ARCADIS of New York, Inc.
6723 Towpath Road
PO Box 66
Syracuse
New York 13214-0066
Tel 315.446.9120
Fax 315.449.4111
www.arcadis-us.com

ENVIRONMENT

Ms. Kiera Thompson
Engineering Geologist
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, New York 12233-7014

Subject:
New York State Electric & Gas Corporation,
Washington Development Associates, LLC
Washington Street Former MGP Site
NYSDEC BCP Site #C704046
City of Binghamton, Broome County, NY
2013 Groundwater Monitoring Summary Report

Date:
October 29, 2013

Contact:
John C. Brussel, P.E.

Phone:
315.671.9441

Email:
John.Brussel@arcadis-us.com

Our ref:
B0013097.0003 #11

Dear Ms. Thompson:

On behalf of New York State Electric & Gas Corporation (NYSEG), this letter summarizes the results of the July 2013 groundwater monitoring performed at the Washington Street former manufactured gas plant (MGP) site located in Binghamton, New York (the site). The site location is shown on Figure 1. The 2013 periodic groundwater monitoring activities were conducted by ARCADIS in accordance with Section 3.3 of the New York State Department of Environmental Conservation-(NYSDEC-) approved *Site Management Plan* (ARCADIS, December 2011) ("the SMP"). The groundwater monitoring activities were performed to:

- Evaluate post-remedial groundwater quality in the remaining monitoring wells at the site.
- Confirm that post-remedial groundwater flow patterns are unchanged.
- Confirm that groundwater quality is improving and/or does not represent a significant threat to human health or the environment based on the site use.

Results of previous groundwater monitoring activities are summarized in the NYSDEC-approved *Periodic Review Report* (ARCADIS, June 2013) ("the PRR").

The 2013 periodic groundwater monitoring activities are summarized below, followed by the groundwater monitoring results and conclusions based on the results.

Groundwater Monitoring Field Activities

Groundwater monitoring was performed during the week of July 1, 2013 and included the collection of groundwater samples from each of the seven remaining shallow and deep monitoring wells in silt, sand/gravel, and till units below the site (monitoring wells MW-4R, MW-5, MW-5D, MW-6S, MW-6, MW-7R, and MW-7D, as shown on Figure 2). Construction details for each monitoring well are presented in Table 1.

Prior to sampling, a synoptic round of water-level measurements was obtained from the seven monitoring wells and piezometer PZ-1 on July 1, 2013. In addition, each well and the piezometer were checked for the presence of accumulated dense non-aqueous phase liquid (DNAPL). None was identified in any of the wells or the piezometer. The water-level data obtained on July 1, 2013 and corresponding groundwater elevations are presented in Table 2 in comparison to historical water levels/elevations.

Groundwater samples were collected using low-flow purging and sampling techniques (a peristaltic pump with dedicated disposable tubing), as described in the Field Sampling Plan (BBL, 2005a), included as Appendix H to the SMP. Field parameters (pH, conductivity, dissolved oxygen, temperature, turbidity, and oxidation-reduction potential) were monitored every 5 minutes during purging. After turbidity levels decreased to below 50 nephelometric turbidity units and parameters stabilized, groundwater samples were collected for laboratory analysis. Field parameter measurements obtained during purging and immediately prior to sampling are presented on the groundwater sampling logs included in Attachment A to this letter.

Groundwater samples, except those submitted for laboratory analysis for volatile organic compounds (VOCs), were collected using low-flow sampling techniques. Groundwater samples submitted for laboratory analysis of VOCs were collected using a disposable polyethylene bailer.

The groundwater samples were submitted to TestAmerica of Buffalo, New York for analysis for Target Compound List (TCL) VOCs, TCL semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) inorganic constituents (includes cyanide), and polychlorinated biphenyls (PCBs). Analytical results were reported using NYSDEC Analytical Services Protocol Category B data deliverables. The analytical results were validated by ARCADIS in accordance with United States Environmental Protection Agency (USEPA) National Functional Guidelines. The laboratory analytical reports and the data usability summary report are included on the attached CD.

Groundwater Monitoring Results

On average, the water level measured in each well on July 1, 2013 (except in MW-6S) was approximately 5 feet lower than the level measured in the same well one year earlier. The water level in MW-6S was approximately 0.2 feet higher than a year

ago. Although the July 2013 water levels were generally several feet lower this year compared to last year, there is no information to suggest that groundwater flow patterns (directions) have changed.

The validated groundwater analytical results for constituents detected in the groundwater samples are summarized in Table 3. Groundwater analytical results were compared to the NYSDEC groundwater standards/guidance values presented in the NYSDEC Division of Water, Technical and Operational Guidance Series (TOGS) document titled, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (TOGS 1.1.1)," dated June 1998, as revised by addenda dated April 2000 and June 2004.

Results for constituents identified in the July 2013 and historical groundwater samples at concentrations exceeding the TOGS 1.1.1 groundwater quality standards are shown on Figure 2. Note that Figure 2 also shows results for wells that no longer exist because they were decommissioned in connection with the site remediation/ redevelopment. Analytical results for the groundwater samples collected during the July 2013 monitoring event are summarized below and compared to the results from previous monitoring events:

- VOCs and polycyclic aromatic hydrocarbons (PAHs) commonly associated with the former MGP were identified at concentrations exceeding the groundwater standards/guidance values in one of the seven monitoring wells (MW-5D). Consistent with historical data, groundwater at monitoring well MW-5D contained benzene, toluene, ethylbenzene, and xylenes (BTEX) and select PAHs at concentrations exceeding the standards/guidance values. The analytical results for BTEX and PAHs at MW-5D compared to historical data are summarized below:

    - The 317 part per billion (ppb) total BTEX concentration identified at MW-5D in July 2013 was lower than the 440 ppb total BTEX concentration identified in the well in the first sampling event (July 2006), but higher than the concentrations identified between 2008 and 2012. While the July 2013 concentrations of benzene, ethylbenzene, and xylenes at MW-5D were each higher than the concentrations identified in the well in the three previous monitoring events, the 2.3 ppb toluene concentration in July 2013 was close to the lowest toluene concentration previously identified in the well (2 ppb in May 2008).

    - PAH concentrations identified at MW-5D in July 2013 were generally consistent with those identified during the four previous sampling events, with one exception: the estimated 3.4 ppb naphthalene concentration at MW-5D in July 2013 was one-to-two orders of magnitude lower than the naphthalene concentrations previously identified in the well (and is now less than the 10 ppb guidance value).

- Isopropylbenzene was identified at MW-5D in July 2013 at a concentration of 11 ppb, which exceeds the corresponding 5 ppb groundwater quality standard. Isopropylbenzene was only analyzed in one of the four previous groundwater samples from MW-5D (July 2012), and it was not identified at a concentration above the 2 ppb detection limit at that time. The isopropylbenzene concentration in MW-5D will be further evaluated during the next monitoring event.

- Two VOCs unrelated to the former MGP (chloroform and tetrachloroethene [PCE]) were identified at concentrations exceeding their respective groundwater standards in samples collected from two wells. The levels of these VOCs appear to be fluctuating nominally, as indicated below:

    - Chloroform was identified in MW-5 at a concentration of 7.6 ppb vs. the 7 ppb standard. Chloroform is a common byproduct from the disinfection of drinking water and is formed when naturally-occurring organic and inorganic materials in the water react with the disinfectant chlorine. Chloroform in groundwater at the site could be an artifact from leaking water supply pipes. Chloroform was previously identified in a June 2006 sample from MW-8 at a concentration of 8 ppb.

      PCE, a common solvent, was identified in MW-7R at a concentration of 5.9 ppb vs. the 5 ppb standard. PCE has previously been identified in MW-7 and replacement well MW-7R (southeast of a former auto sales/service station at the property) at concentrations near or slightly greater than the 5 ppb groundwater standard. No obvious source of the PCE was found in on-site subsurface soil during the previous site investigations or remedial activities.

- One or more inorganics were identified at concentrations exceeding the groundwater standards in several samples. The inorganics identified at concentrations exceeding their respective standards consist of arsenic (MW-5D), barium (MW-5D), cadmium (MW-6), iron (MW-4R, MW5D, MW-6S, MW-6, and MW-7R), lead (MW-5D), manganese (each well except MW-5), and selenium (MW-5D). Each of these inorganics was previously identified in one or more historical groundwater samples at concentrations exceeding the groundwater quality standards. Iron and manganese are common, naturally-occurring elements. The other inorganic constituents may be related to the former MGP or past industrial site use. As indicated in the PRR, lead had not been detected in samples from MW-5D until the July 2012 sampling event. If lead is detected above its criterion in the next sampling, an assessment will be made as to whether: (1) the detections are real or sampling artifacts; (2) the lead poses a risk to human health and the environment; and (3) additional actions need to be taken.

- PCBs were not detected at concentrations above laboratory detection limits in any of the wells, except MW-6S. PCBs (consisting of only Aroclor 1254) were

identified in MW-6S at an estimated concentration of 0.15 ppb, which slightly exceeds the 0.09 ppb groundwater quality standard. PCBs have sporadically been identified in MW-5, MW-6S, and MW-6 (at concentrations higher than or similar to the concentration identified in MW-6S in July 2013). No obvious source of the PCBs was found in onsite subsurface soils during the previous site investigations or remedial activities. PCBs are unrelated to the former MGP.

Based on review of the analytical results, the quality of groundwater beneath the site appears to be unaffected by the former MGP, except at well MW-5D, and data continue to indicate that the area of MGP-affected groundwater near MW-5D is small. However, there are not enough data to establish that residual groundwater concentrations have become asymptotic over an extended period. Based on available data at MW-5D, BTEX concentrations have fluctuated and PAH concentrations identified in each monitoring event have remained generally consistent or decreased. These sampling results (i.e., relatively low persistent concentrations) are not atypical of groundwater conditions at remediated MGPs. The modest increase in the concentrations of selected VOCs in the most-recent sample collected from well MW-5D is within the range of variability that we would expect to see at the site, as there are many factors that can result in modest increases and decreases of VOC concentrations from time to time. Such factors include, but are not limited to, seasonal changes in the elevation of the water table, infiltration of precipitation, location of contaminant sources relative to the water table, and geometry of contaminant sources in relation to the location of monitoring well screens. It is important to note that groundwater at this site is not used as a source of drinking water, and such use is prohibited without necessary water quality treatment and approval by the NYSDEC and state/local health departments.

Additional groundwater monitoring events will be implemented to collect enough data to establish a statistically significant data trend. Typically, a trend can be established after eight events. The July 2013 results represent the fourth set of data collected at MW-4/4R and MW-5, and the fifth set of data collected at MW-5D, MW-6S, MW-6, MW-7/7R, and MW-7D. Considering that MW-5D is the only monitoring well location that appears to be affected by the former MGP site, groundwater monitoring at the site may be discontinued after three more monitoring events (or sooner if NYSEG and the NYSDEC agree that monitoring objectives have been accomplished in a shorter period).

