GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

Groundwater Monitoring Report
First Semiannual 2011 Sampling Event

Glen Cove Former MGP Site

City of Glen Cove
Nassau County, Long Island, New York
Order on Consent Index No. D1-001-98-11
Site ID No. 1-30-089P

Submitted to:
National Grid USA
175 East Old Country Road
Hicksville, NY 11801

Submitted by:
GEI Consultants, Inc.
110 Walt Whitman Road
Huntington Station, NY 11746
631-760-9300

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1. Introduction and Site Background

This report presents the first semiannual 2011 groundwater monitoring results for the Glen Cove Former Manufactured Gas Plant (MGP) site located in Glen Cove, Nassau County, New York (the Site). The frequency of groundwater monitoring was modified to semiannual following the fourth quarter 2010 groundwater monitoring event, with New York State Department of Environmental Conservation (NYSDEC) approval. This report has been prepared in accordance with the requirements of Section 6 of *DER-10* (Division of Environmental Remediation) *Technical Guidance for Site Investigation and Remediation*; the Order on Consent, Index No. D1-0001-98-11 signed by National Grid Corporation (National Grid) and the NYSDEC, and the *Remedial Action Plan, Glen Cove Former Manufactured Gas Plant, Town of Oyster Bay, Nassau Country, New York* (RAP) prepared by GEI Consultants, Inc. (GEI), dated March 2010.

The NYSDEC-approved remedy for the Site included two remedial phases. Phase I includes the excavation of shallow soil and off-site disposal of accessible MGP-related source material (or "hot spots"). Phase II includes groundwater treatment using oxygen injection technology and the installation of recovery wells to remove mobile non-aqueous phase liquids (NAPL). The current property owner, Long Island Power Authority (LIPA), is planning to conduct a facility upgrade which will include the installation of underground utilities, foundation, pilings, and associated electric equipment. LIPA is planning to upgrade this substation to meet the growing energy demand in the Glen Cove region.

Phase I excavation activities were performed from May 5 through 21, 2011 and included the removal and proper disposal of 3,411 tons of material at depths of up to approximately 17 feet below ground surface (ft bgs). Additionally, an oxygen injection pilot test was conducted on April 27, 2011; the results of which will be incorporated into the Phase II portion of the remedy. Phase II remediation is anticipated to be conducted during 2012.

As part of the long term monitoring of the remedy, National Grid began quarterly monitoring of the groundwater at the Site in Q1 2010. This data, and the subsequent 2011 semiannual data, will provide a seasonal baseline of groundwater analytical results to compare against post-remedy concentrations and evaluate the overall effectiveness of the remedial actions.

1.1 Site Description and History

The Glen Cove Former MGP Site is an inverted L-shaped parcel of approximately 1.9 acres presently occupied by an active electrical substation which services Glen Cove and the surrounding area. Topographically, the Site is a flat depression bounded by approximately 20-foot high slopes to the north, south, and east.

To the west, the property slopes downward approximately 20 feet to Glen Cove Creek, a channelized stream, which eventually discharges to Hempstead Bay. Glen Cove Creek flows in a general south to north direction along the western site property line. The creek exits the property boundary at the northwest corner of the Site through a box culvert that directs flow beneath the Long Island Rail Road (LIRR) tracks. The creek eventually discharges to Mosquito Cove (Hempstead Bay). A site location map is included as **Figure 1**.

MGP operations at the Site began in 1905 under the ownership of the Sea Cliff and Glen Cove Gas Company. Facility structures were located on the northern section of the property, and consisted of a 60,000 cubic foot gas holder, boilers, purifiers, retorts, coal shed, engine room, tar and oil tank, and approximately 8 gas tanks. In 1929, the Long Island Lighting Company (LILCO) terminated MGP operations and demolished the facility's surface structures sometime thereafter. Site activities following 1929 consisted solely of natural gas storage in a Hortonsphere gas holder through the 1950s. The Hortonsphere was decommissioned and demolished between 1959 and 1966. A major electrical substation was constructed on the Site in the mid-1960s. In 1998, Brooklyn Union Gas (BUG) and LILCO merged to form the KeySpan Corporation, at which time the ownership of the substation was transferred to LIPA. In 2007, National Grid acquired responsibility for the former MGP property through the acquisition of KeySpan. Currently, the Site is owned by LIPA and operated by National Grid under contract to LIPA.

1.2 Geology

The shallow stratigraphy beneath the Site is comprised of heterogeneous fill and glacial outwash of Upper Pleistocene deposits. The stratigraphic sequence consists of outwash deposits overlain by heterogeneous fill. The heterogeneous fill across most of the Site ranges in thickness from approximately 10 feet throughout most of the former site to 30 feet in the off site area just north of the Site boundary. The fill composition is primarily poorly sorted and highly permeable sand and gravel with varying percentages of gravel, silt, clay, and coal fragments. The glacial outwash deposits consist mainly of interbedded layers of permeable sand and gravel, and less permeable silty sand. The top of the glacial unit was encountered from approximately 10 ft bgs on the central portion of the Site to approximately 32 ft bgs from the top of the railroad embankment. The ground surface elevation of the Site is significantly lower than the top of the railroad embankment, and when factoring in the ground surface elevation difference, the glacial deposits are encountered at similar elevations across the Site and beneath the railroad embankment.

Glen Cove Creek originally occupied a natural stream channel just to the west of the Site before it was channelized along its present route. The natural creek bed is indicated by the alluvial deposits consisting of reworked glacial outwash present along the western boundary of the Site. The alluvial deposits associated with the original stream channel consist of

isolated sand and gravelly sand layers encountered in the upper 5 to 10 feet of soils at the western site boundary.

1.3 Hydrogeology

The groundwater beneath the Site is considered part of the regional Upper Glacial aquifer. Regionally, this aquifer is not used for drinking water. Drinking water for Long Island is provided by the deeper Magothy aquifer.

Groundwater elevations of site wells were similar for the shallow and intermediate wells ranging from about 45 to 53 feet above mean sea level (ft-msl). Groundwater elevation contours indicate a consistent groundwater flow direction to the west for the shallow zone wells and the west-northwest for the intermediate zone.

