08/06/14	02/26/15	04/22/04	08/23/11	04/04/13	08/27/13	02/06/14	08/06/14	02/26/15	04/22/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
BTEX																					
Benzene	1	µg/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
Ethylbenzene	5	µg/L	4 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	µg/L	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U
Xylenes (total)	5	ug/L	5 U	2 U	2 U	2 U	2 U	2 U	5 U	NA	2 U	2 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U
Total BTEX	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs																					
Acenaphthene	20 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 UJ	4.8 U	10 U	**0.07**	4.9 U	4.8 U	4.8 UJ	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 U
Acenaphthylene	- -	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	10 U	**0.1**	4.9 U	4.8 U	4.8 UJ	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 U
Anthracene	50 (GV)	µg/L	10 U	4.8 U	4.8 UB	4.8 U	10 U	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 U	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 U	9.8 U	5 U
Benzo(a)anthracene*	0.002 (GV)	µg/L	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	1 U	**0.06**	4.9 U	4.8 U	4.8 U	9.6 U	5 U	1 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 UJ
Benzo(a)pyrene*	0	µg/L	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	1 U	0.05 U	**1.2 J**	4.8 U	4.8 U	9.6 U	5 U	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Benzo(b)fluoranthene*	0.002 (GV)	µg/L	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	1 U	**0.07**	**1.2 J**	4.8 U	4.8 U	9.6 U	**0.48 J**	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Benzo(g,h,i)perylene	- -	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	10 U	3 U	4.9 U	4.8 U	4.8 U	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Benzo(k)fluoranthene*	0.002 (GV)	µg/L	1 UJ	4.8 U	4.8 U	4.8 U	10 U	4.8 U	1 UJ	0.05 U	**0.75 J**	4.8 U	4.8 U	9.6 U	5 U	1 UJ	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Chrysene*	0.002 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	10 U	0.05 U	4.9 U	4.8 U	4.8 U	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 UJ
Dibenzo(a,h)anthracene	- -	µg/L	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	1 U	**0.03**	4.9 U	4.8 U	4.8 U	9.6 U	5 U	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Fluoranthene	50 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 U	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 U	9.8 U	5 U
Fluorene	50 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 UJ	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 UJ	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 U
Indeno(1,2,3-cd)pyrene*	0.002 (GV)	µg/L	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	1 U	0.05 U	**1.7 J**	4.8 U	4.8 U	9.6 U	5 U	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 U
Naphthalene	10 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 UJ	10 U	4.8 U	10 U	5 U	4.9 U	4.8 U	4.8 UJ	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 U
Phenanthrene	50 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	10 U	**0.09**	4.9 U	4.8 U	4.8 U	9.6 U	5 U	10 U	4.8 U	**0.45 J**	4.8 U	9.8 U	5 U
Pyrene	50 (GV)	µg/L	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U	10 U	5 U	**0.42 J**	4.8 U	4.8 U	9.6 U	5 U	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 U
PAH COCs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	**0.13**	**4.85 J**	ND	ND	ND	**0.48 J**	ND	ND	ND	ND	ND	ND
Total PAHs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	**0.42**	**5.27 J**	ND	ND	ND	**0.48 J**	ND	ND	**0.45 J**	ND	ND	ND
Oxygen Demand																					
Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
* Indicates analytes is COC per Record of Decision (Table 1)
1. D - Compound quantitated using a secondary dilution.
2. J - Indicates that the analyte was detected at a concentration less than the practical quantitation limit (PQL).
3. U - Indicates the constituent was not detected at the PQL. The value preceding the U indicates the PQL.
4. UB - Indicates the constituent was not detected at a concentration less thatn the PQL due to associated blank contamination.
5. ND - not detected
6. NA - not analyzed
7. Sample results detected above the Method Detection Limit (MDL) are presented in bold font.
8. Shading indicates that the result exceeds the NYSDEC TOGS 1.1.1 Water Quality Standard or Guidance Value.
9. "GV" indicates value is a guidance value (i.e., not a standard)

Table 5
Groundwater Analytical Data

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

Location ID:	NYSDEC TOGS 1.1.1 Std. or Guidance Values	Units	MW-7						MW-8S						MW-9S					
			Historical	Baseline	Q2	Q4	Q6	Q8	Historical	Baseline	Q2	Q4	Q6	Q8	Historical	Baseline	Q2	Q4	Q6	Q8
Date Collected:			04/22/04	04/04/13	08/27/13	02/06/14	08/06/14	02/26/15	04/22/04	04/05/13	08/27/13	02/07/14	08/07/14	02/26/15	04/27/04	04/05/13	08/27/13	02/07/14	08/06/14	02/26/15
BTEX																				
Benzene	1	µg/L	1 U	1 U	1 U	**0.45 J**	1 U	1 U	**0.5 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	µg/L	4 U	1 U	1 U	1 U	1 U	1 U	**1.3 J**	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	µg/L	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U
Xylenes (total)	5	ug/L	5 U	2 U	2 U	2 U	2 U	2 U	**6**	2 U	2 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U
Total BTEX	- -	µg/L	ND	ND	ND	**0.45 J**	ND	ND	**7.8 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs																				
Acenaphthene	20 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	**2 J**	4.8 U	4.8 U	**6 J**	**6.8 J**	**8**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Acenaphthylene	- -	µg/L	**1.1 J**	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	10 U	4.8 U	4.8 U	23 UJ	9.6 U	**0.46 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Anthracene	50 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	10 U	4.8 U	4.8 U	23 UJ	9.6 U	**0.97 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Benzo(a)anthracene*	0.002 (GV)	µg/L	1 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	1 U	4.8 U	4.8 U	23 UJ	9.6 U	**1.2 J**	1.1 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Benzo(a)pyrene*	0	µg/L	1 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**1.2 J**	1.1 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Benzo(b)fluoranthene*	0.002 (GV)	µg/L	1 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**1.4 J**	1.1 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Benzo(g,h,i)perylene	- -	µg/L	10 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	10 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**0.49 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Benzo(k)fluoranthene*	0.002 (GV)	µg/L	1 UJ	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	1 UJ	4.8 U	4.8 UJ	23 UJ	9.6 U	**4.9 U**	1.1 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Chrysene*	0.002 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	10 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**0.97 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Dibenzo(a,h)anthracene	- -	µg/L	1 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**4.9 U**	1.1 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Fluoranthene	50 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	**0.4 J**	4.8 U	4.8 U	23 UJ	9.6 U	**3.4 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Fluorene	50 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	**1.7 J**	4.8 U	4.8 U	**3.5 J**	**5.1 J**	**4.8 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Indeno(1,2,3-cd)pyrene*	0.002 (GV)	µg/L	1 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**0.55 J**	1.1 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Naphthalene	10 (GV)	µg/L	**17**	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U	**14**	4.8 U	4.8 U	23 UJ	9.6 U	**2.5 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Phenanthrene	50 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	**0.2 J**	4.8 U	**0.44 J**	23 UJ	9.6 U	**0.57 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
Pyrene	50 (GV)	µg/L	10 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U	**0.3 J**	4.8 U	4.8 U	23 UJ	9.6 U	**2.6 J**	11 U	5.1 U	4.8 U	4.9 U	9.6 U	4.9 U
PAH COCs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.78 J**	ND	ND	ND	ND	ND	ND
Total PAHs	- -	µg/L	**18.1 J**	ND	ND	ND	ND	ND	**18.6 J**	ND	**0.44 J**	**9.5 J**	**11.9 J**	**29.1 J**	ND	ND	ND	ND	ND	ND
Oxygen Demand																				
Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 5
Groundwater Analytical Data

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

Location ID:	NYSDEC TOGS 1.1.1 Std. or Guidance Values	Units	MW-0402S						MW-0403S						MW-0404S					
			Historical	Baseline	Q2	Q4	Q6	Q8	Historical	Baseline	Q2	Q4	Q6	Q8	Historical	Baseline	Q2	Q4	Q6	Q8
Date Collected:			04/28/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15	04/28/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15	04/29/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
BTEX																				
Benzene	1	µg/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
Ethylbenzene	5	µg/L	4 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	µg/L	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U
Xylenes (total)	5	ug/L	5 U	2 U	2 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U
Total BTEX	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs																				
Acenaphthene	20 (GV)	µg/L	10 U	4.8 U	4.6 U	4.7 U	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	**1.3 J**	4.7 U	9.8 U	4.7 U
Acenaphthylene	- -	µg/L	10 U	4.8 UJ	4.6 U	4.7 U	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Anthracene	50 (GV)	µg/L	10 U	4.8 UJ	4.6 U	4.7 U	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Benzo(a)anthracene*	0.002 (GV)	µg/L	1 U	4.8 UJ	4.6 U	4.7 UJ	9.9 U	4.9 U	1 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	1 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Benzo(a)pyrene*	0	µg/L	1 U	4.8 U	4.6 U	4.7 UJ	9.9 U	4.9 U	1 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	1 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Benzo(b)fluoranthene*	0.002 (GV)	µg/L	1 U	4.8 U	4.6 U	4.7 UJ	9.9 U	4.9 U	1 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	1 U	4.7 U	4.6 U	4.7 U	9.8 U	**0.33 J**
Benzo(g,h,i)perylene	- -	µg/L	10 U	4.8 UJ	4.6 U	4.7 UJ	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Benzo(k)fluoranthene*	0.002 (GV)	µg/L	1 U	4.8 U	4.6 U	4.7 UJ	9.9 U	4.9 U	1 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	1 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Chrysene*	0.002 (GV)	µg/L	10 U	4.8 UJ	4.6 U	4.7 UJ	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Dibenzo(a,h)anthracene	- -	µg/L	1 U	4.8 U	4.6 U	4.7 UJ	9.9 U	4.9 U	1 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	1 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Fluoranthene	50 (GV)	µg/L	10 U	4.8 U	4.6 U	4.7 U	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	**0.49 J**	4.7 U	9.8 U	4.7 U
Fluorene	50 (GV)	µg/L	10 U	4.8 UJ	4.6 U	4.7 U	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	**1.2 J**	4.7 U	9.8 U	4.7 U
Indeno(1,2,3-cd)pyrene*	0.002 (GV)	µg/L	1 U	4.8 UJ	4.6 U	4.7 UJ	9.9 U	4.9 U	1 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	1 U	4.7 U	4.6 U	4.7 U	9.8 U	4.7 U
Naphthalene	10 (GV)	µg/L	10 U	4.8 U	4.6 U	4.7 UJ	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	**0.94 J**	10 U	4.7 U	4.6 U	4.7 UJ	9.8 U	**3.2 J**
Phenanthrene	50 (GV)	µg/L	10 U	4.8 U	4.6 U	4.7 U	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	**0.45 J**	4.7 U	9.8 U	4.7 U
Pyrene	50 (GV)	µg/L	10 U	4.8 U	4.6 U	4.7 UJ	9.9 U	4.9 U	10 U	4.8 U	4.7 U	4.6 U	10 U	4.7 U	10 U	4.7 U	**0.38 J**	4.7 U	9.8 U	4.7 U
PAH COCs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.33 J**
Total PAHs	- -	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.94 J**	ND	ND	**3.82 J**	ND	ND	**3.53 J**
Oxygen Demand																				
Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 5
Groundwater Analytical Data

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

Location ID:	NYSDEC TOGS 1.1.1 Std. or Guidance Values	Units	MW-0405S						PMW-1				PMW-2					PMW-3			
			Historical	Baseline	Q2	Q4	Q6	Q8	Baseline	Q2	Q6	Q8	Baseline	Q2	Q4	Q6	Q8	Baseline	Q2	Q6	Q8
Date Collected:			04/29/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15	04/03/13	08/28/13	08/06/14	02/24/15	04/03/13	08/28/13	02/05/14	08/06/14	02/24/15	04/03/13	08/30/13	08/06/14	02/24/15
BTEX																					
Benzene	1	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	NA	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	NA	NA	NA	NA
Ethylbenzene	5	µg/L	4 U	1 U	1 U	1 U	1 U	1 U	NA	NA	NA	NA	1 U	1 U	**0.92 J**	1 U	1 U	NA	NA	NA	NA
Toluene	5	µg/L	5 U	1 U	1 U	1 U	1 U	1 U	NA	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	NA	NA	NA	NA
Xylenes (total)	5	ug/L	5 U	2 U	2 U	2 U	2 U	2 U	NA	NA	NA	NA	2 U	2 U	2 U	2 U	2 U	NA	NA	NA	NA
Total BTEX	- -	µg/L	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND	**0.92 J**	ND	ND	NA	NA	NA	NA
PAHs																					
Acenaphthene	20 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	- -	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	50 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene*	0.002 (GV)	µg/L	1 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene*	0	µg/L	1 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene*	0.002 (GV)	µg/L	1 U	4.7 U	4.7 U	4.6 U	9.7 U	**0.35 J**	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene*	0.002 (GV)	µg/L	1 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene*	0.002 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	µg/L	1 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	50 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	50 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene*	0.002 (GV)	µg/L	1 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	10 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50 (GV)	µg/L	10 U	4.7 U	**0.45 J**	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	50 (GV)	µg/L	10 U	4.7 U	4.7 U	4.6 U	9.7 U	5 U	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA
PAH COCs	- -	µg/L	ND	ND	ND	ND	ND	**0.35 J**	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
Total PAHs	- -	µg/L	ND	ND	**0.45 J**	ND	ND	**0.35 J**	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Demand																					
Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	**4,500**	**3,500**	2,000U	NA	NA	NA	NA	NA	NA	**99,000**	**13,000**	**6,900**	NA
Carbonaceous Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	NA	**2,400**	NA	2,000U	NA	NA	NA	NA	NA	NA	**79,400**	NA	**10,600**	NA

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Location ID:	NYSDEC TOGS 1.1.1 Std. or Guidance Values	Units	PMW-4					PMW-5				PMW-6				
			Baseline	Q2	Q4	Q6	Q8	Baseline	Q2	Q6	Q8	Baseline	Q2	Q4	Q6	Q8
Date Collected:			04/03/13	08/28/13	02/05/14	08/06/14	02/25/15	04/03/13	08/28/13	08/06/14	02/24/15	04/03/13	08/28/13	02/05/14	08/06/14	02/25/15
BTEX																
Benzene	1	µg/L	**230 D**	**81**	**150**	4 U	**81**	NA	NA	NA	NA	**3.4**	**25**	**89**	**90**	**1,200 D**
Ethylbenzene	5	µg/L	**110 D**	**36**	**55**	4 U	**29**	NA	NA	NA	NA	**1.4**	**6.4**	**42**	**57**	**290 D**
Toluene	5	µg/L	**9.3**	**2.9 J**	**5.4**	4 U	**4.9**	NA	NA	NA	NA	1 U	**0.54 J**	**1**	**3.4**	**10**
Xylenes (total)	5	ug/L	**80**	**21**	**33**	8 U	**21**	NA	NA	NA	NA	**1.1 J**	**8.9**	**30**	**95**	**290 D**
Total BTEX	- -	µg/L	**429**	**141 J**	**243**	ND	**136**	NA	NA	NA	NA	**5.9 J**	**40.8 J**	**162**	**245**	**1,790 D**
PAHs																
Acenaphthene	20 (GV)	µg/L	**110 D**	NA	NA	NA	NA	NA	NA	NA	NA	**7.2**	NA	NA	NA	NA
Acenaphthylene	- -	µg/L	**6.2**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Anthracene	50 (GV)	µg/L	**8.8**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Benzo(a)anthracene*	0.002 (GV)	µg/L	**0.88 J**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Benzo(a)pyrene*	0	µg/L	**1.3 J**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Benzo(b)fluoranthene*	0.002 (GV)	µg/L	**1.3 J**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Benzo(g,h,i)perylene	- -	µg/L	**1 J**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Benzo(k)fluoranthene*	0.002 (GV)	µg/L	**0.71 J**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Chrysene*	0.002 (GV)	µg/L	**0.70 J**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Dibenzo(a,h)anthracene	- -	µg/L	4.7 U	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Fluoranthene	50 (GV)	µg/L	**5.4**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Fluorene	50 (GV)	µg/L	**29**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene*	0.002 (GV)	µg/L	4.7 U	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Naphthalene	10 (GV)	µg/L	**800 D**	NA	NA	NA	NA	NA	NA	NA	NA	**7.3**	NA	NA	NA	NA
Phenanthrene	50 (GV)	µg/L	**33**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
Pyrene	50 (GV)	µg/L	**9.5**	NA	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	NA	NA
PAH COCs	- -	µg/L	**4.89 J**	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA
Total PAHs	- -	µg/L	**1,008 J**	NA	NA	NA	NA	NA	NA	NA	NA	**14.5**	NA	NA	NA	NA
Oxygen Demand																
Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	2,000 U	2,000 U	2,000U	NA	NA	NA	NA	NA	NA
Carbonaceous Biochemical Oxygen Demand	- -	µg/L	NA	NA	NA	NA	NA	2,000 U	NA	2,000U	NA	NA	NA	NA	NA	NA

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6. NA - not analyzed
7. Sample results detected above the Method Detection Limit (MDL) are presented in bold font.
8. Shading indicates that the result exceeds the NYSDEC TOGS 1.1.1 Water Quality Standard or Guidance Value.
9. "GV" indicates value is a guidance value (i.e., not a standard)

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			Q6 Sampling			Q8 Sampling		
	April 2-3, 2013	April 5, 2013	February 4-5, 2014	February 6, 2014	February 7, 2014	August 4-5, 2014	August 7, 2014	August 8, 2014	February 23-25, 2015	February 26, 2015	February 27, 2015
	Before Sock Deployment	24 Hours	Before Sock Replacement	24 Hours	48 Hours	Before Sock Replacement	24 Hours	48 Hours	Before Sock Replacement	24 Hours	48 Hours
	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units	Standard Units
AW-1	7.03	12.07	11.18	12.85	12.97	11.79	9.70	9.49	9.61	6.93	8.54
AW-2	7.21	10.34	7.17	10.05	9.26	9.86	7.06	7.19	7.33	7.16	8.08
AW-3	7.08	8.98	7.07	8.39	8.34	7.20	7.03	7.05	6.99	7.43	7.81
AW-4	7.31	11.54	7.36	12.55	12.56	7.14	7.29	7.30	7.41	9.78	10.36
AW-5	7.25	11.70	12.31	12.51	12.62	10.77	9.24	9.02	7.15	8.81	9.73
AW-6	7.34	12.54	11.21	12.23	12.47	10.64	8.87	8.28	7.08	8.90	10.21
AW-7	7.16	10.67	11.21	12.12	12.37	11.49	8.49	8.17	7.11	7.94	9.41
AW-8	7.39	10.99	7.97	12.30	12.36	7.93	8.07	7.80	6.67	7.09	8.76
AW-9	7.45	12.70	12.25	12.74	12.94	12.25	10.07	9.67	6.63	7.14	9.42
AW-10	7.29	8.15	7.27	8.68	8.82	7.40	7.11	7.16	7.23	7.98	8.84
AW-11	7.17	8.01	7.13	9.07	7.80	7.07	6.98	7.00	7.24	8.12	8.52
AW-12	7.92	9.15	7.33	8.20	8.02	7.42	7.14	7.24	7.31	8.08	8.43
AW-13	7.20	8.25	7.07	7.90	7.44	7.01	6.90	6.93	7.22	7.61	7.93
AW-14	7.21	10.22	7.14	10.21	10.05	7.19	6.91	6.96	7.27	8.35	8.85
AW-15	7.25	9.40	7.03	10.13	9.99	7.17	6.83	6.89	7.09	8.06	7.71
AW-16	7.08	10.45	6.74	9.50	9.48	6.76	6.63	6.75	6.97	9.57	9.78
AW-17	6.86	10.60	6.86	9.64	9.43	6.90	6.55	6.68	6.93	9.48	9.64
AW-18	7.07	6.99	6.93	7.05	7.05	6.84	6.71	6.82	7.05	8.26	8.31
AW-19	7.02	6.89	6.72	7.16	6.95	6.82	6.58	6.96	6.95	7.93	7.90
Average pH Concentration	7.23	9.98	8.31	10.17	10.05	8.40	7.59	7.55	7.22	8.14	8.85

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
			08/04/14	8.35	844.53	--	13.74	0.04
			02/23/15	8.81	844.07	--	13.70	0.08
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
			08/04/14	11.01	841.97	--	60.92	0.52
			02/23/15	11.13	841.85	--	60.81	0.63
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
			08/04/14	9.79	844.27	--	18.56	1.66
			02/23/15	11.03	843.03	--	18.64	1.58
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
			08/04/14	15.43	840.23	--	67.25	0.94
			02/23/15	15.73	839.93	--	67.17	1.02
MW-4S	851.47	16.67	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
			02/03/14	8.09	843.25	--	16.10	0.70
			08/04/14	7.64	843.70	--	15.96	0.75
			02/23/15	9.73	841.74	--	15.88	0.79
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
			08/04/14	5.75	846.79	--	24.80	0.04
			02/23/15	6.71	845.83	--	24.69	0.15
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
			08/04/14	10.51	843.63	--	39.17	0.39
			02/23/15	10.82	843.32	--	39.18	0.38

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-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
			08/04/14	6.68	843.70	--	14.02	0.68
			02/23/15	7.09	843.29	--	13.98	0.72
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
			08/04/14	10.68	839.40	--	69.44	0.14
			02/23/15	11.19	838.89	--	70.30	-0.72
MW-9S	849.03	14.47	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
			08/04/14	5.03	843.65	--	14.40	0.42
			02/23/15	6.89	842.14	--	12.25	2.22
MW-9D	849.06	71.44	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
			08/04/14	8.14	840.58	--	72.65	-0.87
			02/23/15	8.85	840.21	--	72.58	-1.14
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
			08/04/14	10.00	841.18	--	59.58	0.06
			02/23/15	10.35	840.83	--	59.56	0.08
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
			08/04/14	7.39	842.70	--	22.55	-0.17
			02/23/15	8.36	841.73	--	22.48	-0.10

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-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
			08/04/14	9.49	840.17	--	39.39	-0.07
			02/23/15	10.05	839.61	--	39.30	0.02
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
			08/04/14	9.71	840.28	--	28.20	0.37
			02/23/15	10.39	839.60	--	28.20	0.37
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
			08/04/14	9.67	839.88	--	59.40	0.37
			02/23/15	10.50	839.05	--	59.33	0.44
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
			08/04/14	10.61	839.98	--	35.42	-0.15
			02/23/15	11.54	839.05	--	35.39	-0.12
AW-1	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
			08/04/14	6.74	844.20	--	19.91	-0.13
			02/23/15	7.42	843.52	--	19.83	-0.05
AW-2	851.23	20.04	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
			08/04/14	6.91	844.04	--	20.09	0.23
			02/23/15	8.43	842.80	--	20.10	-0.06
AW-3	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
			08/04/14	6.31	844.07	--	19.53	-0.43
			02/23/15	7.47	842.91	--	19.50	-0.40

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-4	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
			08/04/14	5.49	845.13	--	19.75	0.02
			02/23/15	8.47	842.15	--	19.73	0.04
AW-5	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
			08/04/14	6.81	843.57	--	19.75	0.05
			02/23/15	8.42	841.96	--	19.64	0.16
AW-6	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
			08/04/14	7.45	842.40	--	19.02	0.26
			02/23/15	8.64	841.21	--	18.79	0.49
AW-7	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
			08/04/14	8.43	841.29	--	18.82	-0.08
			02/23/15	9.32	840.40	--	18.75	-0.01
AW-8	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
			08/04/14	8.71	841.07	--	19.20	0.12
			02/23/15	9.55	840.23	--	18.85	0.47
AW-9	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
			08/04/14	8.73	840.88	--	21.92	0.35
			02/23/15	9.54	840.07	--	21.71	0.56
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
			08/04/14	9.45	840.15	--	24.19	0.01
			02/23/15	9.67	839.93	--	23.76	0.44

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-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
			08/04/14	9.01	840.48	--	24.02	0.25
			02/23/15	9.71	839.78	--	23.50	0.77
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
			08/04/14	8.78	840.41	--	37.15	0.43
			02/23/15	9.49	839.70	--	36.92	0.66
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
			08/04/14	8.59	840.48	--	27.26	0.20
			02/23/15	9.32	839.75	--	26.97	0.49
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
			08/04/14	8.83	840.62	--	30.30	-1.42
			02/23/15	9.58	839.87	--	29.70	-0.82
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
			08/04/14	8.72	840.39	--	34.42	0.26
			02/23/15	9.40	839.71	--	33.89	0.79
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
			08/04/14	8.44	840.68	--	34.45	0.35
			02/23/15	9.14	839.98	--	31.78	3.02
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
			08/04/14	8.45	840.63	--	31.27	0.57
			02/23/15	9.13	839.95	--	30.49	1.35

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-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
			08/04/14	6.78	842.03	--	33.15	0.36
			02/23/15	8.73	840.08	--	32.95	0.56
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
			08/04/14	7.39	841.62	--	34.05	0.28
			02/23/15	8.85	840.16	--	32.74	1.59
PMW-1	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
			08/04/14	7.50	843.69	--	19.32	-0.51
			02/23/15	9.21	841.98	--	19.29	-0.48
PMW-2	849.93	19.76	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
			08/04/14	4.96	844.89	--	19.53	0.31
			02/23/15	7.25	842.68	--	19.23	0.53
PMW-3	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
			08/04/14	7.75	841.89	--	15.35	3.94
			02/23/15	9.36	840.28	--	14.29	5.00
PMW-4	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
			08/04/14	9.13	840.89	--	19.86	-0.08
			02/23/15	9.70	840.32	--	19.81	-0.03
PMW-5	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
			08/04/14	8.60	840.48	--	32.69	0.08
			02/23/15	9.25	839.83	--	31.69	1.08

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-6	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
			08/04/14	9.19	840.40	--	38.33	0.48
			02/23/15	9.90	839.69	--	38.06	0.75
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
			05/30/14	8.75	841.02	29.92	31.41	-0.12
			08/04/14	9.48	840.29	29.93	31.33	-0.04
			11/20/14	10.08	839.69	30.28	31.38	-0.09
			02/23/15	10.13	839.64	30.15	31.35	-0.06
NRW-1	852.45	33.74	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
			05/30/14	10.87	841.07	--	33.62	0.08
			08/04/14	11.11	841.25	--	33.65	0.18
			11/20/14	11.54	840.91	--	33.59	0.15
			02/23/15	11.62	840.83	--	33.46	0.28
NRW-2	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
			05/30/14	8.94	840.86	--	57.92	0.33
			08/04/14	9.46	840.34	56.61	57.81	0.44
			11/20/14	10.05	839.75	57.44	57.83	0.42
			02/23/15	10.13	839.67	57.30	57.70	0.55
NRW-3	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
			05/30/14	8.93	840.85	--	52.24	1.52
			08/04/14	9.44	840.34	--	52.12	1.64
			11/20/14	10.02	839.76	--	52.23	1.53
			02/23/15	10.10	839.68	--	52.32	1.44

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)
NRW-4	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
			05/30/14	8.66	840.86	--	56.64	0.04
			08/04/14	9.18	840.34	--	56.58	0.10
			11/20/14	9.76	839.76	--	56.62	0.06
			02/23/15	9.88	839.64	--	56.40	0.28

Notes:

All measurements from Top of Casing (TOC).