The next groundwater monitoring event is scheduled for July 2014 and will involve obtaining a synoptic round of water level measurements and collecting and analyzing groundwater samples from each well. The results of the 2014 groundwater monitoring event will be evaluated to re-assess the frequency of further monitoring. If groundwater analytical results from 2014 are generally consistent with historical data, the frequency of the monitoring may be adjusted from annually to once every three years, and the number of wells sampled could potentially be reduced, with NYSDEC approval. The results of the next monitoring event will be summarized in a letter report to the NYSDEC. In addition, results for each of the monitoring events

performed between 2013 and 2015 will be summarized in the next PRR due to the NYSDEC on May 31, 2016.

Please do not hesitate to contact Mr. Tracy L. Blazicek, CHMM of NYSEG at 607.762.8839 (tlblazicek@nyseg.com) or the undersigned if you have any questions or require additional information.

Sincerely,

ARCADIS of New York, Inc.

John C. Brussel

John C. Brussel, PE
Principal Engineer

Copies:
Mr. David A. Crosby, PE, New York State Dept. of Environmental Conservation (via e-mail)
Ms. Julia Kenney, New York State Dept. of Health (via e-mail)
Mr. Tracy L. Blazicek, CHMM, NYSEG (via e-mail & US Mail)
Mr. Marc Newman, Washington Development Associates, LLC (via e-mail)
Mr. John M. Nicolich, Washington Development Associates, LLC (via e-mail and US Mail)
Mr. Kenneth S. Kamlet, Esq., Hinman, Howard & Kattell, LLP (via e-mail)
Mr. Keith A. White, CPG, ARCADIS (via e-mail)
Mr. Lawrence C. Healy, ARCADIS (via e-mail)

ARCADIS

Tables

TABLE 1
MONITORING WELL AND PIEZOMETER CONSTRUCTION DETAILS

2013 PERIODIC GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID	Material Screened/ Location	Date Completed	Date of Most-Recent Well Modification	Northing Coordinate	Easting Coordinate	Measuring Point Elev.		Ground Surface Elev.		Well Diam.	Casing/Screen Type	Screen Slot Size	Screen Length	Post-Remedy Depth to Screened Interval (ft. bgs)		Post-Remedy Well Depth	Estimated Hydraulic Conductivity (K)	Estimated Hydraulic Conductivity (K)
				ft.	ft.	ft. NAVD 88		ft. NAVD 88		in.		in.	ft.	Top	Bottom	ft. bgs	cm/sec	ft/day
						pre-remedy	post-remedy	pre-remedy	post-remedy									
MW-4R	sand, gravel and cobbles	11/3/11	7/17/12	763862.97	1001464.69	NA	845.76	NA	846.27	2	PVC	0.01	10.0	17.1	26.9	27.4	7.4E-03	2.1E+01
MW-5	silt, gravel, cobbles, and sand	6/8/06	7/17/12	763766.17	1001444.74	842.32	844.35	842.72	844.95	2	PVC	0.01	10.0	18.0	28.0	28.0	1.7E-02	4.8E+01
MW-5D	fine sandy silt, medium sand, and gravel	6/7/06	7/17/12	763767.20	1001441.76	842.58	844.23	842.81	844.81	2	PVC	0.01	5.0	39.0	44.0	44.0	8.3E-04	2.4E+00
MW-6S	sand, silt, clay, and organics	6/12/06	7/18/12	763645.42	1001463.98	841.61	844.08	842.10	844.44	2	PVC	0.01	5.0	10.0	15.0	15.0	3.2E-03	9.2E+00
MW-6	silt, clay, sand, gravel, and cobbles	6/12/06	7/18/12	763641.56	1001463.96	841.65	843.90	842.13	844.37	2	PVC	0.01	10.0	21.8	31.8	31.8	1.7E-04	4.9E-01
MW-7R	clay, silt, sand, and gravel, and cobbles	11/3/11	7/18/12	763543.99	1001506.05	NA	842.93	NA	843.21	2	PVC	0.01	10.0	14.5	24.3	24.5	1.2E-02	3.4E+01
MW-7D	clay, silt, gravel, and cobbles	6/9/06	7/18/12	763539.70	1001503.08	841.51	842.44	841.91	842.97	2	PVC	0.01	5.0	38.1	43.1	43.1	3.0E-03	8.5E+00
PZ-1	silt, sand, clay, and gravel	6/16/06	NA	763499.48	1001737.14	841.87	841.87	842.12	842.12	2	PVC	0.01	10.0	14.0	24.0	24.0	--	--

Notes:

1. MW = Monitoring Well; S = Shallow Well; D = Deep Well; PZ = Piezometer.
2. All wells are flush-mounted and are constructed of 2-inch diameter polyvinyl chloride (PVC) .
3. TIC = Top of Inner Casing; NA = Not Applicable.
4. Elevations are in feet referenced to the North American Vertical Datum (NAVD) 1988. Datum: NAD 83, NYS Plane Central.
5. Depths are measured in feet referenced TIC.
6. -- = Data is not available.
7. * = 0.01 feet of drawdown was assumed due to no recorded drawdown during specific capacity testing.
8. NA = Not Applicable.
9. Measuring point and ground surface elevations were modified one or two times during remediation and site redevelopment. Pre-remedy elevations are from surveys performed as part of the remedial investigation, and the post-remedy elevations are from a survey performed following site redevelopment on 8/16/2012.

TABLE 2
WATER-LEVEL DATA

2013 PERIODIC GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location	Reference Point Elevation		Depth to Groundwater (feet bmp)						Groundwater Elevation (feet, NAVD 1988)					
	pre-remedy	post-remedy	6/27/2006	7/24/2006	1/17/2008	5/15/2008	7/17/2012 & 7/20/2012	7/1/2013	6/27/2006	7/24/2006	1/17/2008	5/15/2008	7/17/2012 & 7/20/2012	7/1/2013
MW-1R	845.67	--	18.69	17.82	17.83	20.69	NA	NA	826.98	827.85	827.84	824.98	NA	NA
MW-2	844.88	--	NA	16.09	15.74	NA	NA	NA	NA	828.79	829.14	NA	NA	NA
MW-3	842.01	--	NA	13.60	5.48	6.45	NA	NA	NA	828.41	836.53	835.56	NA	NA
MW-4	843.62	--	15.69	16.51	16.93	19.60	NA	NA	827.93	827.11	826.69	824.02	NA	NA
MW-4R	--	845.76	NA	NA	NA	NA	22.50	16.55	NA	NA	NA	NA	823.26	829.21
MW-5	842.32	844.35	14.16	15.09	15.09	17.91	20.29	15.43	828.16	827.23	827.23	824.41	824.06	828.92
MW-5D	842.58	844.23	14.71	14.82	15.34	18.1	20.35	15.49	827.87	827.76	827.24	824.48	823.88	828.74
MW-6S	841.61	844.08	7.00	7.19	7.00	7.56	8.29	8.53	834.61	834.42	834.61	834.05	835.79	835.55
MW-6	841.65	843.90	13.25	13.72	14.25	15.67	20.09	14.71	828.40	827.93	827.40	825.98	823.81	829.19
MW-7	841.62	--	13.22	13.92	NA	16.29	NA	NA	828.40	827.70	NA	825.33	NA	NA
MW-7R	--	842.93	NA	NA	NA	NA	18.26	13.67	NA	NA	NA	NA	824.67	829.26
MW-7D	841.51	842.44	13.14	13.76	NA	NA	18.30	13.52	828.37	827.75	NA	NA	824.14	828.92
MW-8	845.60	--	18.39	17.81	18.21	20.76	NA	NA	827.21	827.79	827.39	824.84	NA	NA
MW-8D	844.84	--	17.16	17.96	18.15	20.47	NA	NA	827.68	826.88	826.69	824.37	NA	NA
MW-9	842.04	--	NA	NA	5.83	6.48	NA	NA	NA	NA	836.21	835.56	NA	NA
PZ-1	841.87	--	13.86	14.23	NA	NA	NA	12.48	828.01	827.64	NA	NA	NA	829.39
SG-1	847.86	--	17.14	21.35	NA	NA	NA	NA	830.72	826.51	NA	NA	NA	NA
SG-2	855.76	--	25.02	29.40	NA	NA	NA	NA	830.74	826.36	NA	NA	NA	NA

Notes:

1. MW = Monitoring Well; R = Replacement Well; S = Shallow Well; D = Deep Well; PZ = Piezometer; SG = Staff Gauge (reference point on bridge).
2. -- = Not Installed; bmp = Below Measuring Point.
3. TIC = Top of Inner Well Casing.
4. Reference point elevations for monitoring wells and piezometer are the top of the inner casing.
5. Elevations are in feet referenced to the North American Vertical Datum (NAVD) 1988.
6. The water level measurements for each mobilization in 2006 and 2008 were taken within one hour, with the following exceptions:
   - Measurements from MW-6S and MW-6D on 6/27/2006, which were taken four hours earlier.
   - MW-2 was essentially dry on 6/27/2006 and 5/15/2008.
   - The water level in MW-3 on 6/27/2006 could not be positively determined due to the presence of non-aqueous phase liquid (NAPL) in the well.
   - Measurements from MW-5 on 1/17/2008, which was taken four hours later.
7. The water level measurements from 2012 were obtained immediately prior to sampling at each well (not as a synoptic round).
8. NA = not available.
9. Measuring point elevations were modified multiple times during remediation and site redevelopment. Pre-remedy elevations are from surveys performed as part of the remedial investigation, and the post-remedy elevations are from a survey performed following site redevelopment on 8/16/2012 .
10. Groundwater elevations calculated for 2006 and 2008 were measured from the pre-remedy reference point elevation. Groundwater elevations calculated for 2012 were measured from the post-remedy reference point elevation.

