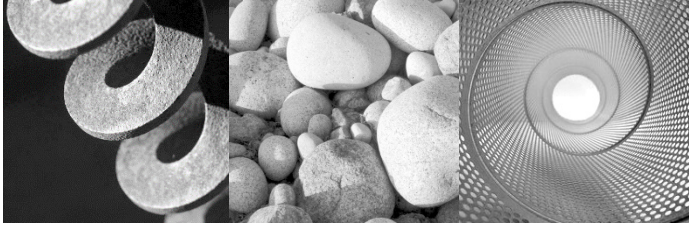

GEI Consultants

Consulting
Engineers and
Scientists

Groundwater Monitoring Report
June 2018 (Q2) Quarterly Sampling Event

Glen Cove Former MGP Site

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

Submitted to:
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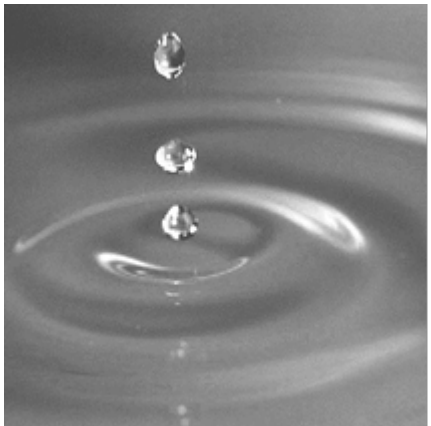

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1. Introduction and Site Background

This report presents the July 2018 quarterly 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 and quarterly sampling resumed in the first quarter of 2018 following the completion of the Phase II field work. 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* (RAP), *Glen Cove Former Manufactured Gas Plant, Town of Oyster Bay, Nassau Country, New York* 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 offsite 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), conducted a facility upgrade which included the installation of underground utilities, foundation, pilings, and associated electric equipment. LIPA's upgrade to this substation was in response to 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). An oxygen injection pilot test was conducted on April 27, 2011. Additional excavation of surface soils along the property boundary in the southwest portion of the Site was conducted from July 15 through 18, 2011. Approximately 240 tons of polycyclic aromatic hydrocarbon (PAH)-impacted material was removed to a depth of approximately 2 feet and transported offsite for proper disposal. A summary report of the soil removal was submitted to the NYSDEC on September 12, 2011. Phase II remediation began in February 2012 with the installation of one recovery well. Two additional recovery wells were installed in May 2012. The oxygen injection treatment system was installed between June 2017 and August 2017. The system was tested from September 17, 2017-November 28, 2017 and several mechanical and power related issues were resolved. The oxygen system began continuous operation on November 28, 2017.

As part of the long-term monitoring of the remedy, National Grid began quarterly monitoring of the groundwater at the Site in Q1 2010. Groundwater sampling was suspended in 2015 during LIPA substation construction. Monitoring wells which were abandoned to accommodate the LIPA substation construction project were reinstalled following the completion of the majority of the LIPA construction work. Quarterly sampling resumed in the first quarter of 2018 following the completion of the Phase II field work.

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 eight 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 (KeySpan), 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 PSEG-LI 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 offsite 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 inter-bedded 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 52 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, historically, 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 well clusters at the Site are less than 0.25 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 during 2010. Semiannual sampling began in July 2011 after completion of the Phase I remedial

excavation. Semiannual sampling was suspended during 2015 during the LIPA substation construction project. The baseline sampling was completed in the first quarter 2016 and quarterly sampling resumed in the first quarter of 2018 following the completion of the Phase II field work.

2. Glen Cove Site and Adjacent Off-site Areas

2.1 Groundwater Monitoring Event Summary

Event Dates: June 18-21, 2018

Site Phase: Quarterly groundwater monitoring

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

2.2 Monitoring Program

2.2.1 Number of Wells

A total of 26 monitoring wells, piezometers, and recovery wells are currently located at or adjacent to the Site. Three recovery wells GCRW-01, GCRW-02 and GCRW-03 were installed in Q1 and Q2 2012. 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 between March and May 2011. GCMW-09S-R, GCMW-09I-R, GCMW-10S-R, GCMW-10I-R, GCMW-14S-R, and GCMW-14I-R were reinstalled in summer 2014. Monitoring well GCMW-13S was destroyed during PSEG-LI construction activities in 2015. Monitoring well, recovery well and piezometer locations are depicted in **Figure 2**.

2.2.2 Hydrological Data

Groundwater levels were measured at 26 monitoring wells and piezometers on June 20, 2018. Depth to groundwater and calculated groundwater elevations are provided in **Table 1**. Shallow and intermediate groundwater contours and elevations for the June 2018 sampling event are depicted in **Figures 3** and **4**, respectively. The groundwater flow direction was generally to the west towards Glen Cove Creek in the shallow and intermediate zones (**Figures 3 and 4**). The depth to water and water table elevation data for the shallow and intermediate portions of the aquifer are presented below.

Shallow Groundwater Zone

Table 1a – Shallow Groundwater Measurements

Well ID	Depth to Water (feet)	Water Elevation (feet above MSL)
PZ-05	9.83	48.32
PZ-06	6.12	50.82
GCMW-08S	28.70	47.67
GCMW-09S-R	10.41	44.18
GCMW-10S-R	10.13	43.75
GCMW-11S	9.52	44.84
GCMW-12S	13.56	48.09
GCMW-14S-R	10.49	44.01
GCMW-15	4.85	*NA
GCMW-16	6.37	*NA
GCMW-20S	10.74	43.50
GCMW-21I	10.41	43.54
GCRW-01	10.92	43.86
GCRW-02	10.23	43.94
GCRW-03	10.51	44.01

*GCMW-15 and 16 have not been re-surveyed with the on-site well, so were not used to generate contours shown in **Figure 3**.

The average calculated shallow hydraulic gradient was 0.018 feet/foot.

Intermediate/Deep Groundwater Zone

Table 1b – Intermediate/Deep Groundwater Measurements

Well ID	Depth to Water (feet)	Water Elevation (feet above MSL)
GCMW-09I-R	10.31	44.09
GCMW-10I-R	10.51	43.49
GCMW-11I	10.07	45.38
GCMW-13I	11.20	44.31
GCMW-14I-R	10.41	43.99
GCMW-21I2	32.20	44.27
GCMW-22I	10.84	43.84

The calculated intermediate hydraulic gradient was 0.010 feet/foot.

2.2.3 NAPL Gauging

All of the existing wells in the groundwater monitoring network and the three newly installed recovery wells are gauged for the presence of non-aqueous phase liquid (NAPL) during each groundwater monitoring event. The three new recovery wells GCRW-01, GCRW-02 and

GCRW-03, were installed in Q1 (GCRW-01) and Q2 2012, in the vicinity of the substation (**Figure 2**). The three new recovery wells are located downgradient of the substation (**Figure 2**). Recovery well GCRW-01 was installed in Q1 2012 and recovery wells GCRW-02 and GCRW-03 were installed in Q2 2012.

Historically, dense non-aqueous phase liquid (DNAPL) has only been present in MW-13S. DNAPL was measured in MW-13S at a thickness of 0.74 feet in June 2005 and had been steadily decreasing to the thickness of 0.3 feet, in July 2011, prior to the increasing in the two 2012 sampling events. The measured thicknesses during these events were 0.65 and 0.70 feet, respectively. The DNAPL thickness in MW-13S decreased during the January 2013 event to 0.40 feet and decreased again in the July 2013 event to 0.30 feet. Monitoring well GCMW-13S was destroyed during PSEG-LI construction activities in 2015. NAPL was not observed in any of the 26 existing wells during the February 2016, March 2018, and June 2018 gauging events.

2.2.4 Groundwater Analytical Sampling

The 2018 groundwater sampling event was performed on June 18-21, and included all accessible wells on the quarterly sampling list. If monitoring wells with measurable thicknesses of NAPL were identified during a sampling event they would not be sampled. A total of 26 monitoring wells, recovery wells and piezometers were sampled for the following analytes:

- Volatile organic compounds (VOCs) and methyl tert-butyl ether (MTBE) via Environmental Protection Agency (EPA) Method 8260.
- Semi-volatile organic compounds (SVOCs) via EPA Method 8270.

In addition, 13 monitoring wells were also sampled for the following analytes:

- PCBs,
- TAL Metals, and
- Total Cyanide.

2.2.5 Analytical Results

The discussion below focuses on the analytical results from the current sampling event. A summary of historical groundwater monitoring results is included in **Figures 5 and 6**.

<u>VOCs</u>

VOC detections above the New York State Technical and Operational Guidance Series (TOGS), 1.1.1 – Ambient Water Quality Standards and Guidance Values (AWQS) for Class

GA groundwater were generally limited to benzene, toluene, ethylbenzene and xylene (BTEX). Exceptions include detections of MTBE (33 micrograms per liter [µg/L]) and vinyl chloride (3.3 µg/L), in wells GCMW-11I and GCMW-15, respectively. Total BTEX concentrations ranged from less than method detection limits (ND) in 18 of the 26 wells sampled, to 516.5 µg/L in GCMW-11S. Individual BTEX compound concentrations above the AWQS were identified in five of the eight wells with detections. The detections and exceedances of the AWQS are summarized in table below.