The water table surface of the shallow groundwater follows the general topography of the Site sloping from east to west. The hydraulic gradient is relatively steep (0.02 feet/foot) in the eastern and western portions of the Site and less steep (0.005 feet/foot) in the western portion of the Site. A uniform hydraulic gradient of about 0.005 feet/foot is present in the intermediate groundwater across the Site. The estimated groundwater seepage flow velocities, assuming an effective porosity of 20 percent, were calculated for the shallow and intermediate aquifer zones as 0.05 and 0.001 feet per day (ft/day), respectively. The potential vertical hydraulic gradients at the Site, at well clusters, are less than .25 feet.

1.4 Historical Groundwater Monitoring Event Summary

Three groundwater monitoring events were conducted at the Site prior to 2010. Groundwater sample collection and analysis, and NAPL/groundwater measurements were conducted in 2004, 2005, and 2008. Quarterly groundwater sampling was conducted through 2010.

2. Glen Cove Site and Adjacent Off-site Areas

2.1 First Semiannual 2011 Groundwater Monitoring Event Summary

Event Dates: June 24, and July 11 and 12, 2011

Site Phase: Semiannual groundwater monitoring

Location: The location of the Glen Cove Former MGP Site is depicted in **Figure 1**.

2.2 Monitoring Program

2.2.1 Number of Wells

A total of 12 monitoring wells and piezometers are currently located at or adjacent to the Site. Piezometer PZ-03 is believed to have been destroyed in 2007. Monitoring wells GCMW-09S, GCMW-09I, GCMW-10S, GCMW-10I, GCMW-14S, and GCMW-14I, as well as piezometers PZ-01A, PZ-02A, PZ-04 and PZ-07 were either destroyed or abandoned as part of the remedial activities conducted in Q1 and Q2 2011. Monitoring wells GCMW-09S, GCMW-09I, GCMW-10S, GCMW-10I, GCMW-14S, and GCMW-14I will be replaced at the completion of the on-going LIPA construction. Monitoring well and piezometer locations are depicted in **Figure 2**.

2.2.2 Hydrological Data

Groundwater levels were measured at 12 monitoring wells and piezometers on July 12, 2011. Depth to groundwater and calculated groundwater elevations are provided in **Table 1.** Shallow and intermediate groundwater contours for the first semiannual sampling event of 2011 are depicted in **Figures 3** and **4**, respectively. The groundwater flow direction was generally to the west towards Glen Cove Creek. The depth to water and water table elevation data for the shallow and intermediate/deep portions of the aquifer are presented below.

Shallow Groundwater Zone

Table 2a – Shallow Groundwater Measurements

Well ID	Depth to Water (feet)	Water Elevation (feet above MSL)
GCMW-08S	27.18	51.41
GCMW-11S	8.31	49.21
GCMW-12S	12.17	54.46
GCMW-13S	9.74	47.99
GCMW-15	5.79	45.55
GCMW-16	5.20	46.09

The average calculated shallow hydraulic gradient was 0.0125 feet/foot.

Intermediate/Deep Groundwater Zone

Table 2b – Intermediate/Deep Groundwater Measurements

Well ID	Depth to Water (feet)	Water Elevation (feet above MSL)
PZ-02A	11.45	47.13
PZ-05	8.43	54.45
PZ-06	4.68	53.84
GCMW-08D	27.52	51.30
GCMW-11I	8.40	49.05
GCMW-13I	9.34	48.39

The calculated intermediate hydraulic gradient was 0.002 feet/foot.

2.2.3 NAPL Gauging

All of the existing wells of the groundwater monitoring network were gauged for the presence of NAPL on July 12, 2011. Dense non-aqueous phase liquid (DNAPL) was present in one well, MW-13S, at a thickness of 0.3 feet. Historically, DNAPL has been gauged only in this well. DNAPL was measured at a thickness of 0.74 feet in June 2005 and has steadily decreased to the thickness of 0.3 feet, measured in July 2011.

2.2.4 Groundwater Analytical Sampling

The first semiannual 2011 groundwater sampling event was performed on June 24, and July 11 and 12, 2011, and included all accessible wells on the quarterly sampling list. A total of 13 monitoring wells and piezometers were sampled for the following analytes:

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tert-butyl ether (MTBE) via Environmental Protection Agency (EPA) Method 8260.
- Polycyclic aromatic hydrocarbons (PAHs) and semivolatile organic compounds (SVOCs) via EPA Method 8270.

Additionally, monitoring wells GCMW-15 and GCMW-16 were sampled for natural attenuation monitoring parameters for the following analytes:

- Polychlorinated biphenyls (PCBs) via EPA Method 8082
- Metals via EPA Method 6010, 8000/7000
- Mercury via EPA Method 7470/7471
- Cyanide via EPA Method 9012
- TOC-KAHN
- Nitrate (E535)
- Sulfate via EPA Method 300
- Alkalinity
- Biochemical Oxygen Demand
- Free Carbon Dioxide
- Chemical Oxygen Demand
- Nitrogen Ammonia
- Nitrite via E353
- Ferrous Iron
- Dissolved Manganese
- Standard Plate Count

2.2.5 Analytical Results

The discussion below focuses on the analytical results from the current semiannual sampling event. A summary of historical groundwater monitoring results are included in **Figure 5**. More in-depth evaluation of the monitored natural attenuation results will be conducted when the planned oxygen injection system is installed and becomes operational during 2012.

BTEX

Total BTEX concentrations ranged from less than method detection limits (ND) in ten of the 13 wells sampled, to 1,073 micrograms per liter (µg/L) in GCMW-11S. The detections are summarized in the following table.

Table 2c – BTEX Detections

Sample Name:	GCMW-11S	Duplicate of: GCMW-11S	GCMW-11I	GCMW-13S
Sample Date:	7/12/2011	7/12/2011	7/12/2011	7/12/2011
Benzene	**180 D**	**180 D**	**11**	**2**
Toluene	**33**	**32**	1 U	**29**
Ethylbenzene	**340 D**	**350 D**	1 U	**260 D**
Xylene, total	**520**	**500**	**1**	**530**
Total BTEX	**1073**	**1062**	**12**	**821**

Notes
D: Concentration obtained through dilution runs
All values reported in µg/L
Bolding indicates a detected concentration

For the first semiannual 2011 monitoring event, BTEX detections were generally similar to, and within the range of, historical values. BTEX concentrations in GCMW-11I significantly decreased from 2004 concentrations and have remained relatively stable.