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-1R		MW-2	MW-4		MW-4R		MW-5			
Date Collected:	Values	07/25/06	01/18/08	01/18/08	07/25/06	01/18/08	07/17/12	07/02/13	07/26/06	01/18/08	07/17/12	07/02/13
Detected VOCs												
Cyclohexane	- -	NA	NA	NA	NA	NA	<1.0	<1.0	NA	NA	<1.0	<1.0
1,1,1-Trichloroethane	5	1.0 J	1.0 J	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0 J	<5.0	<1.0	<1.0
1,2-Dichloroethene (Total)	- -	<10	<10	<10	<10	<10	NA	NA	<10	<10	NA	NA
Acetone	50	<25	<25	<25	<25	<25	8.8 J	<10	<25 J	<25	9.3 J	<10
Benzene	1	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0
Bromodichloromethane	50	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0
Bromoform	50	<5.0 J	<5.0	<5.0	<5.0 J	<5.0	<1.0	<1.0 J	<5.0 J	<5.0	<1.0	<1.0 J
Carbon disulfide	- -	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0
Chloroform	7	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	2.9	**7.6**
cis-1,2-Dichloroethene	5	NA	NA	NA	NA	NA	<1.0	<1.0	NA	NA	<1.0	<1.0
Dichlorodifluoromethane	5	NA	NA	NA	NA	NA	<1.0	<1.0	NA	NA	<1.0	<1.0
Ethylbenzene	5	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0
Isopropylbenzene	5	NA	NA	NA	NA	NA	<1.0	<1.0	NA	NA	<1.0	<1.0
Methyl ethyl ketone (MEK)	- -	<25	<25	<25 J	<25	<25	<10	<10	<25 J	<25 J	<10	<10
Methyl tert-butyl ether	- -	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0 J	<5.0	<1.0	<1.0
Tetrachloroethene	5	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	0.60 J	<5.0	0.41 J	<1.0
Toluene	5	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	0.88 J
Total Xylenes	5	<15	<15	<15	<15	<15	<2.0	<2.0	<15	<15	<2.0	<2.0
Trichloroethene	5	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0
Vinyl chloride	2	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0 J	<5.0	<1.0	<1.0
Total BTEX	- -	<15	<15	<15	<15	<15	<2.0	<2.0	<15	<15	<2.0	<2.0
Total VOCs	- -	1.0 J	1.0 J	<25	<25	<25	8.8 J	<10	0.60 J	<25	13 J	8.5 J
Detected SVOCs												
Carbazole	- -	NA	NA	NA	NA	NA	<5.6	<4.7 J	NA	NA	<4.8	<5.0
2,4-Dimethylphenol	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
2-Methylnaphthalene	- -	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
2-Methylphenol	- -	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
4,6-Dinitro-2-methylphenol	- -	<50	<10	<9.0	<48	<10	<11	<9.4 J	<47	<49	<9.6	<10
4-Methylphenol	- -	<10	<5.0	<5.0	<10	<5.0	<11	<9.4 J	<9.0	<24	<9.6	<10
Acenaphthene	20	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Acenaphthylene	- -	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Acetophenone	- -	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Anthracene	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Benzo(a)anthracene	0.002	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Benzo(a)pyrene	- -	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Benzo(b)fluoranthene	0.002	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Biphenyl	5	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Chrysene	0.002	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Dibenzofuran	- -	<10	<5.0	<5.0	<10	<5.0	<11	<9.4 J	<9.0	<24	<9.6	<10
Di-n-butyl phthalate	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 BJ	<9.0	<24	<4.8	0.57 J
Fluoranthene	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Fluorene	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Naphthalene	10	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Phenanthrene	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Phenol	1	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Pyrene	50	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Total Carcinogenic PAHs	- -	<10	<5.0	<5.0	<10	<5.0	<5.6	<4.7 J	<9.0	<24	<4.8	<5.0
Total PAHs	- -	<10	<5.0	<5.0	<10	<5.0	<11	<9.4 J	<9.0	<24	<9.6	<10
Total SVOCs	- -	<150	<140	<140	<140	<140	<11	<9.4 J	<140	<740	<9.6	0.57 J

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-1R		MW-2	MW-4		MW-4R		MW-5			
Date Collected:	Values	07/25/06	01/18/08	01/18/08	07/25/06	01/18/08	07/17/12	07/02/13	07/26/06	01/18/08	07/17/12	07/02/13
Detected Inorganics												
Aluminum	- -	NA	NA	NA	NA	NA	1,700	2,000	NA	NA	<200	<200
Calcium	- -	NA	NA	NA	NA	NA	137,000	150,000	NA	NA	108,000	79,600
Cobalt	- -	NA	NA	NA	NA	NA	1.70 J	1.30 J	NA	NA	<4.00	<4.00
Copper	200	NA	NA	NA	NA	NA	3.30 J	5.20 J	NA	NA	<10.0	<10.0
Iron	300	NA	NA	NA	NA	NA	**1,900**	**2,800**	NA	NA	<50.0	46.0 J
Magnesium	- -	NA	NA	NA	NA	NA	23,300	24,500	NA	NA	14,400	11,000
Manganese	300	NA	NA	NA	NA	NA	**660**	**660**	NA	NA	<3.00	3.30
Nickel	100	NA	NA	NA	NA	NA	2.50 J	3.80 J	NA	NA	<10.0	<10.0
Potassium	- -	NA	NA	NA	NA	NA	10,000	8,900	NA	NA	9,400	7,400
Sodium	- -	NA	NA	NA	NA	NA	116,000	137,000	NA	NA	46,500	42,300
Thallium	- -	NA	NA	NA	NA	NA	<20.0	<20.0	NA	NA	<20.0	<20.0
Vanadium	- -	NA	NA	NA	NA	NA	3.10 J	2.70 J	NA	NA	<5.00	<5.00
Zinc	2,000	NA	NA	NA	NA	NA	5.90 J	11.0	NA	NA	<10.0	<10.0
Arsenic	25	<10.0	<10.0	NA	<10.0	<10.0	<10.0	<10.0	<10.0 J	<10.0	<10.0	<10.0
Barium	1,000	73.4	87.1	NA	79.2	92.9	81.0	93.0	81.2	85.6	49.0	34.0
Cadmium	5	<1.00	<1.00	NA	<1.00	<1.00	<1.00	<0.500	<1.00	<1.00	<1.00	<0.500
Chromium	50	<4.00	<4.00	NA	<4.00	<4.00	2.60 J	4.50	<4.00	<4.00	3.20 J	2.40 J
Cyanide	200	71.3	168 J	NA	33.3	66.0 J	150	100	**1,650**	**269 J**	21.0	26.0
Lead	25	<5.00	<5.00	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Selenium	10	<15.0	<15.0	NA	<15.0	<15.0	<15.0	<15.0	<15.0	**20.6**	<15.0	<15.0
Detected PCBs												
Aroclor 1248	0.09	<0.50	<0.048	NA	<0.48	<0.048	<0.055	<0.048	<0.47	<0.047	<0.059	<0.049
Aroclor 1254	0.09	<0.50	<0.048	NA	<0.48	<0.048	<0.055	<0.048	<0.47	**0.16**	<0.059	<0.049
Total PCBs	- -	<0.50	<0.048	NA	<0.48	<0.048	<0.055	<0.048	<0.47	0.16	<0.059	<0.049

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-5D					MW-6S				
Date Collected:	Values	07/26/06	01/18/08	05/15/08	07/17/12	07/01/13	06/27/06	07/26/06	01/17/08	07/20/12	07/01/13
Detected VOCs											
Cyclohexane	- -	NA	NA	NA	<2.0	0.47 J	NA	NA	NA	<1.0	<1.0
1,1,1-Trichloroethane	5	<5.0 J	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
1,2-Dichloroethene (Total)	- -	<10	<50 [<10]	<10 [<10]	NA	NA	<10 [<10]	<10	<40	NA	NA
Acetone	50	<25 J	22 J [10 J]	13 J [11 J]	20	<20	<25 [<25]	<25	<100	<10	<10
Benzene	1	**31**	<25 [<5.0]	**3.0 J [4.0 J]**	**8.8**	**90**	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
Bromodichloromethane	50	<5.0	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
Bromoform	50	5.0 J	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0 J	<5.0 [<5.0]	<5.0 J	<20	<1.0 J	<1.0
Carbon disulfide	- -	<5.0	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 [<5.0]	<5.0	<20	<1.0 J	<1.0
Chloroform	7	<5.0	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	0.50 J [0.60 J]	1.0 J	<20	0.42 J	<1.0
cis-1,2-Dichloroethene	5	NA	NA	NA	<2.0	<2.0	NA	NA	NA	<1.0	<1.0
Dichlorodifluoromethane	5	NA	NA	NA	<2.0	<2.0	NA	NA	NA	<1.0	0.85 J
Ethylbenzene	5	**98**	<25 J [0.90 J]	**6.0 [7.0]**	**13**	**45**	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
Isopropylbenzene	5	NA	NA	NA	<2.0	**11**	NA	NA	NA	<1.0	<1.0
Methyl ethyl ketone (MEK)	- -	<25 J	<120 J [<25]	1.0 J [1.0 J]	<20	<20	<25 [<25]	<25	<100	<10	<10
Methyl tert-butyl ether	- -	<5.0 J	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
Tetrachloroethene	5	<5.0 J	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
Toluene	5	**28**	<25 [<5.0]	2.0 J [2.0 J]	**7.7**	2.3	<5.0 J [<5.0]	<5.0	<20	<1.0	<1.0
Total Xylenes	5	**280**	<75 J [2.0 J]	**17 [20]**	**110**	**180**	<15 [<15]	<15	<60	<2.0	<2.0
Trichloroethene	5	<5.0	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 J [<5.0]	<5.0	<20	<1.0	<1.0
Vinyl chloride	2	<5.0 J	<25 [<5.0]	<5.0 [<5.0]	<2.0	<2.0	<5.0 [<5.0]	<5.0	<20	<1.0	<1.0
Total BTEX	- -	440	<75 [2.9 J]	28 J [33 J]	140	317	<15 [<15]	<15	<60	<2.0	<2.0
Total VOCs	- -	440 J	22 J [13 J]	42 J [45 J]	160	329 J	0.50 J [0.60 J]	1.0 J	<100	0.42 J	0.85 J
Detected SVOCs											
Carbazole	- -	NA	NA	NA	32	11	NA	NA	NA	<4.7	<4.8
2,4-Dimethylphenol	50	<9.0	<5.0 [<5.0]	0.90 J [2.0 J]	1.6 J	5.0	NA	<9.0	<5.0	<4.7	<4.8
2-Methylnaphthalene	- -	120	0.60 J [2.0 J]	19 J [40 J]	17	3.3 J	NA	<9.0	<5.0	<4.7	<4.8
2-Methylphenol	- -	<9.0	<5.0 [<5.0]	0.20 J [0.50 J]	<4.8	<4.6	NA	<9.0	<5.0	<4.7	<4.8
4,6-Dinitro-2-methylphenol	- -	<47	<10 [<10]	11 [<10]	<9.6	<9.3	NA	<47	<10	<9.5	<9.6
4-Methylphenol	- -	<9.0	<5.0 [<5.0]	<5.0 [0.50 J]	<9.6	<9.3	NA	<9.0	<5.0	<9.5	<9.6
Acenaphthene	20	**63**	**19 [21]**	**33 [50]**	**39**	**21**	NA	<9.0	<5.0	<4.7	<4.8
Acenaphthylene	- -	15	3.0 J [4.0 J]	4.0 J [6.0]	2.8 J	2.0 J	NA	<9.0	<5.0	<4.7	<4.8
Acetophenone	- -	<9.0	<5.0 [<5.0]	<5.0 [<5.0]	<4.8	0.93 J	NA	<9.0	<5.0	<4.7	<4.8
Anthracene	50	11	4.0 J [4.0 J]	5.0 [7.0]	3.3 J	1.1 J	NA	<9.0	<5.0	<4.7	<4.8
Benzo(a)anthracene	0.002	**1.0 J**	<5.0 [<5.0]	**0.30 J [0.40 J]**	**0.58 J**	**0.44 J**	NA	<9.0	<5.0	<4.7	<4.8
Benzo(a)pyrene	- -	0.50 J	<5.0 [<5.0]	<5.0 [<5.0]	<4.8	<4.6	NA	<9.0	<5.0	<4.7	<4.8
Benzo(b)fluoranthene	0.002	<9.0	<5.0 [<5.0]	<5.0 [<5.0]	<4.8	**0.32 J**	NA	<9.0	<5.0	<4.7	<4.8
Biphenyl	5	**14**	3.0 J [4.0 J]	**5.0 [10]**	**7.4**	<4.6	NA	<9.0	<5.0	<4.7	<4.8
Chrysene	0.002	**0.90 J**	<5.0 [<5.0]	<5.0 [<5.0]	**0.41 J**	**0.41 J**	NA	<9.0	<5.0	<4.7	<4.8
Dibenzofuran	- -	24	7.0 [7.0]	8.0 [14]	14	3.5 J	NA	<9.0	<5.0	<9.5	<9.6
Di-n-butyl phthalate	50	<9.0	<5.0 [<5.0]	0.30 J [<5.0]	<4.8	0.63 J	NA	<9.0	<5.0	<4.7	<4.8
Fluoranthene	50	7.0 J	3.0 J [3.0 J]	4.0 J [6.0]	2.3 J	2.0 J	NA	<9.0	<5.0	<4.7	<4.8
Fluorene	50	40	12 [12]	16 [25]	14	5.5	NA	<9.0	<5.0	<4.7	<4.8
Naphthalene	10	**670 D**	**36 J [67 J]**	**280 DJ [710 DJ]**	**260 D**	3.4 J	NA	<9.0	<5.0	<4.7	<4.8
Phenanthrene	50	38	15 [16]	15 [24]	10	0.77 J	NA	<9.0	<5.0	<4.7	<4.8
Phenol	1	<9.0	<5.0 [<5.0]	<5.0 [0.70 J]	<4.8	<4.6	NA	<9.0	<5.0	<4.7	<4.8
Pyrene	50	5.0 J	2.0 J [2.0 J]	2.0 J [3.0 J]	1.6 J	1.6 J	NA	<9.0	<5.0	<4.7	<4.8
Total Carcinogenic PAHs	- -	2.4 J	<5.0 [<5.0]	0.30 J [0.40 J]	0.99 J	1.2 J	NA	<9.0	<5.0	<4.7	<4.8
Total PAHs	- -	960 J	90 J [130 J]	370 J [860 J]	350 J	40 J	NA	<9.0	<5.0	<9.5	<9.6
Total SVOCs	- -	1,000 J	110 J [140 J]	400 J [900 J]	370 J	64 J	NA	<140	<140	<9.5	<9.6