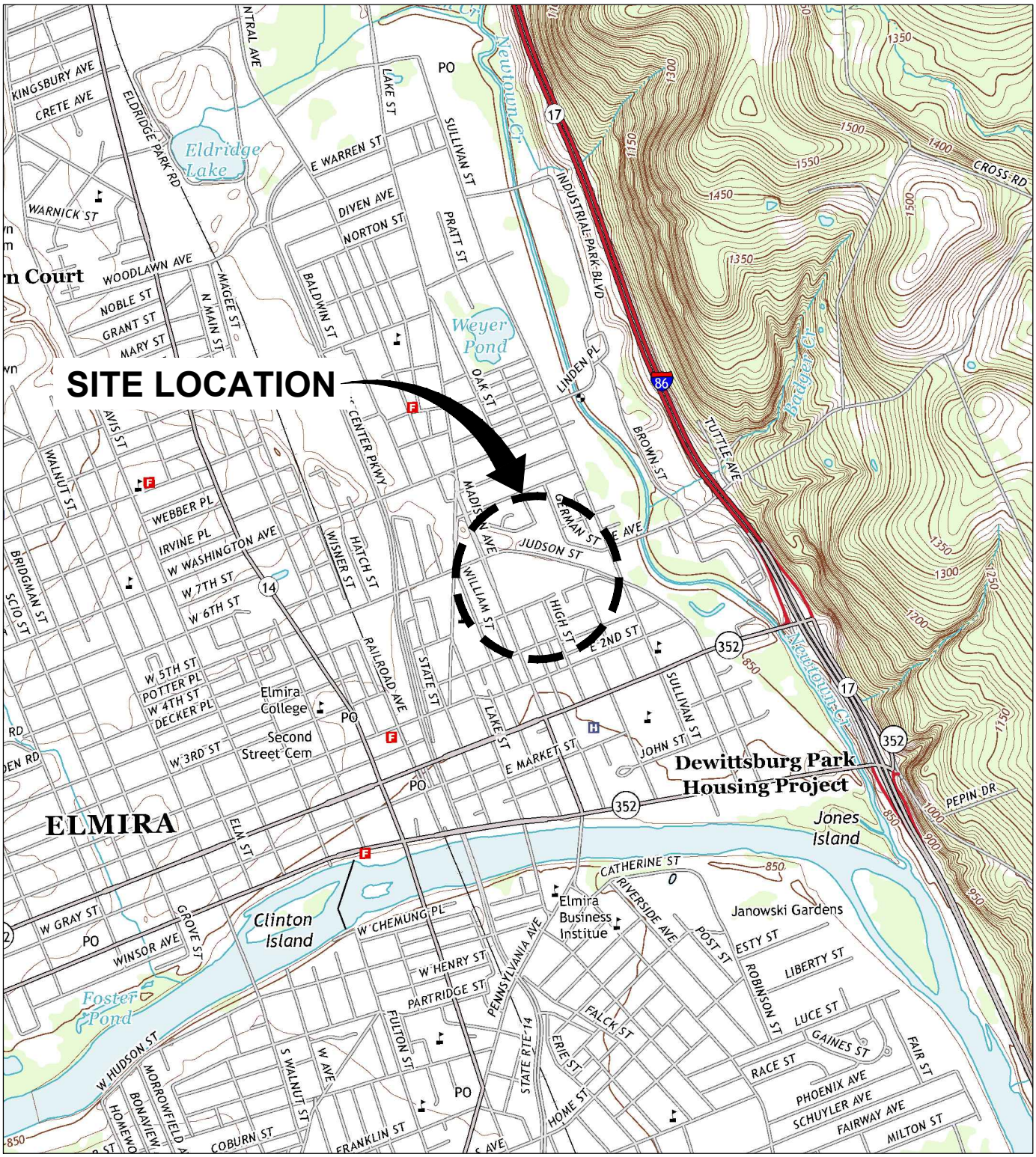
Elevations in feet above mean sea level (ft amsl), 1988 North American Vertical Datum (NAVD88).

-- Indicates measurement not taken or not avaliable.

Due to well repairs, MW-4S, MW-9S, MW-9D, AW-2, PMW-2 and NRW-1 were resurveyed during the August 2014 site visit but after the gauging dated 8/4/2014. *Measuring Point Elevations* and *Actual Depth to Bottom* values have been updated and used starting with the gauging dated 2/23/2015.

ARCADIS

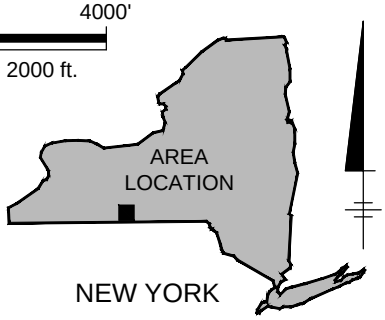
Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., ELMIRA, NY-PA., 2013.

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

CITY: SYRACUSE NY DIV/GROUP: ENVCAD DB: E. KRAHMER LD:(Opt) PM: B. AHRENS TM: B. AHRENS TR: N. BEYRLE LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB0013134\00010002\DWG\APRP113134N01.dwg LAYOUT: 1 SAVED: 4/15/2015 10:20 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 4/15/2015 10:21 AM BY: KRAHMER, ERIC
XREFS: IMAGES: PROJECTNAME: ----
NY_Elmira_20130219_TM_geo.png

EAST FIFTH STREET (AKA JUDSON STREET)

GERMAN STREET

EAST CLINTON STREET

MADISON AVENUE

I.D. BOOTH BUILDING

I.D. BOOTH—OWNED STORAGE YARD

NYSEG SUBSTATION

NYSEG—OWNED PROPERTY

NYSEG—OWNED FORMER MGP SITE

TRAYER—OWNED PROPERTY

TRAYER PRODUCTS BUILDING

ELECTRIC TOWER

SLAB

HYDRANT

GAS REGULATOR SHED

PARKING

MW-0301S
MW-0401S
MW-6S
MW-1D
MW-1S
MW-7
MW-8D
MW-8S
MW-0304D
MW-4S
NRW-1
MW-9S
MW-9D
MW-2D
MW-2S
PMW-5
PMW-6
PMW-3
NRW-3
NRW-4
NRW-2
PMW-4
PMW-1
NMW-0402S
PMW-2
MW-0402S
MW-0801
MW-0403S
MW-0404D
MW-0404S
MW-0405S

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

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

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.

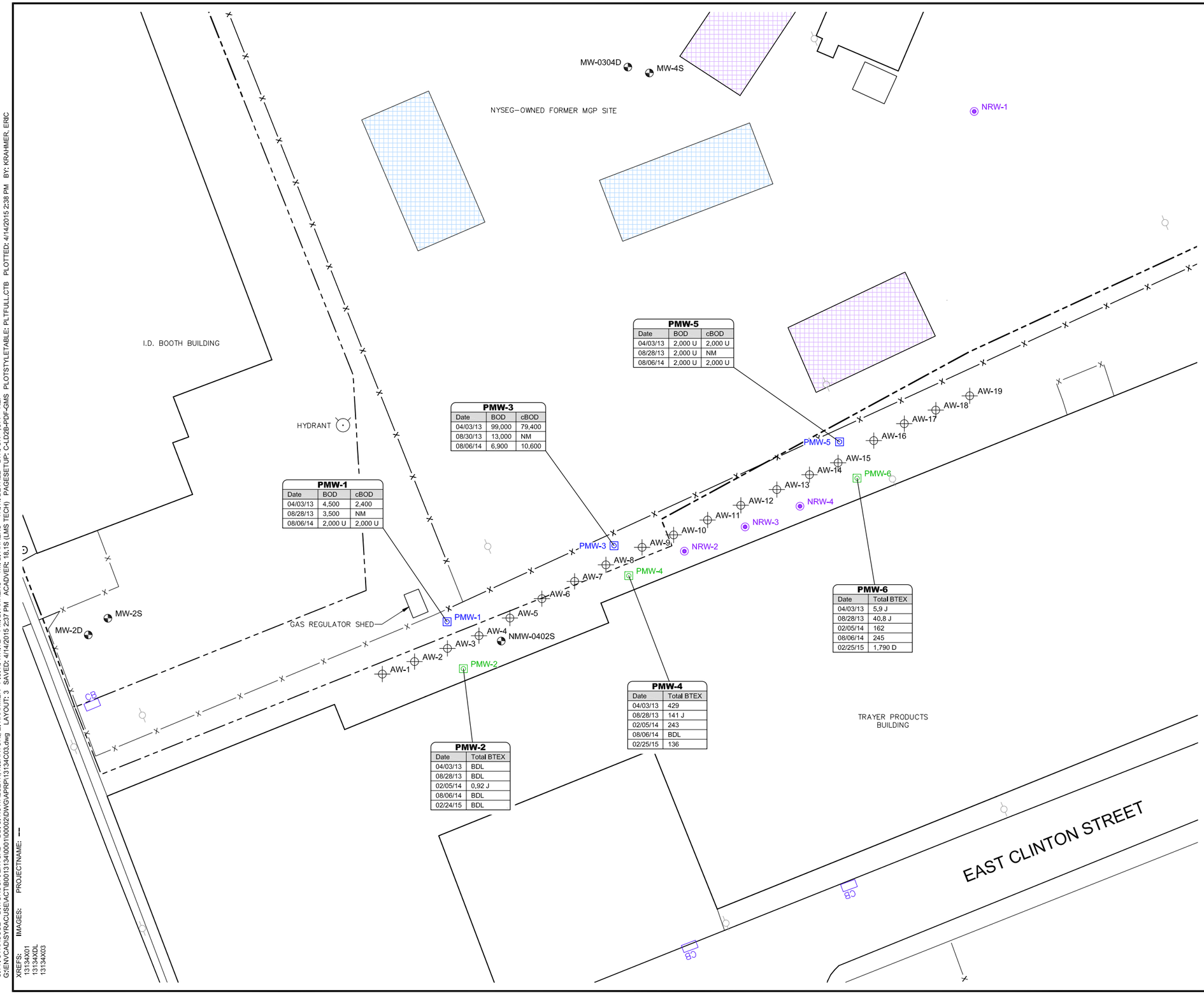
0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

SITE MAP

ARCADIS

FIGURE
2



PMW-5

Date	BOD	cBOD
04/03/13	2,000 U	2,000 U
08/28/13	2,000 U	NM
08/06/14	2,000 U	2,000 U

PMW-3

Date	BOD	cBOD
04/03/13	99,000	79,400
08/30/13	13,000	NM
08/06/14	6,900	10,600

PMW-1

Date	BOD	cBOD
04/03/13	4,500	2,400
08/28/13	3,500	NM
08/06/14	2,000 U	2,000 U

PMW-6

Date	Total BTEX
04/03/13	5,9 J
08/28/13	40,8 J
02/05/14	162
08/06/14	245
02/25/15	1,790 D

PMW-4

Date	Total BTEX
04/03/13	429
08/28/13	141 J
02/05/14	243
08/06/14	BDL
02/25/15	136

PMW-2

Date	Total BTEX
04/03/13	BDL
08/28/13	BDL
02/05/14	0,92 J
08/06/14	BDL
02/24/15	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. 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. D = COMPOUND QUANTITATED USING A SECONDARY DILUTION.
11. 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.

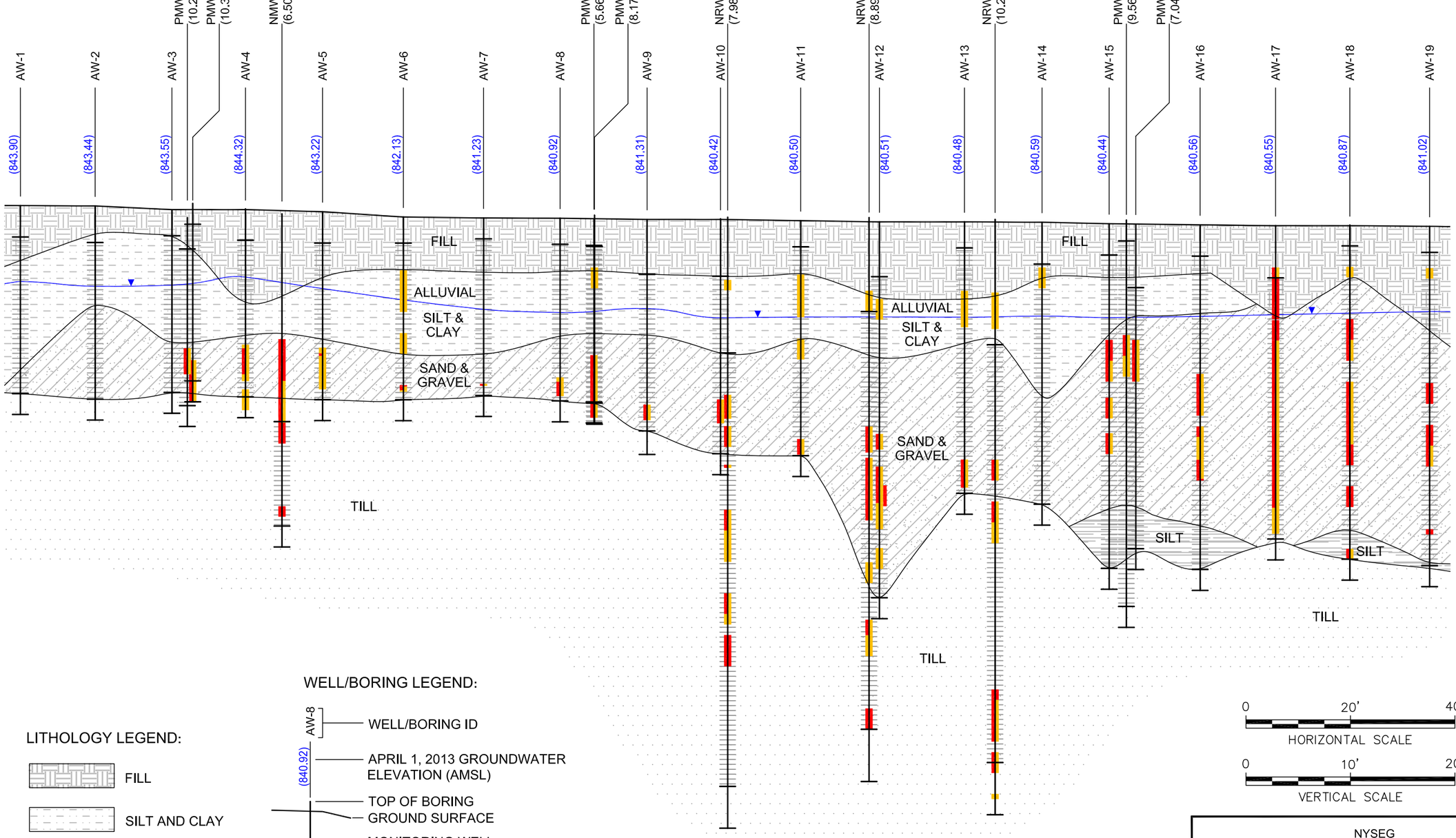
0 20' 40'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

PERFORMANCE MONITORING WELL DATA

ARCADIS

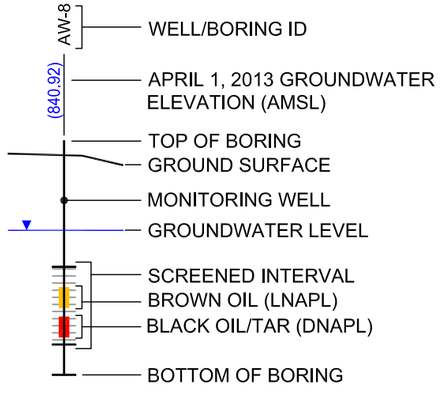
FIGURE
3



LITHOLOGY LEGEND:

- FILL
- SILT AND CLAY
- SAND AND GRAVEL
- SILT
- TILL

WELL/BORING LEGEND:



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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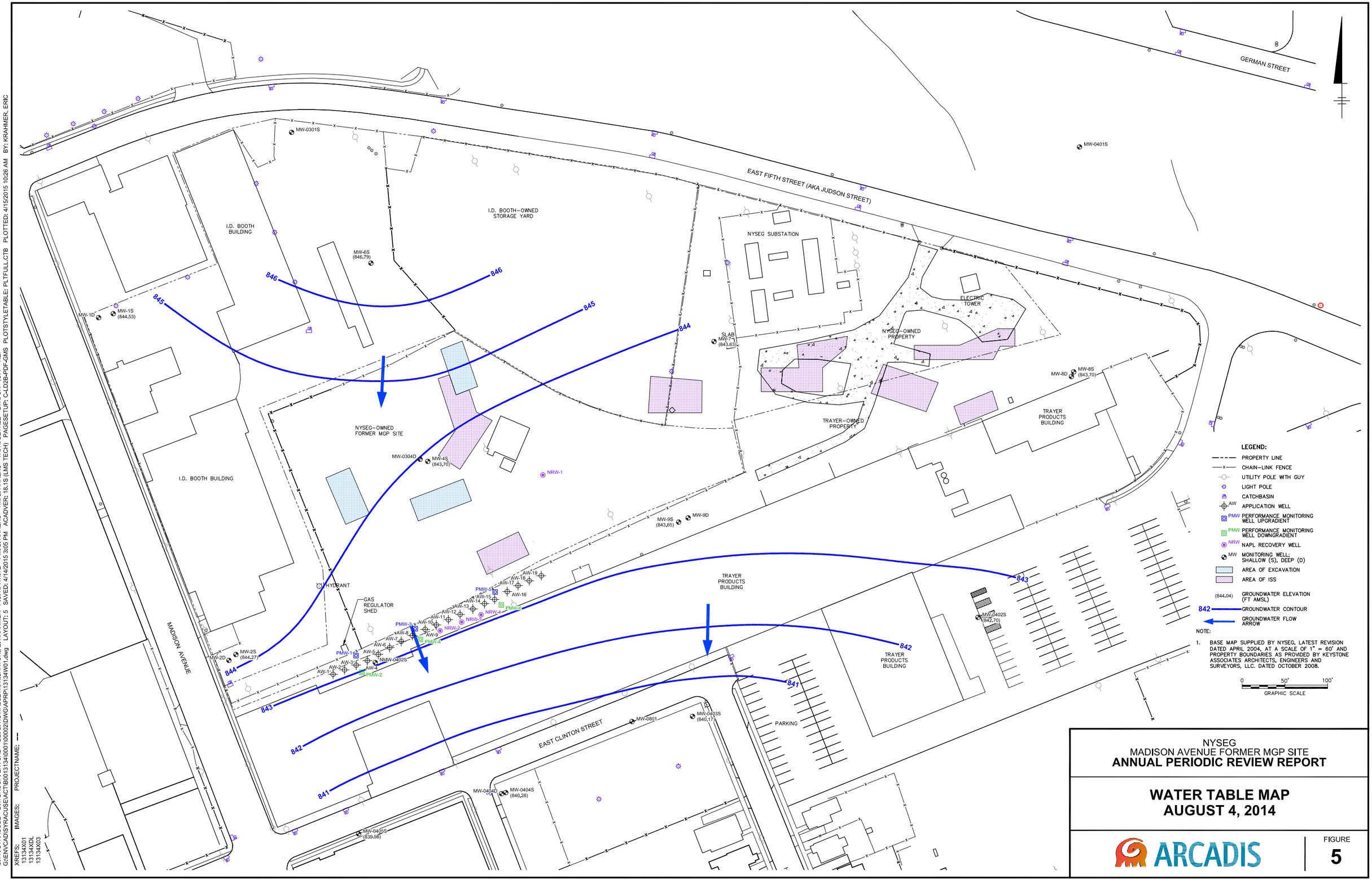


LEGEND:

- 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.