Table 2a – BTEX Detections Above NYS AWQS

Sample Name	GCMW-09SR	GCMW-11S	GCMW-11I	GCMW-13I	GCRW-01
Sample Date	6/18/2018	6/20/2018	6/20/2018	6/20/2018	6/19/2018
Benzene	**3.2**	**38**	**20**	**2**	**1.6**
Toluene	**3**	**8.5**	**0.73 J**	**0.88 J**	**9.4**
Ethylbenzene	**31**	**270**	**8.7**	**120**	**36**
Total Xylene	**23**	**200**	**9.2**	**170**	**43**
Total BTEX	**60.2**	**516.5**	**38.63**	**292.9**	**90**

Notes:
BTEX - benzene, toluene, ethylbenzene, and xylenes (a subset of VOCs)
NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
Bolding indicates a detected concentration
Shading and bolding indicates that the detected concentration is above the NYS AWQS
J - estimated value
U - not detected to the reporting limit

BTEX detections in the June 2018 monitoring event generally remained relatively stable with the majority being at, or near, detections levels. All the wells with detections above the AWQS remained within their respective historical concentration range, being similar to, or below their respective historical average.

SVOCs

SVOC detections above the AWQS were limited to PAHs. Total PAH concentrations ranged from ND in 13 of the 26 wells sampled to 4,185 µg/L in GCMW-11S. Historically, the highest detection of total PAHs has been detected in monitoring well GCMW-13S. GCMW-13S was destroyed and not sampled. The detections in wells with concentrations above the AWQS are summarized in the table on the following page.

Table 2b – PAH Detections Above AWQS

Sample Name	GCMW-08S	GCMW-09SR	GCMW-11S	GCMW-13I	GCMW-20S
Sample Date	6/21/2018	6/18/2018	6/20/2018	6/20/2018	6/20/2018
Acenaphthene	**10**	**160**	**240 J**	250 U	**2 J**
Acenaphthylene	**4.6 J**	**4.5 J**	250 U	250 U	**1.1 J**
Anthracene	**9.1 J**	**12 J**	250 U	250 U	**0.69 J**
Benzo(a)anthracene	**1.1**	5 U	25 U	25 U	**0.6 J**
Benzo(b)fluoranthene	2 U	10 U	50 U	50 U	2 U
Benzo(k)fluoranthene	1 U	5 U	25 U	25 U	1 U
Benzo(g,h,i)perylene	10 U	50 U	250 U	250 U	**2.2 J**
Benzo(a)pyrene	1 U	5 U	25 U	25 U	**0.76 J**
Chrysene	2 U	10 U	50 U	50 U	2 U
Fluoranthene	**8.4 J**	**5.8 J**	250 U	250 U	10 U
Fluorene	**5.7 J**	**85**	**67 J**	250 U	10 U
Indeno(1,2,3-cd)pyrene	2 U	10 U	50 U	50 U	2 U
2-Methylnaphthalene	10 U	**62**	**220 J**	**110 J**	10 U
Naphthalene	10 U	**630**	**3600**	**3600**	10 U
Phenanthrene	**42**	**88**	**58 J**	250 U	10 U
Pyrene	**11**	50 U	250 U	250 U	10 U
Total PAHs	**91.9**	**1047**	**4185**	**3710**	**7.35**

Sample Name	GCMW-20I	Duplicate of GCMW-20I	GCMW-21I	GCRW-01	GCRW-02
Sample Date	6/18/2018	6/18/2018	6/21/2018	6/19/2018	6/18/2018
Acenaphthene	10 U	10 U	**11**	**100**	10 U
Acenaphthylene	10 U	10 U	10 U	**4.4 J**	10 U
Anthracene	10 U	10 U	**2.2 J**	**3.7 J**	10 U
Benzo(a)anthracene	**0.8 J**	**2.2 J**	**0.75 J**	**1.3**	1 U
Benzo(b)fluoranthene	2 UJ	**1.8 J**	2 U	2 UJ	2 UJ
Benzo(k)fluoranthene	1 U	**1**	1 U	1 U	1 U
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	**0.74 J**	**2.4 J**	1 U	1 U	**0.76 J**
Chrysene	2 U	**1.5 J**	2 U	2 U	2 U
Fluoranthene	10 U	**0.95 J**	**3.2 J**	**9.3 J**	10 U
Fluorene	10 U	10 U	**2.2 J**	**26**	10 U
Indeno(1,2,3-cd)pyrene	2 U	**1.3 J**	2 U	2 U	2 U
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U
Naphthalene	10 U	10 U	10 U	**12**	10 U
Phenanthrene	10 U	10 U	**5 J**	**3.1 J**	10 U
Pyrene	10 U	**2 J**	**5.1 J**	**12**	10 U
Total PAHs	**1.54**	**13.15**	**29.45**	**171.8**	**0.76**

Notes:
PAHs - polycyclic aromatic hydrocarbons
NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater

Bolding indicates a detected concentration
Shading and bolding indicates that the detected concentration is above the NYS AWQS
J - estimated value
U - not detected to the reporting limit

Concentrations of total PAHs were detected above the AWQS in 9 of the 26 wells. Total PAH concentrations in most of the monitoring wells and recovery wells remained within their respective historical concentration ranges. Total PAH concentrations in wells with detections above the AWQS decreased significantly in GCMW-11S, GCMW-09S-R, GCMW-09I-R, GCRW-01, GCRW-02, and GCRW-03 since sampling began, but increased in GCMW-13I.

The laboratory analytical results for the June 2018 sampling event are included in **Table 2**.

Other

PCBs, total metals, and total cyanide were analyzed in 11 of the 26 wells analyzed during the sampling event. Analyzing samples for PCBs, total metals, and total cyanide began during the baseline groundwater sampling event in 2016.

PCB concentrations were not detected in any sample. This is consistent with the 2016 baseline groundwater sampling results.

Total metals concentrations were detected above the AWQS for antimony, arsenic, barium, beryllium, chromium, copper, iron, lead, magnesium, manganese, mercury, nickel, and sodium, some of which are naturally occurring. Arsenic, barium, beryllium, copper, magnesium, mercury, and nickel were not detected at concentrations above the AWQSs during the baseline groundwater sampling event in 2016.

Total cyanide was detected in four samples at concentrations below the AWQS. Total cyanide concentrations have increased from 47.9 µg/L to 76 µg/L and ND to 60 µg/L at GCMW-09SR and GCMW-20S, respectively.

2.3 Oxygen Injection System

2.3.1 Program Scope and Purpose

An oxygen injection system started operation in November 2017 and is currently in operation at the site. The oxygen injection system generates and injects oxygen into the subsurface to create an aerobic environment which facilitates the bioremediation of the dissolved MGP-related contaminants.

2.3.2 Current Monitoring Activities

The oxygen injection system monitoring activities are summarized in **Table 3a**, below.

Table 3a – Summary of Oxygen Injection System OM&M Activity

Current Activity	Description	Frequency
Oxygen System Monitoring	Routine inspection and maintenance of the system components, monitoring of operational parameters, and recording/adjusting of the injection flow rates.	Monthly
	Monitoring of oxygen purity.	Monthly
Performance Monitoring of Oxygen Injection Systems	Monitoring of total BTEX and total PAH concentrations in groundwater at upgradient and downgradient wells.	Quarterly
	Monitoring of groundwater chemistry parameters.	Quarterly

2.3.3 Oxygen Injection System OM&M Data

2.3.3.1 System Operational Data

The oxygen injection system operational data for Q2 2018 can be viewed in **Table 3**. The oxygen injection system experienced some downtime during the past quarter. The oxygen system shut down mainly due to local power outages.