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-5D					MW-6S				
Date Collected:	Values	07/26/06	01/18/08	05/15/08	07/17/12	07/01/13	06/27/06	07/26/06	01/17/08	07/20/12	07/01/13
Detected Inorganics											
Aluminum	- -	NA	NA	NA	1,600	4,300	NA	NA	NA	86.0 J	130 J
Calcium	- -	NA	NA	NA	43,600	163,000	NA	NA	NA	200,000	412,000
Cobalt	- -	NA	NA	NA	1.00 J	<4.00	NA	NA	NA	4.50	7.20
Copper	200	NA	NA	NA	7.00 J	8.10 J	NA	NA	NA	2.10 J	<10.0
Iron	300	NA	NA	NA	**2,000**	**10,900**	NA	NA	NA	**3,400**	**11,600**
Magnesium	- -	NA	NA	NA	2,000	39,700	NA	NA	NA	18,200	44,500
Manganese	300	NA	NA	NA	150	**2,000**	NA	NA	NA	**630**	**3,500**
Nickel	100	NA	NA	NA	3.90 J	23.0	NA	NA	NA	12.0	6.40 J
Potassium	- -	NA	NA	NA	14,500	8,200	NA	NA	NA	9,500	10,900
Sodium	- -	NA	NA	NA	41,300	101,000	NA	NA	NA	116,000	422,000
Thallium	- -	NA	NA	NA	<20.0	68.0	NA	NA	NA	<20.0	<20.0
Vanadium	- -	NA	NA	NA	3.70 J	6.80	NA	NA	NA	1.50 J	<5.00
Zinc	2,000	NA	NA	NA	27.0	43.0	NA	NA	NA	12.0	36.0
Arsenic	25	10.1 J	12.7 [12.7]	NA	<10.0	**180**	NA	<10.0	<10.0	5.80 J	6.60 J
Barium	1,000	689	**1,270 [1,290]**	NA	210	**1,200**	NA	73.9	97.7	93.0	220
Cadmium	5	<1.00	<1.00 [<1.00]	NA	2.10	3.40	NA	<1.00	<1.00	0.860 J	2.10
Chromium	50	<4.00	<4.00 [<4.00]	NA	2.30 J	7.80	NA	<4.00	<4.00	3.50 J	1.70 J
Cyanide	200	13.7	17.8 J [20.4 J]	NA	5.70 J	12.0	63.4 J [55.5 J]	112	148 J	34.0	23.0
Lead	25	<5.00	<5.00 [<5.00]	NA	**27.0**	**47.0**	NA	<5.00	<5.00	4.20 J	<5.00
Selenium	10	<15.0	<15.0 [<15.0]	NA	<15.0	**86.0**	NA	<15.0	**16.2**	<15.0	<15.0
Detected PCBs											
Aroclor 1248	0.09	<0.47	<0.047 [<0.047]	NA	<0.053	<0.048	<0.48 [<0.48]	**0.37 J**	<0.050	<0.048	<0.047
Aroclor 1254	0.09	<0.47	<0.047 [<0.047]	NA	<0.053	<0.048	<0.48 [<0.48]	**0.21 J**	<0.050	<0.048	**0.15 J**
Total PCBs	- -	<0.47	<0.047 [<0.047]	NA	<0.053	<0.048	<0.48 [<0.48]	0.58 J	<0.050	<0.048	0.15 J

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-6					MW-7			MW-7R	
Date Collected:	Values	06/27/06	07/26/06	01/17/08	07/20/12	07/01/13	06/26/06	07/27/06	01/24/08	07/20/12	07/01/13
Detected VOCs											
Cyclohexane	- -	NA	NA	NA	<1.0 [<1.0]	<1.0	NA	NA	NA	<1.0	<1.0
1,1,1-Trichloroethane	5	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	<5.0	<5.0 J	<5.0	<1.0	<1.0
1,2-Dichloroethene (Total)	- -	<10	<10 [<10]	<40	NA	NA	14	12	<10	NA	NA
Acetone	50	5.0 J	<25 [<25]	13 J	<10 [<10]	3.0 J	4.0 J	<25 J	<25	<10	<10
Benzene	1	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0
Bromodichloromethane	50	1.0 J	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0
Bromoform	50	<5.0	<5.0 J [<5.0 J]	<20	<1.0 J [<1.0 J]	<1.0	<5.0	<5.0 J	<5.0	<1.0 J	<1.0
Carbon disulfide	- -	<5.0	<5.0 [<5.0]	<20	2.2 J [2.4 J]	<1.0	<5.0	<5.0	<5.0	<1.0 J	<1.0
Chloroform	7	**8.0**	0.50 J [0.70 J]	<20	<1.0 [<1.0]	<1.0	0.80 J	<5.0	<5.0	<1.0	<1.0
cis-1,2-Dichloroethene	5	NA	NA	NA	<1.0 [<1.0]	<1.0	NA	NA	NA	3.4	2.4
Dichlorodifluoromethane	5	NA	NA	NA	<1.0 [<1.0]	<1.0	NA	NA	NA	<1.0	<1.0
Ethylbenzene	5	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0
Isopropylbenzene	5	NA	NA	NA	<1.0 [<1.0]	<1.0	NA	NA	NA	<1.0	<1.0
Methyl ethyl ketone (MEK)	- -	<25	<25 [<25]	<100	<10 [<10]	<10	<25	<25 J	<25	<10	<10
Methyl tert-butyl ether	- -	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	<5.0	<5.0 J	<5.0	<1.0	<1.0
Tetrachloroethene	5	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	2.0 J	**6.0 J**	<5.0	4.3	**5.9**
Toluene	5	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	<5.0	<5.0	<5.0	0.74 J	<1.0
Total Xylenes	5	<15	<15 [<15]	<60	<2.0 [<2.0]	<2.0	<15	<15	<15	<2.0	<2.0
Trichloroethene	5	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	3.0 J	4.0 J	<5.0	0.98 J	0.87 J
Vinyl chloride	2	<5.0	<5.0 [<5.0]	<20	<1.0 [<1.0]	<1.0	**5.0**	**3.0 J**	<5.0	<1.0	<1.0
Total BTEX	- -	<15	<15 [<15]	<60	<2.0 [<2.0]	<2.0	<15	<15	<15	0.74 J	<2.0
Total VOCs	- -	14 J	0.50 J [0.70 J]	13 J	2.2 J [2.4 J]	3.0 J	29 J	25 J	<25	9.4 J	9.2 J
Detected SVOCs											
Carbazole	- -	NA	NA	NA	<4.7 [<4.8]	<4.8	NA	NA	NA	<4.8	<4.6
2,4-Dimethylphenol	50	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
2-Methylnaphthalene	- -	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
2-Methylphenol	- -	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
4,6-Dinitro-2-methylphenol	- -	NA	<47 [<48]	<10	<9.5 [<9.5]	<9.6	NA	<48	<10	<9.6	<9.1
4-Methylphenol	- -	NA	<9.0 [<10]	<5.0	<9.5 [<9.5]	<9.6	NA	<10	<5.0	<9.6	<9.1
Acenaphthene	20	NA	<9.0 [<10]	0.20 J	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8 J	<4.6
Acenaphthylene	- -	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Acetophenone	- -	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Anthracene	50	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Benzo(a)anthracene	0.002	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Benzo(a)pyrene	- -	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Benzo(b)fluoranthene	0.002	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Biphenyl	5	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Chrysene	0.002	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Dibenzofuran	- -	NA	<9.0 [<10]	<5.0	<9.5 [<9.5]	<9.6	NA	<10	<5.0	<9.6	<9.1
Di-n-butyl phthalate	50	NA	<9.0 [<10]	0.30 J	<4.7 [<4.8]	0.36 J	NA	<10	<5.0	<4.8	0.35 J
Fluoranthene	50	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Fluorene	50	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8 J	<4.6
Naphthalene	10	NA	<9.0 [<10]	<5.0	<4.7 [2.2 J]	<4.8	NA	<10	<5.0	<4.8	<4.6
Phenanthrene	50	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Phenol	1	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8 J	<4.6
Pyrene	50	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8 J	<4.6
Total Carcinogenic PAHs	- -	NA	<9.0 [<10]	<5.0	<4.7 [<4.8]	<4.8	NA	<10	<5.0	<4.8	<4.6
Total PAHs	- -	NA	<9.0 [<10]	0.20 J	<9.5 [2.2 J]	<9.6	NA	<10	<5.0	<9.6	<9.1
Total SVOCs	- -	NA	<140 [<140]	0.50 J	<9.5 [2.2 J]	0.36 J	NA	<140	<150	<9.6	0.35 J