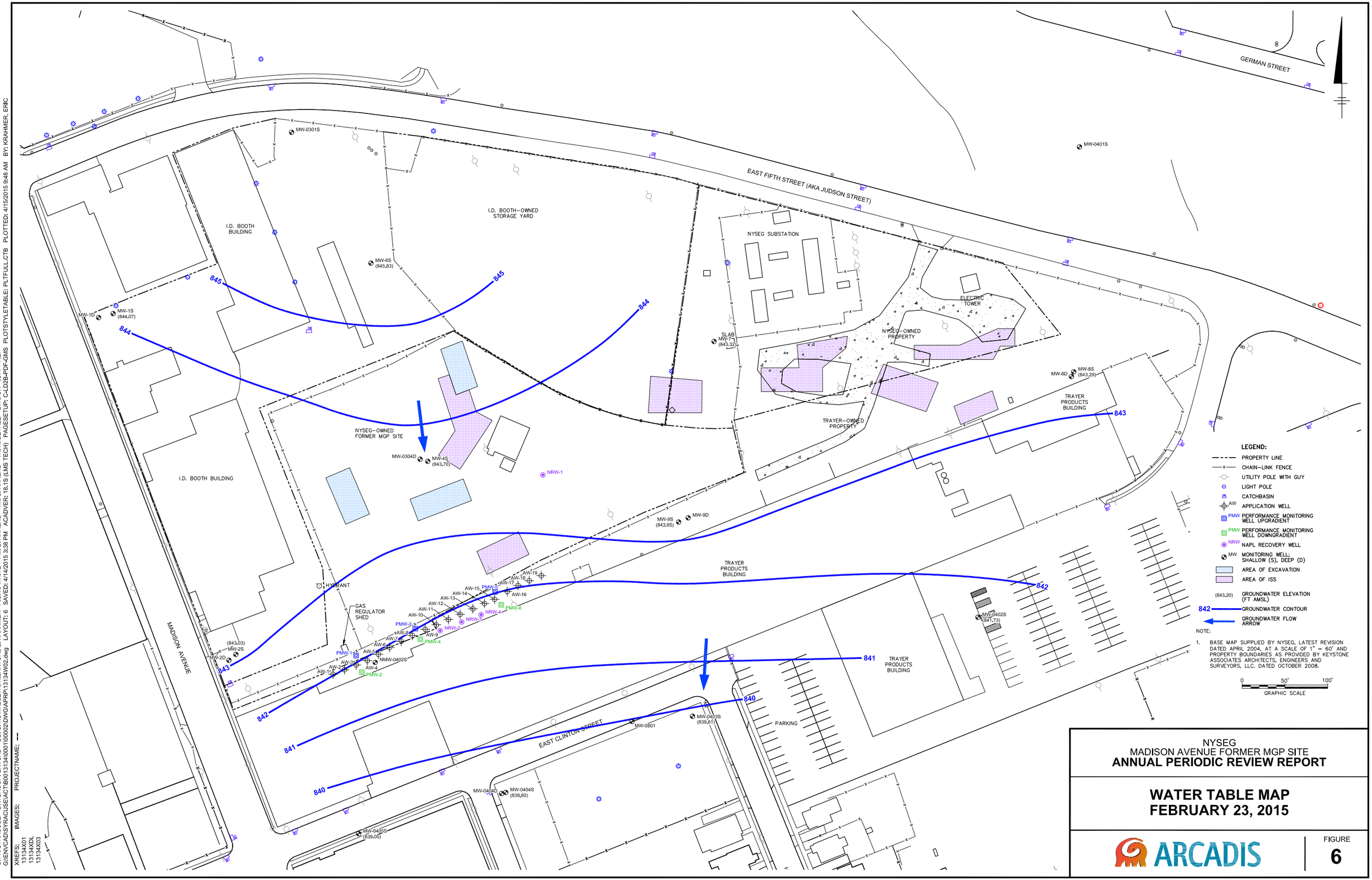
0 50' 100'
GRAPHIC SCALE

NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

WATER TABLE MAP
AUGUST 4, 2014

ARCADIS

FIGURE
5

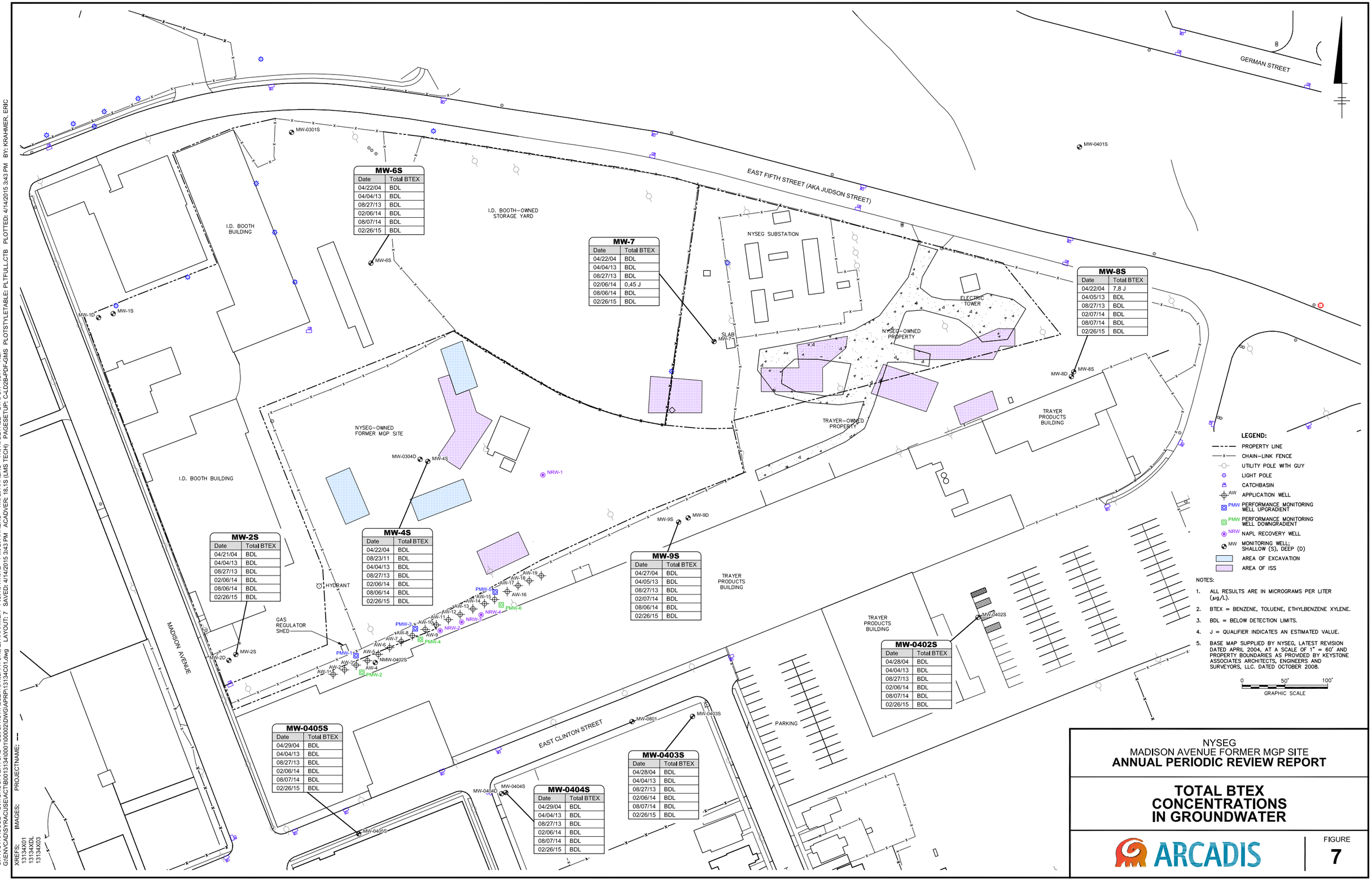


NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

WATER TABLE MAP
FEBRUARY 23, 2015

ARCADIS

FIGURE
6



NYSEG
MADISON AVENUE FORMER MGP SITE
ANNUAL PERIODIC REVIEW REPORT

TOTAL BTEX CONCENTRATIONS IN GROUNDWATER

ARCADIS

FIGURE
7

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: ---

MW-6S

Date	04/22/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
Benzo(a)anthracene	1 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 UJ
Benzo(a)pyrene	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Benzo(b)fluoranthene	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Benzo(k)fluoranthene	1 UJ	4.8 U	4.7 U	4.8 U	9.8 U	5 UJ
Chrysene	10 U	4.8 U	4.7 U	4.8 UJ	9.8 U	5 UJ
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.7 U	4.8 U	9.8 U	5 U
Total PAHs	BDL	BDL	**0.45 J**	BDL	BDL	BDL

MW-4S

Date	04/22/04	08/23/11	04/04/13	08/27/13	02/06/14	08/06/14	02/26/15
Benzo(a)anthracene	1 U	**0.06**	4.9 U	4.8 U	4.8 U	9.6 U	5 U
Benzo(a)pyrene	1 U	0.05 U	**1.2 J**	4.8 U	4.8 U	9.6 U	5 U
Benzo(b)fluoranthene	1 U	**0.07**	**1.2 J**	4.8 U	4.8 U	9.6 U	**0.48 J**
Benzo(k)fluoranthene	1 UJ	0.05 U	**0.75 J**	4.8 U	4.8 U	9.6 U	5 U
Chrysene	10 U	0.05 U	4.9 U	4.8 U	4.8 U	9.6 U	5 U
Indeno(1,2,3-cd)pyrene	1 U	0.05 U	**1.7 J**	4.8 U	4.8 U	9.6 U	5 U
Total PAHs	BDL	**0.42**	**5.27 J**	BDL	BDL	BDL	**0.48 J**

MW-7

Date	04/22/04	04/04/13	08/27/13	02/06/14	08/06/14	02/26/15
Benzo(a)anthracene	1 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U
Benzo(a)pyrene	1 U	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U
Benzo(b)fluoranthene	1 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U
Benzo(k)fluoranthene	1 UJ	4.9 U	4.9 U	4.9 U	9.9 U	4.7 U
Chrysene	10 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U
Indeno(1,2,3-cd)pyrene	1 U	4.9 U	4.9 U	4.9 UJ	9.9 U	4.7 U
Total PAHs	**18.1 J**	BDL	BDL	BDL	BDL	BDL

MW-8S

Date	04/22/04	04/05/13	08/27/13	02/07/14	08/07/14	02/26/15
Benzo(a)anthracene	1 U	4.8 U	4.8 U	23 UJ	9.6 U	**1.2 J**
Benzo(a)pyrene	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**1.2 J**
Benzo(b)fluoranthene	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**1.4 J**
Benzo(k)fluoranthene	1 UJ	4.8 U	4.8 UJ	23 UJ	9.6 U	4.9 U
Chrysene	10 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**0.97 J**
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.8 UJ	23 UJ	9.6 U	**0.55 J**
Total PAHs	**18.6 J**	BDL	**0.44 J**	**9.5 J**	**11.9 J**	**29.1 J**

MW-2S

Date	04/21/04	04/04/13	08/27/13	02/06/14	08/06/14	02/26/15
Benzo(a)anthracene	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U
Benzo(a)pyrene	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U
Benzo(b)fluoranthene	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U
Benzo(k)fluoranthene	1 UJ	4.8 U	4.8 U	4.8 U	10 U	4.8 U
Chrysene	10 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U
Indeno(1,2,3-cd)pyrene	1 U	4.8 U	4.8 U	4.8 U	10 U	4.8 U
Total PAHs	BDL	BDL	BDL	BDL	BDL	BDL

MW-9S

Date	04/27/04	04/05/13	08/27/13	02/07/14	08/06/14	02/26/15
Benzo(a)anthracene	1,1 U	5,1 U	4,8 U	4,9 U	9,6 U	4,9 U
Benzo(a)pyrene	1,1 U	5,1 U	4,8 U	4,9 U	9,6 U	4,9 U
Benzo(b)fluoranthene	1,1 U	5,1 U	4,8 U	4,9 U	9,6 U	4,9 U
Benzo(k)fluoranthene	1,1 U	5,1 U	4,8 U	4,9 U	9,6 U	4,9 U
Chrysene	11 U	5,1 U	4,8 U	4,9 U	9,6 U	4,9 U
Indeno(1,2,3-cd)pyrene	1,1 U	5,1 U	4,8 U	4,9 U	9,6 U	4,9 U
Total PAHs	BDL	BDL	BDL	BDL	BDL	BDL

MW-0402S

Date	04/28/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
Benzo(a)anthracene	1 U	4,8 UJ	4,6 U	4,7 UJ	9,9 U	4,9 U
Benzo(a)pyrene	1 U	4,8 U	4,6 U	4,7 UJ	9,9 U	4,9 U
Benzo(b)fluoranthene	1 U	4,8 U	4,6 U	4,7 UJ	9,9 U	4,9 U
Benzo(k)fluoranthene	1 U	4,8 U	4,6 U	4,7 UJ	9,9 U	4,9 U
Chrysene	10 U	4,8 UJ	4,6 U	4,7 UJ	9,9 U	4,9 U
Indeno(1,2,3-cd)pyrene	1 U	4,8 UJ	4,6 U	4,7 UJ	9,9 U	4,9 U
Total PAHs	BDL	BDL	BDL	BDL	BDL	BDL

MW-0404S

Date	04/29/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
Benzo(a)anthracene	1 U	4,7 U	4,6 U	4,7 U	9,8 U	4,7 U
Benzo(a)pyrene	1 U	4,7 U	4,6 U	4,7 U	9,8 U	4,7 U
Benzo(b)fluoranthene	1 U	4,7 U	4,6 U	4,7 U	9,8 U	**0.33 J**
Benzo(k)fluoranthene	1 U	4,7 U	4,6 U	4,7 U	9,8 U	4,7 U
Chrysene	10 U	4,7 U	4,6 U	4,7 U	9,8 U	4,7 U
Indeno(1,2,3-cd)pyrene	1 U	4,7 U	4,6 U	4,7 U	9,8 U	4,7 U
Total PAHs	BDL	BDL	**3.82 J**	BDL	BDL	**3.53 J**

MW-0405S

Date	04/29/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
Benzo(a)anthracene	1 U	4,7 U	4,7 U	4,6 U	9,7 U	5 U
Benzo(a)pyrene	1 U	4,7 U	4,7 U	4,6 U	9,7 U	5 U
Benzo(b)fluoranthene	1 U	4,7 U	4,7 U	4,6 U	9,7 U	**0.35 J**
Benzo(k)fluoranthene	1 U	4,7 U	4,7 U	4,6 U	9,7 U	5 U
Chrysene	10 U	4,7 U	4,7 U	4,6 U	9,7 U	5 U
Indeno(1,2,3-cd)pyrene	1 U	4,7 U	4,7 U	4,6 U	9,7 U	5 U
Total PAHs	BDL	BDL	**0.45 J**	BDL	BDL	**0.35 J**

MW-0403S

Date	04/28/04	04/04/13	08/27/13	02/06/14	08/07/14	02/26/15
Benzo(a)anthracene	1 U	4,8 U	4,7 U	4,6 U	10 U	4,7 U
Benzo(a)pyrene	1 U	4,8 U	4,7 U	4,6 U	10 U	4,7 U
Benzo(b)fluoranthene	1 U	4,8 U	4,7 U	4,6 U	10 U	4,7 U
Benzo(k)fluoranthene	1 U	4,8 U	4,7 U	4,6 U	10 U	4,7 U
Chrysene	10 U	4,8 U	4,7 U	4,6 U	10 U	4,7 U
Indeno(1,2,3-cd)pyrene	1 U	4,8 U	4,7 U	4,6 U	10 U	4,7 U
Total PAHs	BDL	BDL	BDL	BDL	BDL	**0.94 J**

MW-0301S
MW-0401S
MW-6S
MW-1D
MW-1S
MW-2D
MW-2S
MW-0304D
MW-4S
NRW-1
MW-9S
MW-9D
MW-0404D
MW-0404S
MW-0405S
MW-0801
MW-0403S
MW-8D
MW-8S
MW-0402S
PMW-1
PMW-2
PMW-3
PMW-4
PMW-5
PMW-6
NRW-2
NRW-3
NRW-4
NMW-0402S
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
SLAB MW-7

EAST FIFTH STREET (AKA JUDSON STREET)
GERMAN STREET
MADISON AVENUE
I.D. BOOTH–OWNED STORAGE YARD
I.D. BOOTH BUILDING
NYSEG SUBSTATION
NYSEG–OWNED FORMER MGP SITE
NYSEG–OWNED PROPERTY
TRAYER–OWNED PROPERTY
TRAYER PRODUCTS BUILDING
ELECTRIC TOWER
GAS REGULATOR SHED
HYDRANT
PARKING

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
8

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

NYSEG–OWNED FORMER MGP SITE

NYSEG–OWNED PROPERTY

TRAYER–OWNED PROPERTY

TRAYER PRODUCTS BUILDING

ELECTRIC TOWER

SLAB

GAS REGULATOR SHED

HYDRANT

PARKING

MW-0301S
MW-0401S
MW-1D
MW-1S
MW-2D
MW-2S
MW-4S
MW-0304D
MW-6S
MW-7
MW-8D
MW-8S
MW-9S
MW-9D
MW-0402S
MW-0403S
MW-0801
MW-0404D
MW-0404S
MW-0405S

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

1 2 3 4 5 6 7 8

LEGEND:

- 3 — PHOTOGRAPH LOCATION/ ORIENTATION/NUMBER
- 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 DOWNGRADIENT
- NRW — NAPL RECOVERY WELL
- MW — MONITORING WELL; SHALLOW (S), DEEP (D)
- AREA OF EXCAVATION
- AREA OF ISS

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

PHOTOGRAPH ORIENTATION FIGURE

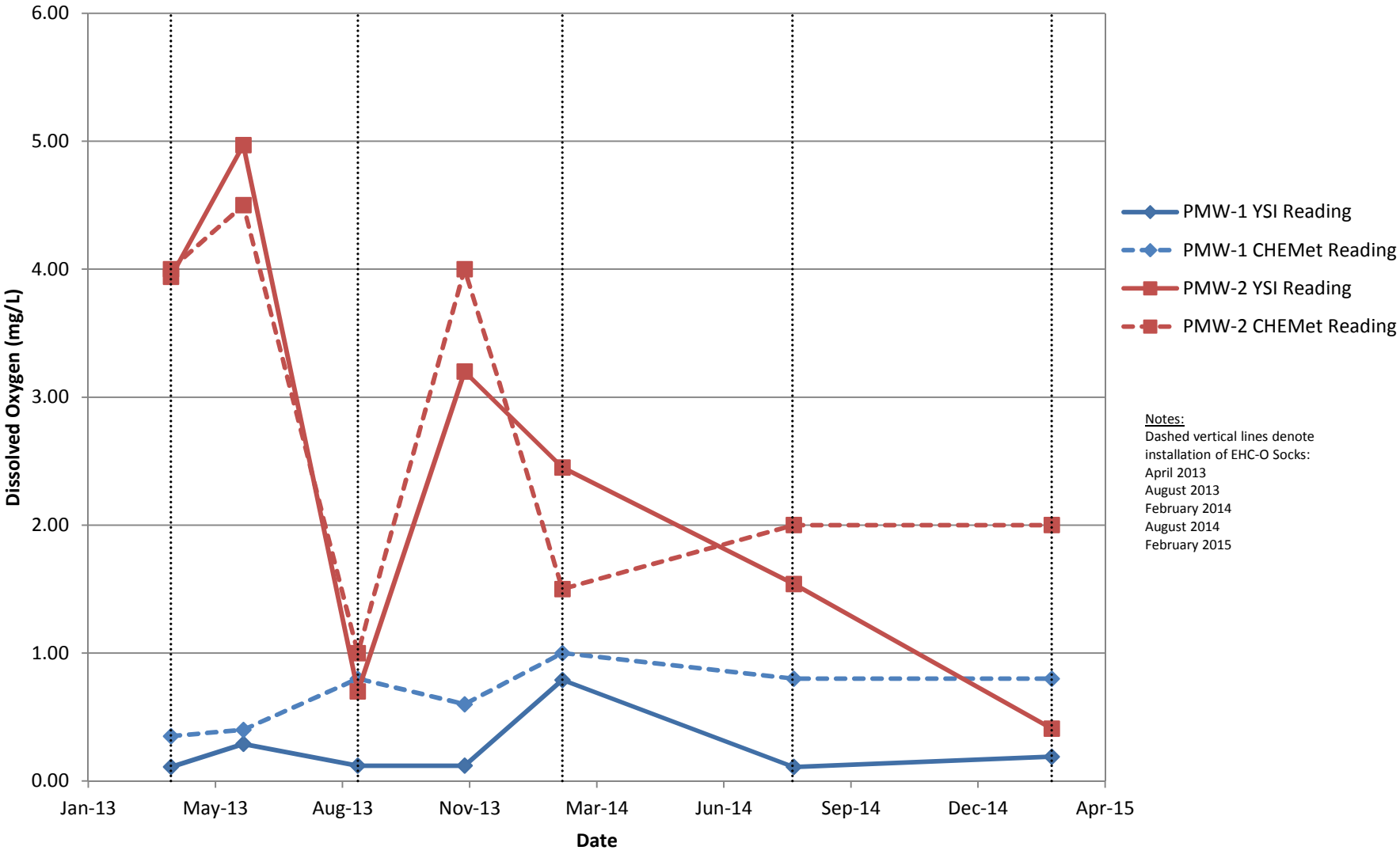
ARCADIS

FIGURE
9

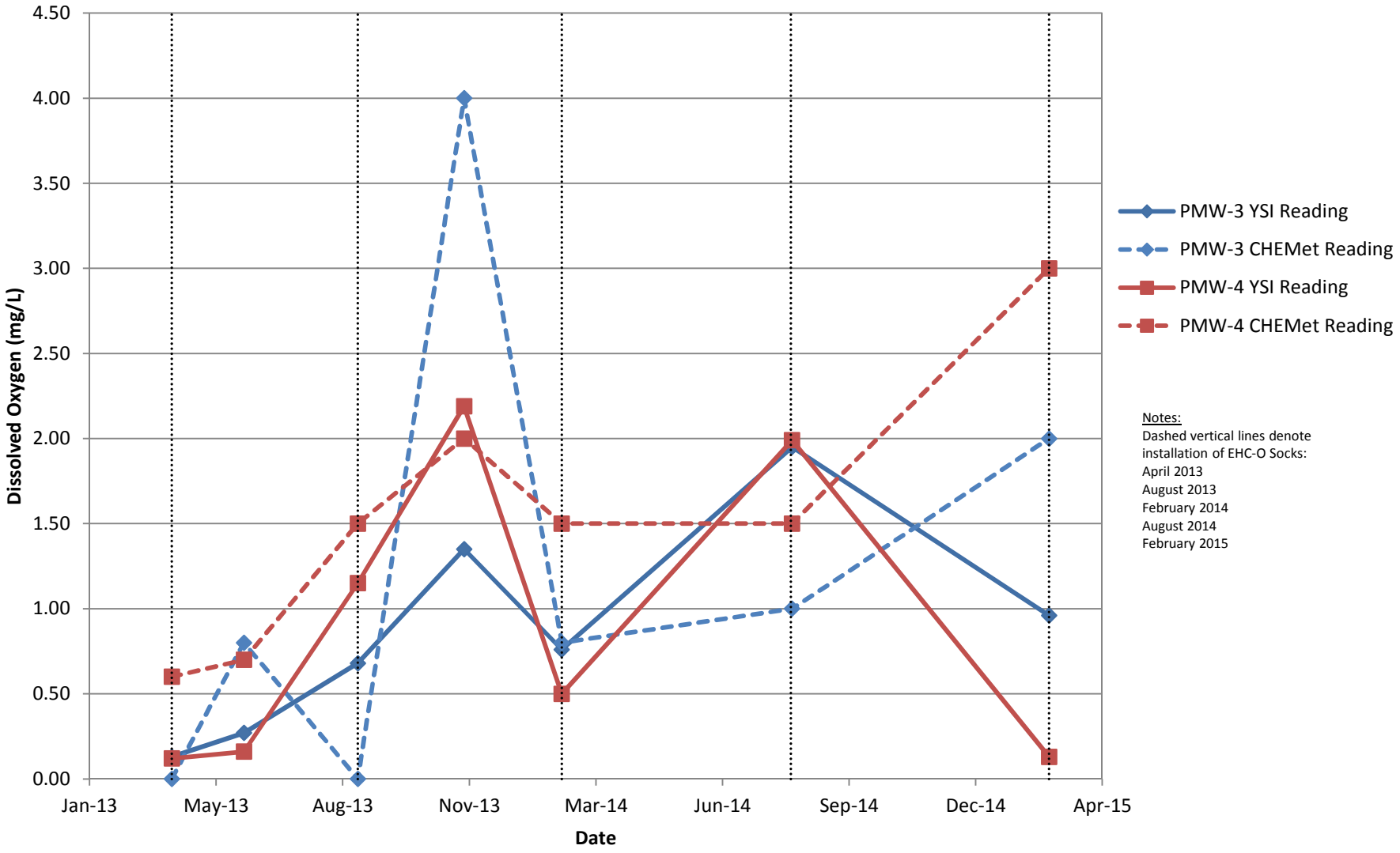
ARCADIS

Graphs

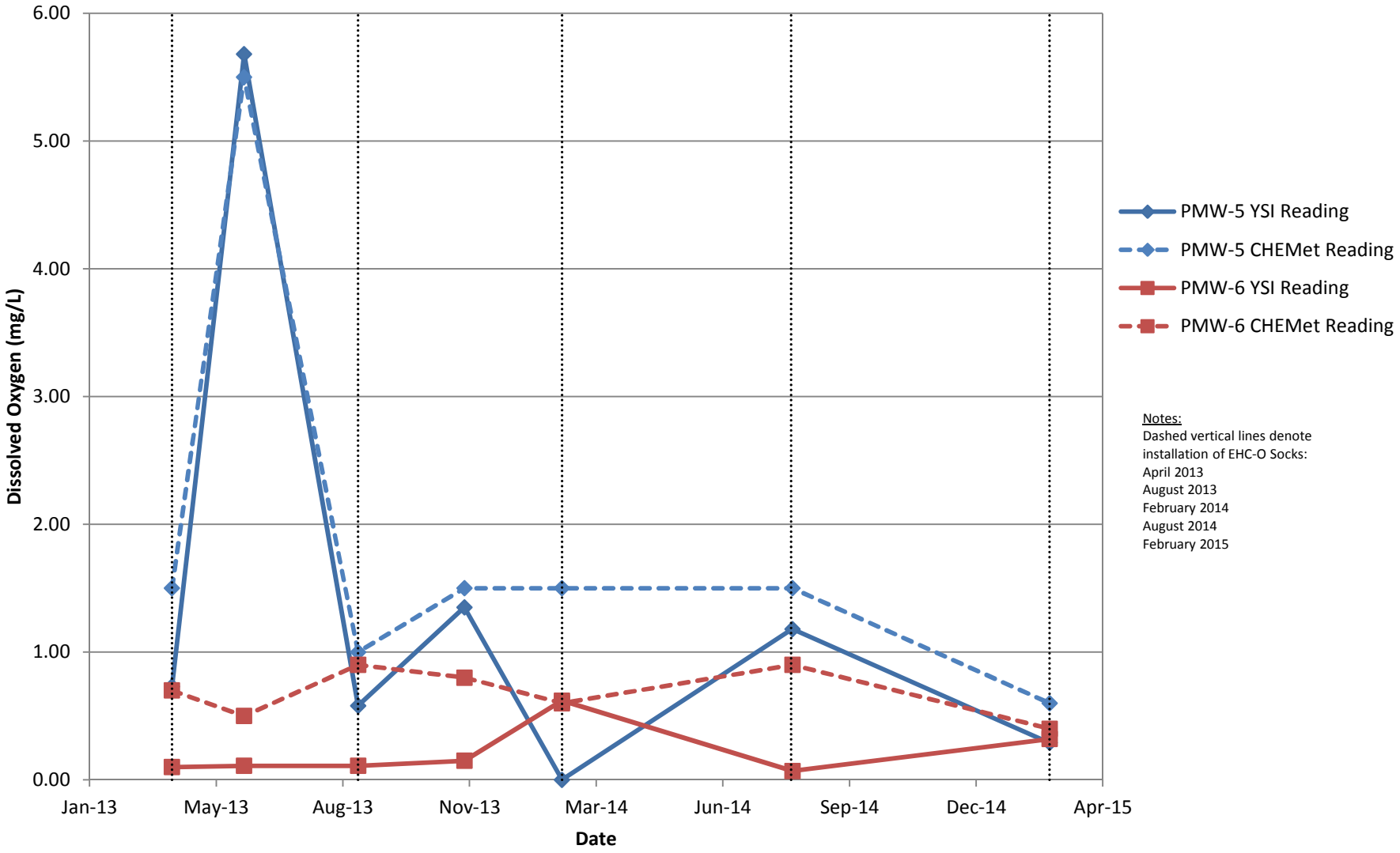
Graph 1 - Dissolved Oxygen Readings from PMW-1 and PMW-2