Tables

Table 1. Water Level Measurements and Calculated Groundwater Elevations
Groundwater Monitoring Report - Q2 2018
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)
PZ-05	6/20/2018	8-18	1352	2	58.15	9.83	48.32
PZ-06	6/20/2018	7-17	1355	2	56.94	6.12	50.82
GCMW-08S	6/20/2018	26-36	1423	2	76.37	28.70	47.67
GCMW-08D	6/20/2018	60-70	1444	2	76.59	31.12	45.47
GCMW-09S-R	6/20/2018	6-16	1422	2	54.59	10.41	44.18
GCMW-09I-R	6/20/2018	24-34	1421	2	54.40	10.31	44.09
GCMW-10S-R	6/20/2018	15-20	1349	2	53.88	10.13	43.75
GCMW-10I-R	6/20/2018	20-30	1349	2	54.00	10.51	43.49
GCMW-11S	6/20/2018	8-20	1358	2	54.36	9.52	44.84
GCMW-11I	6/20/2018	23-28	1357	2	55.45	10.07	45.38
GCMW-12S	6/20/2018	14-24	1353	2	61.65	13.56	48.09
GCMW-13S[2]	NM	12-22	NM	2	NM	NM	NM
GCMW-13I	6/20/2018	25-30	1359	2	55.51	11.20	44.31
GCMW-14S-R	6/20/2018	10-20	1417	2	54.5	10.49	44.01
GCMW-14I-R	6/20/2018	23-28	1416	2	54.40	10.41	43.99
GCMW-15	6/20/2018	6-16	1436	2	NM[3]	4.85	NA[3]
GCMW-16	6/20/2018	6-16	1437	2	NM[3]	6.37	NA[3]
GCMW-20S	6/20/2018	9-19	1401	2	54.24	10.74	43.50
GCMW-20I	6/20/2018	35-45	1406	2	53.95	10.41	43.54
GCMW-20I2	6/20/2018	45-55	1404	2	54.52	10.15	44.37
GCMW-21I	6/20/2018	25-35	1448	2	76.68	31.77	44.91
GCMW-21I2	6/20/2018	45-55	1447	2	76.47	32.20	44.27
GCMW-22I	6/20/2018	27-37	1410	2	54.68	10.84	43.84
GCMW-22I2	6/20/2018	47-57	1410	2	54.56	10.52	44.04
GCRW-01	6/20/2018	15-25	1423	2	54.78	10.92	43.86
GCRW-02	6/20/2018	15-25	1420	2	54.17	10.23	43.94
GCRW-03	6/20/2018	15-25	1419	2	54.52	10.51	44.01

Notes:
bgs - Below Ground Surface
[1] - Well Elevations Obtained From 2015 Site Survey
[2]- Destroyed
[3]- Well elevation has not been surveyed
MSL - Mean Sea Level
NM - Not Measured

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

Analyte	Units	CAS No.	NY AWQS	GCMW-08S GCMW-08S 26 36 ft 6/21/2018	GCMW-08D GCMW-08D 60 70 ft 6/21/2018	GCMW-09SR GCMW-09SR 8 18 ft 6/18/2018	GCMW-09IR GCMW-09IR 24 34 ft 6/18/2018	GCMW-10SR GCMW-10SR 15 20 ft 6/20/2018	GCMW-10IR GCMW-10IR 20 30 ft 6/20/2018	GCMW-11S GCMW-11S 8 20 ft 6/20/2018	GCMW-11I GCMW-11I 23 28 ft 6/20/2018	GCMW-12S GCMW-12S 14 24 ft 6/20/2018	GCMW-12S Dup-02 14 24 ft 6/20/2018 GCMW-12S	GCMW-13I GCMW-13I 25 30 ft 6/20/2018
BTEX	ug/L													
Benzene		71-43-2	1	1 U	1 U	**3.2**	1 U	1 U	1 U	**38**	**20**	1 U	1 U	**2**
Toluene		108-88-3	5	1 U	1 U	**3**	1 U	1 U	1 U	**8.5**	**0.73 J**	1 U	1 U	**0.88 J**
Ethylbenzene		100-41-4	5	1 U	1 U	**31**	1 U	1 U	1 U	**270**	**8.7**	1 U	1 U	**120**
Total Xylene		1330-20-7	5	2 U	2 U	**23**	2 U	2 U	2 U	**200**	**9.2**	2 U	2 U	**170**
Total BTEX (ND=0)		TBTEX_ND0		ND	ND	**60.2**	ND	ND	ND	**516.5**	**38.63**	ND	ND	**292.9**
Other VOCs	ug/L													
Acetone		67-64-1	50*	6.2 U	5 U	13 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Bromodichloromethane		75-27-4	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform		75-25-2	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane		74-83-9	5	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide		75-15-0	60*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride		56-23-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene		108-90-7	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane		75-00-3	5	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform (Trichloromethane)		67-66-3	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane		74-87-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ	1 UJ
Dibromochloromethane		124-48-1	50*	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane		75-34-3	5	**1.4**	1 U	**0.71 J**	1 U	1 U	1 U	**1.9**	**0.59 J**	1 U	1 U	**0.55 J**
1,2-Dichloroethane		107-06-2	0.6	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 UJ	1 U	1 U
1,1-Dichloroethene		75-35-4	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total 1,2-Dichloroethene		540-59-0		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane		78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene		10061-01-5	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ	1 UJ
trans-1,3-Dichloropropene		10061-02-6	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ	1 UJ
2-Hexanone		591-78-6	50*	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Methyl ethyl ketone (2-Butanone)		78-93-3	50*	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 UJ	5 U	5 U
Methyl tert-butyl ether (MTBE)		1634-04-4	10*	1 U	**1**	1 U	1 U	1 U	1 U	1 U	**33**	1 U	1 U	1 U
4-Methyl-2-pentanone (MIBK)		108-10-1		5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Methylene chloride		75-09-2	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene		100-42-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane		79-34-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ	1 UJ
Tetrachloroethene (PCE)		127-18-4	5	1 U	**0.28 J**	1 U	**2.8**	1 U	**0.79 J**	1 U	**0.25 J**	1 U	1 U	**1.1**
1,1,1-Trichloroethane (TCA)		71-55-6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane		79-00-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)		79-01-6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride		75-01-4	2	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total VOCs (ND=0)		TVOC_ND0		**1.4**	**1.28**	**60.91**	**2.8**	ND	**0.79**	**518.4**	**72.47**	ND	ND	**294.5**

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

Analyte	Units	CAS No.	NY AWQS	GCMW-08S GCMW-08S 26 36 ft 6/21/2018	GCMW-08D GCMW-08D 60 70 ft 6/21/2018	GCMW-09SR GCMW-09SR 8 18 ft 6/18/2018	GCMW-09IR GCMW-09IR 24 34 ft 6/18/2018	GCMW-10SR GCMW-10SR 15 20 ft 6/20/2018	GCMW-10IR GCMW-10IR 20 30 ft 6/20/2018	GCMW-11S GCMW-11S 8 20 ft 6/20/2018	GCMW-11I GCMW-11I 23 28 ft 6/20/2018	GCMW-12S GCMW-12S 14 24 ft 6/20/2018	GCMW-12S Dup-02 14 24 ft 6/20/2018 GCMW-12S	GCMW-13I GCMW-13I 25 30 ft 6/20/2018
NYSDEC PAH17	ug/L													
Acenaphthene		83-32-9	20*	**10**	10 U	**160**	10 U	10 U	10 U	**240 J**	**4.7 J**	10 U	10 U	250 U
Acenaphthylene		208-96-8		**4.6 J**	10 U	**4.5 J**	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Anthracene		120-12-7	50*	**9.1 J**	10 U	**12 J**	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Benzo(a)anthracene		56-55-3	0.002*	**1.1**	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
Benzo(b)fluoranthene		205-99-2	0.002*	2 U	2 U	10 U	2 UJ	2 U	2 U	50 U	2 U	2 U	2 U	50 U
Benzo(k)fluoranthene		207-08-9	0.002*	1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
Benzo(g,h,i)perylene		191-24-2		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Benzo(a)pyrene		50-32-8	ND	1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
Chrysene		218-01-9	0.002*	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
Dibenz(a,h)anthracene		53-70-3		1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
Fluoranthene		206-44-0	50*	**8.4 J**	10 U	**5.8 J**	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Fluorene		86-73-7	50*	**5.7 J**	10 U	**85**	10 U	10 U	10 U	**67 J**	10 U	10 U	10 U	250 U
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
2-Methylnaphthalene		91-57-6		10 U	10 U	**62**	10 U	10 U	10 U	**220 J**	10 U	10 U	10 U	**110 J**
Naphthalene		91-20-3	10*	10 U	10 U	**630**	10 U	10 U	10 U	**3600**	**1.7 J**	10 U	10 U	**3600**
Phenanthrene		85-01-8	50*	**42**	10 U	**88**	10 U	10 U	10 U	**58 J**	10 U	10 U	10 U	250 U
Pyrene		129-00-0	50*	**11**	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Total PAH (17) (ND=0)		TPAH17_ND0		**91.9**	ND	**1047**	ND	ND	ND	**4185**	**6.4**	ND	ND	**3710**
NYSDEC PAH17 Other SVOCs	ug/L													
Bis(2-chloroethoxy)methane		111-91-1	5	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Bis(2-chloroethyl)ether		111-44-4	1	1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
2,2-oxybis(1-Chloropropane)		108-60-1	5	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Bis(2-ethylhexyl)phthalate		117-81-7	5	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
4-Bromophenyl phenyl ether		101-55-3		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Butyl benzyl phthalate		85-68-7	50*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Carbazole		86-74-8		10 U	10 U	50 U	10 U	10 U	10 U	**26 J**	**2.3 J**	10 U	10 U	250 U
4-Chloro-3-methylphenol		59-50-7		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
4-Chloroaniline		106-47-8	5	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
2-Chloronaphthalene		91-58-7	10*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
2-Chlorophenol		95-57-8		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
4-Chlorophenyl phenyl ether		7005-72-3		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Dibenzofuran		132-64-9		**3 J**	10 U	**15 J**	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	3	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	3	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	3	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
3,3-Dichlorobenzidine		91-94-1	5	10 U	10 U	50 UJ	10 U	10 UJ	10 UJ	250 UJ	10 UJ	10 UJ	10 UJ	250 UJ
2,4-Dichlorophenol		120-83-2	5	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