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-6					MW-7			MW-7R	
Date Collected:	Values	06/27/06	07/26/06	01/17/08	07/20/12	07/01/13	06/26/06	07/27/06	01/24/08	07/20/12	07/01/13
Detected Inorganics											
Aluminum	- -	NA	NA	NA	160 J [170 J]	1,400	NA	NA	NA	940	<200
Calcium	- -	NA	NA	NA	157,000 [160,000]	153,000	NA	NA	NA	105,000	143,000
Cobalt	- -	NA	NA	NA	1.00 J [1.10 J]	1.30 J	NA	NA	NA	1.10 J	<4.00
Copper	200	NA	NA	NA	1.70 J [<10.0]	2.60 J	NA	NA	NA	4.10 J	1.80 J
Iron	300	NA	NA	NA	**2,000 [2,100]**	**4,300**	NA	NA	NA	**2,100**	91.0
Magnesium	- -	NA	NA	NA	10,400 [10,600]	11,100	NA	NA	NA	17,800	25,200
Manganese	300	NA	NA	NA	**5,700 [5,800]**	**6,100**	NA	NA	NA	**5,100**	**5,300**
Nickel	100	NA	NA	NA	<10.0 B [<10.0 B]	7.00 J	NA	NA	NA	<10.0 B	2.60 J
Potassium	- -	NA	NA	NA	16,800 [17,200]	17,200	NA	NA	NA	14,100	13,900
Sodium	- -	NA	NA	NA	340,000 [348,000]	240,000	NA	NA	NA	146,000	150,000
Thallium	- -	NA	NA	NA	<20.0 [<20.0]	<20.0	NA	NA	NA	<20.0	<20.0
Vanadium	- -	NA	NA	NA	4.80 J [5.00]	2.50 J	NA	NA	NA	5.20	<5.00
Zinc	2,000	NA	NA	NA	<10.0 B [<10.0 B]	19.0	NA	NA	NA	<100 B	3.60 J
Arsenic	25	NA	11.3 [11.3]	17.1	7.60 J [9.10 J]	12.0	NA	**25.8**	**62.2**	<10.0	<10.0
Barium	1,000	NA	136 [135]	197	140 [140]	130	NA	419	552	200	230
Cadmium	5	NA	<1.00 [<1.00]	<1.00	<1.00 [0.570 J]	**7.30**	NA	<1.00	<1.00	<1.00	<0.500
Chromium	50	NA	<4.00 [<4.00]	<4.00	<4.00 [1.90 J]	3.60 J	NA	<4.00	<4.00	2.50 J	1.80 J
Cyanide	200	56.6 J	55.0 [<10.0]	71.2 J	63.0 [63.0]	54.0	<10.0	<10.0	<10.0	5.50 J	<10.0
Lead	25	NA	<5.00 [<5.00]	<5.00	<5.00 [<5.00]	3.90 J	NA	<5.00	<5.00	4.40 J	<5.00
Selenium	10	NA	<15.0 [<15.0]	<15.0	<15.0 [<15.0]	<15.0	NA	<15.0	<15.0	<15.0	<15.0
Detected PCBs											
Aroclor 1248	0.09	<0.60	**<0.48 [0.52]**	<0.048	<0.048 [<0.048]	<0.048	<0.47	<0.47	<0.048	<0.052	<0.047
Aroclor 1254	0.09	<0.60	**<0.48 [0.30 J]**	<0.048	<0.048 [<0.048]	<0.048	<0.47	<0.47	<0.048	<0.052	<0.047
Total PCBs	- -	<0.60	<0.48 [0.82 J]	<0.048	<0.048 [<0.048]	<0.048	<0.47	<0.47	<0.048	<0.052	<0.047

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-7D					MW-8		MW-8D	
Date Collected:	Values	06/27/06	07/27/06	01/24/08	07/20/12	07/01/13	07/26/06	01/18/08	07/25/06	01/17/08
Detected VOCs										
Cyclohexane	- -	NA	NA	NA	<1.0	<1.0 [<1.0]	NA	NA	NA	NA
1,1,1-Trichloroethane	5	<5.0	<5.0 J	<5.0	<1.0	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethene (Total)	- -	<10	<10	<10	NA	NA	<10	<10	<10	<10
Acetone	50	3.0 J	<25 J	<25	3.0 J	<10 [<10]	<25	<25	<25 J	<25
Benzene	1	**8.0**	**5.0**	0.70 J	<1.0	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Bromodichloromethane	50	<5.0	<5.0	<5.0	0.47 J	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Bromoform	50	<5.0	<5.0 J	<5.0	<1.0 J	<1.0 [<1.0]	<5.0 J	<5.0	<5.0	<5.0
Carbon disulfide	- -	<5.0	<5.0	<5.0	<1.0 J	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Chloroform	7	<5.0	<5.0	<5.0	3.6	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	5	NA	NA	NA	<1.0	<1.0 [<1.0]	NA	NA	NA	NA
Dichlorodifluoromethane	5	NA	NA	NA	<1.0	<1.0 [<1.0]	NA	NA	NA	NA
Ethylbenzene	5	<5.0	<5.0	<5.0	<1.0	<1.0 [<1.0]	0.50 J	<5.0	<5.0	<5.0
Isopropylbenzene	5	NA	NA	NA	<1.0	<1.0 [<1.0]	NA	NA	NA	NA
Methyl ethyl ketone (MEK)	- -	<25	<25 J	<25	<10	<10 [<10]	<25	5.0 J	<25	<25
Methyl tert-butyl ether	- -	1.0 J	0.70 J	<5.0	<1.0	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	5	<5.0	<5.0 J	<5.0	<1.0	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Toluene	5	<5.0	<5.0	<5.0	0.95 J	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Total Xylenes	5	<15	<15	<15	0.68 J	<2.0 [<2.0]	<15	<15	<15	<15
Trichloroethene	5	<5.0	<5.0	<5.0	<1.0	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	2	<5.0	<5.0 J	<5.0	<1.0	<1.0 [<1.0]	<5.0	<5.0	<5.0	<5.0
Total BTEX	- -	8.0	5.0	0.70 J	1.6 J	<2.0 [<2.0]	0.50 J	<15	<15	<15
Total VOCs	- -	12 J	5.7 J	0.70 J	8.7 J	<10 [<10]	0.50 J	5.0 J	<25	<25
Detected SVOCs										
Carbazole	- -	NA	NA	NA	<4.9	<4.6 [<4.6]	NA	NA	NA	NA
2,4-Dimethylphenol	50	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
2-Methylnaphthalene	- -	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	1.0 J	<10	<5.0
2-Methylphenol	- -	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
4,6-Dinitro-2-methylphenol	- -	NA	<47	<9.0	<9.7	<9.3 [<9.2]	<47	<10	<48	<9.0
4-Methylphenol	- -	NA	<9.0	<5.0	<9.7	<9.3 [<9.2]	<9.0	<5.0	<10	<5.0
Acenaphthene	20	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	0.80 J	<10	<5.0
Acenaphthylene	- -	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Acetophenone	- -	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Anthracene	50	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Benzo(a)anthracene	0.002	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Benzo(a)pyrene	- -	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Benzo(b)fluoranthene	0.002	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Biphenyl	5	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Chrysene	0.002	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Dibenzofuran	- -	NA	<9.0	<5.0	<9.7	<9.3 [<9.2]	<9.0	0.30 J	<10	<5.0
Di-n-butyl phthalate	50	NA	<9.0	<5.0	<4.9	0.31 J [0.41 J]	<9.0	<5.0	<10	<5.0
Fluoranthene	50	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Fluorene	50	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	0.50 J	<10	<5.0
Naphthalene	10	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Phenanthrene	50	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	0.30 J	<10	<5.0
Phenol	1	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Pyrene	50	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Total Carcinogenic PAHs	- -	NA	<9.0	<5.0	<4.9	<4.6 [<4.6]	<9.0	<5.0	<10	<5.0
Total PAHs	- -	NA	<9.0	<5.0	<9.7	<9.3 [<9.2]	<9.0	2.4 J	<10	<5.0
Total SVOCs	- -	NA	<140	<140	<9.7	0.31 J [0.41 J]	<140	2.9 J	<140	<140

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Location ID:	NYSDEC Water Standard/Guidance	MW-7D					MW-8		MW-8D	
Date Collected:	Values	06/27/06	07/27/06	01/24/08	07/20/12	07/01/13	07/26/06	01/18/08	07/25/06	01/17/08
Detected Inorganics										
Aluminum	- -	NA	NA	NA	860	83.0 J [77.0 J]	NA	NA	NA	NA
Calcium	- -	NA	NA	NA	45,700	211,000 [206,000]	NA	NA	NA	NA
Cobalt	- -	NA	NA	NA	<4.00	0.960 J [0.750 J]	NA	NA	NA	NA
Copper	200	NA	NA	NA	3.70 J	<10.0 [<10.0]	NA	NA	NA	NA
Iron	300	NA	NA	NA	47.0 J	200 [200]	NA	NA	NA	NA
Magnesium	- -	NA	NA	NA	3,400	39,200 [38,100]	NA	NA	NA	NA
Manganese	300	NA	NA	NA	5.60	**1,800 [1,700]**	NA	NA	NA	NA
Nickel	100	NA	NA	NA	<10.0	2.50 J [2.70 J]	NA	NA	NA	NA
Potassium	- -	NA	NA	NA	10,600	11,400 [11,100]	NA	NA	NA	NA
Sodium	- -	NA	NA	NA	34,300	254,000 [246,000]	NA	NA	NA	NA
Thallium	- -	NA	NA	NA	<20.0	<20.0 [<20.0]	NA	NA	NA	NA
Vanadium	- -	NA	NA	NA	2.10 J	<5.00 [<5.00]	NA	NA	NA	NA
Zinc	2,000	NA	NA	NA	28.0	160 [160]	NA	NA	NA	NA
Arsenic	25	NA	14.5 J	16.9	<10.0	<10.0 [6.50 J]	**43.6**	<10.0	<10.0	<10.0
Barium	1,000	NA	258	330	26.0	250 [240]	295	224	**1,110**	**1,590**
Cadmium	5	NA	<1.00	<1.00	<1.00	0.570 J [<0.500]	<1.00	<1.00	<1.00	<1.00
Chromium	50	NA	<4.00	<4.00	5.80	1.90 J [<4.00]	<4.00	<4.00	<4.00	<4.00
Cyanide	200	<10.0	<10.0	<10.0	<10.0	<10.0 [<10.0]	18.3	11.8 J	13.8	<10.0
Lead	25	NA	<5.00	<5.00	<5.00	<5.00 [<5.00]	<5.00	<5.00	<5.00	<5.00
Selenium	10	NA	<15.0	<15.0	<15.0	<15.0 [<15.0]	<15.0	<15.0	<15.0	<15.0
Detected PCBs										
Aroclor 1248	0.09	<0.57	<0.47	<0.047	<0.051	<0.048 [<0.047]	<0.48	<0.048	<0.48	<0.048
Aroclor 1254	0.09	<0.57	<0.47	<0.047	<0.051	<0.048 [<0.047]	<0.48	<0.048	<0.48	<0.048
Total PCBs	- -	<0.57	<0.47	<0.047	<0.30 B	<0.048 [<0.047]	<0.48	<0.048	<0.48	<0.048