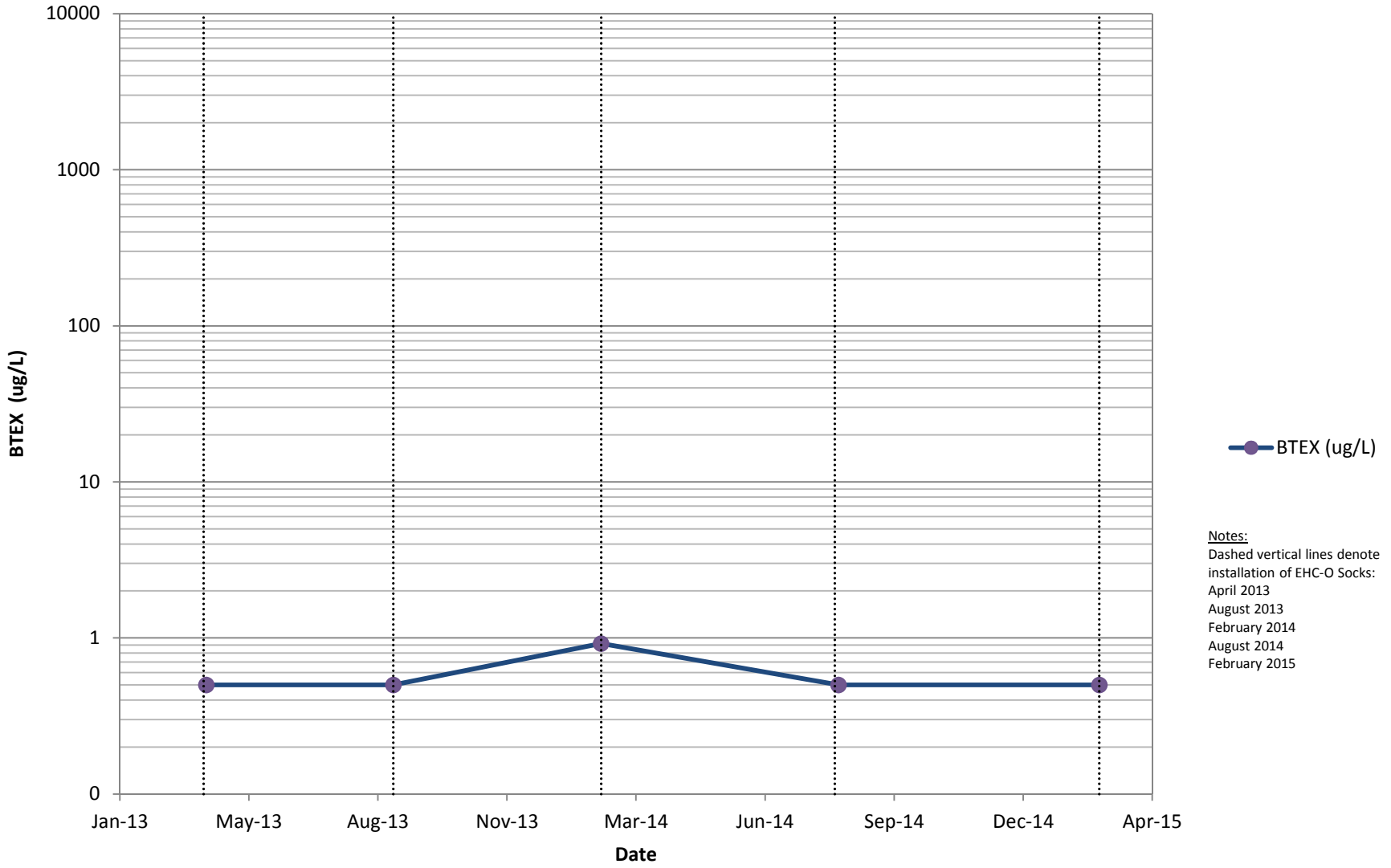
Graph 2 - Dissolved Oxygen Readings from PMW-3 and PMW-4



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

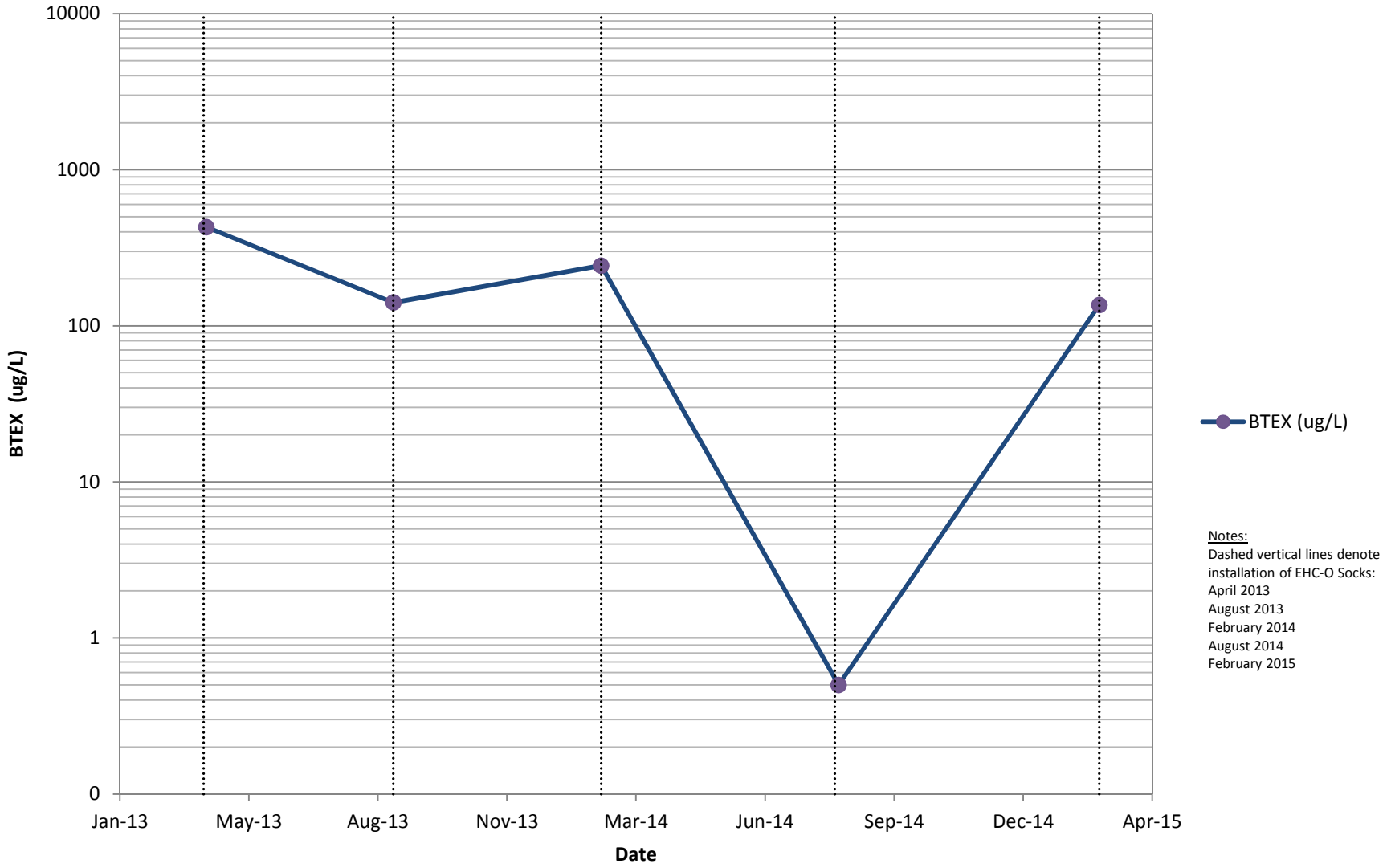


Graph 4 - BTEX in PMW-2 Over Time



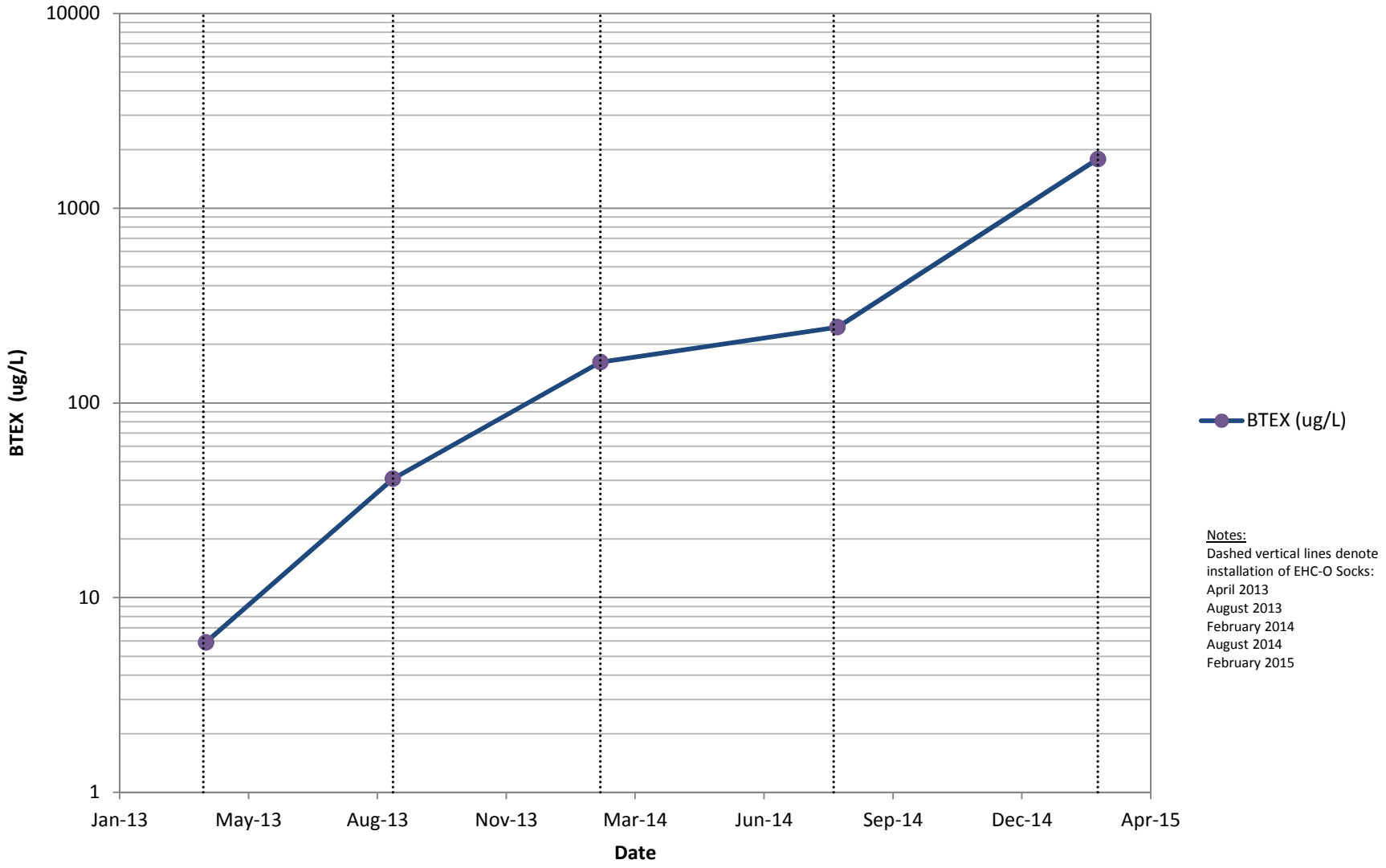
Notes:
Dashed vertical lines denote installation of EHC-O Socks:
April 2013
August 2013
February 2014
August 2014
February 2015

Graph 5 - BTEX in PMW-4 Over Time



Notes:
Dashed vertical lines denote installation of EHC-O Socks:
April 2013
August 2013
February 2014
August 2014
February 2015

Graph 6 - BTEX in PMW-6 Over Time



Notes:
Dashed vertical lines denote installation of EHC-O Socks:
April 2013
August 2013
February 2014
August 2014
February 2015

Appendix A

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, Semivolatile and Miscellaneous Analyses

SDG #480-65088-1

Analyses Performed By:
TestAmerica
Amherst, New York

Report #22286R
Review Level: Tier III
Project: B0013134.0000.00002

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 480-65088-1 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
TRIP BLANK	480-65088-1	Water	8/6/2014		X				
PMW-6	480-65088-10	Water	8/6/2014		X				
PMW-3	480-65088-11	Water	8/6/2014						X
DUP-080614	480-65088-12	Water	8/6/2014	MW-4S	X	X			
PMW-2	480-65088-2	Water	8/6/2014		X				
PMW-1	480-65088-3	Water	8/6/2014						X
MW-4S	480-65088-4	Water	8/6/2014		X	X			
MW-2S	480-65088-5	Water	8/6/2014		X	X			
PMW-4	480-65088-6	Water	8/6/2014		X				
MW-9S	480-65088-7	Water	8/6/2014		X	X			
PMW-5	480-65088-8	Water	8/6/2014						X
MW-7	480-65088-9	Water	8/6/2014		X	X			

Note:

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location MW-2S.

2. Miscellaneous parameters include biochemical oxygen demand and carbonaceous biochemical oxygen demand.

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 8260B and 8270C 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 8260B	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 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-4S/DUP-080614	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 8260B	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
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 8260B	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 8270C	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.

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 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.

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.

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-2S	Acenaphthene
	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 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.

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

Sample Locations	Compound	LCS Recovery
DUP-080614 MW-4S MW-2S MW-9S MW-7	Di-n-octyl phthalate	> UL

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD 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

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-4S/DUP-080614	Bis(2-ethylhexyl) phthalate	2.4 J	9.8 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 8270C	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
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

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to SM 5210B. Data were reviewed in accordance with USEPA National Functional Guidelines of July 2002.

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 that it was already 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 the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

  B The reported value was obtained from a reading less than the contract-required detection limit (CRDL), but greater than or equal to the instrument detection limit (IDL).

- Quantitation (Q) Qualifiers

  E The reported value is estimated due to the presence of interference.

  N Spiked sample recovery is not within control limits.

  * Duplicate analysis is not within control limits.

- Validation Qualifiers

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

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

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

  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.

GENERAL CHEMISTRY ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
Biological Oxygen Demand (BOD) by SM5210B	Water	48 hours from collection to analysis	Cool to <6 °C.
Carbonaceous Biochemical Oxygen Demand by SM5210B			

All samples were analyzed within the specified holding times.

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.

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

3. 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.

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 and all initial calibration verification standard recoveries were within control limits.

All calibration standard recoveries were within the control limit.

4. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

All analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory qualifier "N" will be removed.

MS/MSD analysis was not performed on a sample location within this SDG.

4.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

Laboratory duplicate analysis was not performed on a sample location within this SDG.

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy 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.

Field duplicate analysis was not performed on a sample location within this SDG.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

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

7. 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 GENERAL CHEMISTRY

General Chemistry: SM5210B	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Miscellaneous Instrumentation					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					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
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSD or correlation coefficient		X		X	
Continuing calibration %R		X		X	
Raw Data		X		X	
Transcription/calculation errors present				X	
Reporting limits adjusted to reflect sample dilutions		X		X	

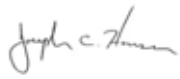
%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
480-65088-1	8/6/2014	ASP 2005	TRIP BLANK	Water	Yes	--	--	--	--	
	8/6/2014	ASP 2005	PMW-6	Water	Yes	--	--	--	--	
	8/6/2014	ASP 2005	PMW-3	Water	--	--	--	--	Yes	
	8/6/2014	ASP 2005	DUP-080614	Water	Yes	Yes	--	--	--	
	8/6/2014	ASP 2005	PMW-2	Water	Yes	--	--	--	--	
	8/6/2014	ASP 2005	PMW-1	Water	--	--	--	--	Yes	
	8/6/2014	ASP 2005	MW-4S	Water	Yes	Yes	--	--	--	
	8/6/2014	ASP 2005	MW-2S	Water	Yes	No	--	--	--	SVOC – MS/MSD RPD
	8/6/2014	ASP 2005	PMW-4	Water	Yes	--	--	--	--	
	8/6/2014	ASP 2005	MW-9S	Water	Yes	Yes	--	--	--	
	8/6/2014	ASP 2005	PMW-5	Water	--	--	--	--	Yes	
	8/6/2014	ASP 2005	MW-7	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: September 10, 2014

PEER REVIEW: Dennis Capria

DATE: September 12, 2014

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-65088-1
Client Matrix: Water

Date Sampled: 08/06/2014 0000
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4634.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0400			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0400				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	104		73 - 120
Dibromofluoromethane (Surr)	118		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **PMW-2**

Lab Sample ID: 480-65088-2
Client Matrix: Water

Date Sampled: 08/06/2014 0850
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4635.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0420			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0420				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
Toluene-d8 (Surr)	109		71 - 126
4-Bromofluorobenzene (Surr)	104		73 - 120
Dibromofluoromethane (Surr)	117		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-4
Client Matrix: Water

Date Sampled: 08/06/2014 0950
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4636.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0441			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0441				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	116		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-5
Client Matrix: Water

Date Sampled: 08/06/2014 1100
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197698	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4659.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0105			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0105				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
Toluene-d8 (Surr)	103		71 - 126
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	108		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **PMW-4**

Lab Sample ID: 480-65088-6
Client Matrix: Water

Date Sampled: 08/06/2014 1105
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4637.D
Dilution:	4.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0502			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0502				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	<4.0		1.6	4.0
Ethylbenzene	<4.0		3.0	4.0
Toluene	<4.0		2.0	4.0
Xylenes, Total	<8.0		2.6	8.0
m,p-Xylene	<8.0		2.6	8.0
o-Xylene	<4.0		3.0	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	111		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120
Dibromofluoromethane (Surr)	117		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-7
Client Matrix: Water

Date Sampled: 08/06/2014 1235
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4638.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0522			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0522				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120
Dibromofluoromethane (Surr)	117		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **MW-7**

Lab Sample ID: 480-65088-9
Client Matrix: Water

Date Sampled: 08/06/2014 1400
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4639.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0543			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0543				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	109		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	116		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **PMW-6**

Lab Sample ID: 480-65088-10
Client Matrix: Water

Date Sampled: 08/06/2014 1440
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4640.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0604			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0604				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Benzene	90		0.41	1.0
Ethylbenzene	57		0.74	1.0
Toluene	3.4		0.51	1.0
Xylenes, Total	95		0.66	2.0
m,p-Xylene	63		0.66	2.0
o-Xylene	32		0.76	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
Toluene-d8 (Surr)	102		71 - 126
4-Bromofluorobenzene (Surr)	99		73 - 120
Dibromofluoromethane (Surr)	117		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **DUP-080614**

Lab Sample ID: 480-65088-12
Client Matrix: Water

Date Sampled: 08/06/2014 0000
Date Received: 08/07/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197478	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D4641.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/13/2014 0624			Final Weight/Volume:	5 mL
Prep Date:	08/13/2014 0624				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	104		73 - 120
Dibromofluoromethane (Surr)	115		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-4
Client Matrix: Water

Date Sampled: 08/06/2014 0950
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1318.D
Dilution:	1.0			Initial Weight/Volume:	259.4 mL
Analysis Date:	08/13/2014 1640			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.6		1.4	9.6
3 & 4 Methylphenol	<9.6		1.3	9.6
bis (2-chloroisopropyl) ether	<9.6		1.2	9.6
2,4,5-Trichlorophenol	<9.6		1.7	9.6
2,4,6-Trichlorophenol	<9.6		1.4	9.6
2,4-Dichlorophenol	<9.6		1.6	9.6
2,4-Dimethylphenol	<9.6		1.3	9.6
2,4-Dinitrophenol	<48		24	48
2,4-Dinitrotoluene	<9.6		0.81	9.6
2,6-Dinitrotoluene	<9.6		1.2	9.6
2-Chloronaphthalene	<9.6		1.3	9.6
2-Chlorophenol	<9.6		1.4	9.6
2-Methylnaphthalene	<9.6		1.3	9.6
2-Methylphenol	<9.6		1.3	9.6
2-Nitroaniline	<48		9.6	48
2-Nitrophenol	<9.6		1.9	9.6
3,3'-Dichlorobenzidine	<58		39	58
3-Nitroaniline	<48		9.6	48
4,6-Dinitro-2-methylphenol	<48		16	48
4-Bromophenyl phenyl ether	<9.6		1.7	9.6
4-Chloro-3-methylphenol	<9.6		1.6	9.6
4-Chloroaniline	<19		1.3	19
4-Chlorophenyl phenyl ether	<9.6		1.7	9.6
4-Nitroaniline	<48		9.6	48
4-Nitrophenol	<48		9.6	48
Acenaphthene	<9.6		1.4	9.6
Acenaphthylene	<9.6		1.5	9.6
Acetophenone	<9.6		1.7	9.6
Anthracene	<9.6		1.6	9.6
Atrazine	<9.6		1.5	9.6
Benzaldehyde	<9.6		2.0	9.6
Benzo(a)anthracene	<9.6		1.8	9.6
Benzo(a)pyrene	<9.6		2.3	9.6
Benzo(b)fluoranthene	<9.6		2.0	9.6
Benzo(g,h,i)perylene	<9.6		1.9	9.6
Benzo(k)fluoranthene	<9.6		2.4	9.6
Bis(2-chloroethoxy)methane	<9.6		1.6	9.6
Bis(2-chloroethyl)ether	<9.6		1.3	9.6
Bis(2-ethylhexyl) phthalate	2.4	J	2.3	9.6
Butyl benzyl phthalate	<9.6		2.2	9.6
Caprolactam	<9.6		1.3	9.6
Carbazole	<9.6		2.0	9.6
Chrysene	<9.6		1.8	9.6
Dibenz(a,h)anthracene	<9.6		1.6	9.6
Dibenzofuran	<9.6		1.6	9.6
Diethyl phthalate	<9.6		1.9	9.6

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-4
Client Matrix: Water

Date Sampled: 08/06/2014 0950
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1318.D
Dilution:	1.0			Initial Weight/Volume:	259.4 mL
Analysis Date:	08/13/2014 1640			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.6		1.9	9.6
Di-n-butyl phthalate	<9.6		1.8	9.6
Di-n-octyl phthalate	<9.6		2.4	9.6
Fluoranthene	<9.6		1.8	9.6
Fluorene	<9.6		1.7	9.6
Hexachlorobenzene	<9.6		1.6	9.6
Hexachlorobutadiene	<9.6		0.80	9.6
Hexachlorocyclopentadiene	<9.6		0.72	9.6
Hexachloroethane	<9.6		0.80	9.6
Indeno(1,2,3-cd)pyrene	<9.6		1.7	9.6
Isophorone	<9.6		1.3	9.6
Naphthalene	<9.6		1.2	9.6
Nitrobenzene	<9.6		1.3	9.6
N-Nitrosodi-n-propylamine	<9.6		1.4	9.6
N-Nitrosodiphenylamine	<9.6		1.7	9.6
Pentachlorophenol	<48		9.6	48
Phenanthrene	<9.6		1.8	9.6
Phenol	<9.6		1.4	9.6
Pyrene	<9.6		1.8	9.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	84		10 - 143
Nitrobenzene-d5	80		39 - 130
Phenol-d5	70		25 - 130
2-Fluorophenol	65		25 - 130
2,4,6-Tribromophenol	72		31 - 141
2-Fluorobiphenyl	70		38 - 130

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-5
Client Matrix: Water

Date Sampled: 08/06/2014 1100
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1319.D
Dilution:	1.0			Initial Weight/Volume:	244 mL
Analysis Date:	08/13/2014 1705			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<10		1.5	10
3 & 4 Methylphenol	<10		1.3	10
bis (2-chloroisopropyl) ether	<10		1.2	10
2,4,5-Trichlorophenol	<10		1.8	10
2,4,6-Trichlorophenol	<10		1.5	10
2,4-Dichlorophenol	<10		1.7	10
2,4-Dimethylphenol	<10		1.3	10
2,4-Dinitrophenol	<51		26	51
2,4-Dinitrotoluene	<10		0.86	10
2,6-Dinitrotoluene	<10		1.2	10
2-Chloronaphthalene	<10		1.4	10
2-Chlorophenol	<10		1.5	10
2-Methylnaphthalene	<10		1.3	10
2-Methylphenol	<10		1.4	10
2-Nitroaniline	<51		10	51
2-Nitrophenol	<10		2.0	10
3,3'-Dichlorobenzidine	<61		41	61
3-Nitroaniline	<51		10	51
4,6-Dinitro-2-methylphenol	<51		17	51
4-Bromophenyl phenyl ether	<10		1.8	10
4-Chloro-3-methylphenol	<10		1.7	10
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<10		1.8	10
4-Nitroaniline	<51		10	51
4-Nitrophenol	<51		10	51
Acenaphthene	<10	UJ	1.5	10
Acenaphthylene	<10		1.6	10
Acetophenone	<10		1.8	10
Anthracene	<10		1.7	10
Atrazine	<10		1.6	10
Benzaldehyde	<10		2.2	10
Benzo(a)anthracene	<10		1.9	10
Benzo(a)pyrene	<10		2.5	10
Benzo(b)fluoranthene	<10		2.2	10
Benzo(g,h,i)perylene	<10		2.0	10
Benzo(k)fluoranthene	<10		2.6	10
Bis(2-chloroethoxy)methane	<10		1.7	10
Bis(2-chloroethyl)ether	<10		1.4	10
Bis(2-ethylhexyl) phthalate	4.4	J	2.5	10
Butyl benzyl phthalate	<10		2.4	10
Caprolactam	<10		1.3	10
Carbazole	<10		2.2	10
Chrysene	<10		1.9	10
Dibenz(a,h)anthracene	<10		1.7	10
Dibenzofuran	<10		1.7	10
Diethyl phthalate	<10		2.0	10