Analyte	Units	CAS No.	NY AWQS	GCMW-08S GCMW-08S 26 36 ft 6/21/2018	GCMW-08D GCMW-08D 60 70 ft 6/21/2018	GCMW-09SR GCMW-09SR 8 18 ft 6/18/2018	GCMW-09IR GCMW-09IR 24 34 ft 6/18/2018	GCMW-10SR GCMW-10SR 15 20 ft 6/20/2018	GCMW-10IR GCMW-10IR 20 30 ft 6/20/2018	GCMW-11S GCMW-11S 8 20 ft 6/20/2018	GCMW-11I GCMW-11I 23 28 ft 6/20/2018	GCMW-12S GCMW-12S 14 24 ft 6/20/2018	GCMW-12S Dup-02 14 24 ft 6/20/2018 GCMW-12S	GCMW-13I GCMW-13I 25 30 ft 6/20/2018
Diethyl phthalate		84-66-2	50*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Dimethyl phthalate		131-11-3	50*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
2,4-Dimethylphenol		105-67-9	50*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Di-n-butyl phthalate		84-74-2	50	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
4,6-Dinitro-2-methylphenol		534-52-1		20 U	20 U	100 U	20 UJ	20 U	20 U	500 UJ	20 U	20 U	20 U	500 UJ
2,4-Dinitrophenol		51-28-5	10*	20 U	20 U	100 U	20 UJ	20 UJ	20 UJ	500 UJ	20 UJ	20 UJ	20 UJ	500 UJ
2,4-Dinitrotoluene		121-14-2	5	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
2,6-Dinitrotoluene		606-20-2	5	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
Di-n-octyl phthalate		117-84-0	50*	10 U	10 U	50 UJ	10 UJ	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Hexachlorobenzene		118-74-1	0.04	1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	0.5	1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
Hexachlorocyclopentadiene		77-47-4	5	10 UJ	10 UJ	50 U	10 UJ	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Hexachloroethane		67-72-1	5	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
Isophorone		78-59-1	50*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
2-Methylnaphthalene		91-57-6		10 U	10 U	**62**	10 U	10 U	10 U	**220 J**	10 U	10 U	10 U	**110 J**
2-Methylphenol (o-Cresol)		95-48-7	1	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
4-Methylphenol (p-Cresol)		106-44-5	1	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
2-Nitroaniline		88-74-4	5	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
3-Nitroaniline		99-09-2	5	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
4-Nitroaniline		100-01-6	5	10 UJ	10 UJ	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Nitrobenzene		98-95-3	0.4	1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
2-Nitrophenol		88-75-5		10 UJ	10 UJ	50 U	10 UJ	10 U	10 U	250 U	10 U	10 U	10 U	250 U
4-Nitrophenol		100-02-7		20 U	20 U	100 U	20 U	20 U	20 U	500 U	20 U	20 U	20 U	500 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	50*	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7		1 U	1 U	5 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	25 U
Pentachlorophenol		87-86-5	1	20 U	20 U	100 U	20 UJ	20 U	20 U	500 U	20 U	20 U	20 U	500 U
Phenol		108-95-2	1	10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
1,2,4-Trichlorobenzene		120-82-1	5	2 U	2 U	10 U	2 U	2 U	2 U	50 U	2 U	2 U	2 U	50 U
2,4,5-Trichlorophenol		95-95-4		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
2,4,6-Trichlorophenol		88-06-2		10 U	10 U	50 U	10 U	10 U	10 U	250 U	10 U	10 U	10 U	250 U
Total SVOCs (ND=0)		TSVOC_ND0		**94.9**	ND	**1062**	ND	ND	ND	**4211**	**8.7**	ND	ND	**3710**

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

Location Name				GCMW-08S	GCMW-08D	GCMW-09SR	GCMW-09IR	GCMW-10SR	GCMW-10IR	GCMW-11S	GCMW-11I	GCMW-12S	GCMW-12S	GCMW-13I
Sample Name				GCMW-08S	GCMW-08D	GCMW-09SR	GCMW-09IR	GCMW-10SR	GCMW-10IR	GCMW-11S	GCMW-11I	GCMW-12S	Dup-02	GCMW-13I
Start Depth				26	60	8	24	15	20	8	23	14	14	25
End Depth				36	70	18	34	20	30	20	28	24	24	30
Depth Unit				ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
Sample Date				6/21/2018	6/21/2018	6/18/2018	6/18/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018	6/20/2018
Parent Sample													GCMW-12S	
Analyte	**Units**	**CAS No.**	**NY AWQS**											
PCB Aroclors	ug/L													
Aroclor 1016		12674-11-2		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1221		11104-28-2		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1232		11141-16-5		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1242		53469-21-9		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1248		12672-29-6		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1254		11097-69-1		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1260		11096-82-5		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1262		37324-23-5		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Aroclor 1268		11100-14-4		NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Total PCBs (Lab calculated)		1336-36-3	0.09	NA	NA	0.4 U	0.4 U	0.4 U	0.4 U	NA	NA	NA	NA	NA
Total Metals	ug/L													
Aluminum		7429-90-5		NA	NA	**63.1 J**	**51 J**	**45.4 J**	**63.7 J**	NA	NA	NA	NA	NA
Antimony		7440-36-0	3	NA	NA	20 U	20 U	20 U	20 U	NA	NA	NA	NA	NA
Arsenic		7440-38-2	25	NA	NA	**4.8 J**	15 U	15 U	15 U	NA	NA	NA	NA	NA
Barium		7440-39-3	1000	NA	NA	**96.6 J**	**112 J**	**80.7 J**	**161 J**	NA	NA	NA	NA	NA
Beryllium		7440-41-7	3*	NA	NA	2 U	2 U	2 U	2 U	NA	NA	NA	NA	NA
Cadmium		7440-43-9	5	NA	NA	4 U	4 U	4 U	4 U	NA	NA	NA	NA	NA
Calcium		7440-70-2		NA	NA	**68000**	**53800**	**105000**	**75800**	NA	NA	NA	NA	NA
Chromium		7440-47-3	50	NA	NA	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA
Cobalt		7440-48-4		NA	NA	50 U	**2.5 J**	50 U	50 U	NA	NA	NA	NA	NA
Copper		7440-50-8	200	NA	NA	25 U	25 U	25 U	25 U	NA	NA	NA	NA	NA
Iron		7439-89-6	300	NA	NA	**15500**	150 U	**38.1 J**	**67.6 J**	NA	NA	NA	NA	NA
Lead		7439-92-1	25	NA	NA	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA
Magnesium		7439-95-4	35000*	NA	NA	**10400**	**25900**	**20000**	**27400**	NA	NA	NA	NA	NA
Manganese		7439-96-5	300	NA	NA	**7070**	**260**	**4.3 J**	**14 J**	NA	NA	NA	NA	NA
Mercury		7439-97-6	0.7	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U	NA	NA	NA	NA	NA
Nickel		7440-02-0	100	NA	NA	40 U	40 U	40 U	40 U	NA	NA	NA	NA	NA
Potassium		7440-09-7		NA	NA	**3820 J**	**4990 J**	**6000**	**5760**	NA	NA	NA	NA	NA
Selenium		7782-49-2	10	NA	NA	20 U	20 U	20 U	20 U	NA	NA	NA	NA	NA
Silver		7440-22-4	50	NA	NA	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA
Sodium		7440-23-5	20000	NA	NA	**11800**	**35600**	**94700**	**83000**	NA	NA	NA	NA	NA
Thallium		7440-28-0	0.5*	NA	NA	20 U	20 U	20 U	20 U	NA	NA	NA	NA	NA
Vanadium		7440-62-2		NA	NA	**11.5 J**	50 U	50 U	50 U	NA	NA	NA	NA	NA
Zinc		7440-66-6	2000*	NA	NA	30 U	30 U	30 U	30 U	NA	NA	NA	NA	NA
Cyanides	ug/L													
Total Cyanide		57-12-5	200	NA	NA	**76 J**	10 UJ	10 UJ	10 UJ	NA	NA	NA	NA	NA