TABLE 3
GROUNDWATER ANALYTICAL RESULTS FOR DETECTED CONSTITUENTS (ppb)

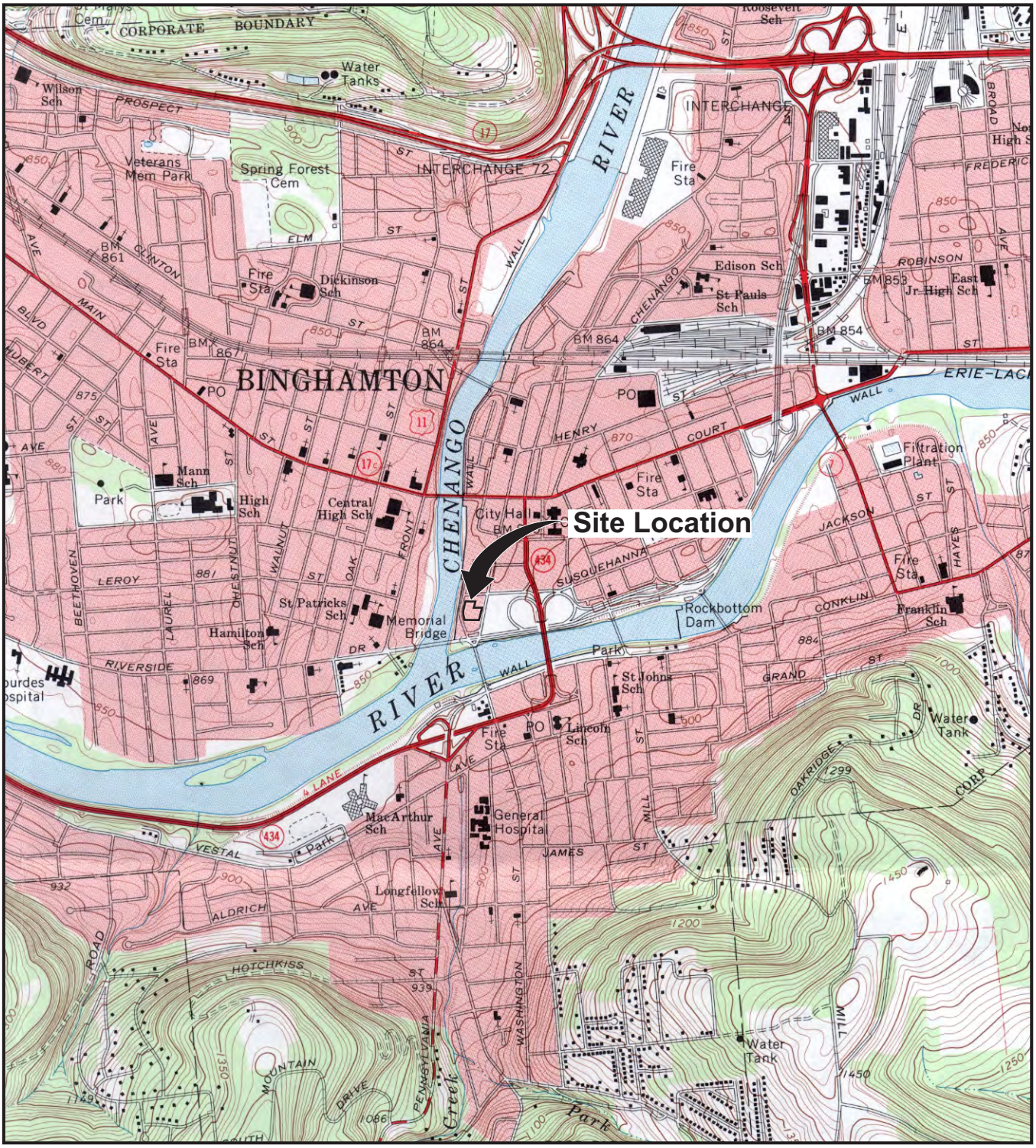
2013 GROUNDWATER MONITORING
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Notes:

1. Samples were collected by ARCADIS on the dates indicated.
2. VOCs = Target Compound List (TCL) Volatile Organic Compounds and Methyl-t-Butyl Ether (MTBE).
3. BTEX = Benzene, toluene, ethylbenzene and xylenes.
4. SVOCs = TCL Semi-Volatile Organic Compounds and Pyridine.
6. PAHs = Polycyclic aromatic hydrocarbons.
7. PCBs = Polychlorinated Biphenyls.
8. Laboratory analysis was performed by TestAmerica Laboratories, Inc. (TestAmerica), formerly Severn Trent Laboratories, Inc. (STL), of Buffalo, New York.
   - VOCs using United States Environmental Protection Agency (USEPA) SW-846 Method 8260B;
   - SVOCs using USEPA SW-846 Method 8270C;
   - Inorganics using USEPA SW-846 Methods 6010, 7470 and 9012A; and
   - PCBs using USEPA SW-846 Method 8082.
9. Total Carcinogenic PAHs consist of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene.
10. Only those constituents detected in one or more samples are summarized.
11. Concentrations reported in parts per billion (ppb), which is equivalent to micrograms per liter (ug/L).
12. Field duplicate sample results are presented in brackets.
13. Data qualifiers are defined as follows:
    < = Constituent not detected at a concentration above the reported detection limit.
    B (Inorganic) - Indicates an estimated value between the instrument detection limit and the Reporting Limit (RL).
    D - Compound quantitated using a secondary dilution.
    J - Indicates that the associated numerical value is an estimated concentration.
14. NYSDEC groundwater standards/guidance values are from the NYSDEC Division of Water, Technical and Operational Guidance Series (TOGS) document titled "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (TOGS 1.1.1) dated June 1998, revised April 2000 and June 2004.
15. Shading indicates that the result exceeds the TOGS 1.1.1 Water Quality Standard/Guidance Value.
16. - - = No TOGS 1.1.1 Water Quality Standard/Guidance Value listed.
17. NA = Not Analyzed.
18. Results have been validated.

ARCADIS

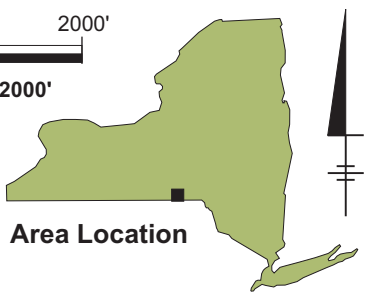
Figures



REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., BINGHAMTON WEST, NY, 1968, PHOTOINSPECTED 1976.

2000' 0 2000'

Approximate Scale: 1" = 2000'



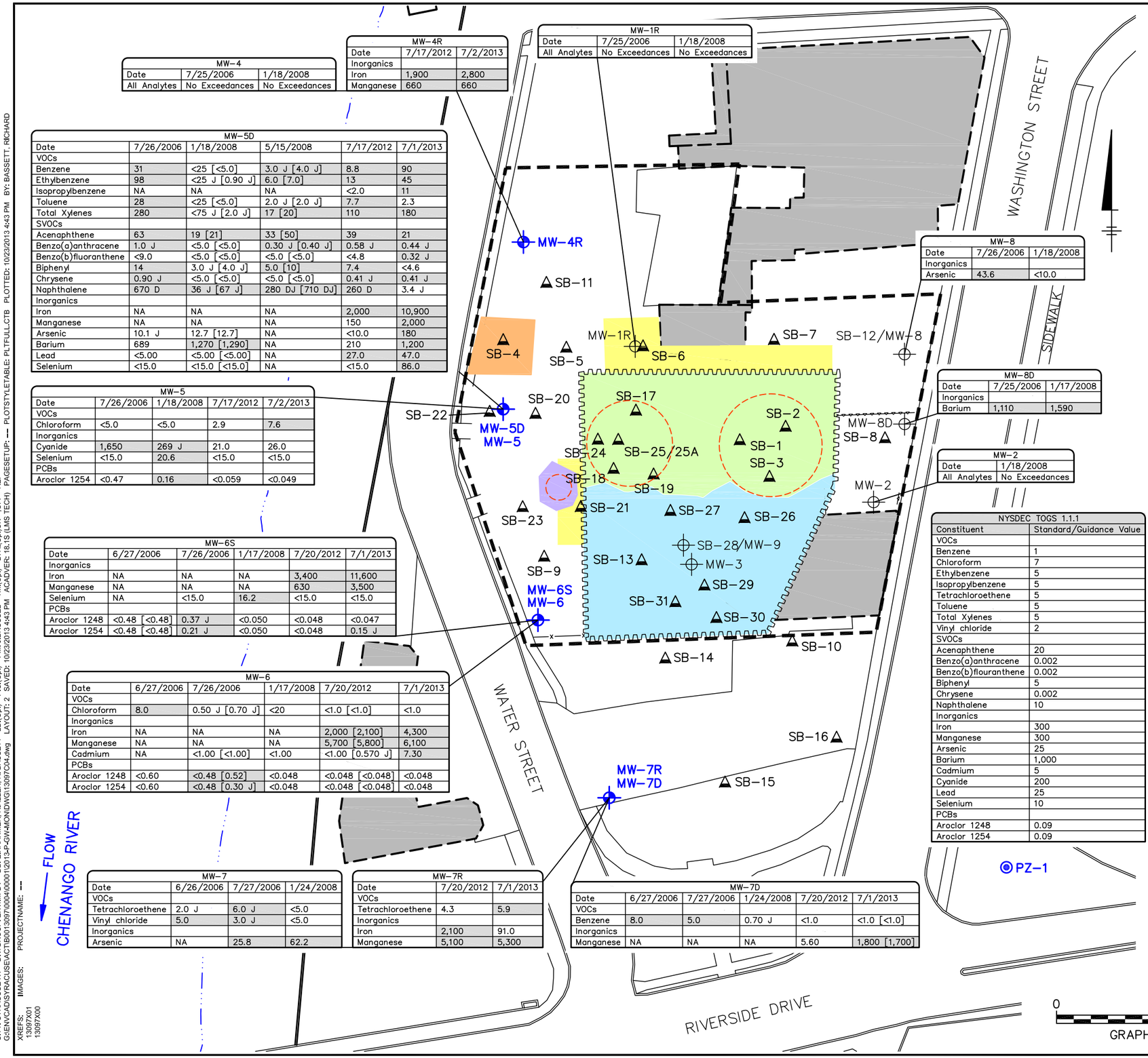
NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