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-5
Client Matrix: Water

Date Sampled: 08/06/2014 1100
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1319.D
Dilution:	1.0			Initial Weight/Volume:	244 mL
Analysis Date:	08/13/2014 1705			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<10		2.0	10
Di-n-butyl phthalate	<10		1.9	10
Di-n-octyl phthalate	<10		2.6	10
Fluoranthene	<10		1.9	10
Fluorene	<10	U	1.8	10
Hexachlorobenzene	<10		1.7	10
Hexachlorobutadiene	<10		0.85	10
Hexachlorocyclopentadiene	<10		0.77	10
Hexachloroethane	<10		0.85	10
Indeno(1,2,3-cd)pyrene	<10		1.8	10
Isophorone	<10		1.3	10
Naphthalene	<10		1.2	10
Nitrobenzene	<10		1.3	10
N-Nitrosodi-n-propylamine	<10		1.5	10
N-Nitrosodiphenylamine	<10		1.8	10
Pentachlorophenol	<51		10	51
Phenanthrene	<10		1.9	10
Phenol	<10		1.5	10
Pyrene	<10		1.9	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	93		10 - 143
Nitrobenzene-d5	75		39 - 130
Phenol-d5	75		25 - 130
2-Fluorophenol	71		25 - 130
2,4,6-Tribromophenol	75		31 - 141
2-Fluorobiphenyl	71		38 - 130

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-7
Client Matrix: Water

Date Sampled: 08/06/2014 1235
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1320.D
Dilution:	1.0			Initial Weight/Volume:	261.4 mL
Analysis Date:	08/13/2014 1729			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.6		1.4	9.6
3 & 4 Methylphenol	<9.6		1.2	9.6
bis (2-chloroisopropyl) ether	<9.6		1.1	9.6
2,4,5-Trichlorophenol	<9.6		1.7	9.6
2,4,6-Trichlorophenol	<9.6		1.4	9.6
2,4-Dichlorophenol	<9.6		1.6	9.6
2,4-Dimethylphenol	<9.6		1.2	9.6
2,4-Dinitrophenol	<48		24	48
2,4-Dinitrotoluene	<9.6		0.80	9.6
2,6-Dinitrotoluene	<9.6		1.1	9.6
2-Chloronaphthalene	<9.6		1.3	9.6
2-Chlorophenol	<9.6		1.4	9.6
2-Methylnaphthalene	<9.6		1.2	9.6
2-Methylphenol	<9.6		1.3	9.6
2-Nitroaniline	<48		9.6	48
2-Nitrophenol	<9.6		1.9	9.6
3,3'-Dichlorobenzidine	<57		38	57
3-Nitroaniline	<48		9.6	48
4,6-Dinitro-2-methylphenol	<48		16	48
4-Bromophenyl phenyl ether	<9.6		1.7	9.6
4-Chloro-3-methylphenol	<9.6		1.6	9.6
4-Chloroaniline	<19		1.2	19
4-Chlorophenyl phenyl ether	<9.6		1.7	9.6
4-Nitroaniline	<48		9.6	48
4-Nitrophenol	<48		9.6	48
Acenaphthene	<9.6		1.4	9.6
Acenaphthylene	<9.6		1.5	9.6
Acetophenone	<9.6		1.7	9.6
Anthracene	<9.6		1.6	9.6
Atrazine	<9.6		1.5	9.6
Benzaldehyde	<9.6		2.0	9.6
Benzo(a)anthracene	<9.6		1.8	9.6
Benzo(a)pyrene	<9.6		2.3	9.6
Benzo(b)fluoranthene	<9.6		2.0	9.6
Benzo(g,h,i)perylene	<9.6		1.9	9.6
Benzo(k)fluoranthene	<9.6		2.4	9.6
Bis(2-chloroethoxy)methane	<9.6		1.6	9.6
Bis(2-chloroethyl)ether	<9.6		1.3	9.6
Bis(2-ethylhexyl) phthalate	2.4	J	2.3	9.6
Butyl benzyl phthalate	<9.6		2.2	9.6
Caprolactam	<9.6		1.2	9.6
Carbazole	<9.6		2.0	9.6
Chrysene	<9.6		1.8	9.6
Dibenz(a,h)anthracene	<9.6		1.6	9.6
Dibenzofuran	<9.6		1.6	9.6
Diethyl phthalate	<9.6		1.9	9.6

Client: New York State Electric & Gas

Job Number: 480-65088-1

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

Lab Sample ID: 480-65088-7
Client Matrix: Water

Date Sampled: 08/06/2014 1235
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1320.D
Dilution:	1.0			Initial Weight/Volume:	261.4 mL
Analysis Date:	08/13/2014 1729			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.6		1.9	9.6
Di-n-butyl phthalate	<9.6		1.8	9.6
Di-n-octyl phthalate	<9.6		2.4	9.6
Fluoranthene	<9.6		1.8	9.6
Fluorene	<9.6		1.7	9.6
Hexachlorobenzene	<9.6		1.6	9.6
Hexachlorobutadiene	<9.6		0.79	9.6
Hexachlorocyclopentadiene	<9.6		0.72	9.6
Hexachloroethane	<9.6		0.79	9.6
Indeno(1,2,3-cd)pyrene	<9.6		1.7	9.6
Isophorone	<9.6		1.2	9.6
Naphthalene	<9.6		1.1	9.6
Nitrobenzene	<9.6		1.2	9.6
N-Nitrosodi-n-propylamine	<9.6		1.4	9.6
N-Nitrosodiphenylamine	<9.6		1.7	9.6
Pentachlorophenol	<48		9.6	48
Phenanthrene	<9.6		1.8	9.6
Phenol	<9.6		1.4	9.6
Pyrene	<9.6		1.8	9.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	85		10 - 143
Nitrobenzene-d5	77		39 - 130
Phenol-d5	71		25 - 130
2-Fluorophenol	65		25 - 130
2,4,6-Tribromophenol	71		31 - 141
2-Fluorobiphenyl	67		38 - 130

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **MW-7**

Lab Sample ID: 480-65088-9
Client Matrix: Water

Date Sampled: 08/06/2014 1400
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1321.D
Dilution:	1.0			Initial Weight/Volume:	253.4 mL
Analysis Date:	08/13/2014 1754			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.9		1.5	9.9
3 & 4 Methylphenol	<9.9		1.3	9.9
bis (2-chloroisopropyl) ether	<9.9		1.2	9.9
2,4,5-Trichlorophenol	<9.9		1.8	9.9
2,4,6-Trichlorophenol	<9.9		1.5	9.9
2,4-Dichlorophenol	<9.9		1.7	9.9
2,4-Dimethylphenol	<9.9		1.3	9.9
2,4-Dinitrophenol	<49		25	49
2,4-Dinitrotoluene	<9.9		0.83	9.9
2,6-Dinitrotoluene	<9.9		1.2	9.9
2-Chloronaphthalene	<9.9		1.4	9.9
2-Chlorophenol	<9.9		1.5	9.9
2-Methylnaphthalene	<9.9		1.3	9.9
2-Methylphenol	<9.9		1.4	9.9
2-Nitroaniline	<49		9.9	49
2-Nitrophenol	<9.9		2.0	9.9
3,3'-Dichlorobenzidine	<59		39	59
3-Nitroaniline	<49		9.9	49
4,6-Dinitro-2-methylphenol	<49		17	49
4-Bromophenyl phenyl ether	<9.9		1.8	9.9
4-Chloro-3-methylphenol	<9.9		1.7	9.9
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<9.9		1.8	9.9
4-Nitroaniline	<49		9.9	49
4-Nitrophenol	<49		9.9	49
Acenaphthene	<9.9		1.5	9.9
Acenaphthylene	<9.9		1.6	9.9
Acetophenone	<9.9		1.8	9.9
Anthracene	<9.9		1.7	9.9
Atrazine	<9.9		1.6	9.9
Benzaldehyde	<9.9		2.1	9.9
Benzo(a)anthracene	<9.9		1.9	9.9
Benzo(a)pyrene	<9.9		2.4	9.9
Benzo(b)fluoranthene	<9.9		2.1	9.9
Benzo(g,h,i)perylene	<9.9		2.0	9.9
Benzo(k)fluoranthene	<9.9		2.5	9.9
Bis(2-chloroethoxy)methane	<9.9		1.7	9.9
Bis(2-chloroethyl)ether	<9.9		1.4	9.9
Bis(2-ethylhexyl) phthalate	<9.9		2.4	9.9
Butyl benzyl phthalate	<9.9		2.3	9.9
Caprolactam	<9.9		1.3	9.9
Carbazole	<9.9		2.1	9.9
Chrysene	<9.9		1.9	9.9
Dibenz(a,h)anthracene	<9.9		1.7	9.9
Dibenzofuran	<9.9		1.7	9.9
Diethyl phthalate	<9.9		2.0	9.9

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **MW-7**

Lab Sample ID: 480-65088-9
Client Matrix: Water

Date Sampled: 08/06/2014 1400
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1321.D
Dilution:	1.0			Initial Weight/Volume:	253.4 mL
Analysis Date:	08/13/2014 1754			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.9		2.0	9.9
Di-n-butyl phthalate	<9.9		1.9	9.9
Di-n-octyl phthalate	<9.9		2.5	9.9
Fluoranthene	<9.9		1.9	9.9
Fluorene	<9.9		1.8	9.9
Hexachlorobenzene	<9.9		1.7	9.9
Hexachlorobutadiene	<9.9		0.82	9.9
Hexachlorocyclopentadiene	<9.9		0.74	9.9
Hexachloroethane	<9.9		0.82	9.9
Indeno(1,2,3-cd)pyrene	<9.9		1.8	9.9
Isophorone	<9.9		1.3	9.9
Naphthalene	<9.9		1.2	9.9
Nitrobenzene	<9.9		1.3	9.9
N-Nitrosodi-n-propylamine	<9.9		1.5	9.9
N-Nitrosodiphenylamine	<9.9		1.8	9.9
Pentachlorophenol	<49		9.9	49
Phenanthrene	<9.9		1.9	9.9
Phenol	<9.9		1.5	9.9
Pyrene	<9.9		1.9	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	89		10 - 143
Nitrobenzene-d5	75		39 - 130
Phenol-d5	67		25 - 130
2-Fluorophenol	64		25 - 130
2,4,6-Tribromophenol	73		31 - 141
2-Fluorobiphenyl	68		38 - 130

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **DUP-080614**

Lab Sample ID: 480-65088-12
Client Matrix: Water

Date Sampled: 08/06/2014 0000
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1322.D
Dilution:	1.0			Initial Weight/Volume:	254.7 mL
Analysis Date:	08/13/2014 1818			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.8		1.5	9.8
3 & 4 Methylphenol	<9.8		1.3	9.8
bis (2-chloroisopropyl) ether	<9.8		1.2	9.8
2,4,5-Trichlorophenol	<9.8		1.8	9.8
2,4,6-Trichlorophenol	<9.8		1.5	9.8
2,4-Dichlorophenol	<9.8		1.7	9.8
2,4-Dimethylphenol	<9.8		1.3	9.8
2,4-Dinitrophenol	<49		25	49
2,4-Dinitrotoluene	<9.8		0.82	9.8
2,6-Dinitrotoluene	<9.8		1.2	9.8
2-Chloronaphthalene	<9.8		1.4	9.8
2-Chlorophenol	<9.8		1.5	9.8
2-Methylnaphthalene	<9.8		1.3	9.8
2-Methylphenol	<9.8		1.4	9.8
2-Nitroaniline	<49		9.8	49
2-Nitrophenol	<9.8		2.0	9.8
3,3'-Dichlorobenzidine	<59		39	59
3-Nitroaniline	<49		9.8	49
4,6-Dinitro-2-methylphenol	<49		17	49
4-Bromophenyl phenyl ether	<9.8		1.8	9.8
4-Chloro-3-methylphenol	<9.8		1.7	9.8
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<9.8		1.8	9.8
4-Nitroaniline	<49		9.8	49
4-Nitrophenol	<49		9.8	49
Acenaphthene	<9.8		1.5	9.8
Acenaphthylene	<9.8		1.6	9.8
Acetophenone	<9.8		1.8	9.8
Anthracene	<9.8		1.7	9.8
Atrazine	<9.8		1.6	9.8
Benzaldehyde	<9.8		2.1	9.8
Benzo(a)anthracene	<9.8		1.9	9.8
Benzo(a)pyrene	<9.8		2.4	9.8
Benzo(b)fluoranthene	<9.8		2.1	9.8
Benzo(g,h,i)perylene	<9.8		2.0	9.8
Benzo(k)fluoranthene	<9.8		2.5	9.8
Bis(2-chloroethoxy)methane	<9.8		1.7	9.8
Bis(2-chloroethyl)ether	<9.8		1.4	9.8
Bis(2-ethylhexyl) phthalate	<9.8		2.4	9.8
Butyl benzyl phthalate	<9.8		2.3	9.8
Caprolactam	<9.8		1.3	9.8
Carbazole	<9.8		2.1	9.8
Chrysene	<9.8		1.9	9.8
Dibenz(a,h)anthracene	<9.8		1.7	9.8
Dibenzofuran	<9.8		1.7	9.8
Diethyl phthalate	<9.8		2.0	9.8

Client: New York State Electric & Gas

Job Number: 480-65088-1

Client Sample ID: **DUP-080614**

Lab Sample ID: 480-65088-12
Client Matrix: Water

Date Sampled: 08/06/2014 0000
Date Received: 08/07/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1322.D
Dilution:	1.0			Initial Weight/Volume:	254.7 mL
Analysis Date:	08/13/2014 1818			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.8		2.0	9.8
Di-n-butyl phthalate	<9.8		1.9	9.8
Di-n-octyl phthalate	<9.8		2.5	9.8
Fluoranthene	<9.8		1.9	9.8
Fluorene	<9.8		1.8	9.8
Hexachlorobenzene	<9.8		1.7	9.8
Hexachlorobutadiene	<9.8		0.81	9.8
Hexachlorocyclopentadiene	<9.8		0.74	9.8
Hexachloroethane	<9.8		0.81	9.8
Indeno(1,2,3-cd)pyrene	<9.8		1.8	9.8
Isophorone	<9.8		1.3	9.8
Naphthalene	<9.8		1.2	9.8
Nitrobenzene	<9.8		1.3	9.8
N-Nitrosodi-n-propylamine	<9.8		1.5	9.8
N-Nitrosodiphenylamine	<9.8		1.8	9.8
Pentachlorophenol	<49		9.8	49
Phenanthrene	<9.8		1.9	9.8
Phenol	<9.8		1.5	9.8
Pyrene	<9.8		1.9	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	80		10 - 143
Nitrobenzene-d5	75		39 - 130
Phenol-d5	69		25 - 130
2-Fluorophenol	65		25 - 130
2,4,6-Tribromophenol	64		31 - 141
2-Fluorobiphenyl	66		38 - 130

General Chemistry

Client Sample ID: **PMW-1**

Lab Sample ID: 480-65088-3
Client Matrix: Water

Date Sampled: 08/06/2014 0945
Date Received: 08/07/2014 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	<2.0		mg/L	2.0	2.0	1.0	5210B
Analysis Batch: 480-196808	Analysis Date: 08/07/2014 1541						
Biochemical Oxygen Demand	<2.0		mg/L	2.0	2.0	1.0	SM 5210B
Analysis Batch: 480-196807	Analysis Date: 08/07/2014 1541						

General Chemistry

Client Sample ID: **PMW-5**

Lab Sample ID: 480-65088-8
Client Matrix: Water

Date Sampled: 08/06/2014 1335
Date Received: 08/07/2014 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	<2.0		mg/L	2.0	2.0	1.0	5210B
Analysis Batch: 480-196808	Analysis Date: 08/07/2014 1541						
Biochemical Oxygen Demand	<2.0		mg/L	2.0	2.0	1.0	SM 5210B
Analysis Batch: 480-196963	Analysis Date: 08/08/2014 0841						

Client: New York State Electric & Gas

Job Number: 480-65088-1

General Chemistry

Client Sample ID: **PMW-3**

Lab Sample ID: 480-65088-11
Client Matrix: Water

Date Sampled: 08/06/2014 1600
Date Received: 08/07/2014 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Carbonaceous Biochemical Oxygen Demand	10.6		mg/L	2.0	2.0	1.0	5210B
Analysis Batch: 480-196808	Analysis Date: 08/07/2014 1541						
Biochemical Oxygen Demand	6.9		mg/L	2.0	2.0	1.0	SM 5210B
Analysis Batch: 480-196963	Analysis Date: 08/08/2014 0841						

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAm
THE LEADER IN ENVIRON

480-65088 Chain of Custody

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
NYSEG/ARCADIS	Bruce Ahrens	8/6/14	264225
Address 295 Woodcliff Drive	Telephone Number (Area Code)/Fax Number 585-385-0090	Lab Number	Page 1 of X1
City Fairport / **State** NY / **Zip Code** 14450	Site Contact Klaus Beyrle	Lab Contact Melissa Deyo	
Project Name and Location (State) Madison Ave Former MGP Site	Carrier/Waybill Number		
Contract/Purchase Order/Quote No. B0013134.0000			

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	Sulfide	BOD	COD	8270	Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
TRIP BLANK	—	—											X					
PMW-2	8.6.14	0850		X						3			X					
PMW-1		0945		X			2							X	X			
MW-45		0950		X			2			3			X			X		
MW-25		1100		X			6			9			X			X		MS/MSD
PMW-4		1105		X						3			X					
MW-9S		1235		X			2			3			X			X		
PMW-5		1335		X			2							X	X			
MW-7		1400		X			2			3			X			X		
PMW-6		1440		X						3			X					
PMW-3		1600		X			2							X	X			
DUP-080614		—		X			2			3			X			X		

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)
& Per Contract

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

QC Requirements (Specify)

	Date	Time
1. Relinquished By	8.6.14	1730
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By Fed Ex	8.6.14	
2. Received By THIS	8-7-14	0900
3. Received By		

Comments

08/21/2014

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

#2 4.0, 4.1

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NYSEG Elmira Madison Avenue Former MGP Site

Data Usability Summary Report (DUSR)

ELMIRA, NEW YORK

Volatile and Semivolatile Analyses

SDG #480-65212-1

Analyses Performed By:
TestAmerica
Amherst, New York

Report #22287R
Review Level: Tier III
Project: B0013134.0000.00002

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 480-65212-1 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
MW-6S	480-65212-1	Water	8/7/2014		X	X			
MW-0405S	480-65212-2	Water	8/7/2014		X	X			
MW-8S	480-65212-3	Water	8/7/2014		X	X			
MW-0404S	480-65212-4	Water	8/7/2014		X	X			
MW-0402S	480-65212-5	Water	8/7/2014		X	X			
MW-0403S	480-65212-6	Water	8/7/2014		X	X			
TRIP BLANK	480-65212-7	Water	8/7/2014		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.

MS/MSD analysis was not performed on a sample location within this SDG.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the 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.

Field duplicate analysis was not performed on a sample location within this SDG.

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
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
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					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.

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 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.

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.

MS/MSD analysis was not performed on a sample location within this SDG.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the 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.

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

Sample Locations	Compound	LCS Recovery
MW-6S MW-0405S MW-8S MW-0404S MW-0402S MW-0403S	Di-n-octyl phthalate	> UL

The criteria used to evaluate the LCS recoveries are presented in the following table. In the case of an LCS 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

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.

Field duplicate analysis was not performed on a sample location within this SDG.

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
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate (MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					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	

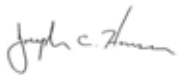
%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
480-65212-1	8/7/2014	ASP 2005	MW-6S	Water	Yes	Yes	--	--	--	
	8/7/2014	ASP 2005	MW-0405S	Water	Yes	Yes	--	--	--	
	8/7/2014	ASP 2005	MW-8S	Water	Yes	Yes	--	--	--	
	8/7/2014	ASP 2005	MW-0404S	Water	Yes	Yes	--	--	--	
	8/7/2014	ASP 2005	MW-0402S	Water	Yes	Yes	--	--	--	
	8/7/2014	ASP 2005	MW-0403S	Water	Yes	Yes	--	--	--	
	8/7/2014	ASP 2005	TRIP BLANK	Water	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: September 10, 2014

PEER REVIEW: Dennis Capria

DATE: September 12, 2014

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-1
Client Matrix: Water

Date Sampled: 08/07/2014 0850
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6802.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0203			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0203				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
Toluene-d8 (Surr)	95		71 - 126
4-Bromofluorobenzene (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	100		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-2
Client Matrix: Water

Date Sampled: 08/07/2014 0850
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6803.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0227			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0227				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
Toluene-d8 (Surr)	95		71 - 126
4-Bromofluorobenzene (Surr)	107		73 - 120
Dibromofluoromethane (Surr)	98		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-3
Client Matrix: Water

Date Sampled: 08/07/2014 1000
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6804.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0250			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0250				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
Toluene-d8 (Surr)	94		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	102		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-4
Client Matrix: Water

Date Sampled: 08/07/2014 1000
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6805.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0313			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0313				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
Toluene-d8 (Surr)	94		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	100		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-5
Client Matrix: Water

Date Sampled: 08/07/2014 1110
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6806.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0337			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0337				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
Toluene-d8 (Surr)	95		71 - 126
4-Bromofluorobenzene (Surr)	107		73 - 120
Dibromofluoromethane (Surr)	100		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-6
Client Matrix: Water

Date Sampled: 08/07/2014 1110
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6807.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0401			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0401				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		66 - 137
Toluene-d8 (Surr)	95		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	98		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-65212-7
Client Matrix: Water

Date Sampled: 08/07/2014 0000
Date Received: 08/08/2014 0900

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-197700	Instrument ID:	HP5973Q
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	Q6808.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 0425			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 0425				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
Toluene-d8 (Surr)	94		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120
Dibromofluoromethane (Surr)	99		60 - 140

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-1
Client Matrix: Water

Date Sampled: 08/07/2014 0850
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1323.D
Dilution:	1.0			Initial Weight/Volume:	254.2 mL
Analysis Date:	08/13/2014 1843			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.8		1.5	9.8
3 & 4 Methylphenol	<9.8		1.3	9.8
bis (2-chloroisopropyl) ether	<9.8		1.2	9.8
2,4,5-Trichlorophenol	<9.8		1.8	9.8
2,4,6-Trichlorophenol	<9.8		1.5	9.8
2,4-Dichlorophenol	<9.8		1.7	9.8
2,4-Dimethylphenol	<9.8		1.3	9.8
2,4-Dinitrophenol	<49		25	49
2,4-Dinitrotoluene	<9.8		0.83	9.8
2,6-Dinitrotoluene	<9.8		1.2	9.8
2-Chloronaphthalene	<9.8		1.4	9.8
2-Chlorophenol	<9.8		1.5	9.8
2-Methylnaphthalene	<9.8		1.3	9.8
2-Methylphenol	<9.8		1.4	9.8
2-Nitroaniline	<49		9.8	49
2-Nitrophenol	<9.8		2.0	9.8
3,3'-Dichlorobenzidine	<59		39	59
3-Nitroaniline	<49		9.8	49
4,6-Dinitro-2-methylphenol	<49		17	49
4-Bromophenyl phenyl ether	<9.8		1.8	9.8
4-Chloro-3-methylphenol	<9.8		1.7	9.8
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<9.8		1.8	9.8
4-Nitroaniline	<49		9.8	49
4-Nitrophenol	<49		9.8	49
Acenaphthene	<9.8		1.5	9.8
Acenaphthylene	<9.8		1.6	9.8
Acetophenone	<9.8		1.8	9.8
Anthracene	<9.8		1.7	9.8
Atrazine	<9.8		1.6	9.8
Benzaldehyde	<9.8		2.1	9.8
Benzo(a)anthracene	<9.8		1.9	9.8
Benzo(a)pyrene	<9.8		2.4	9.8
Benzo(b)fluoranthene	<9.8		2.1	9.8
Benzo(g,h,i)perylene	<9.8		2.0	9.8
Benzo(k)fluoranthene	<9.8		2.5	9.8
Bis(2-chloroethoxy)methane	<9.8		1.7	9.8
Bis(2-chloroethyl)ether	<9.8		1.4	9.8
Bis(2-ethylhexyl) phthalate	<9.8		2.4	9.8
Butyl benzyl phthalate	<9.8		2.3	9.8
Caprolactam	<9.8		1.3	9.8
Carbazole	<9.8		2.1	9.8
Chrysene	<9.8		1.9	9.8
Dibenz(a,h)anthracene	<9.8		1.7	9.8
Dibenzofuran	<9.8		1.7	9.8
Diethyl phthalate	<9.8		2.0	9.8