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

				Location Name	GCMW-14SR	GCMW-14IR	GCMW-15	GCMW-16	GCMW-20S	GCMW-20I	GCMW-20I	GCMW-20I2	GCMW-21I	GCMW-21I2	GCMW-22I
				Sample Name	GCMW-14SR	GCMW-14IR	GCMW-15	GCMW-16	GCMW-20S	GCMW-20I	DUP-01	GCMW-20I2	GCMW-21I	GCMW-21I2	GCMW-22I
				Start Depth	10	23	6	6	9	35	35	45	25	45	27
				End Depth	20	28	16	16	19	45	45	55	35	55	37
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/18/2018	6/18/2018	6/21/2018	6/21/2018	6/20/2018	6/18/2018	6/18/2018	6/18/2018	6/21/2018	6/21/2018	6/18/2018
				Parent Sample							GCMW-20I				
Analyte	**Units**	**CAS No.**	**NY AWQS**												
BTEX	ug/L														
Benzene		71-43-2	1	1 U	1 U	**0.51 J**	1 U	**0.57 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene		108-88-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene		100-41-4	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylene		1330-20-7	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Total BTEX (ND=0)		TBTEX_ND0		ND	ND	**0.51**	ND	**0.57**	ND	ND	ND	ND	ND	ND	ND
Other VOCs	ug/L														
Acetone		67-64-1	50*	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	6.5 U	5 U	5 U	
Bromodichloromethane		75-27-4	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Bromoform		75-25-2	50*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Bromomethane		74-83-9	5	1 UJ	1 UJ	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	
Carbon disulfide		75-15-0	60*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Carbon tetrachloride		56-23-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chlorobenzene		108-90-7	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chloroethane		75-00-3	5	1 UJ	1 UJ	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	
Chloroform (Trichloromethane)		67-66-3	7	1 U	1 U	1 U	**0.49 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chloromethane		74-87-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Dibromochloromethane		124-48-1	50*	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	
1,1-Dichloroethane		75-34-3	5	1 U	1 U	**1.2**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichloroethane		107-06-2	0.6	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	
1,1-Dichloroethene		75-35-4	5	1 U	1 U	**0.22 J**	**0.15 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Total 1,2-Dichloroethene		540-59-0		2 U	2 U	**1.3 J**	**0.58 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
1,2-Dichloropropane		78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
cis-1,3-Dichloropropene		10061-01-5	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
trans-1,3-Dichloropropene		10061-02-6	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
2-Hexanone		591-78-6	50*	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	
Methyl ethyl ketone (2-Butanone)		78-93-3	50*	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	
Methyl tert-butyl ether (MTBE)		1634-04-4	10*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.1**	1 U	
4-Methyl-2-pentanone (MIBK)		108-10-1		5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	
Methylene chloride		75-09-2	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Styrene		100-42-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1,2,2-Tetrachloroethane		79-34-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Tetrachloroethene (PCE)		127-18-4	5	1 U	**0.57 J**	**0.56 J**	**1.8**	1 U	**3.1**	**3.1**	**1.2**	1 U	1 U	**1.7**	
1,1,1-Trichloroethane (TCA)		71-55-6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1,2-Trichloroethane		79-00-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Trichloroethene (TCE)		79-01-6	5	1 U	1 U	**0.42 J**	**0.64 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Vinyl chloride		75-01-4	2	1 UJ	1 UJ	**3.3**	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	
Total VOCs (ND=0)		TVOC_ND0		ND	**0.57**	**7.51**	**3.66**	**0.57**	**3.1**	**3.1**	**1.2**	ND	**1.1**	**1.7**	

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

Location Name				GCMW-14SR	GCMW-14IR	GCMW-15	GCMW-16	GCMW-20S	GCMW-20I	GCMW-20I	GCMW-20I2	GCMW-21I	GCMW-21I2	GCMW-22I
Sample Name				GCMW-14SR	GCMW-14IR	GCMW-15	GCMW-16	GCMW-20S	GCMW-20I	DUP-01	GCMW-20I2	GCMW-21I	GCMW-21I2	GCMW-22I
Start Depth				10	23	6	6	9	35	35	45	25	45	27
End Depth				20	28	16	16	19	45	45	55	35	55	37
Depth Unit				ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
Sample Date				6/18/2018	6/18/2018	6/21/2018	6/21/2018	6/20/2018	6/18/2018	6/18/2018	6/18/2018	6/21/2018	6/21/2018	6/18/2018
Parent Sample										GCMW-20I				
Analyte	**Units**	**CAS No.**	**NY AWQS**											
NYSDEC PAH17	ug/L													
Acenaphthene		83-32-9	20*	10 U	10 U	**3.3 J**	10 U	**2 J**	10 U	10 U	10 U	**11**	10 U	10 U
Acenaphthylene		208-96-8		10 U	10 U	10 U	10 U	**1.1 J**	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene		120-12-7	50*	10 U	10 U	10 U	10 U	**0.69 J**	10 U	10 U	10 U	**2.2 J**	10 U	10 U
Benzo(a)anthracene		56-55-3	0.002*	1 U	1 U	1 U	1 U	**0.6 J**	**0.8 J**	**2.2 J**	1 U	**0.75 J**	1 U	1 U
Benzo(b)fluoranthene		205-99-2	0.002*	2 UJ	2 UJ	2 U	2 U	2 U	2 UJ	**1.8 J**	2 UJ	2 U	2 U	2 UJ
Benzo(k)fluoranthene		207-08-9	0.002*	1 U	1 U	1 U	1 U	1 U	1 U	**1**	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene		191-24-2		10 U	10 U	10 U	10 U	**2.2 J**	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene		50-32-8	ND	1 U	1 U	1 U	1 U	**0.76 J**	**0.74 J**	**2.4 J**	1 U	1 U	1 U	1 U
Chrysene		218-01-9	0.002*	2 U	2 U	2 U	2 U	2 U	2 U	**1.5 J**	2 U	2 U	2 U	2 U
Dibenz(a,h)anthracene		53-70-3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene		206-44-0	50*	10 U	10 U	10 U	10 U	10 U	10 U	**0.95 J**	10 U	**3.2 J**	10 U	10 U
Fluorene		86-73-7	50*	10 U	10 U	**1.7 J**	10 U	10 U	10 U	10 U	10 U	**2.2 J**	10 U	10 U
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	2 U	2 U	2 U	2 U	2 U	2 U	**1.3 J**	2 U	2 U	2 U	2 U
2-Methylnaphthalene		91-57-6		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene		91-20-3	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene		85-01-8	50*	10 U	10 U	**1.1 J**	10 U	10 U	10 U	10 U	10 U	**5 J**	10 U	10 U
Pyrene		129-00-0	50*	10 U	10 U	10 U	10 U	10 U	10 U	**2 J**	10 U	**5.1 J**	10 U	10 U
Total PAH (17) (ND=0)		TPAH17_ND0		ND	ND	**6.1**	ND	**7.35**	**1.54**	**13.15**	ND	**29.45**	ND	ND
NYSDEC PAH17 Other SVOCs	ug/L													
Bis(2-chloroethoxy)methane		111-91-1	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether		111-44-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-oxybis(1-Chloropropane)		108-60-1	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate		117-81-7	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether		101-55-3		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Butyl benzyl phthalate		85-68-7	50*	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Carbazole		86-74-8		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol		59-50-7		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline		106-47-8	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene		91-58-7	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol		95-57-8		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether		7005-72-3		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran		132-64-9		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3-Dichlorobenzidine		91-94-1	5	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol		120-83-2	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

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

				Location Name	GCMW-14SR	GCMW-14IR	GCMW-15	GCMW-16	GCMW-20S	GCMW-20I	GCMW-20I	GCMW-20I2	GCMW-21I	GCMW-21I2	GCMW-22I
				Sample Name	GCMW-14SR	GCMW-14IR	GCMW-15	GCMW-16	GCMW-20S	GCMW-20I	DUP-01	GCMW-20I2	GCMW-21I	GCMW-21I2	GCMW-22I
				Start Depth	10	23	6	6	9	35	35	45	25	45	27
				End Depth	20	28	16	16	19	45	45	55	35	55	37
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/18/2018	6/18/2018	6/21/2018	6/21/2018	6/20/2018	6/18/2018	6/18/2018	6/18/2018	6/21/2018	6/21/2018	6/18/2018
				Parent Sample							GCMW-20I				
Analyte	Units	CAS No.	NY AWQS												
Diethyl phthalate		84-66-2	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate		131-11-3	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol		105-67-9	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate		84-74-2	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol		534-52-1		20 UJ	20 UJ	20 U	20 U	20 U	20 UJ	20 UJ	20 UJ	20 U	20 U	20 UJ
2,4-Dinitrophenol		51-28-5	10*	20 UJ	20 UJ	20 U	20 U	20 UJ	20 UJ	20 UJ	20 UJ	20 U	20 U	20 UJ
2,4-Dinitrotoluene		121-14-2	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,6-Dinitrotoluene		606-20-2	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-octyl phthalate		117-84-0	50*	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Hexachlorobenzene		118-74-1	0.04	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene		77-47-4	5	10 UJ	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Hexachloroethane		67-72-1	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Isophorone		78-59-1	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene		91-57-6		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol (o-Cresol)		95-48-7	1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (p-Cresol)		106-44-5	1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline		88-74-4	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline		99-09-2	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline		100-01-6	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene		98-95-3	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol		88-75-5		10 UJ	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 U	10 U	10 UJ
4-Nitrophenol		100-02-7		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol		87-86-5	1	20 UJ	20 UJ	20 U	20 U	20 U	20 UJ	20 UJ	20 UJ	20 U	20 U	20 UJ
Phenol		108-95-2	1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene		120-82-1	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,4,5-Trichlorophenol		95-95-4		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol		88-06-2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total SVOCs (ND=0)		TSVOC_ND0		ND	ND	**6.1**	ND	**7.35**	**1.54**	**13.15**	ND	**29.45**	ND	ND