SITE LOCATION MAP

ARCADIS

FIGURE
1

05/09/2013 SYRACUSE, NY-ENV/141-DJHOWES
B0013097/0004/00001/CDR/13097N01.CDR



MW-4		
Date	7/25/2006	1/18/2008
All Analytes	No Exceedances	No Exceedances

MW-4R		
Date	7/17/2012	7/2/2013
Inorganics		
Iron	1,900	2,800
Manganese	660	660

MW-1R		
Date	7/25/2006	1/18/2008
All Analytes	No Exceedances	No Exceedances

MW-8		
Date	7/26/2006	1/18/2008
Inorganics		
Arsenic	43.6	<10.0

MW-8D		
Date	7/25/2006	1/17/2008
Inorganics		
Barium	1,110	1,590

MW-2	
Date	1/18/2008
All Analytes	No Exceedances

MW-5D					
Date	7/26/2006	1/18/2008	5/15/2008	7/17/2012	7/1/2013
VOCs					
Benzene	31	<25 [<5.0]	3.0 J [4.0 J]	8.8	90
Ethylbenzene	98	<25 J [0.90 J]	6.0 [7.0]	13	45
Isopropylbenzene	NA	NA	NA	<2.0	11
Toluene	28	<25 [<5.0]	2.0 J [2.0 J]	7.7	2.3
Total Xylenes	280	<75 J [2.0 J]	17 [20]	110	180
SVOCs					
Acenaphthene	63	19 [21]	33 [50]	39	21
Benzo(a)anthracene	1.0 J	<5.0 [<5.0]	0.30 J [0.40 J]	0.58 J	0.44 J
Benzo(b)fluoranthene	<9.0	<5.0 [<5.0]	<5.0 [<5.0]	<4.8	0.32 J
Biphenyl	14	3.0 J [4.0 J]	5.0 [10]	7.4	<4.6
Chrysene	0.90 J	<5.0 [<5.0]	<5.0 [<5.0]	0.41 J	0.41 J
Naphthalene	670 D	36 J [67 J]	280 DJ [710 DJ]	260 D	3.4 J
Inorganics					
Iron	NA	NA	NA	2,000	10,900
Manganese	NA	NA	NA	150	2,000
Arsenic	10.1 J	12.7 [12.7]	NA	<10.0	180
Barium	689	1,270 [1,290]	NA	210	1,200
Lead	<5.00	<5.00 [<5.00]	NA	27.0	47.0
Selenium	<15.0	<15.0 [<15.0]	NA	<15.0	86.0

MW-5				
Date	7/26/2006	1/18/2008	7/17/2012	7/2/2013
VOCs				
Chloroform	<5.0	<5.0	2.9	7.6
Inorganics				
Cyanide	1,650	269 J	21.0	26.0
Selenium	<15.0	20.6	<15.0	<15.0
PCBs				
Aroclor 1254	<0.47	0.16	<0.059	<0.049

MW-6S					
Date	6/27/2006	7/26/2006	1/17/2008	7/20/2012	7/1/2013
Inorganics					
Iron	NA	NA	NA	3,400	11,600
Manganese	NA	NA	NA	630	3,500
Selenium	NA	<15.0	16.2	<15.0	<15.0
PCBs					
Aroclor 1248	<0.48 [<0.48]	0.37 J	<0.050	<0.048	<0.047
Aroclor 1254	<0.48 [<0.48]	0.21 J	<0.050	<0.048	0.15 J

MW-6					
Date	6/27/2006	7/26/2006	1/17/2008	7/20/2012	7/1/2013
VOCs					
Chloroform	8.0	0.50 J [0.70 J]	<20	<1.0 [<1.0]	<1.0
Inorganics					
Iron	NA	NA	NA	2,000 [2,100]	4,300
Manganese	NA	NA	NA	5,700 [5,800]	6,100
Cadmium	NA	<1.00 [<1.00]	<1.00	<1.00 [0.570 J]	7.30
PCBs					
Aroclor 1248	<0.60	<0.48 [0.52]	<0.048	<0.048 [<0.048]	<0.048
Aroclor 1254	<0.60	<0.48 [0.30 J]	<0.048	<0.048 [<0.048]	<0.048

MW-7			
Date	6/26/2006	7/27/2006	1/24/2008
VOCs			
Tetrachloroethene	2.0 J	6.0 J	<5.0
Vinyl chloride	5.0	3.0 J	<5.0
Inorganics			
Arsenic	NA	25.8	62.2

MW-7R		
Date	7/20/2012	7/1/2013
VOCs		
Tetrachloroethene	4.3	5.9
Inorganics		
Iron	2,100	91.0
Manganese	5,100	5,300

MW-7D					
Date	6/27/2006	7/27/2006	1/24/2008	7/20/2012	7/1/2013
VOCs					
Benzene	8.0	5.0	0.70 J	<1.0	<1.0 [<1.0]
Inorganics					
Manganese	NA	NA	NA	5.60	1,800 [1,700]

NYSDEC TOGS 1.1.1	
Constituent	Standard/Guidance Value
VOCs	
Benzene	1
Chloroform	7
Ethylbenzene	5
Isopropylbenzene	5
Tetrachloroethene	5
Toluene	5
Total Xylenes	5
Vinyl chloride	2
SVOCs	
Acenaphthene	20
Benzo(a)anthracene	0.002
Benzo(b)flouranthene	0.002
Biphenyl	5
Chrysene	0.002
Naphthalene	10
Inorganics	
Iron	300
Manganese	300
Arsenic	25
Barium	1,000
Cadmium	5
Cyanide	200
Lead	25
Selenium	10
PCBs	
Aroclor 1248	0.09
Aroclor 1254	0.09

LEGEND:

- EXISTING MONITORING WELL LOCATION
- EXISTING PIEZOMETER LOCATION
- FORMER MONITORING WELL LOCATION
- FORMER RI SOIL BORING LOCATION
- FORMER EXCAVATION AREAS 1 & 2 (21–FOOT AVERAGE DEPTH)
- FORMER EXCAVATION AREA 3 (14–FOOT AVERAGE DEPTH)
- FORMER EXCAVATION AREA 4 (2–FOOT AVERAGE DEPTH)
- FORMER EXCAVATION AREA 5 (SURFACE COVER [ASPHALT/CONCRETE] REMOVAL)
- FORMER TAR WELL EXCAVATION (16–FOOT AVERAGE DEPTH)
- FORMER WASHINGTON STREET MGP PROPERTY
- FORMER BUILDING (DEMOLISHED)
- FORMER HOLDERS
- FENCE
- FORMER LOCATION OF EXCAVATION BRACING

NOTES:

1. BASE MAP INFORMATION WAS PROVIDED BY NYSEG AND NYSEG DRAWINGS TITLED "WASHINGTON STREET MGP SITE, CITY OF BINGHAMTON, BROOME COUNTY NEW YORK" RECEIVED 8/3/06 & 8/17/06 FILE INDEX: BING_WASH2.DGN.
2. LOCATIONS OF FORMER HOLDERS ARE BASED ON SURVEY PERFORMED BY KEYSTONE ASSOCIATES DURING REMEDIAL ACTIVITIES IN 2010.
3. LOCATION AND SIZE OF FORMER TAR WELL IS APPROXIMATE, BASED ON FIELD OBSERVATIONS.
4. NYSDEC TOGS 1.1.1 = GROUNDWATER STANDARDS/GUIDANCE VALUES FOR CLASS GA WATER AS PRESENTED IN THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1, DATED JUNE 1998, LAST UPDATED JUNE 2004.
5. SHADING INDICATES THAT THE VALUE EXCEEDS THE TOGS 1.1.1 STANDARD/GUIDANCE VALUE.
6. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER BILLION (PPB), WHICH ARE EQUIVALENT TO MICROGRAMS PER LITER (ug/L).
7. FIELD DUPLICATE SAMPLE RESULTS ARE PRESENTED IN BRACKETS [].
8. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED VALUE IS AN ESTIMATED CONCENTRATION.
9. D = COMPOUND QUANTITATED USING A SECONDARY DILUTION.
10. < = CONSTITUENT WAS NOT DETECTED AT A CONCENTRATION EXCEEDING THE PRESENTED LABORATORY DETECTION LIMIT.
11. VOCs = VOLATILE ORGANIC COMPOUNDS.
12. SVOCs = SEMI–VOLATILE ORGANIC COMPOUNDS.
13. PCBs = POLYCHLORINATED BIPHENYLS.
14. NA = NOT ANALYZED.
15. FIGURE ONLY SHOWS CONSTITUENTS AT CONCENTRATIONS EXCEEDING TOGS 1.1.1 STANDARD/GUIDANCE VALUES.

NEW YORK STATE ELECTRIC & GAS CORPORATION
WASHINGTON STREET FORMER MGP SITE
BINGHAMTON, NEW YORK
2013 PERIODIC GROUNDWATER MONITORING

GROUNDWATER ANALYTICAL RESULTS EXCEEDING STANDARDS/ GUIDANCE VALUES

ARCADIS

FIGURE
2

CITY: SYRACUSE NY DIV/GROUP: ENV/IM-DV DB: E.KRAHMER, R.ALLEN, R. BASSETT LD:(Opt) PIC:(Opt) PM: J.BRUSSEL TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB0013097\0004\0001\2013-P-GW-MONDWG\13097C04.dwg LAYOUT: 2 SAVED: 10/23/2013 4:43 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---
XREFS: IMAGES: PROJECTNAME: ---
13097X01
13097X00

ARCADIS

Attachments

Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: MWB
Well ID: MW-4R
Client / Job Number: NYSEG
Date: 7-2-13
Weather: Sun ~70
Time In: 10:00 **Time Out:**

Well Information

Depth to Water:	16.55 (from MP)
Total Depth:	26.95 (from MP)
Length of Water Column:	10.40
Volume of Water in Well:	~1.5 gal.
Three Well Volumes:	~5 gal.

Well Type:	(Flushmount)		Stick-Up
Well Material:	Stainless Steel		(PVC)
Well Locked:		(Yes)	No
Measuring Point Marked:		(Yes)	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	(Bailer (VOCs))	(Peristaltic)	Grundfos	Other:

Duration of Pumping: 50 (min)
Average Pumping Rate: ~100 (ml/min) Water-Quality Meter Type: Horiba U-52
Total Volume Removed: ~1.5 gal. (gal) Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8	9
	10:15	10:20	10:25	10:30	10:35	10:40			
Volume Purged (mL)	–	–	–	–	–	–			
Rate (mL/min)	~100	~100	~100	~100	~100	~100			
Depth to Water (ft.)	16.87	16.92	17.00	17.02	17.02	17.02			
pH	7.37	7.36	7.37	7.36	7.34	7.34			
Temp. (C)	25.17	21.24	20.12	21.23	20.59	21.02			
Conductivity (mS/cm)	1.43	1.47	1.45	1.40	1.40	1.40			
Dissolved Oxygen	8.54	1.92	1.12	1.11	1.10	1.11			
ORP (mV)	238	260	266	269	270	270			
Turbidity (NTU)	380	205	137	52	50	49			
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID:	MW-4R	Sample Time:	10:45
MS/MSD:	Yes (No)		
Duplicate:	Yes (No)		
Duplicate ID		Dup. Time:	

Problems / Observations

PID = 0.0

Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: MWE
Client / Job Number: NYSEG
Weather: Sun ~65°
Well ID: MW-5
Date: 7-2-13
Time In: 8:15 **Time Out:** 9:20

Well Information

Depth to Water:	14.72 (from MP)
Total Depth:	27.98 (from MP)
Length of Water Column:	13.26
Volume of Water in Well:	~2 gal.
Three Well Volumes:	~6 gal.