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-1
Client Matrix: Water

Date Sampled: 08/07/2014 0850
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1323.D
Dilution:	1.0			Initial Weight/Volume:	254.2 mL
Analysis Date:	08/13/2014 1843			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.8		2.0	9.8
Di-n-butyl phthalate	<9.8		1.9	9.8
Di-n-octyl phthalate	<9.8		2.5	9.8
Fluoranthene	<9.8		1.9	9.8
Fluorene	<9.8		1.8	9.8
Hexachlorobenzene	<9.8		1.7	9.8
Hexachlorobutadiene	<9.8		0.82	9.8
Hexachlorocyclopentadiene	<9.8		0.74	9.8
Hexachloroethane	<9.8		0.82	9.8
Indeno(1,2,3-cd)pyrene	<9.8		1.8	9.8
Isophorone	<9.8		1.3	9.8
Naphthalene	<9.8		1.2	9.8
Nitrobenzene	<9.8		1.3	9.8
N-Nitrosodi-n-propylamine	<9.8		1.5	9.8
N-Nitrosodiphenylamine	<9.8		1.8	9.8
Pentachlorophenol	<49		9.8	49
Phenanthrene	<9.8		1.9	9.8
Phenol	<9.8		1.5	9.8
Pyrene	<9.8		1.9	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	98		10 - 132
Nitrobenzene-d5	78		30 - 117
Phenol-d5	76		25 - 109
2-Fluorophenol	70		26 - 107
2,4,6-Tribromophenol	75		34 - 140
2-Fluorobiphenyl	67		32 - 114

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-2
Client Matrix: Water

Date Sampled: 08/07/2014 0850
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1324.D
Dilution:	1.0			Initial Weight/Volume:	257.9 mL
Analysis Date:	08/13/2014 1907			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.7		1.5	9.7
3 & 4 Methylphenol	<9.7		1.3	9.7
bis (2-chloroisopropyl) ether	<9.7		1.2	9.7
2,4,5-Trichlorophenol	<9.7		1.7	9.7
2,4,6-Trichlorophenol	<9.7		1.5	9.7
2,4-Dichlorophenol	<9.7		1.6	9.7
2,4-Dimethylphenol	<9.7		1.3	9.7
2,4-Dinitrophenol	<48		24	48
2,4-Dinitrotoluene	<9.7		0.81	9.7
2,6-Dinitrotoluene	<9.7		1.2	9.7
2-Chloronaphthalene	<9.7		1.4	9.7
2-Chlorophenol	<9.7		1.5	9.7
2-Methylnaphthalene	<9.7		1.3	9.7
2-Methylphenol	<9.7		1.4	9.7
2-Nitroaniline	<48		9.7	48
2-Nitrophenol	<9.7		1.9	9.7
3,3'-Dichlorobenzidine	<58		39	58
3-Nitroaniline	<48		9.7	48
4,6-Dinitro-2-methylphenol	<48		16	48
4-Bromophenyl phenyl ether	<9.7		1.7	9.7
4-Chloro-3-methylphenol	<9.7		1.6	9.7
4-Chloroaniline	<19		1.3	19
4-Chlorophenyl phenyl ether	<9.7		1.7	9.7
4-Nitroaniline	<48		9.7	48
4-Nitrophenol	<48		9.7	48
Acenaphthene	<9.7		1.5	9.7
Acenaphthylene	<9.7		1.6	9.7
Acetophenone	<9.7		1.7	9.7
Anthracene	<9.7		1.6	9.7
Atrazine	<9.7		1.6	9.7
Benzaldehyde	<9.7		2.0	9.7
Benzo(a)anthracene	<9.7		1.8	9.7
Benzo(a)pyrene	<9.7		2.3	9.7
Benzo(b)fluoranthene	<9.7		2.0	9.7
Benzo(g,h,i)perylene	<9.7		1.9	9.7
Benzo(k)fluoranthene	<9.7		2.4	9.7
Bis(2-chloroethoxy)methane	<9.7		1.6	9.7
Bis(2-chloroethyl)ether	<9.7		1.4	9.7
Bis(2-ethylhexyl) phthalate	<9.7		2.3	9.7
Butyl benzyl phthalate	<9.7		2.2	9.7
Caprolactam	<9.7		1.3	9.7
Carbazole	<9.7		2.0	9.7
Chrysene	<9.7		1.8	9.7
Dibenz(a,h)anthracene	<9.7		1.6	9.7
Dibenzofuran	<9.7		1.6	9.7
Diethyl phthalate	<9.7		1.9	9.7

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-2
Client Matrix: Water

Date Sampled: 08/07/2014 0850
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1324.D
Dilution:	1.0			Initial Weight/Volume:	257.9 mL
Analysis Date:	08/13/2014 1907			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.7		1.9	9.7
Di-n-butyl phthalate	<9.7		1.8	9.7
Di-n-octyl phthalate	<9.7		2.4	9.7
Fluoranthene	<9.7		1.8	9.7
Fluorene	<9.7		1.7	9.7
Hexachlorobenzene	<9.7		1.6	9.7
Hexachlorobutadiene	<9.7		0.80	9.7
Hexachlorocyclopentadiene	<9.7		0.73	9.7
Hexachloroethane	<9.7		0.80	9.7
Indeno(1,2,3-cd)pyrene	<9.7		1.7	9.7
Isophorone	<9.7		1.3	9.7
Naphthalene	<9.7		1.2	9.7
Nitrobenzene	<9.7		1.3	9.7
N-Nitrosodi-n-propylamine	<9.7		1.5	9.7
N-Nitrosodiphenylamine	<9.7		1.7	9.7
Pentachlorophenol	<48		9.7	48
Phenanthrene	<9.7		1.8	9.7
Phenol	<9.7		1.5	9.7
Pyrene	<9.7		1.8	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	87		10 - 132
Nitrobenzene-d5	77		30 - 117
Phenol-d5	68		25 - 109
2-Fluorophenol	68		26 - 107
2,4,6-Tribromophenol	76		34 - 140
2-Fluorobiphenyl	72		32 - 114

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-3
Client Matrix: Water

Date Sampled: 08/07/2014 1000
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1325.D
Dilution:	1.0			Initial Weight/Volume:	260.8 mL
Analysis Date:	08/13/2014 1932			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.6		1.4	9.6
3 & 4 Methylphenol	<9.6		1.2	9.6
bis (2-chloroisopropyl) ether	<9.6		1.2	9.6
2,4,5-Trichlorophenol	<9.6		1.7	9.6
2,4,6-Trichlorophenol	<9.6		1.4	9.6
2,4-Dichlorophenol	<9.6		1.6	9.6
2,4-Dimethylphenol	<9.6		1.2	9.6
2,4-Dinitrophenol	<48		24	48
2,4-Dinitrotoluene	<9.6		0.81	9.6
2,6-Dinitrotoluene	<9.6		1.2	9.6
2-Chloronaphthalene	<9.6		1.3	9.6
2-Chlorophenol	<9.6		1.4	9.6
2-Methylnaphthalene	<9.6		1.2	9.6
2-Methylphenol	<9.6		1.3	9.6
2-Nitroaniline	<48		9.6	48
2-Nitrophenol	<9.6		1.9	9.6
3,3'-Dichlorobenzidine	<58		38	58
3-Nitroaniline	<48		9.6	48
4,6-Dinitro-2-methylphenol	<48		16	48
4-Bromophenyl phenyl ether	<9.6		1.7	9.6
4-Chloro-3-methylphenol	<9.6		1.6	9.6
4-Chloroaniline	<19		1.2	19
4-Chlorophenyl phenyl ether	<9.6		1.7	9.6
4-Nitroaniline	<48		9.6	48
4-Nitrophenol	<48		9.6	48
Acenaphthene	6.8	J	1.4	9.6
Acenaphthylene	<9.6		1.5	9.6
Acetophenone	<9.6		1.7	9.6
Anthracene	<9.6		1.6	9.6
Atrazine	<9.6		1.5	9.6
Benzaldehyde	<9.6		2.0	9.6
Benzo(a)anthracene	<9.6		1.8	9.6
Benzo(a)pyrene	<9.6		2.3	9.6
Benzo(b)fluoranthene	<9.6		2.0	9.6
Benzo(g,h,i)perylene	<9.6		1.9	9.6
Benzo(k)fluoranthene	<9.6		2.4	9.6
Bis(2-chloroethoxy)methane	<9.6		1.6	9.6
Bis(2-chloroethyl)ether	<9.6		1.3	9.6
Bis(2-ethylhexyl) phthalate	7.2	J	2.3	9.6
Butyl benzyl phthalate	<9.6		2.2	9.6
Caprolactam	<9.6		1.2	9.6
Carbazole	3.5	J	2.0	9.6
Chrysene	<9.6		1.8	9.6
Dibenz(a,h)anthracene	<9.6		1.6	9.6
Dibenzofuran	<9.6		1.6	9.6
Diethyl phthalate	<9.6		1.9	9.6

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-3
Client Matrix: Water

Date Sampled: 08/07/2014 1000
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1325.D
Dilution:	1.0			Initial Weight/Volume:	260.8 mL
Analysis Date:	08/13/2014 1932			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.6		1.9	9.6
Di-n-butyl phthalate	<9.6		1.8	9.6
Di-n-octyl phthalate	<9.6		2.4	9.6
Fluoranthene	<9.6		1.8	9.6
Fluorene	5.1	J	1.7	9.6
Hexachlorobenzene	<9.6		1.6	9.6
Hexachlorobutadiene	<9.6		0.80	9.6
Hexachlorocyclopentadiene	<9.6		0.72	9.6
Hexachloroethane	<9.6		0.80	9.6
Indeno(1,2,3-cd)pyrene	<9.6		1.7	9.6
Isophorone	<9.6		1.2	9.6
Naphthalene	<9.6		1.2	9.6
Nitrobenzene	<9.6		1.2	9.6
N-Nitrosodi-n-propylamine	<9.6		1.4	9.6
N-Nitrosodiphenylamine	<9.6		1.7	9.6
Pentachlorophenol	<48		9.6	48
Phenanthrene	<9.6		1.8	9.6
Phenol	<9.6		1.4	9.6
Pyrene	<9.6		1.8	9.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	71		10 - 132
Nitrobenzene-d5	82		30 - 117
Phenol-d5	80		25 - 109
2-Fluorophenol	74		26 - 107
2,4,6-Tribromophenol	76		34 - 140
2-Fluorobiphenyl	72		32 - 114

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-4
Client Matrix: Water

Date Sampled: 08/07/2014 1000
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1326.D
Dilution:	1.0			Initial Weight/Volume:	254.2 mL
Analysis Date:	08/13/2014 1956			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.8		1.5	9.8
3 & 4 Methylphenol	<9.8		1.3	9.8
bis (2-chloroisopropyl) ether	<9.8		1.2	9.8
2,4,5-Trichlorophenol	<9.8		1.8	9.8
2,4,6-Trichlorophenol	<9.8		1.5	9.8
2,4-Dichlorophenol	<9.8		1.7	9.8
2,4-Dimethylphenol	<9.8		1.3	9.8
2,4-Dinitrophenol	<49		25	49
2,4-Dinitrotoluene	<9.8		0.83	9.8
2,6-Dinitrotoluene	<9.8		1.2	9.8
2-Chloronaphthalene	<9.8		1.4	9.8
2-Chlorophenol	<9.8		1.5	9.8
2-Methylnaphthalene	<9.8		1.3	9.8
2-Methylphenol	<9.8		1.4	9.8
2-Nitroaniline	<49		9.8	49
2-Nitrophenol	<9.8		2.0	9.8
3,3'-Dichlorobenzidine	<59		39	59
3-Nitroaniline	<49		9.8	49
4,6-Dinitro-2-methylphenol	<49		17	49
4-Bromophenyl phenyl ether	<9.8		1.8	9.8
4-Chloro-3-methylphenol	<9.8		1.7	9.8
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<9.8		1.8	9.8
4-Nitroaniline	<49		9.8	49
4-Nitrophenol	<49		9.8	49
Acenaphthene	<9.8		1.5	9.8
Acenaphthylene	<9.8		1.6	9.8
Acetophenone	<9.8		1.8	9.8
Anthracene	<9.8		1.7	9.8
Atrazine	<9.8		1.6	9.8
Benzaldehyde	<9.8		2.1	9.8
Benzo(a)anthracene	<9.8		1.9	9.8
Benzo(a)pyrene	<9.8		2.4	9.8
Benzo(b)fluoranthene	<9.8		2.1	9.8
Benzo(g,h,i)perylene	<9.8		2.0	9.8
Benzo(k)fluoranthene	<9.8		2.5	9.8
Bis(2-chloroethoxy)methane	<9.8		1.7	9.8
Bis(2-chloroethyl)ether	<9.8		1.4	9.8
Bis(2-ethylhexyl) phthalate	<9.8		2.4	9.8
Butyl benzyl phthalate	<9.8		2.3	9.8
Caprolactam	<9.8		1.3	9.8
Carbazole	<9.8		2.1	9.8
Chrysene	<9.8		1.9	9.8
Dibenz(a,h)anthracene	<9.8		1.7	9.8
Dibenzofuran	<9.8		1.7	9.8
Diethyl phthalate	<9.8		2.0	9.8

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-4
Client Matrix: Water

Date Sampled: 08/07/2014 1000
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1326.D
Dilution:	1.0			Initial Weight/Volume:	254.2 mL
Analysis Date:	08/13/2014 1956			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.8		2.0	9.8
Di-n-butyl phthalate	<9.8		1.9	9.8
Di-n-octyl phthalate	<9.8		2.5	9.8
Fluoranthene	<9.8		1.9	9.8
Fluorene	<9.8		1.8	9.8
Hexachlorobenzene	<9.8		1.7	9.8
Hexachlorobutadiene	<9.8		0.82	9.8
Hexachlorocyclopentadiene	<9.8		0.74	9.8
Hexachloroethane	<9.8		0.82	9.8
Indeno(1,2,3-cd)pyrene	<9.8		1.8	9.8
Isophorone	<9.8		1.3	9.8
Naphthalene	<9.8		1.2	9.8
Nitrobenzene	<9.8		1.3	9.8
N-Nitrosodi-n-propylamine	<9.8		1.5	9.8
N-Nitrosodiphenylamine	<9.8		1.8	9.8
Pentachlorophenol	<49		9.8	49
Phenanthrene	<9.8		1.9	9.8
Phenol	<9.8		1.5	9.8
Pyrene	<9.8		1.9	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	94		10 - 132
Nitrobenzene-d5	85		30 - 117
Phenol-d5	81		25 - 109
2-Fluorophenol	76		26 - 107
2,4,6-Tribromophenol	80		34 - 140
2-Fluorobiphenyl	72		32 - 114

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-5
Client Matrix: Water

Date Sampled: 08/07/2014 1110
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1327.D
Dilution:	1.0			Initial Weight/Volume:	252.3 mL
Analysis Date:	08/13/2014 2020			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<9.9		1.5	9.9
3 & 4 Methylphenol	<9.9		1.3	9.9
bis (2-chloroisopropyl) ether	<9.9		1.2	9.9
2,4,5-Trichlorophenol	<9.9		1.8	9.9
2,4,6-Trichlorophenol	<9.9		1.5	9.9
2,4-Dichlorophenol	<9.9		1.7	9.9
2,4-Dimethylphenol	<9.9		1.3	9.9
2,4-Dinitrophenol	<50		25	50
2,4-Dinitrotoluene	<9.9		0.83	9.9
2,6-Dinitrotoluene	<9.9		1.2	9.9
2-Chloronaphthalene	<9.9		1.4	9.9
2-Chlorophenol	<9.9		1.5	9.9
2-Methylnaphthalene	<9.9		1.3	9.9
2-Methylphenol	<9.9		1.4	9.9
2-Nitroaniline	<50		9.9	50
2-Nitrophenol	<9.9		2.0	9.9
3,3'-Dichlorobenzidine	<59		40	59
3-Nitroaniline	<50		9.9	50
4,6-Dinitro-2-methylphenol	<50		17	50
4-Bromophenyl phenyl ether	<9.9		1.8	9.9
4-Chloro-3-methylphenol	<9.9		1.7	9.9
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<9.9		1.8	9.9
4-Nitroaniline	<50		9.9	50
4-Nitrophenol	<50		9.9	50
Acenaphthene	<9.9		1.5	9.9
Acenaphthylene	<9.9		1.6	9.9
Acetophenone	<9.9		1.8	9.9
Anthracene	<9.9		1.7	9.9
Atrazine	<9.9		1.6	9.9
Benzaldehyde	<9.9		2.1	9.9
Benzo(a)anthracene	<9.9		1.9	9.9
Benzo(a)pyrene	<9.9		2.4	9.9
Benzo(b)fluoranthene	<9.9		2.1	9.9
Benzo(g,h,i)perylene	<9.9		2.0	9.9
Benzo(k)fluoranthene	<9.9		2.5	9.9
Bis(2-chloroethoxy)methane	<9.9		1.7	9.9
Bis(2-chloroethyl)ether	<9.9		1.4	9.9
Bis(2-ethylhexyl) phthalate	<9.9		2.4	9.9
Butyl benzyl phthalate	<9.9		2.3	9.9
Caprolactam	<9.9		1.3	9.9
Carbazole	<9.9		2.1	9.9
Chrysene	<9.9		1.9	9.9
Dibenz(a,h)anthracene	<9.9		1.7	9.9
Dibenzofuran	<9.9		1.7	9.9
Diethyl phthalate	<9.9		2.0	9.9

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-5
Client Matrix: Water

Date Sampled: 08/07/2014 1110
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1327.D
Dilution:	1.0			Initial Weight/Volume:	252.3 mL
Analysis Date:	08/13/2014 2020			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<9.9		2.0	9.9
Di-n-butyl phthalate	<9.9		1.9	9.9
Di-n-octyl phthalate	<9.9		2.5	9.9
Fluoranthene	<9.9		1.9	9.9
Fluorene	<9.9		1.8	9.9
Hexachlorobenzene	<9.9		1.7	9.9
Hexachlorobutadiene	<9.9		0.82	9.9
Hexachlorocyclopentadiene	<9.9		0.74	9.9
Hexachloroethane	<9.9		0.82	9.9
Indeno(1,2,3-cd)pyrene	<9.9		1.8	9.9
Isophorone	<9.9		1.3	9.9
Naphthalene	<9.9		1.2	9.9
Nitrobenzene	<9.9		1.3	9.9
N-Nitrosodi-n-propylamine	<9.9		1.5	9.9
N-Nitrosodiphenylamine	<9.9		1.8	9.9
Pentachlorophenol	<50		9.9	50
Phenanthrene	<9.9		1.9	9.9
Phenol	<9.9		1.5	9.9
Pyrene	<9.9		1.9	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	93		10 - 132
Nitrobenzene-d5	87		30 - 117
Phenol-d5	88		25 - 109
2-Fluorophenol	82		26 - 107
2,4,6-Tribromophenol	78		34 - 140
2-Fluorobiphenyl	75		32 - 114

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-6
Client Matrix: Water

Date Sampled: 08/07/2014 1110
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1328.D
Dilution:	1.0			Initial Weight/Volume:	250.6 mL
Analysis Date:	08/13/2014 2045			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	<10		1.5	10
3 & 4 Methylphenol	<10		1.3	10
bis (2-chloroisopropyl) ether	<10		1.2	10
2,4,5-Trichlorophenol	<10		1.8	10
2,4,6-Trichlorophenol	<10		1.5	10
2,4-Dichlorophenol	<10		1.7	10
2,4-Dimethylphenol	<10		1.3	10
2,4-Dinitrophenol	<50		25	50
2,4-Dinitrotoluene	<10		0.84	10
2,6-Dinitrotoluene	<10		1.2	10
2-Chloronaphthalene	<10		1.4	10
2-Chlorophenol	<10		1.5	10
2-Methylnaphthalene	<10		1.3	10
2-Methylphenol	<10		1.4	10
2-Nitroaniline	<50		10	50
2-Nitrophenol	<10		2.0	10
3,3'-Dichlorobenzidine	<60		40	60
3-Nitroaniline	<50		10	50
4,6-Dinitro-2-methylphenol	<50		17	50
4-Bromophenyl phenyl ether	<10		1.8	10
4-Chloro-3-methylphenol	<10		1.7	10
4-Chloroaniline	<20		1.3	20
4-Chlorophenyl phenyl ether	<10		1.8	10
4-Nitroaniline	<50		10	50
4-Nitrophenol	<50		10	50
Acenaphthene	<10		1.5	10
Acenaphthylene	<10		1.6	10
Acetophenone	<10		1.8	10
Anthracene	<10		1.7	10
Atrazine	<10		1.6	10
Benzaldehyde	<10		2.1	10
Benzo(a)anthracene	<10		1.9	10
Benzo(a)pyrene	<10		2.4	10
Benzo(b)fluoranthene	<10		2.1	10
Benzo(g,h,i)perylene	<10		2.0	10
Benzo(k)fluoranthene	<10		2.5	10
Bis(2-chloroethoxy)methane	<10		1.7	10
Bis(2-chloroethyl)ether	<10		1.4	10
Bis(2-ethylhexyl) phthalate	<10		2.4	10
Butyl benzyl phthalate	<10		2.3	10
Caprolactam	<10		1.3	10
Carbazole	<10		2.1	10
Chrysene	<10		1.9	10
Dibenz(a,h)anthracene	<10		1.7	10
Dibenzofuran	<10		1.7	10
Diethyl phthalate	<10		2.0	10

Client: New York State Electric & Gas

Job Number: 480-65212-1

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

Lab Sample ID: 480-65212-6
Client Matrix: Water

Date Sampled: 08/07/2014 1110
Date Received: 08/08/2014 0900

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	680-343799	Instrument ID:	CMSG
Prep Method:	3520C	Prep Batch:	680-343390	Lab File ID:	GH1328.D
Dilution:	1.0			Initial Weight/Volume:	250.6 mL
Analysis Date:	08/13/2014 2045			Final Weight/Volume:	0.5 mL
Prep Date:	08/11/2014 1624			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethyl phthalate	<10		2.0	10
Di-n-butyl phthalate	<10		1.9	10
Di-n-octyl phthalate	<10		2.5	10
Fluoranthene	<10		1.9	10
Fluorene	<10		1.8	10
Hexachlorobenzene	<10		1.7	10
Hexachlorobutadiene	<10		0.83	10
Hexachlorocyclopentadiene	<10		0.75	10
Hexachloroethane	<10		0.83	10
Indeno(1,2,3-cd)pyrene	<10		1.8	10
Isophorone	<10		1.3	10
Naphthalene	<10		1.2	10
Nitrobenzene	<10		1.3	10
N-Nitrosodi-n-propylamine	<10		1.5	10
N-Nitrosodiphenylamine	<10		1.8	10
Pentachlorophenol	<50		10	50
Phenanthrene	<10		1.9	10
Phenol	<10		1.5	10
Pyrene	<10		1.9	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (Surr)	64		10 - 132
Nitrobenzene-d5	59		30 - 117
Phenol-d5	62		25 - 109
2-Fluorophenol	57		26 - 107
2,4,6-Tribromophenol	52		34 - 140
2-Fluorobiphenyl	47		32 - 114

Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt ______

Drinking Water? Yes ☐ No ☐

TestA THE LEADER IN

480-65212 Chain of Custody

Client: NYSEG/ARCADIS	Project Manager: Bruce Ahrens
Address: 295 Woodcliff Dr	Telephone Number (Area Code)/Fax Number: 585-385-0090
City: Fairport — State: NY — Zip Code: 14450	Site Contact: Klaus Beyrle — Lab Contact: Melissa Deyo
Project Name and Location (State): Madison Ave Former MGP Site	Carrier/Waybill Number:
Contract/Purchase Order/Quote No.: B0013134.0000	

Date: ~~8/6/14~~ 8/7/14 — Chain of Custody Number: 264226 — Lab Number: — Page 1 of 2

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	8260	8270
MW-16	8.7.14	0850		X			2			3			X	X
MW-0405S	↓	0850		↓			↓			↓			↓	↓
MW-8S	↓	1000		↓			↓			↓			↓	↓
MW-0404S	↓	1000		↓			↓			↓			↓	↓
MW-0402S	↓	1110		↓			↓			↓			↓	↓
MW-0403S	↓	1110		↓			↓			↓			↓	↓
TRIP BLANK	—	—		↓						1			↓	

Matrix: Air, Aqueous, Sed., Soil. Containers & Preservatives: Unpres., H2SO4, HNO3, HCl, NaOH, ZnAc/NaOH. Analysis (Attach list if more space is needed). Special Instructions/Conditions of Receipt

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

Sample Disposal: ☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months ⊗ Per Contract (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: Nicholas Beyrle	8.7.14	1530	1. Received By: FedEx		
2. Relinquished By			2. Received By: [signature]	8/8/14	0950
3. Relinquished By			3. Received By		

Comments: 2.2 #1

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

08/20/2014

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 #480-75932-1

Analyses Performed By:
TestAmerica
Amherst, New York

Report #23291R
Review Level: Tier III
Project: B0013134.0001.00002

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #480-75932-1 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
MW-2S	480-75932-1	Water	2/26/2015		X	X			
MW-4S	480-75932-2	Water	2/26/2015		X	X			
MW-6S	480-75932-3	Water	2/26/2015		X	X			
MW-7	480-75932-4	Water	2/26/2015		X	X			
MW-8S	480-75932-5	Water	2/26/2015		X	X			
MW-9S	480-75932-6	Water	2/26/2015		X	X			
MW-0402S	480-75932-7	Water	2/26/2015		X	X			
MW-0403S	480-75932-8	Water	2/26/2015		X	X			
MW-0404S	480-75932-9	Water	2/26/2015		X	X			
MW-0405S	480-75932-10	Water	2/26/2015		X	X			
DUP-022615	480-75932-11	Water	2/26/2015	MW-8S	X	X			
TRIP BLANK	480-75932-12	Water	2/26/2015		X				
PMW-02	480-75932-13	Water	2/24/2015		X				
PMW-04	480-75932-14	Water	2/25/2015		X				
PMW-06	480-75932-15	Water	2/25/2015		X				

Note:

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location MW-6S.