SVOCs

Total PAH concentrations ranged from ND in nine of the 13 wells sampled to 13,387 µg/L in GCMW-13S. The detections are summarized in the following table.

Table 2d – PAH Detections

Sample Name:	GCMW-08S	GCMW-11S	Duplicate of: GCMW-11S	GCMW-13S	GCMW-15	Duplicate of: GCMW-15
Sample Date:	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/11/2011	7/11/2011
Acenaphthene	**4 J**	**260**	**240**	**170**	**2 J**	**2 J**
Acenaphthylene	**1 J**	**45 J**	**41 J**	**11 J**	10 U	10 U
Anthracene	**1 J**	**14 J**	**12 J**	100 U	10 U	10 U
Benz[a]anthracene	**2 J**	100 U	100 U	100 U	10 U	10 U
Benzo[a]pyrene	**2 J**	100 U	100 U	100 U	10 U	10 U
Benzo[b]fluoranthene	**1 J**	100 U	100 U	100 U	10 U	10 U
Chrysene	**2 J**	100 U	100 U	100 U	10 U	10 U
Fluoranthene	**8 J**	100 U	100 U	100 U	10 U	10 U
Fluorene	10 U	**74 J**	**69 J**	**51 J**	**1 J**	**1 J**
Methylnaphthalene,2-	10 U	**310**	**330**	**1100 DJ**	10 UJ	10 UJ
Naphthalene	10 U	**4900 D**	**5100 D**	**12000 D**	10 U	10 U
Phenanthrene	**4 J**	**82 J**	**78 J**	**55 J**	**1 J**	**1 J**
Pyrene	**12**	100 U	100 U	100 U	10 U	10 U
Total PAHs	**37**	**5685**	**5870**	**13387**	**4**	**4**

Notes:
All values reported in µg/L
Bolding indicates a detected concentration
Gray shading indicates that the detected result value exceeds NYS AWQS
J: estimated value
D: sample diluted for quantification purposes
U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

In two of the four wells with detections, PAH concentrations were low and near groundwater standards. In the remaining two wells (GCMW-11S and GCMW-13S), the first semiannual 2011 PAH concentrations were similar to historical results. Detections of non-PAH SVOCs were sparse and included three SVOCs (carbazole, dibenzofuran, and di-n-butyl phthalate). The laboratory analytical results for the first semiannual 2011 sampling event are included in **Table 2**.

Monitored natural Attenuation Parameters

The first semiannual 2011 monitored natural attenuation parameters results will be presented and evaluated along with all pre-system startup data in the Final Engineering Report. The

Final Engineering Report will be submitted following the completion of the Phase II remedial activities, including system installation.

2.3 Future Plans

- Design and construct an oxygen injection system as part of Phase II remedy
- Install additional monitoring wells as part of Phase II remedy
- Continue semiannual groundwater and NAPL monitoring, then quarterly after startup of the oxygen injection system.

Tables

Table 1
Water Level Measurements and Calculated Groundwater Elevations
Glen Cove Former MGP Site
Glen Cove, New York

Well ID	Date of Measurement	Screened Interval (feet bgs)	Time of Measurement	Well Casing Diameter (inches)	Well Elevation[1] (feet above MSL)	Depth to Water (feet)	Water Elevation (feet above MSL)	Notes
PZ-01A*	-	25 - 35	-	-	57.11	-	-	
PZ-02A	7/12/2011	18 - 21	0850	2	58.58	11.45	47.13	
PZ-03*	-	14 - 19	-	-	56.76	-	-	
PZ-04*	-	16 - 19	-	-	56.96	-	-	
PZ-05	7/12/2011	8 - 18	0847	2	62.88	8.43	54.45	
PZ-06	7/12/2011	7 - 17	0845	2	58.52	4.68	53.84	
PZ-07*	NM	3 - 10	-	-	50.36	-	-	
GCMW-08S	7/12/2011	26 - 36	1247	2	78.59	27.18	51.41	
GCMW-08D	7/12/2011	60 - 70	1248	2	78.82	27.52	51.30	
GCMW-09S*	-	8 - 18	-	-	56.81	-	-	
GCMW-09I*	-	26 - 36	-	-	56.88	-	-	
GCMW-10S	-	11 - 16	-	-	52.62	-	-	
GCMW-10I	-	16 - 26	-	-	53.08	-	-	
GCMW-11S	7/12/2011	8 - 20	0843	2	57.52	8.31	49.21	
GCMW-11I	7/12/2011	23 - 28	0845	2	57.45	8.40	49.05	
GCMW-12S	7/12/2011	14 - 24	0850	2	66.63	12.17	54.46	
GCMW-13S	7/12/2011	12 - 22	0841	2	57.73	9.74	47.99	0.3 feet of DNAPL
GCMW-13I	7/12/2011	25 - 30	0840	2	57.73	9.34	48.39	
GCMW-14S*	-	8 - 18	-	-	58.74	-	-	
GCMW-14I*	-	25 - 30	-	-	58.75	-	-	
GCMW-15	7/12/2011	6 - 16	0754	2	51.34	5.79	45.55	
GCMW-16	7/12/2011	6 - 16	0749	2	51.29	5.20	46.09	

Notes:
bgs - Below Ground Surface
[1] - Well Elevations Obtained From 2008 RI
MSL - Mean Sea Level
* Destroyed or Abandoned
NM - Not Measured