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

Analyte	Units	CAS No.	NY AWQS	GCMW-14SR GCMW-14SR 10 20 ft 6/18/2018	GCMW-14IR GCMW-14IR 23 28 ft 6/18/2018	GCMW-15 GCMW-15 6 16 ft 6/21/2018	GCMW-16 GCMW-16 6 16 ft 6/21/2018	GCMW-20S GCMW-20S 9 19 ft 6/20/2018	GCMW-20I GCMW-20I 35 45 ft 6/18/2018	GCMW-20I DUP-01 35 45 ft 6/18/2018 GCMW-20I	GCMW-20I2 GCMW-20I2 45 55 ft 6/18/2018	GCMW-21I GCMW-21I 25 35 ft 6/21/2018	GCMW-21I2 GCMW-21I2 45 55 ft 6/21/2018	GCMW-22I GCMW-22I 27 37 ft 6/18/2018
PCB Aroclors	ug/L													
Aroclor 1016		12674-11-2		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1221		11104-28-2		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1232		11141-16-5		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1242		53469-21-9		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1248		12672-29-6		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1254		11097-69-1		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1260		11096-82-5		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1262		37324-23-5		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Aroclor 1268		11100-14-4		NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Total PCBs (Lab calculated)		1336-36-3	0.09	NA	NA	0.42 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	NA	NA	0.4 U
Total Metals	ug/L													
Aluminum		7429-90-5		NA	NA	**45.9 J**	**62.4 J**	**84900**	**740 J**	**1360 J**	**73.4 J**	NA	NA	**663**
Antimony		7440-36-0	3	NA	NA	20 U	20 U	**8.7 J**	20 U	20 U	20 U	NA	NA	20 U
Arsenic		7440-38-2	25	NA	NA	**3.6 J**	15 U	**36.9**	15 U	15 U	15 U	NA	NA	15 U
Barium		7440-39-3	1000	NA	NA	**243**	**73.6 J**	**1240**	**138 J**	**134 J**	**110 J**	NA	NA	**103 J**
Beryllium		7440-41-7	3*	NA	NA	2 U	2 U	**6.8**	2 U	**0.24 J**	2 U	NA	NA	2 U
Cadmium		7440-43-9	5	NA	NA	4 U	4 U	**0.8 J**	4 U	4 U	4 U	NA	NA	4 U
Calcium		7440-70-2		NA	NA	**89000**	**28300**	**185000**	**53900**	**46400**	**44300**	NA	NA	**70500**
Chromium		7440-47-3	50	NA	NA	10 U	10 U	**221**	10 U	10 U	10 U	NA	NA	10 U
Cobalt		7440-48-4		NA	NA	50 U	50 U	**76**	50 U	50 U	50 U	NA	NA	50 U
Copper		7440-50-8	200	NA	NA	25 U	25 U	**286**	25 U	25 U	25 U	NA	NA	25 U
Iron		7439-89-6	300	NA	NA	**55300**	**58.1 J**	**162000**	**1990 J**	**3350 J**	150 U	NA	NA	**1210**
Lead		7439-92-1	25	NA	NA	10 U	10 U	**346**	10 U	10 U	10 U	NA	NA	10 U
Magnesium		7439-95-4	35000*	NA	NA	**15800**	**11700**	**60800**	**24500**	**21300**	**17100**	NA	NA	**28600**
Manganese		7439-96-5	300	NA	NA	**2040**	**4 J**	**11700**	**68.6**	**89.1**	15 U	NA	NA	**277**
Mercury		7439-97-6	0.7	NA	NA	0.2 U	0.2 U	**1.3**	0.2 U	0.2 U	0.2 U	NA	NA	0.2 U
Nickel		7440-02-0	100	NA	NA	40 U	40 U	**181**	**3.1 J**	**4.5 J**	**1.8 J**	NA	NA	**3.2 J**
Potassium		7440-09-7		NA	NA	**12700**	**2690 J**	**22800**	**4350 J**	**3900 J**	**3700 J**	NA	NA	**5920**
Selenium		7782-49-2	10	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	NA	NA	20 U
Silver		7440-22-4	50	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U
Sodium		7440-23-5	20000	NA	NA	**481000**	**43200**	**35100**	**33900**	**29000**	**43000**	NA	NA	**60000**
Thallium		7440-28-0	0.5*	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	NA	NA	20 U
Vanadium		7440-62-2		NA	NA	50 U	50 U	**236**	**2.9 J**	**4.8 J**	50 U	NA	NA	**2.9 J**
Zinc		7440-66-6	2000*	NA	NA	30 U	30 U	**820**	**45.7**	**35.8**	30 U	NA	NA	**72.5**
Cyanides	ug/L													
Total Cyanide		57-12-5	200	NA	NA	**6.9 J**	10 UJ	**60 J**	10 UJ	10 UJ	10 UJ	NA	NA	**2.9 J**

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

Analyte	Units	CAS No.	NY AWQS	Location Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
				Sample Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
				Start Depth	47	15	15	15	8	7
				End Depth	57	25	25	25	18	17
				Depth Unit	ft	ft	ft	ft	ft	ft
				Sample Date	6/18/2018	6/19/2018	6/18/2018	6/19/2018	6/20/2018	6/20/2018
				Parent Sample						
BTEX	ug/L									
Benzene		71-43-2	1		1 U	**1.6**	1 U	1 U	1 U	1 U
Toluene		108-88-3	5		1 U	**9.4**	1 U	1 U	1 U	1 U
Ethylbenzene		100-41-4	5		1 U	**36**	**0.39 J**	1 U	1 U	1 U
Total Xylene		1330-20-7	5		2 U	**43**	2 U	2 U	2 U	2 U
Total BTEX (ND=0)		TBTEX_ND0			ND	**90**	**0.39**	ND	ND	ND
Other VOCs	ug/L									
Acetone		67-64-1	50*		5 U	5 U	5.2 U	5 UJ	5 UJ	5 UJ
Bromodichloromethane		75-27-4	50*		1 U	1 U	1 U	1 U	1 U	1 U
Bromoform		75-25-2	50*		1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane		74-83-9	5		1 UJ	1 UJ	1 UJ	1 U	1 U	1 U
Carbon disulfide		75-15-0	60*		1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride		56-23-5	5		1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene		108-90-7	5		1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane		75-00-3	5		1 UJ	1 UJ	1 UJ	1 U	1 U	1 U
Chloroform (Trichloromethane)		67-66-3	7		1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane		74-87-3	5		1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane		124-48-1	50*		1 UJ	1 UJ	1 UJ	1 U	1 U	1 U
1,1-Dichloroethane		75-34-3	5		1 U	**0.67 J**	1 U	1 U	1 U	1 U
1,2-Dichloroethane		107-06-2	0.6		1 U	1 U	1 U	1 UJ	1 UJ	1 UJ
1,1-Dichloroethene		75-35-4	5		1 U	1 U	1 U	1 U	1 U	1 U
Total 1,2-Dichloroethene		540-59-0			2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane		78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene		10061-01-5	0.4		1 U	1 U	1 U	1 U	1 UJ	1 U
trans-1,3-Dichloropropene		10061-02-6	0.4		1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone		591-78-6	50*		5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
Methyl ethyl ketone (2-Butanone)		78-93-3	50*		5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
Methyl tert-butyl ether (MTBE)		1634-04-4	10*		1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (MIBK)		108-10-1			5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
Methylene chloride		75-09-2	5		1 U	1 U	1 U	1 U	1 U	1 U
Styrene		100-42-5	5		1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane		79-34-5	5		1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)		127-18-4	5		**3.3**	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane (TCA)		71-55-6	5		1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane		79-00-5	1		1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)		79-01-6	5		1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride		75-01-4	2		1 UJ	1 UJ	1 UJ	1 U	1 U	1 U
Total VOCs (ND=0)		TVOC_ND0			**3.3**	**90.67**	**0.39**	ND	ND	ND