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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 30% 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-8S/ DUP-022615	m-Xylene & p-Xylene	2 U	0.66 J	AC
	Xylenes, Total	2 U	0.66 J	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.

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
PMW-06	Benzene	570 E	1200 D	1200 D
	Ethylbenzene	260 E	290 D	290 D
	m-Xylene & p-Xylene	180 E	190 D	190 D
	Xylenes, Total	270 E	290 D	290 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

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
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
MW-8S	Nitrobenzene-d5	AC
	2-Fluorobiphenyl	
	p-Terphenyl-d14	< LL but > 10%

LL Lower control limit
AC Acceptable

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.

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.

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-6S	Benzo(a)pyrene	<LL but >10%	AC
	Benzo(b)fluoranthene		
	Benzo(g,h,i)perylene		
	Chrysene		
	Dibenz(a,h)anthracene		
	Indeno(1,2,3-c,d)pyrene		

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-6S	Benzo(a)anthracene
	Benzo(a)pyrene
	Benzo(b)fluoranthene
	Benzo(g,h,i)perylene
	Benzo(k)fluoranthene
	Chrysene
	Dibenz(a,h)anthracene
	Indeno(1,2,3-c,d)pyrene

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 30% 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-8S/ DUP-022615	Acenaphthene	8.0	9.7 J	AC
	Acenaphthylene	0.46 J	24 U	
	Anthracene	0.97 J	24 U	
	Benzo(a)anthracene	1.2 J	1.8 J	

Sample ID/ Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
	Benzo(a)pyrene	1.2 J	2.3 J	AC
	Benzo(b)fluoranthene	1.4 J	2.9 J	
	Benzo(g,h,i)perylene	0.49 J	24 U	
	Chrysene	0.97 J	24 U	
	Fluoranthene	3.4 J	4.8 J	
	Fluorene	4.8 J	6.3 J	
	Indeno(1,2,3-c,d)pyrene	0.55 J	24 U	
	Naphthalene	2.5 J	24 U	
	Phenanthrene	0.57 J	24 U	
	Pyrene	2.6 J	3.5 J	

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
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	
480-75932-1	2/26/2015	ASP 2005	MW-2S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-4S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-6S	Water	Yes	No	--	--	--	SVOC-MS %R, MS/MSD RPD
	2/26/2015	ASP 2005	MW-7	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-8S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-9S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-0402S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-0403S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-0404S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	MW-0405S	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	DUP-022615	Water	Yes	Yes	--	--	--	
	2/26/2015	ASP 2005	TRIP BLANK	Water	Yes	--	--	--	--	
	2/24/2015	ASP 2005	PMW-02	Water	Yes	--	--	--	--	
	2/25/2015	ASP 2005	PMW-04	Water	Yes	--	--	--	--	
	2/25/2015	ASP 2005	PMW-06	Water	No	--	--	--	--	VOC-Dilution

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: Todd Church

SIGNATURE: 

DATE: March 19, 2015

PEER REVIEW: Dennis Capria

DATE: March 25, 2015

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control limits
X	Surrogate is outside control limits
F2	MS/MSD RPD exceeds control limits

Glossary

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

Client Sample ID: MW-2S

Lab Sample ID: 480-75932-1

Date Collected: 02/26/15 10:25

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 13:15	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 13:15	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 13:15	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 13:15	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 13:15	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*03/02/15 13:15*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 13:15*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*03/02/15 13:15*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*03/02/15 13:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<4.8		4.8	0.40	ug/L		02/27/15 14:31	02/28/15 12:19	1
Acenaphthylene	<4.8		4.8	0.37	ug/L		02/27/15 14:31	02/28/15 12:19	1
Anthracene	<4.8		4.8	0.27	ug/L		02/27/15 14:31	02/28/15 12:19	1
Benz(a)anthracene	<4.8		4.8	0.35	ug/L		02/27/15 14:31	02/28/15 12:19	1
Benzo(a)pyrene	<4.8		4.8	0.45	ug/L		02/27/15 14:31	02/28/15 12:19	1
Benzo(b)fluoranthene	<4.8		4.8	0.33	ug/L		02/27/15 14:31	02/28/15 12:19	1
Benzo(g,h,i)perylene	<4.8		4.8	0.34	ug/L		02/27/15 14:31	02/28/15 12:19	1
Benzo(k)fluoranthene	<4.8		4.8	0.70	ug/L		02/27/15 14:31	02/28/15 12:19	1
Chrysene	<4.8		4.8	0.32	ug/L		02/27/15 14:31	02/28/15 12:19	1
Dibenz(a,h)anthracene	<4.8		4.8	0.41	ug/L		02/27/15 14:31	02/28/15 12:19	1
Fluoranthene	<4.8		4.8	0.39	ug/L		02/27/15 14:31	02/28/15 12:19	1
Fluorene	<4.8		4.8	0.35	ug/L		02/27/15 14:31	02/28/15 12:19	1
Indeno(1,2,3-c,d)pyrene	<4.8		4.8	0.45	ug/L		02/27/15 14:31	02/28/15 12:19	1
Naphthalene	<4.8		4.8	0.73	ug/L		02/27/15 14:31	02/28/15 12:19	1
Phenanthrene	<4.8		4.8	0.42	ug/L		02/27/15 14:31	02/28/15 12:19	1
Pyrene	<4.8		4.8	0.33	ug/L		02/27/15 14:31	02/28/15 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*72*		*46 - 120*	*02/27/15 14:31*	*02/28/15 12:19*	*1*
2-Fluorobiphenyl	*74*		*48 - 120*	*02/27/15 14:31*	*02/28/15 12:19*	*1*
p-Terphenyl-d14	*79*		*67 - 150*	*02/27/15 14:31*	*02/28/15 12:19*	*1*

Client Sample ID: MW-4S

Lab Sample ID: 480-75932-2

Date Collected: 02/26/15 11:40

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 13:39	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 13:39	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 13:39	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 13:39	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 13:39	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 13:39	1

Client Sample ID: MW-4S

Lab Sample ID: 480-75932-2

Date Collected: 02/26/15 11:40

Matrix: Water

Date Received: 02/27/15 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*03/02/15 13:39*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*03/02/15 13:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/02/15 13:39*	*1*
Dibromofluoromethane (Surr)	*97*		*60 - 140*		*03/02/15 13:39*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<5.0		5.0	0.41	ug/L		02/27/15 14:31	02/28/15 12:46	1
Acenaphthylene	<5.0		5.0	0.38	ug/L		02/27/15 14:31	02/28/15 12:46	1
Anthracene	<5.0		5.0	0.28	ug/L		02/27/15 14:31	02/28/15 12:46	1
Benz(a)anthracene	<5.0		5.0	0.36	ug/L		02/27/15 14:31	02/28/15 12:46	1
Benzo(a)pyrene	<5.0		5.0	0.47	ug/L		02/27/15 14:31	02/28/15 12:46	1
Benzo(b)fluoranthene	**0.48**	**J**	5.0	0.34	ug/L		02/27/15 14:31	02/28/15 12:46	1
Benzo(g,h,i)perylene	<5.0		5.0	0.35	ug/L		02/27/15 14:31	02/28/15 12:46	1
Benzo(k)fluoranthene	<5.0		5.0	0.74	ug/L		02/27/15 14:31	02/28/15 12:46	1
Chrysene	<5.0		5.0	0.33	ug/L		02/27/15 14:31	02/28/15 12:46	1
Dibenz(a,h)anthracene	<5.0		5.0	0.42	ug/L		02/27/15 14:31	02/28/15 12:46	1
Fluoranthene	<5.0		5.0	0.40	ug/L		02/27/15 14:31	02/28/15 12:46	1
Fluorene	<5.0		5.0	0.36	ug/L		02/27/15 14:31	02/28/15 12:46	1
Indeno(1,2,3-c,d)pyrene	<5.0		5.0	0.47	ug/L		02/27/15 14:31	02/28/15 12:46	1
Naphthalene	<5.0		5.0	0.77	ug/L		02/27/15 14:31	02/28/15 12:46	1
Phenanthrene	<5.0		5.0	0.44	ug/L		02/27/15 14:31	02/28/15 12:46	1
Pyrene	<5.0		5.0	0.34	ug/L		02/27/15 14:31	02/28/15 12:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*60*		*46 - 120*	*02/27/15 14:31*	*02/28/15 12:46*	*1*
2-Fluorobiphenyl	*65*		*48 - 120*	*02/27/15 14:31*	*02/28/15 12:46*	*1*
p-Terphenyl-d14	*70*		*67 - 150*	*02/27/15 14:31*	*02/28/15 12:46*	*1*

Client Sample ID: MW-6S

Lab Sample ID: 480-75932-3

Date Collected: 02/26/15 08:55

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 14:03	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 14:03	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 14:03	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 14:03	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 14:03	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 14:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*03/02/15 14:03*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 14:03*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/02/15 14:03*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*03/02/15 14:03*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<5.0		5.0	0.41	ug/L		02/27/15 14:31	02/28/15 13:12	1

Client Sample ID: MW-6S

Date Collected: 02/26/15 08:55
Date Received: 02/27/15 09:30

Lab Sample ID: 480-75932-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	<5.0		5.0	0.38	ug/L		02/27/15 14:31	02/28/15 13:12	1
Anthracene	<5.0		5.0	0.28	ug/L		02/27/15 14:31	02/28/15 13:12	1
Benz(a)anthracene	<5.0	UJ	5.0	0.36	ug/L		02/27/15 14:31	02/28/15 13:12	1
Benzo(a)pyrene	<5.0		5.0	0.47	ug/L		02/27/15 14:31	02/28/15 13:12	1
Benzo(b)fluoranthene	<5.0		5.0	0.34	ug/L		02/27/15 14:31	02/28/15 13:12	1
Benzo(g,h,i)perylene	<5.0		5.0	0.35	ug/L		02/27/15 14:31	02/28/15 13:12	1
Benzo(k)fluoranthene	<5.0		5.0	0.73	ug/L		02/27/15 14:31	02/28/15 13:12	1
Chrysene	<5.0		5.0	0.33	ug/L		02/27/15 14:31	02/28/15 13:12	1
Dibenz(a,h)anthracene	<5.0	UJ	5.0	0.42	ug/L		02/27/15 14:31	02/28/15 13:12	1
Fluoranthene	<5.0		5.0	0.40	ug/L		02/27/15 14:31	02/28/15 13:12	1
Fluorene	<5.0		5.0	0.36	ug/L		02/27/15 14:31	02/28/15 13:12	1
Indeno(1,2,3-c,d)pyrene	<5.0	UJ	5.0	0.47	ug/L		02/27/15 14:31	02/28/15 13:12	1
Naphthalene	<5.0		5.0	0.75	ug/L		02/27/15 14:31	02/28/15 13:12	1
Phenanthrene	<5.0		5.0	0.44	ug/L		02/27/15 14:31	02/28/15 13:12	1
Pyrene	<5.0		5.0	0.34	ug/L		02/27/15 14:31	02/28/15 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*62*		*46 - 120*	*02/27/15 14:31*	*02/28/15 13:12*	*1*
2-Fluorobiphenyl	*65*		*48 - 120*	*02/27/15 14:31*	*02/28/15 13:12*	*1*
p-Terphenyl-d14	*76*		*67 - 150*	*02/27/15 14:31*	*02/28/15 13:12*	*1*

Client Sample ID: MW-7

Date Collected: 02/26/15 12:45
Date Received: 02/27/15 09:30

Lab Sample ID: 480-75932-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 14:28	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 14:28	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 14:28	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 14:28	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 14:28	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*03/02/15 14:28*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 14:28*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*03/02/15 14:28*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*03/02/15 14:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<4.7		4.7	0.39	ug/L		02/27/15 14:31	02/28/15 13:38	1
Acenaphthylene	<4.7		4.7	0.36	ug/L		02/27/15 14:31	02/28/15 13:38	1
Anthracene	<4.7		4.7	0.27	ug/L		02/27/15 14:31	02/28/15 13:38	1
Benz(a)anthracene	<4.7		4.7	0.34	ug/L		02/27/15 14:31	02/28/15 13:38	1
Benzo(a)pyrene	<4.7		4.7	0.45	ug/L		02/27/15 14:31	02/28/15 13:38	1
Benzo(b)fluoranthene	<4.7		4.7	0.32	ug/L		02/27/15 14:31	02/28/15 13:38	1
Benzo(g,h,i)perylene	<4.7		4.7	0.33	ug/L		02/27/15 14:31	02/28/15 13:38	1
Benzo(k)fluoranthene	<4.7		4.7	0.69	ug/L		02/27/15 14:31	02/28/15 13:38	1

Client Sample ID: MW-7

Lab Sample ID: 480-75932-4

Date Collected: 02/26/15 12:45

Matrix: Water

Date Received: 02/27/15 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<4.7		4.7	0.31	ug/L		02/27/15 14:31	02/28/15 13:38	1
Dibenz(a,h)anthracene	<4.7		4.7	0.40	ug/L		02/27/15 14:31	02/28/15 13:38	1
Fluoranthene	<4.7		4.7	0.38	ug/L		02/27/15 14:31	02/28/15 13:38	1
Fluorene	<4.7		4.7	0.34	ug/L		02/27/15 14:31	02/28/15 13:38	1
Indeno(1,2,3-c,d)pyrene	<4.7		4.7	0.45	ug/L		02/27/15 14:31	02/28/15 13:38	1
Naphthalene	<4.7		4.7	0.72	ug/L		02/27/15 14:31	02/28/15 13:38	1
Phenanthrene	<4.7		4.7	0.42	ug/L		02/27/15 14:31	02/28/15 13:38	1
Pyrene	<4.7		4.7	0.32	ug/L		02/27/15 14:31	02/28/15 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*57*		*46 - 120*	*02/27/15 14:31*	*02/28/15 13:38*	*1*
2-Fluorobiphenyl	*63*		*48 - 120*	*02/27/15 14:31*	*02/28/15 13:38*	*1*
p-Terphenyl-d14	*75*		*67 - 150*	*02/27/15 14:31*	*02/28/15 13:38*	*1*

Client Sample ID: MW-8S

Lab Sample ID: 480-75932-5

Date Collected: 02/26/15 08:35

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 15:03	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 15:03	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 15:03	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 15:03	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 15:03	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*03/02/15 15:03*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*03/02/15 15:03*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/02/15 15:03*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*03/02/15 15:03*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**8.0**		4.9	0.40	ug/L		02/27/15 14:31	02/28/15 14:04	1
Acenaphthylene	**0.46**	**J**	4.9	0.37	ug/L		02/27/15 14:31	02/28/15 14:04	1
Anthracene	**0.97**	**J**	4.9	0.28	ug/L		02/27/15 14:31	02/28/15 14:04	1
Benz(a)anthracene	**1.2**	**J**	4.9	0.35	ug/L		02/27/15 14:31	02/28/15 14:04	1
Benzo(a)pyrene	**1.2**	**J**	4.9	0.46	ug/L		02/27/15 14:31	02/28/15 14:04	1
Benzo(b)fluoranthene	**1.4**	**J**	4.9	0.33	ug/L		02/27/15 14:31	02/28/15 14:04	1
Benzo(g,h,i)perylene	**0.49**	**J**	4.9	0.34	ug/L		02/27/15 14:31	02/28/15 14:04	1
Benzo(k)fluoranthene	<4.9		4.9	0.72	ug/L		02/27/15 14:31	02/28/15 14:04	1
Chrysene	**0.97**	**J**	4.9	0.33	ug/L		02/27/15 14:31	02/28/15 14:04	1
Dibenz(a,h)anthracene	<4.9		4.9	0.41	ug/L		02/27/15 14:31	02/28/15 14:04	1
Fluoranthene	**3.4**	**J**	4.9	0.39	ug/L		02/27/15 14:31	02/28/15 14:04	1
Fluorene	**4.8**	**J**	4.9	0.35	ug/L		02/27/15 14:31	02/28/15 14:04	1
Indeno(1,2,3-c,d)pyrene	**0.55**	**J**	4.9	0.46	ug/L		02/27/15 14:31	02/28/15 14:04	1
Naphthalene	**2.5**	**J**	4.9	0.75	ug/L		02/27/15 14:31	02/28/15 14:04	1
Phenanthrene	**0.57**	**J**	4.9	0.43	ug/L		02/27/15 14:31	02/28/15 14:04	1

Client Sample ID: MW-8S

Date Collected: 02/26/15 08:35
Date Received: 02/27/15 09:30

Lab Sample ID: 480-75932-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	2.6	J	4.9	0.33	ug/L		02/27/15 14:31	02/28/15 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*61*		*46 - 120*	*02/27/15 14:31*	*02/28/15 14:04*	*1*
2-Fluorobiphenyl	*66*		*48 - 120*	*02/27/15 14:31*	*02/28/15 14:04*	*1*
p-Terphenyl-d14	*63*	*X*	*67 - 150*	*02/27/15 14:31*	*02/28/15 14:04*	*1*

Client Sample ID: MW-9S

Date Collected: 02/26/15 14:00
Date Received: 02/27/15 09:30

Lab Sample ID: 480-75932-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 15:27	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 15:27	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 15:27	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 15:27	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 15:27	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*03/02/15 15:27*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 15:27*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*03/02/15 15:27*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*03/02/15 15:27*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<4.9		4.9	0.41	ug/L		02/27/15 14:31	02/28/15 14:30	1
Acenaphthylene	<4.9		4.9	0.38	ug/L		02/27/15 14:31	02/28/15 14:30	1
Anthracene	<4.9		4.9	0.28	ug/L		02/27/15 14:31	02/28/15 14:30	1
Benz(a)anthracene	<4.9		4.9	0.36	ug/L		02/27/15 14:31	02/28/15 14:30	1
Benzo(a)pyrene	<4.9		4.9	0.46	ug/L		02/27/15 14:31	02/28/15 14:30	1
Benzo(b)fluoranthene	<4.9		4.9	0.34	ug/L		02/27/15 14:31	02/28/15 14:30	1
Benzo(g,h,i)perylene	<4.9		4.9	0.35	ug/L		02/27/15 14:31	02/28/15 14:30	1
Benzo(k)fluoranthene	<4.9		4.9	0.72	ug/L		02/27/15 14:31	02/28/15 14:30	1
Chrysene	<4.9		4.9	0.33	ug/L		02/27/15 14:31	02/28/15 14:30	1
Dibenz(a,h)anthracene	<4.9		4.9	0.42	ug/L		02/27/15 14:31	02/28/15 14:30	1
Fluoranthene	<4.9		4.9	0.40	ug/L		02/27/15 14:31	02/28/15 14:30	1
Fluorene	<4.9		4.9	0.36	ug/L		02/27/15 14:31	02/28/15 14:30	1
Indeno(1,2,3-c,d)pyrene	<4.9		4.9	0.46	ug/L		02/27/15 14:31	02/28/15 14:30	1
Naphthalene	<4.9		4.9	0.75	ug/L		02/27/15 14:31	02/28/15 14:30	1
Phenanthrene	<4.9		4.9	0.44	ug/L		02/27/15 14:31	02/28/15 14:30	1
Pyrene	<4.9		4.9	0.34	ug/L		02/27/15 14:31	02/28/15 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*70*		*46 - 120*	*02/27/15 14:31*	*02/28/15 14:30*	*1*
2-Fluorobiphenyl	*75*		*48 - 120*	*02/27/15 14:31*	*02/28/15 14:30*	*1*
p-Terphenyl-d14	*87*		*67 - 150*	*02/27/15 14:31*	*02/28/15 14:30*	*1*

Client: New York State Electric & Gas
Project/Site: NYSEG - Elmira Madison Ave Lab & Test

TestAmerica Job ID: 480-75932-1

Client Sample ID: MW-0402S

Lab Sample ID: 480-75932-7

Date Collected: 02/26/15 14:20

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 15:51	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 15:51	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 15:51	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 15:51	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 15:51	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*03/02/15 15:51*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 15:51*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/02/15 15:51*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*03/02/15 15:51*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<4.9		4.9	0.40	ug/L		02/27/15 14:31	02/28/15 14:56	1
Acenaphthylene	<4.9		4.9	0.37	ug/L		02/27/15 14:31	02/28/15 14:56	1
Anthracene	<4.9		4.9	0.27	ug/L		02/27/15 14:31	02/28/15 14:56	1
Benz(a)anthracene	<4.9		4.9	0.35	ug/L		02/27/15 14:31	02/28/15 14:56	1
Benzo(a)pyrene	<4.9		4.9	0.46	ug/L		02/27/15 14:31	02/28/15 14:56	1
Benzo(b)fluoranthene	<4.9		4.9	0.33	ug/L		02/27/15 14:31	02/28/15 14:56	1
Benzo(g,h,i)perylene	<4.9		4.9	0.34	ug/L		02/27/15 14:31	02/28/15 14:56	1
Benzo(k)fluoranthene	<4.9		4.9	0.71	ug/L		02/27/15 14:31	02/28/15 14:56	1
Chrysene	<4.9		4.9	0.32	ug/L		02/27/15 14:31	02/28/15 14:56	1
Dibenz(a,h)anthracene	<4.9		4.9	0.41	ug/L		02/27/15 14:31	02/28/15 14:56	1
Fluoranthene	<4.9		4.9	0.39	ug/L		02/27/15 14:31	02/28/15 14:56	1
Fluorene	<4.9		4.9	0.35	ug/L		02/27/15 14:31	02/28/15 14:56	1
Indeno(1,2,3-c,d)pyrene	<4.9		4.9	0.46	ug/L		02/27/15 14:31	02/28/15 14:56	1
Naphthalene	<4.9		4.9	0.74	ug/L		02/27/15 14:31	02/28/15 14:56	1
Phenanthrene	<4.9		4.9	0.43	ug/L		02/27/15 14:31	02/28/15 14:56	1
Pyrene	<4.9		4.9	0.33	ug/L		02/27/15 14:31	02/28/15 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*61*		*46 - 120*	*02/27/15 14:31*	*02/28/15 14:56*	*1*
2-Fluorobiphenyl	*66*		*48 - 120*	*02/27/15 14:31*	*02/28/15 14:56*	*1*
p-Terphenyl-d14	*70*		*67 - 150*	*02/27/15 14:31*	*02/28/15 14:56*	*1*

Client Sample ID: MW-0403S

Lab Sample ID: 480-75932-8

Date Collected: 02/26/15 13:15

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 16:15	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 16:15	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 16:15	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 16:15	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 16:15	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 16:15	1

Client Sample ID: MW-0403S

Lab Sample ID: 480-75932-8

Date Collected: 02/26/15 13:15

Matrix: Water

Date Received: 02/27/15 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*03/02/15 16:15*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 16:15*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/02/15 16:15*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*03/02/15 16:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<4.7		4.7	0.38	ug/L		02/27/15 14:31	02/28/15 15:23	1
Acenaphthylene	<4.7		4.7	0.35	ug/L		02/27/15 14:31	02/28/15 15:23	1
Anthracene	<4.7		4.7	0.26	ug/L		02/27/15 14:31	02/28/15 15:23	1
Benz(a)anthracene	<4.7		4.7	0.34	ug/L		02/27/15 14:31	02/28/15 15:23	1
Benzo(a)pyrene	<4.7		4.7	0.44	ug/L		02/27/15 14:31	02/28/15 15:23	1
Benzo(b)fluoranthene	<4.7		4.7	0.32	ug/L		02/27/15 14:31	02/28/15 15:23	1
Benzo(g,h,i)perylene	<4.7		4.7	0.33	ug/L		02/27/15 14:31	02/28/15 15:23	1
Benzo(k)fluoranthene	<4.7		4.7	0.68	ug/L		02/27/15 14:31	02/28/15 15:23	1
Chrysene	<4.7		4.7	0.31	ug/L		02/27/15 14:31	02/28/15 15:23	1
Dibenz(a,h)anthracene	<4.7		4.7	0.39	ug/L		02/27/15 14:31	02/28/15 15:23	1
Fluoranthene	<4.7		4.7	0.37	ug/L		02/27/15 14:31	02/28/15 15:23	1
Fluorene	<4.7		4.7	0.34	ug/L		02/27/15 14:31	02/28/15 15:23	1
Indeno(1,2,3-c,d)pyrene	<4.7		4.7	0.44	ug/L		02/27/15 14:31	02/28/15 15:23	1
Naphthalene	**0.94**	**J**	4.7	0.71	ug/L		02/27/15 14:31	02/28/15 15:23	1
Phenanthrene	<4.7		4.7	0.41	ug/L		02/27/15 14:31	02/28/15 15:23	1
Pyrene	<4.7		4.7	0.32	ug/L		02/27/15 14:31	02/28/15 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*62*		*46 - 120*	*02/27/15 14:31*	*02/28/15 15:23*	*1*
2-Fluorobiphenyl	*68*		*48 - 120*	*02/27/15 14:31*	*02/28/15 15:23*	*1*
p-Terphenyl-d14	*78*		*67 - 150*	*02/27/15 14:31*	*02/28/15 15:23*	*1*