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-08S 7/12/2011	GCMW-08D 7/12/2011	GCMW-10S 6/24/2011	GCMW-10I 6/24/2011	GCMW-11S 7/12/2011	Duplicate of: GCMW-11S 7/12/2011	GCMW-11I 7/12/2011	GCMW-12S 7/12/2011	GCMW-13S 7/12/2011	GCMW-13I 7/12/2011
BTEX (ug/L)											
Benzene	1	1 U	1 U	1 U	1 U	**180 D**	**180 D**	**11**	1 U	**2**	1 U
Toluene	5	1 U	1 U	1 U	1 U	**33**	**32**	1 U	1 U	**29**	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	**340 D**	**350 D**	1 U	1 U	**260 D**	1 U
Xylene, total	5	1 U	1 U	1 U	1 U	**520**	**500**	**1**	1 U	**530**	1 U
Total BTEX	NE	ND	ND	ND	ND	**1073**	**1062**	**12**	ND	**821**	ND
Other VOCs (ug/L)											
Acetone	50*	**2 BJ**	**1 BJ**	5 U	5 U	5 U	**1 BJ**	5 U	5 U	**1 BJ**	5 U
Bromodichloromethane	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Butanone,2-	50*	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	60*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloroethane,1,1-	5	1 U	1 U	1 U	1 U	**3**	**3**	1 U	1 U	1 U	1 U
Dichloroethane,1,2-	0.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloroethene,1,1-	0.07	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloroethene,1,2- (total)	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropane,1,2-	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, cis-1,3	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, trans-1,3	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexanone,2-	50	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	10	10 U	**1 J**	10 U	**1 J**	**3 J**	**3 J**	**44**	10 U	**3 J**	**12**
Methyl-2-pentanone,4-	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	2 U	2 U	2 U	2 U	2 U	2 U	**1 BJ**	2 U	2 U	2 U
Styrene	5	1 U	1 U	1 U	1 U	**27**	**26**	1 U	1 U	**8**	1 U
Tetrachloroethane,1,1,2,2-	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	**2**	**18**	1 U	1 U	**1**	1 U	1 U	**4**
Trichloroethane,1,1,1-	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethane,1,1,2-	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	1 U	**1**	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total VOCs	NE	**2**	**2**	**2**	**20**	**1106**	**1095**	**58**	ND	**833**	**16**
PAHs (ug/L)											
Acenaphthene	20*	**4 J**	10 U	10 U	10 U	**260**	**240**	10 U	10 U	**170**	10 U
Acenaphthylene	NE	**1 J**	10 U	10 U	10 U	**45 J**	**41 J**	10 U	10 U	**11 J**	10 U
Anthracene	50*	**1 J**	10 U	10 U	10 U	**14 J**	**12 J**	10 U	10 U	100 U	10 U
Benz[a]anthracene	0.002*	**2 J**	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-08S 7/12/2011	GCMW-08D 7/12/2011	GCMW-10S 6/24/2011	GCMW-10I 6/24/2011	GCMW-11S 7/12/2011	Duplicate of: GCMW-11S 7/12/2011	GCMW-11I 7/12/2011	GCMW-12S 7/12/2011	GCMW-13S 7/12/2011	GCMW-13I 7/12/2011
Benzo[a]pyrene	ND	**2 J**	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Benzo[b]fluoranthene	0.002*	**1 J**	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Benzo[g,h,i]perylene	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Benzo[k]fluoranthene	0.002*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Chrysene	0.002*	**2 J**	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dibenz[a,h]anthracene	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Fluoranthene	50*	**8 J**	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Fluorene	50*	10 U	10 U	10 U	10 U	**74 J**	**69 J**	10 U	10 U	**51 J**	10 U
Indeno[1,2,3-cd]pyrene	0.002*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Methylnaphthalene,2-	NE	10 U	10 U	10 U	10 U	**310**	**330**	10 U	10 U	**1100 DJ**	10 U
Naphthalene	10*	10 U	10 U	10 U	10 U	**4900 D**	**5100 D**	10 U	10 U	**12000 D**	10 U
Phenanthrene	50*	**4 J**	10 U	10 U	10 U	**82 J**	**78 J**	10 U	10 U	**55 J**	10 U
Pyrene	50*	**12**	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Total PAHs	NE	**37**	ND	ND	ND	**5685**	**5870**	ND	ND	**13387**	ND
Other SVOCs (ug/L)											
Bis(2-chloroethoxy)methane	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Bis(2-chloroethyl)ether	1	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Bis(2-ethylhexyl)phthalate	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Bis(chloroisopropyl)ether	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Bromophenyl phenyl ether,4-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Butyl benzyl phthalate	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Carbazole	NE	10 U	10 U	10 U	10 U	**29 J**	**26 J**	10 U	10 U	100 U	10 U
Chloro-3-methylphenol,4-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Chloroaniline,4-	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Chloronaphthalene,2-	10*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Chlorophenol,2-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Chlorophenyl phenyl ether,4-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dibenzofuran	NE	10 U	10 U	10 U	10 U	**13 J**	**12 J**	10 U	10 U	**11 J**	10 U
Dichlorobenzene,1,2-	3	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dichlorobenzene,1,3-	3	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dichlorobenzene,1,4-	3	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dichlorobenzidine,3,3-	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dichlorophenol,2,4-	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Diethyl phthalate	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dimethyl phthalate	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dimethylphenol, 2,4-	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Di-n-butyl phthalate	50	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dinitro-2-methylphenol,4,6-	NE	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
Dinitrophenol,2,4-	10*	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
Dinitrotoluene,2,4-	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Dinitrotoluene,2,6-	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Di-n-octyl phthalate	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Hexachlorobenzene	0.04	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-08S 7/12/2011	GCMW-08D 7/12/2011	GCMW-10S 6/24/2011	GCMW-10I 6/24/2011	GCMW-11S 7/12/2011	Duplicate of: GCMW-11S 7/12/2011	GCMW-11I 7/12/2011	GCMW-12S 7/12/2011	GCMW-13S 7/12/2011	GCMW-13I 7/12/2011
Hexachlorobutadiene	0.5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Hexachlorocyclopentadiene	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Hexachloroethane	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Isophorone	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Methylphenol, 4-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Methylphenol,2-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Nitroaniline,2-	5	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
Nitroaniline,3-	5	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
Nitroaniline,4-	5	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
Nitrobenzene	0.4	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Nitrophenol,2-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Nitrophenol,4-	NE	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
N-Nitrosodi-n-propylamine	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
N-Nitrosodiphenylamine	50*	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Pentachlorophenol	1	25 U	25 U	25 U	25 U	250 U	250 U	25 U	25 U	250 U	25 U
Phenol	1	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Trichlorobenzene,1,2,4-	5	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Trichlorophenol,2,4,5-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Trichlorophenol,2,4,6-	NE	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	100 U	10 U
Total SVOCs	NE	**37**	ND	ND	ND	**5727**	**5908**	ND	ND	**13398**	ND
PCBs (ug/L)											
Aroclor 1016	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals (ug/L)											
Manganese	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/L)											
Aluminum	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-08S 7/12/2011	GCMW-08D 7/12/2011	GCMW-10S 6/24/2011	GCMW-10I 6/24/2011	GCMW-11S 7/12/2011	Duplicate of: GCMW-11S 7/12/2011	GCMW-11I 7/12/2011	GCMW-12S 7/12/2011	GCMW-13S 7/12/2011	GCMW-13I 7/12/2011
Lead	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	2000*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Cyanide (ug/L)											
Cyanide, Total	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other (ug/L)											
Alkalinity	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biochemical Oxygen Demand	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide, Free	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide, Total	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous iron	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Ammonia	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrite	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count (cfu/mL)	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Phosphorous	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-15 7/11/2011	Duplicate of: GCMW-15 7/11/2011	GCMW-16 7/11/2011	PZ-02A 7/12/2011	PZ-07 6/24/2011	Duplicate of: PZ-07 6/24/2011
BTEX (ug/L)							
Benzene	1	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U	1 U
Xylene, total	5	1 U	1 U	1 U	1 U	1 U	1 U
Total BTEX	NE	ND	ND	ND	ND	ND	ND
Other VOCs (ug/L)							
Acetone	50*	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	50*	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	50*	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 U	1 U	1 U	1 U	1 U	1 U
Butanone,2-	50*	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	60*	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	7	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U
Dibromochloromethane	50*	1 U	1 U	1 U	1 U	1 U	1 U
Dichloroethane,1,1-	5	**2 J**	**2 J**	1 U	1 U	1 U	1 U
Dichloroethane,1,2-	0.6	1 U	1 U	1 U	1 U	1 U	1 U
Dichloroethene,1,1-	0.07	1 U	1 U	**1**	1 U	1 U	1 U
Dichloroethene,1,2- (total)	NE	**5**	**5**	**3**	1 U	1 U	1 U
Dichloropropane,1,2-	1	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, cis-1,3	NE	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, trans-1,3	NE	1 U	1 U	1 U	1 U	1 U	1 U
Hexanone,2-	50	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	10	10 U	10 U	**1**	10 U	10 U	10 U
Methyl-2-pentanone,4-	NE	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	2 U	2 U	2 U	2 U	2 U	2 U
Styrene	5	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethane,1,1,2,2-	5	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	**2**	1 U	**18**	**18**
Trichloroethane,1,1,1-	5	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethane,1,1,2-	1	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	**1**	**2**	**4**	1 U	**1**	**1**
Vinyl chloride	2	**10**	**10**	1 U	1 U	1 U	1 U
Total VOCs	NE	**18**	**19**	**11**	ND	**19**	**19**
PAHs (ug/L)							
Acenaphthene	20*	**2 J**	**2 J**	10 U	10 U	10 U	10 U
Acenaphthylene	NE	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50*	10 U	10 U	10 U	10 U	10 U	10 U
Benz[a]anthracene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-15 7/11/2011	Duplicate of: GCMW-15 7/11/2011	GCMW-16 7/11/2011	PZ-02A 7/12/2011	PZ-07 6/24/2011	Duplicate of: PZ-07 6/24/2011
Benzo[a]pyrene	ND	10 U	10 U	10 U	10 U	10 U	10 U
Benzo[b]fluoranthene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U
Benzo[g,h,i]perylene	NE	10 U	10 U	10 U	10 U	10 U	10 U
Benzo[k]fluoranthene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	NE	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	50*	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	50*	**1 J**	**1 J**	10 U	10 U	10 U	10 U
Indeno[1,2,3-cd]pyrene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U
Methylnaphthalene,2-	NE	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
Naphthalene	10*	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	50*	**1 J**	**1 J**	10 U	10 U	10 U	10 U
Pyrene	50*	10 U	10 U	10 U	10 U	10 U	10 U
Total PAHs	NE	**4**	**4**	ND	ND	ND	ND
Other SVOCs (ug/L)							
Bis(2-chloroethoxy)methane	5	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	1	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate	5	10 U	10 U	10 U	10 U	10 U	10 U
Bis(chloroisopropyl)ether	5	10 U	10 U	10 U	10 U	10 U	10 U
Bromophenyl phenyl ether,4-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Butyl benzyl phthalate	50*	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	NE	10 U	10 U	10 U	10 U	10 U	10 U
Chloro-3-methylphenol,4-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Chloroaniline,4-	5	10 U	10 U	10 U	10 U	10 U	10 U
Chloronaphthalene,2-	10*	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
Chlorophenol,2-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Chlorophenyl phenyl ether,4-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	NE	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorobenzene,1,2-	3	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorobenzene,1,3-	3	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorobenzene,1,4-	3	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorobenzidine,3,3-	5	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorophenol,2,4-	5	10 U	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	50*	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	50*	10 U	10 U	10 U	10 U	10 U	10 U
Dimethylphenol, 2,4-	50*	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate	50	10 U	**1 J**	10 U	10 U	10 U	10 U
Dinitro-2-methylphenol,4,6-	NE	25 U	25 U	25 U	25 U	25 U	25 U
Dinitrophenol,2,4-	10*	25 U	25 U	25 U	25 U	25 U	25 U
Dinitrotoluene,2,4-	5	10 U	10 U	10 U	10 U	10 U	10 U
Dinitrotoluene,2,6-	5	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	50*	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.04	10 U	10 U	10 U	10 U	10 U	10 U