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

			Location Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
			Sample Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
			Start Depth	47	15	15	15	8	7
			End Depth	57	25	25	25	18	17
			Depth Unit	ft	ft	ft	ft	ft	ft
			Sample Date	6/18/2018	6/19/2018	6/18/2018	6/19/2018	6/20/2018	6/20/2018
			Parent Sample						
Analyte	**Units**	**CAS No.**	**NY AWQS**						
NYSDEC PAH17	ug/L								
Acenaphthene		83-32-9	20*	10 U	**100**	10 U	10 U	10 U	10 U
Acenaphthylene		208-96-8		10 U	**4.4 J**	10 U	10 U	10 U	10 U
Anthracene		120-12-7	50*	10 U	**3.7 J**	10 U	10 U	10 U	10 U
Benzo(a)anthracene		56-55-3	0.002*	1 U	**1.3**	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene		205-99-2	0.002*	2 UJ	2 UJ	2 UJ	2 U	2 U	2 U
Benzo(k)fluoranthene		207-08-9	0.002*	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene		191-24-2		10 U	10 U	10 U	**1.8 J**	**1.9 J**	10 U
Benzo(a)pyrene		50-32-8	ND	1 U	1 U	**0.76 J**	1 U	1 U	1 U
Chrysene		218-01-9	0.002*	2 U	2 U	2 U	2 U	2 U	2 U
Dibenz(a,h)anthracene		53-70-3		1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene		206-44-0	50*	10 U	**9.3 J**	10 U	10 U	10 U	10 U
Fluorene		86-73-7	50*	10 U	**26**	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	2 U	2 U	2 U	2 U	2 U	2 U
2-Methylnaphthalene		91-57-6		10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene		91-20-3	10*	10 U	**12**	10 U	10 U	10 U	10 U
Phenanthrene		85-01-8	50*	10 U	**3.1 J**	10 U	10 U	10 U	10 U
Pyrene		129-00-0	50*	10 U	**12**	10 U	10 U	10 U	10 U
Total PAH (17) (ND=0)		TPAH17_ND0		ND	**171.8**	**0.76**	**1.8**	**1.9**	ND
NYSDEC PAH17 Other SVOCs	ug/L								
Bis(2-chloroethoxy)methane		111-91-1	5	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether		111-44-4	1	1 U	1 U	1 U	1 U	1 U	1 U
2,2-oxybis(1-Chloropropane)		108-60-1	5	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate		117-81-7	5	2 U	2 U	2.8 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether		101-55-3		10 U	10 U	10 U	10 U	10 U	10 U
Butyl benzyl phthalate		85-68-7	50*	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole		86-74-8		10 U	**1.4 J**	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol		59-50-7		10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline		106-47-8	5	10 U	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene		91-58-7	10*	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol		95-57-8		10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether		7005-72-3		10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran		132-64-9		10 U	**3.9 J**	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	3	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	3	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	3	10 U	10 U	10 U	10 U	10 U	10 U
3,3-Dichlorobenzidine		91-94-1	5	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ
2,4-Dichlorophenol		120-83-2	5	10 U	10 U	10 U	10 U	10 U	10 U

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

			Location Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
			Sample Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
			Start Depth	47	15	15	15	8	7
			End Depth	57	25	25	25	18	17
			Depth Unit	ft	ft	ft	ft	ft	ft
			Sample Date	6/18/2018	6/19/2018	6/18/2018	6/19/2018	6/20/2018	6/20/2018
			Parent Sample						
Analyte	Units	CAS No.	NY AWQS						
Diethyl phthalate		84-66-2	50*	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate		131-11-3	50*	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol		105-67-9	50*	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate		84-74-2	50	10 U	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol		534-52-1		20 UJ	20 UJ	20 UJ	20 U	20 U	20 U
2,4-Dinitrophenol		51-28-5	10*	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene		121-14-2	5	2 U	2 U	2 U	2 U	2 U	2 U
2,6-Dinitrotoluene		606-20-2	5	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-octyl phthalate		117-84-0	50*	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
Hexachlorobenzene		118-74-1	0.04	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	0.5	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene		77-47-4	5	10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
Hexachloroethane		67-72-1	5	2 U	2 U	2 U	2 U	2 U	2 U
Isophorone		78-59-1	50*	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene		91-57-6		10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol (o-Cresol)		95-48-7	1	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (p-Cresol)		106-44-5	1	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline		88-74-4	5	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline		99-09-2	5	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline		100-01-6	5	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene		98-95-3	0.4	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol		88-75-5		10 UJ	10 UJ	10 UJ	10 U	10 U	10 U
4-Nitrophenol		100-02-7		20 U	20 U	20 U	20 U	20 U	20 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	50*	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7		1 U	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol		87-86-5	1	20 UJ	20 UJ	20 UJ	20 U	20 U	20 U
Phenol		108-95-2	1	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene		120-82-1	5	2 U	2 U	2 U	2 U	2 U	2 U
2,4,5-Trichlorophenol		95-95-4		10 U	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol		88-06-2		10 U	10 U	10 U	10 U	10 U	10 U
Total SVOCs (ND=0)		TSVOC_ND0		ND	**177.1**	**0.76**	**1.8**	**1.9**	ND

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

			Location Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
			Sample Name	GCMW-22I2	GCRW-01	GCRW-02	GCRW-03	PZ-05	PZ-06
			Start Depth	47	15	15	15	8	7
			End Depth	57	25	25	25	18	17
			Depth Unit	ft	ft	ft	ft	ft	ft
			Sample Date	6/18/2018	6/19/2018	6/18/2018	6/19/2018	6/20/2018	6/20/2018
			Parent Sample						
Analyte	**Units**	**CAS No.**	**NY AWQS**						
PCB Aroclors	ug/L								
Aroclor 1016		12674-11-2		0.4 U	NA	NA	NA	NA	NA
Aroclor 1221		11104-28-2		0.4 U	NA	NA	NA	NA	NA
Aroclor 1232		11141-16-5		0.4 U	NA	NA	NA	NA	NA
Aroclor 1242		53469-21-9		0.4 U	NA	NA	NA	NA	NA
Aroclor 1248		12672-29-6		0.4 U	NA	NA	NA	NA	NA
Aroclor 1254		11097-69-1		0.4 U	NA	NA	NA	NA	NA
Aroclor 1260		11096-82-5		0.4 U	NA	NA	NA	NA	NA
Aroclor 1262		37324-23-5		0.4 U	NA	NA	NA	NA	NA
Aroclor 1268		11100-14-4		0.4 U	NA	NA	NA	NA	NA
Total PCBs (Lab calculated)		1336-36-3	0.09	0.4 U	NA	NA	NA	NA	NA
Total Metals	ug/L								
Aluminum		7429-90-5		**1590**	NA	NA	NA	NA	NA
Antimony		7440-36-0	3	20 U	NA	NA	NA	NA	NA
Arsenic		7440-38-2	25	15 U	NA	NA	NA	NA	NA
Barium		7440-39-3	1000	**149 J**	NA	NA	NA	NA	NA
Beryllium		7440-41-7	3*	2 U	NA	NA	NA	NA	NA
Cadmium		7440-43-9	5	4 U	NA	NA	NA	NA	NA
Calcium		7440-70-2		**54000**	NA	NA	NA	NA	NA
Chromium		7440-47-3	50	10 U	NA	NA	NA	NA	NA
Cobalt		7440-48-4		**63**	NA	NA	NA	NA	NA
Copper		7440-50-8	200	25 U	NA	NA	NA	NA	NA
Iron		7439-89-6	300	**2650**	NA	NA	NA	NA	NA
Lead		7439-92-1	25	**4.8 J**	NA	NA	NA	NA	NA
Magnesium		7439-95-4	35000*	**24200**	NA	NA	NA	NA	NA
Manganese		7439-96-5	300	**1420**	NA	NA	NA	NA	NA
Mercury		7439-97-6	0.7	0.2 U	NA	NA	NA	NA	NA
Nickel		7440-02-0	100	**19.2 J**	NA	NA	NA	NA	NA
Potassium		7440-09-7		**4090 J**	NA	NA	NA	NA	NA
Selenium		7782-49-2	10	20 U	NA	NA	NA	NA	NA
Silver		7440-22-4	50	10 U	NA	NA	NA	NA	NA
Sodium		7440-23-5	20000	**42100**	NA	NA	NA	NA	NA
Thallium		7440-28-0	0.5*	20 U	NA	NA	NA	NA	NA
Vanadium		7440-62-2		**6.9 J**	NA	NA	NA	NA	NA
Zinc		7440-66-6	2000*	**85.1**	NA	NA	NA	NA	NA
Cyanides	ug/L								
Total Cyanide		57-12-5	200	10 UJ	NA	NA	NA	NA	NA

Table 2. Groundwater Analytical Results
Groundwater Monitoring Report - Q2 2018
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)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX, Total VOCs, Total PAHs, and Total SVOCs are calculated using detects only.
Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

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

CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

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

Validation Qualifiers:
J = The result is an estimated value.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Table 3. Oxygen Injection System Operational Data
Groundwater Monitoring Report - Q2 2018
Glen Cove Former MGP Site
Glen Cove, New York