Client Sample ID: MW-0404S

Lab Sample ID: 480-75932-9

Date Collected: 02/26/15 11:40

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 16:38	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 16:38	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 16:38	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 16:38	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 16:38	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*03/02/15 16:38*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 16:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/02/15 16:38*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*03/02/15 16:38*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<4.7		4.7	0.38	ug/L		02/27/15 14:31	02/28/15 15:49	1

Client Sample ID: MW-0404S

Lab Sample ID: 480-75932-9

Date Collected: 02/26/15 11:40

Matrix: Water

Date Received: 02/27/15 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	<4.7		4.7	0.36	ug/L		02/27/15 14:31	02/28/15 15:49	1
Anthracene	<4.7		4.7	0.26	ug/L		02/27/15 14:31	02/28/15 15:49	1
Benz(a)anthracene	<4.7		4.7	0.34	ug/L		02/27/15 14:31	02/28/15 15:49	1
Benzo(a)pyrene	<4.7		4.7	0.44	ug/L		02/27/15 14:31	02/28/15 15:49	1
Benzo(b)fluoranthene	**0.33**	**J**	4.7	0.32	ug/L		02/27/15 14:31	02/28/15 15:49	1
Benzo(g,h,i)perylene	<4.7		4.7	0.33	ug/L		02/27/15 14:31	02/28/15 15:49	1
Benzo(k)fluoranthene	<4.7		4.7	0.68	ug/L		02/27/15 14:31	02/28/15 15:49	1
Chrysene	<4.7		4.7	0.31	ug/L		02/27/15 14:31	02/28/15 15:49	1
Dibenz(a,h)anthracene	<4.7		4.7	0.39	ug/L		02/27/15 14:31	02/28/15 15:49	1
Fluoranthene	<4.7		4.7	0.38	ug/L		02/27/15 14:31	02/28/15 15:49	1
Fluorene	<4.7		4.7	0.34	ug/L		02/27/15 14:31	02/28/15 15:49	1
Indeno(1,2,3-c,d)pyrene	<4.7		4.7	0.44	ug/L		02/27/15 14:31	02/28/15 15:49	1
Naphthalene	**3.2**	**J**	4.7	0.71	ug/L		02/27/15 14:31	02/28/15 15:49	1
Phenanthrene	<4.7		4.7	0.41	ug/L		02/27/15 14:31	02/28/15 15:49	1
Pyrene	<4.7		4.7	0.32	ug/L		02/27/15 14:31	02/28/15 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*65*		*46 - 120*	*02/27/15 14:31*	*02/28/15 15:49*	*1*
2-Fluorobiphenyl	*69*		*48 - 120*	*02/27/15 14:31*	*02/28/15 15:49*	*1*
p-Terphenyl-d14	*82*		*67 - 150*	*02/27/15 14:31*	*02/28/15 15:49*	*1*

Client Sample ID: MW-0405S

Lab Sample ID: 480-75932-10

Date Collected: 02/26/15 10:20

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 17:03	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 17:03	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 17:03	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 17:03	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 17:03	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*03/02/15 17:03*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*03/02/15 17:03*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/02/15 17:03*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*03/02/15 17:03*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<5.0		5.0	0.41	ug/L		02/27/15 14:31	02/28/15 16:15	1
Acenaphthylene	<5.0		5.0	0.38	ug/L		02/27/15 14:31	02/28/15 16:15	1
Anthracene	<5.0		5.0	0.28	ug/L		02/27/15 14:31	02/28/15 16:15	1
Benz(a)anthracene	<5.0		5.0	0.36	ug/L		02/27/15 14:31	02/28/15 16:15	1
Benzo(a)pyrene	<5.0		5.0	0.47	ug/L		02/27/15 14:31	02/28/15 16:15	1
Benzo(b)fluoranthene	**0.35**	**J**	5.0	0.34	ug/L		02/27/15 14:31	02/28/15 16:15	1
Benzo(g,h,i)perylene	<5.0		5.0	0.35	ug/L		02/27/15 14:31	02/28/15 16:15	1
Benzo(k)fluoranthene	<5.0		5.0	0.72	ug/L		02/27/15 14:31	02/28/15 16:15	1

Client Sample ID: MW-0405S

Date Collected: 02/26/15 10:20
Date Received: 02/27/15 09:30

Lab Sample ID: 480-75932-10
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<5.0		5.0	0.33	ug/L		02/27/15 14:31	02/28/15 16:15	1
Dibenz(a,h)anthracene	<5.0		5.0	0.42	ug/L		02/27/15 14:31	02/28/15 16:15	1
Fluoranthene	<5.0		5.0	0.40	ug/L		02/27/15 14:31	02/28/15 16:15	1
Fluorene	<5.0		5.0	0.36	ug/L		02/27/15 14:31	02/28/15 16:15	1
Indeno(1,2,3-c,d)pyrene	<5.0		5.0	0.47	ug/L		02/27/15 14:31	02/28/15 16:15	1
Naphthalene	<5.0		5.0	0.75	ug/L		02/27/15 14:31	02/28/15 16:15	1
Phenanthrene	<5.0		5.0	0.44	ug/L		02/27/15 14:31	02/28/15 16:15	1
Pyrene	<5.0		5.0	0.34	ug/L		02/27/15 14:31	02/28/15 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*59*		*46 - 120*	*02/27/15 14:31*	*02/28/15 16:15*	*1*
2-Fluorobiphenyl	*63*		*48 - 120*	*02/27/15 14:31*	*02/28/15 16:15*	*1*
p-Terphenyl-d14	*75*		*67 - 150*	*02/27/15 14:31*	*02/28/15 16:15*	*1*

Client Sample ID: DUP-022615

Date Collected: 02/26/15 00:00
Date Received: 02/27/15 09:30

Lab Sample ID: 480-75932-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 17:27	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 17:27	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 17:27	1
m-Xylene & p-Xylene	**0.66**	**J**	2.0	0.66	ug/L			03/02/15 17:27	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 17:27	1
Xylenes, Total	**0.66**	**J**	2.0	0.66	ug/L			03/02/15 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*03/02/15 17:27*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 17:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*03/02/15 17:27*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*03/02/15 17:27*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**9.7**	**J**	24	2.0	ug/L		02/27/15 14:31	02/28/15 16:42	5
Acenaphthylene	<24		24	1.8	ug/L		02/27/15 14:31	02/28/15 16:42	5
Anthracene	<24		24	1.4	ug/L		02/27/15 14:31	02/28/15 16:42	5
Benz(a)anthracene	**1.8**	**J**	24	1.7	ug/L		02/27/15 14:31	02/28/15 16:42	5
Benzo(a)pyrene	**2.3**	**J**	24	2.3	ug/L		02/27/15 14:31	02/28/15 16:42	5
Benzo(b)fluoranthene	**2.9**	**J**	24	1.6	ug/L		02/27/15 14:31	02/28/15 16:42	5
Benzo(g,h,i)perylene	<24		24	1.7	ug/L		02/27/15 14:31	02/28/15 16:42	5
Benzo(k)fluoranthene	<24		24	3.5	ug/L		02/27/15 14:31	02/28/15 16:42	5
Chrysene	<24		24	1.6	ug/L		02/27/15 14:31	02/28/15 16:42	5
Dibenz(a,h)anthracene	<24		24	2.0	ug/L		02/27/15 14:31	02/28/15 16:42	5
Fluoranthene	**4.8**	**J**	24	1.9	ug/L		02/27/15 14:31	02/28/15 16:42	5
Fluorene	**6.3**	**J**	24	1.7	ug/L		02/27/15 14:31	02/28/15 16:42	5
Indeno(1,2,3-c,d)pyrene	<24		24	2.3	ug/L		02/27/15 14:31	02/28/15 16:42	5
Naphthalene	<24		24	3.7	ug/L		02/27/15 14:31	02/28/15 16:42	5
Phenanthrene	<24		24	2.1	ug/L		02/27/15 14:31	02/28/15 16:42	5

Client: New York State Electric & Gas
Project/Site: NYSEG - Elmira Madison Ave Lab & Test

TestAmerica Job ID: 480-75932-1

Client Sample ID: DUP-022615

Lab Sample ID: 480-75932-11
Matrix: Water
Date Collected: 02/26/15 00:00
Date Received: 02/27/15 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	3.5	J	24	1.6	ug/L		02/27/15 14:31	02/28/15 16:42	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*66*		*46 - 120*	*02/27/15 14:31*	*02/28/15 16:42*	*5*
2-Fluorobiphenyl	*76*		*48 - 120*	*02/27/15 14:31*	*02/28/15 16:42*	*5*
p-Terphenyl-d14	*77*		*67 - 150*	*02/27/15 14:31*	*02/28/15 16:42*	*5*

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-75932-12
Matrix: Water
Date Collected: 02/26/15 00:00
Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 17:50	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 17:50	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 17:50	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 17:50	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 17:50	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*03/02/15 17:50*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*03/02/15 17:50*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/02/15 17:50*	*1*
Dibromofluoromethane (Surr)	*97*		*60 - 140*		*03/02/15 17:50*	*1*

Client Sample ID: PMW-02

Lab Sample ID: 480-75932-13
Matrix: Water
Date Collected: 02/24/15 14:20
Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.41	ug/L			03/02/15 18:14	1
Toluene	<1.0		1.0	0.51	ug/L			03/02/15 18:14	1
Ethylbenzene	<1.0		1.0	0.74	ug/L			03/02/15 18:14	1
m-Xylene & p-Xylene	<2.0		2.0	0.66	ug/L			03/02/15 18:14	1
o-Xylene	<1.0		1.0	0.76	ug/L			03/02/15 18:14	1
Xylenes, Total	<2.0		2.0	0.66	ug/L			03/02/15 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*03/02/15 18:14*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*03/02/15 18:14*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*03/02/15 18:14*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*03/02/15 18:14*	*1*

Client: New York State Electric & Gas
Project/Site: NYSEG - Elmira Madison Ave Lab & Test

TestAmerica Job ID: 480-75932-1

Client Sample ID: PMW-04

Lab Sample ID: 480-75932-14

Date Collected: 02/25/15 13:35

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	81		4.0	1.6	ug/L			03/02/15 18:38	4
Toluene	4.9		4.0	2.0	ug/L			03/02/15 18:38	4
Ethylbenzene	29		4.0	3.0	ug/L			03/02/15 18:38	4
m-Xylene & p-Xylene	10		8.0	2.6	ug/L			03/02/15 18:38	4
o-Xylene	11		4.0	3.0	ug/L			03/02/15 18:38	4
Xylenes, Total	21		8.0	2.6	ug/L			03/02/15 18:38	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*03/02/15 18:38*	*4*
Toluene-d8 (Surr)	*99*		*71 - 126*		*03/02/15 18:38*	*4*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*03/02/15 18:38*	*4*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*03/02/15 18:38*	*4*

Client Sample ID: PMW-06

Lab Sample ID: 480-75932-15

Date Collected: 02/25/15 11:30

Matrix: Water

Date Received: 02/27/15 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1200 ~~570~~	E D	1.0	0.41	ug/L			03/02/15 19:02	1
Toluene	10		1.0	0.51	ug/L			03/02/15 19:02	1
Ethylbenzene	290 ~~260~~	E D	1.0	0.74	ug/L			03/02/15 19:02	1
m-Xylene & p-Xylene	190 ~~180~~	E D	2.0	0.66	ug/L			03/02/15 19:02	1
o-Xylene	87		1.0	0.76	ug/L			03/02/15 19:02	1
Xylenes, Total	290 ~~270~~	E D	2.0	0.66	ug/L			03/02/15 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*03/02/15 19:02*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*03/02/15 19:02*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*03/02/15 19:02*	*1*
Dibromofluoromethane (Surr)	*89*		*60 - 140*		*03/02/15 19:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1200		20	8.2	ug/L			03/05/15 12:20	20
Toluene	11	J	20	10	ug/L			03/05/15 12:20	20
Ethylbenzene	290		20	15	ug/L			03/05/15 12:20	20
m-Xylene & p-Xylene	190		40	13	ug/L			03/05/15 12:20	20
o-Xylene	99		20	15	ug/L			03/05/15 12:20	20
Xylenes, Total	290		40	13	ug/L			03/05/15 12:20	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*03/05/15 12:20*	*20*
Toluene-d8 (Surr)	*104*		*71 - 126*		*03/05/15 12:20*	*20*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*03/05/15 12:20*	*20*
Dibromofluoromethane (Surr)	*107*		*60 - 140*		*03/05/15 12:20*	*20*

Chain of Custody Record

TestAmer
THE LEADER IN ENVIRONMENTA

480-75932 Chain of Custody

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TAL-4124 (1007)

Client: NYSEG / ARCADIS	Project Manager: Bruce Ahrens	Date: 2/26/15	Chain of Custody Number: 275577
Address: 295 Woodcliff Drive	Telephone Number (Area Code)/Fax Number: 585-385-0074	Lab Number:	Page 1 of 2
City: Fairport / State: NY / Zip Code: 14450	Site Contact: Klaus Beyer	Lab Contact: Melissa Deyo	
Project Name and Location (State): Madison Ave Former MGP Site, New York	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: B00131340010			

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	Special Instructions/ Conditions of Receipt
MW-2S	2/26/15	1025		X			2			3			X	X	
MW-4S	2/26/15	1140					2			3			X	X	
MW-6S	2/26/15	0855					~~2~~			~~3~~			X	X	MS/MSD
MW-7	2/26/15	1245					2			3			X	X	
MW-8S	2/26/15	0835					2			3			X	X	
MW-9S	2/26/15	1400					2			3			X	X	
MW-0402S	2/26/15	~~1430~~ 1420					2			3			X	X	
MW-0403S	2/26/15	~~1320~~ 1315					2			3			X	X	
MW-0404S	2/26/15	1140					2			3			X	X	
MW-0405S	2/26/15	1020					2			3			X	X	
DUP-022615	2/26/15	—					2			3			X	X	
TRIP BLANK	—	—		↓											

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

Sample Disposal: Per Contract
☐ 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	2/26/15	1530	1. Received By: TA Buff	2/27/15	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: # 1 2.3, 2.8

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: NYSEG/ARCADIS	Project Manager: Bruce Ahrens	Date: 2/26/15	Chain of Custody Number: 275576
Address: 345 Woodcliff Drive	Telephone Number (Area Code)/Fax Number: 585-385-0090	Lab Number:	Page 1 of 1
City: Fairport / State: NY / Zip Code: 14450	Site Contact: Kraus Beyrle	Lab Contact: Melissa Deyo	
Project Name and Location (State): Madison Ave Former MGP Site, New York	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: B00131340000			

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	Special Instructions/ Conditions of Receipt
PMW-02	2/24/15	1420		X						2			X		
PMW-04	2/25/15	1335		X						2			X		
PMW-06	2/25/15	1130								3			X		
~~MW-16S (MS)~~	~~2/24/15~~	~~0855~~		X			2			3			X	X	
~~MW-16S (MSD)~~	~~2/24/15~~	~~0855~~		X			2			3			X	X	

Page 35 of 35

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)
As contract

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	2/26/15	1530	1. Received By: TA Buff	2/27/15	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

#1 2.3, 2.8

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

3/9/2015

Appendix B

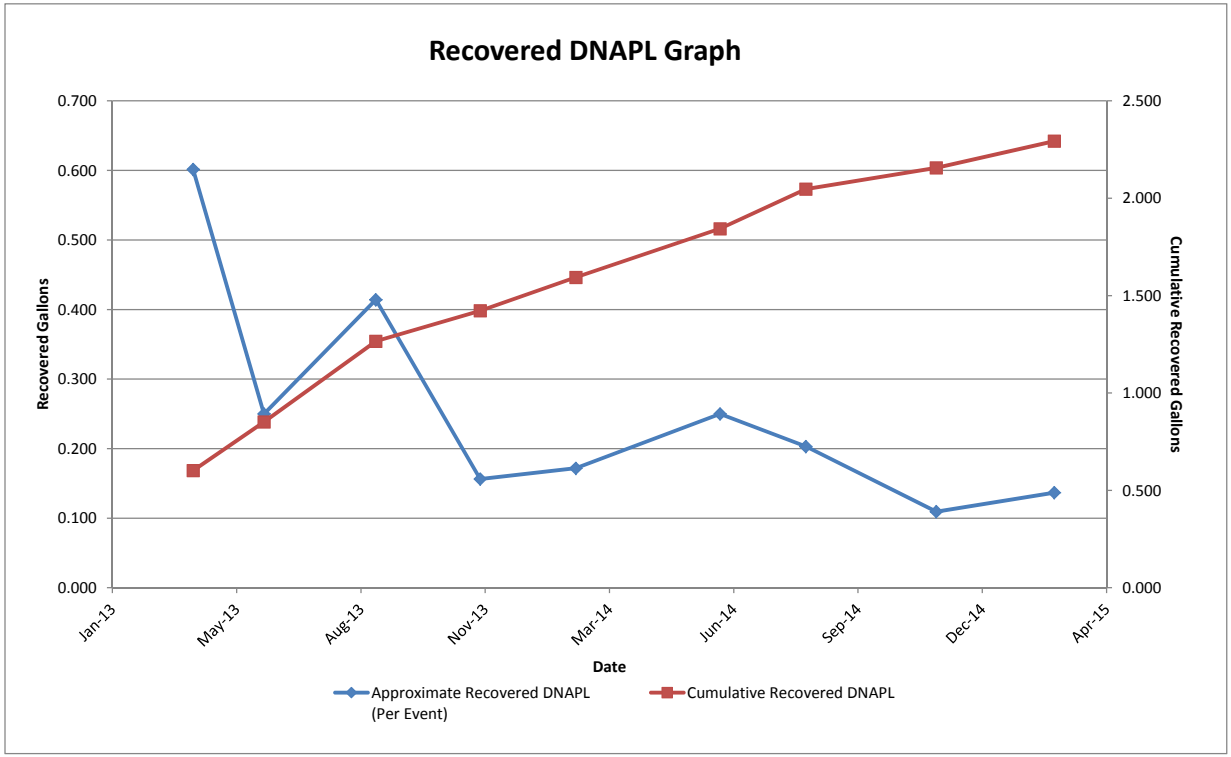
DNAPL Recovery Summary

Appendix B
DNAPL Recovery Summary

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

Date	PMW-3			NRW-2			NMW-0402S			Totals		
	Recoverd DNAPL (gal)	Total (gal)	Cumulative (gal)	Recoverd DNAPL (gal)	Total (gal)	Cumulative (gal)	Recoverd DNAPL (gal)	Total (gal)	Cumulative (gal)	Recoverd DNAPL (gal)	Total (gal)	Cumulative (gal)
4/1/2013	0		0	0.0078		0.008	0.5938		0.594	0.602		0.602
5/28/2013	0		0	0.0000		0.008	0.2500		0.844	0.250		0.852
8/26/2013	--	0	0	0.1875	0.242	0.195	0.2266	1.352	1.070	0.414	1.594	1.266
11/18/2013	--		0	0.0313		0.227	0.1250		1.195	0.156		1.422
2/3/2014	--		0	0.0156		0.242	0.1563		1.352	0.172		1.594
5/30/2014	--		0	0.0000		0.242	0.25		1.602	0.250		1.844
8/7/2014	--	0	0	0.109375	0.168	0.352	0.09375	0.531	1.695	0.203	0.699	2.047
11/20/2014	--		0	0.046875		0.398	0.0625		1.758	0.109		2.156
2/23/2015	--		0	0.01171875		0.410	0.125		1.883	0.137		2.293

Notes:
A value of zero for 'Recovered DNAPL' indicates DNAPL was observed but not recoverable.
-- for 'Recovered DNAPL' indicates DNAPL was not observed.



Appendix C

Site Inspection Form

Site Inspection Form
Madison Avenue Former MGP Site - Elmira, New York

Date/Time: February 23, 2015 / Monthly

Weather: ~15°F cold! Sunny and cloudy

Personnel: NSB

Temperature: ↓

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*	
Application wells	☒ Good	☐ Poor*	
Performance Monitoring wells	☒ Good	☐ Poor*	
NAPL Monitoring/Recovery wells	☒ Good	☐ Poor*	
Cover Areas (Grass and Stone)	☐ Good	☐ Poor*	NA, Covered by snow
Signs of intrusive activities	☒ No	☐ Yes*	However, covered by snow
Evidence of Settlement	☒ No	☐ Yes*	However, covered by snow

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: Significant snow covered site (0.5' - 1.5') no evidence of above deficient.

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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 1	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: SE	
COMMENT: Picture showing (snow covered) stone parking area over former manufactured gas plant (MGP) area. Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 2	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: E	
COMMENT: Picture showing (snow covered) stone parking area over former MGP. Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 3	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: NW	
COMMENT: Picture showing (snow covered) stone parking area over former MGP. Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit. Area currently used for material staging.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 4	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: N	
COMMENT: Picture showing (snow covered) stone area over former MGP and storage shed. Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit. Area used for material staging.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 5	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: NE	
COMMENT: Picture showing (snow covered) stone and vegetation coverage over PCB IRM removal areas (1997) and purifier waste removal area (2011). Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit. Area used for material staging.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 6	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: E	
COMMENT: Picture showing (snow covered) stone coverage and stock piled materials over ISS areas. Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 7	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: SW	
COMMENT: Picture showing (snow covered) grass area and stone coverage over ISS area, purifier waste IRM removal area (2004) and purifier waste removal area (2011). Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
PHOTOGRAPH #: 8	
PHOTOGRAPHER: NJB	
DATE: 02/26/15	
DIRECTION: WSW	
COMMENT: Picture showing treatment system area. Snow prohibited detailed inspection of cover. Assume no repair is needed – will be confirmed during August site visit.	

Appendix E

Photographic Logs of Well Conditions

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-1S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-1D	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-2S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-2D	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
COMMENT: Photograph showing MW-2D. Well is in good condition with locking cap.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-4S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
COMMENT: Photograph showing MW-4S. Well is in good condition with locking cap and competent cover. Surface completion was replaced August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-6S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
COMMENT: Photograph showing MW-6S. Well is in good condition with locking cap and competent cover. Locking cap was installed August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-7	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-8S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-8D **PHOTOGRAPHER: NJB** **DATE: 02/23/15** **DIRECTION: NA** **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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-9S **PHOTOGRAPHER: NJB** **DATE: 02/23/15** **DIRECTION: NA** **COMMENT:** Photograph showing MW-9S. Well is in good condition with locking well cap and competent cover. Surface completion was replaced August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-9D	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
COMMENT: Photograph showing MW-9D. Well is in good condition with locking well cap and competent cover. Surface completion was replaced August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0304D	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0402S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0403S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0404S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0404D	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : MW-0405S	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-1	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-1. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-2	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-2. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover. Surface completion was replaced August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-3	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-3. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-4	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-4. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-5	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-5. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-6	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-6. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-7	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-7. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-8	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-8. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-9	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-9. 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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-10	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-11	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
COMMENT: Photograph showing AW-11. Well and stainless steel canister/assembly is in good condition. Well has well plug and competent cover. Well cover was replaced August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-12	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-13	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-14	
PHOTOGRAPHER: NJB	
DATE: 02/24/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-15	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-16	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-17	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-18	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : AW-19	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
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#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-1	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing PMW-1. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-2	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing PMW-2. Well is in good condition with well plug and competent cover. Surface completion was replaced August 2014.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-3	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing PMW-3. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-4	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing PMW-4. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-5	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
COMMENT: Photograph showing PMW-5. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : PMW-6	
PHOTOGRAPHER: NJB	
DATE: 02/23/15	
DIRECTION: NA	
COMMENT: Photograph showing PMW-6. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-1 **PHOTOGRAPHER: NJB** **DATE: 02/23/15** **DIRECTION: NA** **COMMENT:** Photograph showing NRW-1. Well is in good condition with well plug and competent cover. Riser height was lowered August 2014 to allow room for the locking cap.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-2 **PHOTOGRAPHER: NJB** **DATE: 02/25/15** **DIRECTION: NA** **COMMENT:** Photograph showing NRW-2. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-3	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing NRW-3. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : NRW-4	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing NRW-4. Well is in good condition with well plug and competent cover.	

CLIENT: NYSEG	**SITE NAME: Madison Avenue Former MGP Site**
PROJECT#: B0013134.0001	**SITE LOCATION: Elmira, New York**
WELL ID : NMW-0402S	
PHOTOGRAPHER: NJB	
DATE: 02/25/15	
DIRECTION: NA	
COMMENT: Photograph showing NMW-0402S. Well is in good condition with well plug and competent cover.	

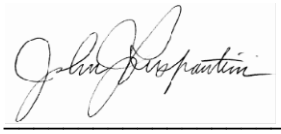
Appendix F

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.



John J. Ruspantini, CHMM, PMP
NYSEG, Manager – Programs/Projects