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-15 7/11/2011	Duplicate of: GCMW-15 7/11/2011	GCMW-16 7/11/2011	PZ-02A 7/12/2011	PZ-07 6/24/2011	Duplicate of: PZ-07 6/24/2011
Hexachlorobutadiene	0.5	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	5	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
Hexachloroethane	5	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	50*	10 U	10 U	10 U	10 U	10 U	10 U
Methylphenol, 4-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Methylphenol,2-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Nitroaniline,2-	5	25 U	25 U	25 U	25 U	25 U	25 U
Nitroaniline,3-	5	25 U	25 U	25 U	25 U	25 U	25 U
Nitroaniline,4-	5	25 U	25 U	25 U	25 U	25 U	25 U
Nitrobenzene	0.4	10 U	10 U	10 U	10 U	10 U	10 U
Nitrophenol,2-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Nitrophenol,4-	NE	25 U	25 U	25 U	25 U	25 U	25 U
N-Nitrosodi-n-propylamine	NE	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	50*	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	1	25 U	25 U	25 U	25 U	25 U	25 U
Phenol	1	10 U	10 U	10 U	10 U	10 U	10 U
Trichlorobenzene,1,2,4-	5	10 U	10 U	10 U	10 U	10 U	10 U
Trichlorophenol,2,4,5-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Trichlorophenol,2,4,6-	NE	10 U	10 U	10 U	10 U	10 U	10 U
Total SVOCs	NE	**4**	**5**	ND	ND	ND	ND
PCBs (ug/L)							
Aroclor 1016	NE	1 U	1 U	1 U	NA	NA	NA
Aroclor 1221	NE	2 U	2 U	2 U	NA	NA	NA
Aroclor 1232	NE	1 U	1 U	1 U	NA	NA	NA
Aroclor 1242	NE	1 U	1 U	1 U	NA	NA	NA
Aroclor 1248	NE	1 U	1 U	1 U	NA	NA	NA
Aroclor 1254	NE	1 U	1 U	1 U	NA	NA	NA
Aroclor 1260	NE	1 U	1 U	1 U	NA	NA	NA
Total PCBs	NE	ND	ND	ND	NA	NA	NA
Dissolved Metals (ug/L)							
Manganese	300	**1590**	**1590**	**84.5**	NA	NA	NA
Total Metals (ug/L)							
Aluminum	NE	**26.6 J**	**21.9 J**	7.4 U	NA	NA	NA
Antimony	3	2.3 U	2.3 U	2.3 U	NA	NA	NA
Arsenic	25	4.9 U	4.9 U	4.9 U	NA	NA	NA
Barium	1000	**130 J**	**132 J**	**94.7 J**	NA	NA	NA
Beryllium	3*	0.087 UJ	0.087 UJ	0.087 UJ	NA	NA	NA
Cadmium	5	0.2 U	0.2 U	0.2 U	NA	NA	NA
Calcium	NE	**68300**	**68300**	**42600**	NA	NA	NA
Chromium	50	**0.8 J**	**1.6 J**	**1.3 J**	NA	NA	NA
Cobalt	NE	0.54 U	0.54 U	0.54 U	NA	NA	NA
Copper	200	0.44 U	0.44 U	0.5 UJ	NA	NA	NA
Iron	300	**28700**	**28300**	33.6 UJ	NA	NA	NA