Well Type:	(Flushmount)		Stick-Up
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	(Bailer (VOCs))	(Peristaltic)	Grundfos	Other:

Duration of Pumping: 65 (min)
Average Pumping Rate: 120 (ml/min)
Total Volume Removed: ~1.5 gal. (gal)
Water-Quality Meter Type: Horiba U-52
Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8	9
	8:40	8:45	8:50	8:55	9:00	9:05	9:10	9:15	9:20
Volume Purged (mL)	–	–	–	–	–	–	–	–	–
Rate (mL/min)	~150	~120	~120	~120	~120	~120	~120	~120	~120
Depth to Water (ft.)	14.12	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77
pH	7.59	7.50	7.52	7.50	7.51	7.51	7.50	7.50	7.51
Temp. (C)	22.37	22.78	22.44	21.69	21.72	21.59	21.60	21.64	21.70
Conductivity (mS/cm)	0.549	0.536	0.528	0.524	0.523	0.524	0.524	0.523	0.523
Dissolved Oxygen	10.65	8.65	9.33	6.21	2.11	0.98	0.97	0.98	0.99
ORP (mV)	134	187	200	212	217	219	219	220	220
Turbidity (NTU)	31.8	25.2	13.7	13.2	6.3	6.8	6.9	6.7	6.5
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID: MW-5 Sample Time: 9:25
MS/MSD: (Yes) No
Duplicate: Yes (No)
Duplicate ID Dup. Time:

Problems / Observations

PID = 0.0

Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: WDS
Well ID: MW-5D
Client / Job Number: NYSEG
Date: 7/1/13
Weather: Cloudy / Raining
Time In: 1430 **Time Out:** 1545

Well Information

Depth to Water:	15.49	(from MP)
Total Depth:	43.28	(from MP)
Length of Water Column:	27.79	
Volume of Water in Well:	4.53	
Three Well Volumes:	13.59	

Well Type:	Flushmount	Stick-Up
Well Material:	Stainless Steel	PVC
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No
Well Diameter:	1" 2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer (VOCs)	Peristaltic	Grundfos	Other:

Duration of Pumping: (min)
Average Pumping Rate: 150 (ml/min) Water-Quality Meter Type: Horiba
Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8	9
	1440	1445	1450	1455	1500	1505	1510	1515	
Volume Purged (mL)									
Rate (mL/min)	200	150	150	150	150	150	150	150	
Depth to Water (ft.)	15.80	15.80	15.78	15.77	15.77	15.77	15.77	15.77	
pH	8.74	8.80	8.73	8.67	8.47	8.33	8.10	8.10	
Temp. (C)	23.06	23.00	23.01	23.23	23.21	23.29	23.33	23.34	
Conductivity (mS/cm)	0.551	0.519	0.521	0.528	0.531	0.535	0.537	0.538	
Dissolved Oxygen	4.18	2.47	1.11	0.61	0.42	0.35	0.36	0.34	
ORP (mV)	-83	-58	-53	-46	-31	-27	-19	-21	
Turbidity (NTU)	71.2	60.1	53.9	46.7	45.6	42.6	40.9	40.8	
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID: MW-5D Sample Time: 1520
MS/MSD: Yes No
Duplicate: Yes No
Duplicate ID Dup. Time:

Problems / Observations

PID = 0.0 ppm

Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: WDS
Well ID: MW-6
Client / Job Number: NYSEG
Date: 7/1/13
Weather: Cloudy
Time In: 1210 **Time Out:** 1310

Well Information

Depth to Water:	14.72	(from MP)
Total Depth:	31.42	(from MP)
Length of Water Column:	16.7	
Volume of Water in Well:	2.7	
Three Well Volumes:	8.16	

Well Type:	(Flushmount)		Stick-Up
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	(Bailer (VOCs))	(Peristaltic)	Grundfos	Other:

Duration of Pumping: 45 (min)
Average Pumping Rate: 120 (ml/min) Water-Quality Meter Type: Horiba
Total Volume Removed: 1.4 (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8	9
	1215	1220	1225	1230	1235	1240	1245	1250	
Volume Purged (mL)									
Rate (mL/min)	150	150	120	120	120	120	120	120	
Depth to Water (ft.)	15.02	15.75	15.78	15.78	15.73	15.70	15.70	15.70	
pH	7.04	7.04	7.01	6.98	6.98	6.99	6.99	7.02	
Temp. (C)	18.64	18.68	19.03	19.67	19.99	19.93	19.95	19.96	
Conductivity (mS/cm)	1.94	1.93	1.93	1.92	1.94	1.91	1.92	1.91	
Dissolved Oxygen	5.17	2.57	1.27	0.95	0.63	0.68	0.69	0.70	
ORP (mV)	-74	-75	-75	-76	-77	-76	-75	-73	
Turbidity (NTU)	290	233	189	173	115	46.8	49.3	43.2	
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID: MW-6 Sample Time: 1255
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:

Problems / Observations

PID = 0.0 ppm

Initial purge: turbid, odorless

Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: WDS
Well ID: MW-65
Client / Job Number: NYSEG
Date: 7/11/13
Weather: Cloudy
Time In: 1310 **Time Out:** 1430

Well Information

Depth to Water:	8.53	(from MP)
Total Depth:	15.47	(from MP)
Length of Water Column:	6.94	
Volume of Water in Well:	1.13	
Three Well Volumes:	3.39	

Well Type:	(Flushmount)		Stick-Up
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	(Bailer (VOCs))	(Peristaltic)	Grundfos	Other:

Duration of Pumping: 45 (min)
Average Pumping Rate: 150 (ml/min) Water-Quality Meter Type: Horiba
Total Volume Removed: 1.8 (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8	9
	1320	1325	1330	1335	1340	1345	1350	1355	1400
Volume Purged (mL)									
Rate (mL/min)	175	150	150	150	150	150	150	150	150
Depth to Water (ft.)	8.68	8.66	8.66	8.68	8.67	8.66	8.66	8.67	8.67
pH	6.74	6.73	6.74	6.73	6.74	6.75	6.75	6.76	6.76
Temp. (C)	19.90	19.78	19.65	19.71	19.52	19.83	20.01	20.21	20.17
Conductivity (mS/cm)	4.24	4.53	4.65	4.75	4.68	4.65	4.62	4.60	4.61
Dissolved Oxygen	6.59	2.54	1.80	1.93	1.69	1.64	1.52	1.49	1.48
ORP (mV)	-23	-30	-38	-40	-45	-48	-53	-51	-50
Turbidity (NTU)	51.5	25.8	12.1	10.3	7.5	8.2	7.9	7.3	7.1
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID:	MW-65	Sample Time:	1405
MS/MSD:	Yes	(No)	
Duplicate:	Yes	(No)	
Duplicate ID		Dup. Time:	

Problems / Observations

PID = 0.0 ppm

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Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: MWE
Well ID: MW-7R
Client / Job Number: NYSEG
Date: 7-1-13
Weather: Rain ~ 65°
Time In: 9:30 **Time Out:** 10:20

Well Information

Depth to Water:	13.67 (from MP)
Total Depth:	24.47 (from MP)
Length of Water Column:	10.80
Volume of Water in Well:	1.76
Three Well Volumes:	~5gal.

Well Type:	(Flushmount)	Stick-Up
Well Material:	Stainless Steel	(PVC)
Well Locked:	(Yes)	No
Measuring Point Marked:	(Yes)	No
Well Diameter:	1"	(2") Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	(Bailer (VOCs))	(Peristaltic)	Grundfos	Other:

Duration of Pumping: (min)
Average Pumping Rate: ~120 (ml/min) Water-Quality Meter Type: Horiba
Total Volume Removed: ~2gal. (gal) Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3875 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8	9
	9:40	9:45	9:50	9:55	10:00	10:05	10:10		
Volume Purged (mL)	—	—	—	—	—	—	—		
Rate (mL/min)	~120	~120	~120	~120	~120	~120	~120		
Depth to Water (ft.)	13.70	13.73	13.72	13.72	13.72	13.72	13.72		
pH	7.04	6.80	6.78	6.77	6.76	6.77	6.77		
Temp. (C)	17.60	15.76	15.30	15.16	15.12	15.08	15.06		
Conductivity (mS/cm)	1.49	1.49	1.47	1.50	1.49	1.50	1.49		
Dissolved Oxygen	9.73	3.53	2.33	1.52	1.35	1.37	1.36		
ORP (mV)	93	115	123	135	136	137	137		
Turbidity (NTU)	42.7	8.2	1.2	0.0	0.0	0.0	0.0		
Notes:									

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID: MW-7R Sample Time: 10:15
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:

Problems / Observations

PID = 0.0

Washington Street Former MGP Site, Binghamton, Broome County, NY

Site *Event*

GROUNDWATER SAMPLING LOG

Sampling Personnel: WDS
Well ID: MW-7D
Client / Job Number: NYSEG
Date: 7/11/13
Weather: Cloudy
Time In: 1030 **Time Out:** 1200

Well Information

Depth to Water:	13.52	(from MP)
Total Depth:	41.79	(from MP)
Length of Water Column:	28.27	
Volume of Water in Well:	4.61 gal	
Three Well Volumes:	13.82 gal	

Well Type:	~~Flushmount~~		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Grundfos	Other:
Tubing/Bailer Material:	St. Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer (VOCs)	Peristaltic	Grundfos	Other:

Duration of Pumping: 50 (min)

Average Pumping Rate: 200 (ml/min) Water-Quality Meter Type: Horiba

Total Volume Removed: ~2.6 (gal) Did well go dry: Yes No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3875 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	± 10%	± 3.0%	± 10 mV

Time: / Parameter:	1	2	3	4	5	6	7	8		9
	1045	1050	1055	1100	1105	1110	1115	1120	1125	1130
Volume Purged (mL)	—	—	—	—	—	—	—	—	—	—
Rate (mL/min)	150	200	200	200	200	200	200	200	200	200
Depth to Water (ft.)	13.60	13.65	13.68	13.69	13.69	13.69	13.69	13.69	13.69	13.69
pH	8.28	8.34	8.13	7.58	7.33	7.29	7.31	7.26	7.23	7.22
Temp. (C)	15.96	15.51	15.81	15.25	15.23	15.28	15.31	15.27	15.31	15.26
Conductivity (mS/cm)	0.812	0.810	0.854	0.989	1.75	2.03	2.05	2.04	2.04	2.03
Dissolved Oxygen	9.89	6.99	6.31	4.32	2.98	0.65	0.81	0.84	0.82	0.81
ORP (mV)	157	172	195	75	31	-5	8	16	18	21
Turbidity (NTU)	62.4	62.8	52.4	44.3	48.1	54.6	12.2	7.7	7.5	7.2
Notes:										

Sampling Information

Analyses	#	Laboratory
TCL PCBs	2	STL Buffalo, NY
TCL VOCs	3	STL Canton, OH
1,1,1-TCA, TCE	3	STL Canton, OH
Ethylbenzene, Isopropylbenzene, Xylene	3	STL Canton, OH

Sample ID: MW-7D Sample Time: 1135

MS/MSD: Yes (No)

Duplicate: (Yes) No

Duplicate ID DUP-01-071113 Dup. Time: 1135

Problems / Observations

PID = 0.0 ppm

Initial purge: clear, colorless, odorless