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Sample Name: / Sample Date:	NYS AWQS	GCMW-15 7/11/2011	Duplicate of: GCMW-15 7/11/2011	GCMW-16 7/11/2011	PZ-02A 7/12/2011	PZ-07 6/24/2011	Duplicate of: PZ-07 6/24/2011
Lead	25	2 U	2 U	**10.7**	NA	NA	NA
Magnesium	35000*	**9280**	**9380**	**14400**	NA	NA	NA
Manganese	300	**1640**	**1620**	**82.7**	NA	NA	NA
Mercury	0.7	0.1 U	0.1 U	0.1 U	NA	NA	NA
Nickel	100	0.72 U	0.72 U	**1.9 J**	NA	NA	NA
Potassium	NE	**11100**	**11200**	**4030 J**	NA	NA	NA
Selenium	10	3.8 U	3.8 U	3.8 U	NA	NA	NA
Silver	50	0.24 UJ	0.24 UJ	0.24 UJ	NA	NA	NA
Sodium	20000	**257000**	**257000**	**58400**	NA	NA	NA
Thallium	0.5*	3.5 U	3.5 U	3.5 U	NA	NA	NA
Vanadium	NE	0.19 U	0.19 U	0.19 U	NA	NA	NA
Zinc	2000*	43.4 U	20.4 U	16.7 UJ	NA	NA	NA
Total Cyanide (ug/L)							
Cyanide, Total	200	10 U	10 U	10 U	NA	NA	NA
Other (ug/L)							
Alkalinity	NE	**174000**	**163000**	**63800**	NA	NA	NA
Biochemical Oxygen Demand	NE	**4000**	2000 U	2000 U	NA	NA	NA
Carbon Dioxide, Free	NE	**93900**	**98600**	**39400**	NA	NA	NA
Chemical Oxygen Demand	NE	**29900**	**30500**	10000 U	NA	NA	NA
Cyanide, Total	200	10 U	10 U	10 U	NA	NA	NA
Ferrous iron	NE	**22000**	**22000**	400 U	NA	NA	NA
Nitrogen, Ammonia	2000	**2570**	**2450**	100 U	NA	NA	NA
Nitrogen, Nitrate	10000	100 U	100 U	**5850**	NA	NA	NA
Nitrogen, Nitrite	1000	100 U	100 U	100 U	NA	NA	NA
Standard Plate Count (cfu/mL)	NE	**7**	**7**	**21**	NA	NA	NA
Sulfate	250000	**9810**	**10200**	**46400**	NA	NA	NA
Total Organic Carbon	NE	**3300**	**3500**	1000 U	NA	NA	NA
Total Phosphorous	NE	**90**	**70**	50 U	NA	NA	NA

Table 2
Summary of Groundwater Analytical Results
Glen Cove Former MGP Site
Glen Cove, New York

Notes:

Analytes in blue are not detected in any sample
ug/L - micrograms per liter or parts per billion (ppb)
cfu/ml - colony forming units per 1 milliliter
BTEX - benzene, toluene, ethylbenzene, and xylenes
VOCs - volatile organic compounds
PAHs - polycyclic aromatic hydrocarbons
SVOCs - semivolatile organic compounds
PCBs - polychlorinated biphenyls
Total BTEX, Total VOCs, Total PAHs, Total SVOCs, and Total PCBs are calculated using detects only.

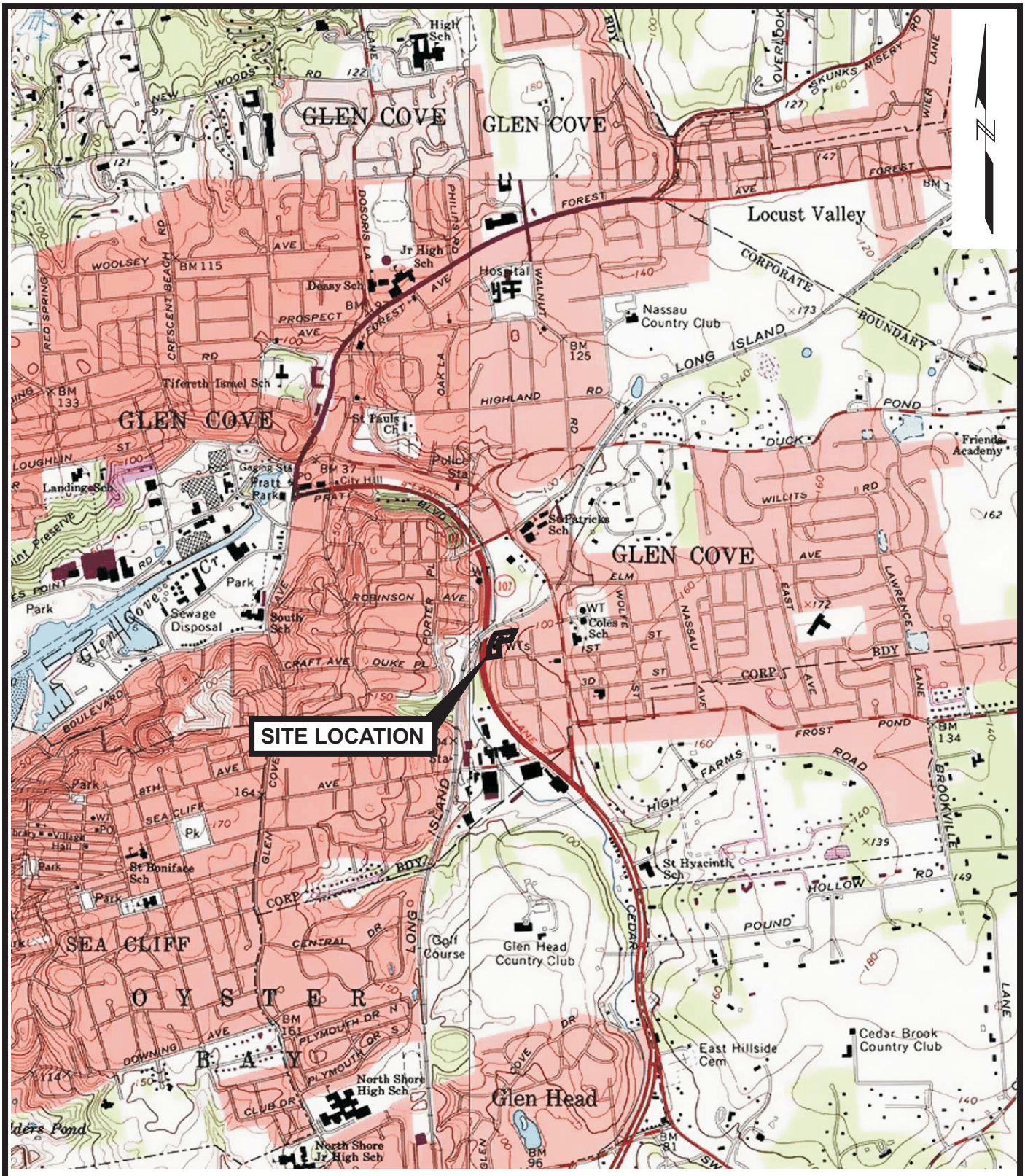
NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

NE - not established
NA - not analyzed
ND - not detected; total concentration is listed as ND because no compounds were detected in the group

Bolding indicates a detected concentration
Gray shading indicates that the detected result value exceeds NYS AWQS

Data Qualifiers:
J - estimated value
U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis
UJ - not detected at or above the reporting limit shown and the reporting limit is estimated
D - Results for dilution
BJ - Analyte detected in the associated method blank and is an estimated value
DJ - Results for dilution and is an estimated value

Figures



SOURCE: MAP CREATED WITH TOPO!™ 2000 WILDFLOWER PRODUCTIONS (www.topo.com)

GLEN COVE FORMER MGP SITE
GLEN COVE, NEW YORK

nationalgrid

GEI Consultants

SITE LOCATION MAP

Project 093270-5-1504 | September 2011 | Figure 1

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LEGEND:

- PROPERTY BOUNDARIES
- FORMER STRUCTURES (REMOVED OR DESTROYED)
- GCMW10S — MONITORING WELL
- PZ05 — PIEZOMETER
- GCMW10S — MONITORING WELL (ABANDONED OR DESTROYED)
- PZ07 — PIEZOMETER (ABANDONED OR DESTROYED)

N

LONG ISLAND RAILROAD

ROUTE 107

SHOULDER

SHOULDER

RETAINING WALL

RETAINING WALL

CULVERT HEADWALL

GCMW15

GCMW16

GLEN COVE CREEK

FLOW

GCMW08D GCMW08S

TOP

SLOPE

BOTTOM

BOTTOM SLOPE

PZ06

PZ03

GCMW11S GCMW11I

CONTROL HOUSE

TAR TANK

BOILER

COAL SHED

RETORTS

CESSPOOL

GCMW12S

PZ05

OIL TANK

OIL TANK

CONCRETE SLAB WITH STEEL SUPER-STRUCTURE

PURIFIER

CONCRETE SLAB WITH STEEL SUPER-STRUCTURE

ENGINE ROOM

PZ01A

GCMW09S

GCMW09I

GAS TANKS

GCMW13I

GCMW13S

60,000 cu ft GAS HOLDER

GCMW14I

GCMW14S

GAS TANKS

PZ04

RETAINING WALL

RETAINING WALL

PZ02A

GCMW10I

GCMW10S

40,000 cu ft GAS HOLDER (HORTONSPHERE)

METER HOUSE

TOP SLOPE

ACCESS ROAD

TOP SLOPE

PZ07

0 20 40

SCALE, FEET

GLEN COVE FORMER MGP SITE
GLEN COVE, NEW YORK

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PROJECT 093270-5-1504

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SUITE 204
HUNTINGTON STATION, NY 11746

MONITORING WELL LOCATION MAP

September 2011 Figure 2

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GLEN COVE, NEW YORK

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HUNTINGTON STATION, NY 11746

GROUNDWATER CONTOUR MAP
SHALLOW WELLS
JULY 12, 2011

September 2011 Figure 3

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LEGEND:

- PROPERTY BOUNDARIES
- FORMER STRUCTURES (REMOVED OR DESTROYED)
- GCMW11I — MONITORING WELL
- PZ02A — PIEZOMETER
- GCMW10I — MONITORING WELL (ABANDONED OR DESTROYED)
- PZ03 — PIEZOMETER (ABANDONED OR DESTROYED)
- 48 — GROUNDWATER CONTOUR (FEET RELATIVE TO MSL)
- 47.13 — GROUNDWATER ELEVATION (FEET RELATIVE TO MSL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

LONG ISLAND RAILROAD
ROUTE 107
SHOULDER
SHOULDER
CREEK
COVE
GLEN
FLOW
CULVERT HEADWALL
RETAINING WALL
RETAINING WALL
GCMW09I
GAS TANKS
PZ01A
GCMW13I
48.39
GCMW14I
GAS TANKS
60,000 cu ft GAS HOLDER
PZ02A
47.13
GCMW10I
40,000 cu ft GAS HOLDER (HORTONSPHERE)
METER HOUSE
TOP SLOPE
ACCESS ROAD
TOP SLOPE
PZ03
GCMW11I
49.05
CONCRETE SLAB WITH STEEL SUPER-STRUCTURE
PURIFIER
CONCRETE SLAB WITH STEEL SUPER-STRUCTURE
ENGINE ROOM
BOILER
CONTROL HOUSE
TAR TANK
COAL SHED
RETORTS
CESSPOOL
OIL TANK
OIL TANK
TOP
BOTTOM SLOPE
BOTTOM SLOPE
BOTTOM
SLOPE
SLOPE
TOP
RETAINING WALL
RETAINING WALL
49
48
47
N

0 20 40
SCALE, FEET

GLEN COVE FORMER MGP SITE
GLEN COVE, NEW YORK

nationalgrid

PROJECT 093270-5-1504

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HUNTINGTON STATION, NY 11746

GROUNDWATER CONTOUR MAP
INTERMEDIATE WELLS
JULY 12, 2011

September 2011 Figure 4

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Sample ID:	GCMW-09S						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	30	133	2	98	118	65	45
PAHs (µg/L)	305	272	380	543	1907	495	451

Sample ID:	GCMW-09I						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	38	9	35	ND	ND	1	ND
PAHs (µg/L)	1564	633	281	55	342	286	22

Sample ID:	GCMW-14I						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	10	ND	ND	ND	ND	1	ND

Sample ID:	GCMW-14S						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	3	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	9	ND	21	ND	ND	2	ND

Sample ID:	PZ-03					
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10
BTEX (µg/L)	NS	221	NS	NS	NS	NS
PAHs (µg/L)	NS	1242	NS	NS	NS	NS

Sample ID:	GCMW-11I							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	1062	275	ND	21	34	47	23	12
PAHs (µg/L)	1488	16	5	ND	ND	617	ND	ND

Sample ID:	GCMW-11S							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	1003	1776	1319	1163	1070	1048	1002	1073
PAHs (µg/L)	6523	4455	7421	6462	4964	5036	4750	5685

Sample ID:	PZ-01A						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	223	116	4	ND	ND	ND	ND
PAHs (µg/L)	581	199	7	2	ND	ND	ND

Sample ID:	GCMW-08D							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	ND	ND	ND	2	ND	ND	ND	ND
PAHs (µg/L)	10	ND	ND	ND	ND	ND	ND	ND

Sample ID:	GCMW-08S							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	1	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	346	282	14	180	229	5	322	37

Sample ID:	PZ-06						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	ND	ND	NS	ND	ND	ND	ND
PAHs (µg/L)	ND	3	ND	ND	ND	ND	ND

Sample ID:	GCMW-12S							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	6	1	ND	ND	ND	ND	ND	ND

Sample ID:	PZ-05						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	ND	1	ND	ND	ND	ND	ND

Sample ID:	GCMW-13I							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	438	25	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	3748	48	ND	25	ND	9	ND	ND

Sample ID:	GCMW-13S							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	456	NS	1327	564	836	939	950	821
PAHs (µg/L)	4495	NS	11047	7128	10498	8591	11885	13,387

Sample ID:	PZ-04						
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	11	3	ND	ND	ND	ND	ND

Sample ID:	PZ-02A							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID:	GCMW-15							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	NS	10	ND	2	3	ND	2	4

Sample ID:	GCMW-10I							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	June-11
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID:	GCMW-10S							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	June-11
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID:	PZ-07							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	June-11
BTEX (µg/L)	3	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID:	GCMW-16							
Sample Date:	2004	2005	Feb-08	Mar-10	Jun-10	Sep-10	Dec-10	July-11
BTEX (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND

LEGEND:

- PROPERTY BOUNDARIES
- FORMER STRUCTURES (REMOVED OR DESTROYED)
- GCMW10S — MONITORING WELL
- PZ05 — PIEZOMETER
- GCMW10S — MONITORING WELL (ABANDONED OR DESTROYED)
- PZ07 — PIEZOMETER (ABANDONED OR DESTROYED)
- NS — NOT SAMPLED
- ND — NOT DETECTED
- PAHs — POLYCYCLIC AROMATIC HYDROCARBONS
- BTEX — BENZENE, TOLUENE, ETHYLBENZENE, XYLENE

LONG ISLAND RAILROAD
ROUTE 107
SHOULDER
CREEK
COVE
GLEN
CULVERT HEADWALL
RETAINING WALL
GCMW15
GCMW16
PZ02A
PZ04
PZ01A
PZ03
PZ06
PZ05
PZ07
GCMW08D
GCMW08S
GCMW11S
GCMW11I
GCMW09S
GCMW09I
GCMW14I
GCMW14S
GCMW13I
GCMW13S
GCMW12S
GCMW10I
GCMW10S
GAS TANKS
60,000 cu ft GAS HOLDER
40,000 cu ft GAS HOLDER (HORTONSPHERE)
METER HOUSE
CONTROL HOUSE
TAR TANK
BOILER
COAL SHED
RETORTS
CESSPOOL
CONCRETE SLAB WITH STEEL SUPER-STRUCTURE
PURIFIER
ENGINE ROOM
OIL TANK
TOP SLOPE
BOTTOM SLOPE
ACCESS ROAD
FLOW
0 20 40
SCALE, FEET

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GROUNDWATER ANALYTICAL RESULTS (µg/L)

September 2011 — Figure 5

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