	Operational Days		Oxygen Injected Per Month (lbs)
Month 1	Apr-18	27	1,957
Month 2	May-18	30	2,801
Month 3	Jun-18	30	2,915
Total Operational Days in Q2 2018			87
Total Oxygen in Q2 2018 (lbs)			7,672.95
Running Total for Oxygen Through Q2 2018 (lbs)			**7,672.95**

			4/17/2018						5/25/2018						6/29/2018					
	O_2%		84.9						87.3						86.9					
	R		10.73						10.73						10.73					
	Temp R (T)		680						630						650					
		Depth	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSIa (P)	n=PV/RT lbs O2	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSIa (P)	n=PV/RT lbs O2	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSIa (P)	n=PV/RT lbs O2
Injection Bank 1	Point 01I	34	0	0.000	0.000	30.0	44.7	0.000	0	0.000	0.000	27.5	42.2	0.000	0	0.000	0.000	22.5	37.2	0.000
	Point 02S	31	0	0.000	0.000	30.0	44.7	0.000	0	0.000	0.000	27.5	42.2	0.000	0	0.000	0.000	22.5	37.2	0.000
	Point 02I	34	18	29.314	58.629	28.5	43.2	0.295	14	22.266	44.532	26.5	41.2	0.237	14	21.015	42.030	22.0	36.7	0.192
	Point 03S	21	32	43.211	86.422	15.0	29.7	0.299	22	31.409	62.818	18.5	33.2	0.269	20	28.120	56.241	17.5	32.2	0.226
	Point 03I	34	26	37.120	74.240	18.5	33.2	0.287	26	35.985	71.969	16.5	31.2	0.290	20	27.233	54.466	15.5	30.2	0.205
	Point 04S	21	26	31.363	62.725	9.0	23.7	0.173	26	30.354	60.708	7.5	22.2	0.174	26	29.311	58.621	6.0	20.7	0.151
	Point 04I	34	28	37.168	74.335	14.0	28.7	0.248	28	36.842	73.685	13.5	28.2	0.268	22	28.690	57.380	13.0	27.7	0.198
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Oxygen Injected Per Day (lb)			**41.644**						**39.637**						**31.104**					
		Depth	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSIa (P)	n=PV/RT lbs O2	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSIa (P)	n=PV/RT lbs O2	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSIa (P)	n=PV/RT lbs O2
Injection Bank 2	Point 05S	21	30	36.567	73.135	9.5	24.2	0.206	22	25.972	51.943	8.0	22.7	0.152	40	46.698	93.397	7.5	22.2	0.258
	Point 05I	34	0	0.000	0.000	18.0	32.7	0.000	30	39.474	78.948	13.5	28.2	0.288	38	49.555	99.110	13.0	27.7	0.342
	Point 06S	21	28	34.480	68.961	10.0	24.7	0.198	24	28.333	56.666	8.0	22.7	0.166	38	43.861	87.722	7.0	21.7	0.237
	Point 06I	34	0	0.000	0.000	27.5	42.2	0.000	0	0.000	0.000	25.0	39.7	0.000	12	18.377	36.754	23.5	38.2	0.175
	Point 07S	21	32	33.826	67.652	3.5	18.2	0.143	34	35.940	71.880	3.5	18.2	0.169	40	41.698	83.395	3.0	17.7	0.184
	Point 07I	34	34	43.531	87.062	12.0	26.7	0.270	20	25.366	50.731	11.5	26.2	0.172	38	47.733	95.465	11.0	25.7	0.306
	Point 08S	21	30	32.571	65.143	4.5	19.2	0.146	16	17.371	34.743	4.5	19.2	0.086	36	38.054	76.108	3.5	18.2	0.173
	Point 08I	34	0	0.000	0.000	23.0	37.7	0.000	58	80.273	160.546	16.5	31.2	0.647	38	51.743	103.486	15.5	30.2	0.389
Total Oxygen Injected Per Day (lb)			**30.830**						**53.746**						**66.052**					
System Total Per Day (lb)			**72.47**						**93.38**						**97.16**					

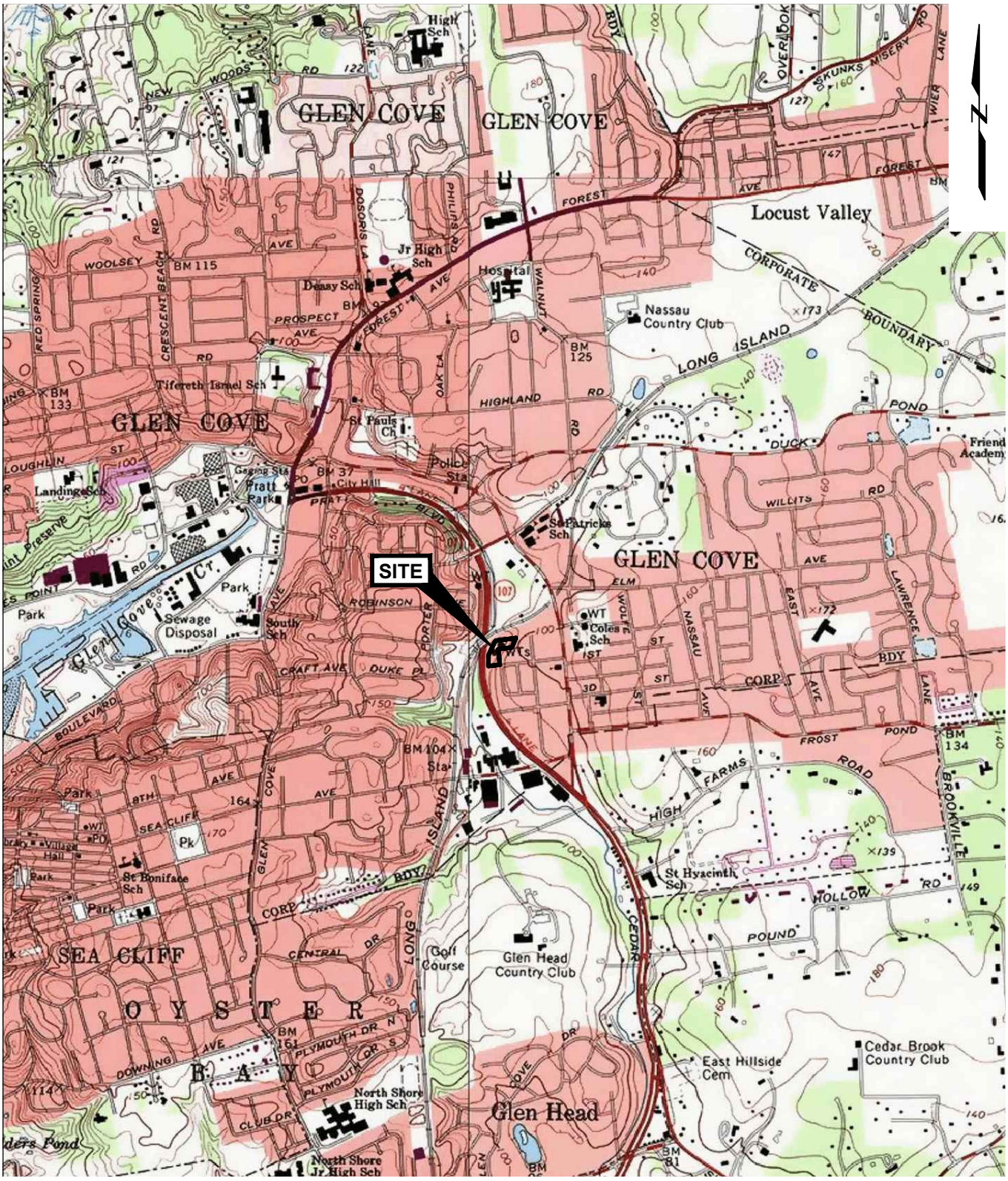
Notes:
SCFH (M) = Measured flow rate
SCFH (C*) = Flow rate converted for oxygen (Flow meters are calibrated for air)
CF/D (V) = Volume of oxygen injected per day
PSI (M) = Measured pressure
PSIa (P) = Pressure converted to atmospheric pressure
n = PV/RT = (lb Moles)
lbs = n*32 lb/lb mole
Temperature = Degrees Rankine
R = Constant (10.73)

System Operating Specs
Total of 2 injection banks
Oxygen is injected for 10 minutes during each injection cycle
Each Injection bank operates for 12 injection cycles per day
Each injection point injects oxygen for 120 min per day (10 min per cycle * 12 cycles)

Example
Bank 1 starts injection at 700AM
Bank 1 finishes injection at 710AM
System is recharging 710AM to 800AM
Bank 2 starts injection at 800AM
Bank 2 finishes injection at 810AM
System is recharging 810AM to 900AM
(Keep repeating cycle for course of day)

System Downtime
System down (4/22-4/24, 5/3-5/4, and 5/15) power outage

Figures



NOTES:

MAP CREATED WITH TOPO!™ ©2000
WILDFLOWER PRODUCTIONS *(www.topo.com)*

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Glen Cove, New York

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SITE LOCATION MAP

Project 093270 | October 2018 | Fig. 1

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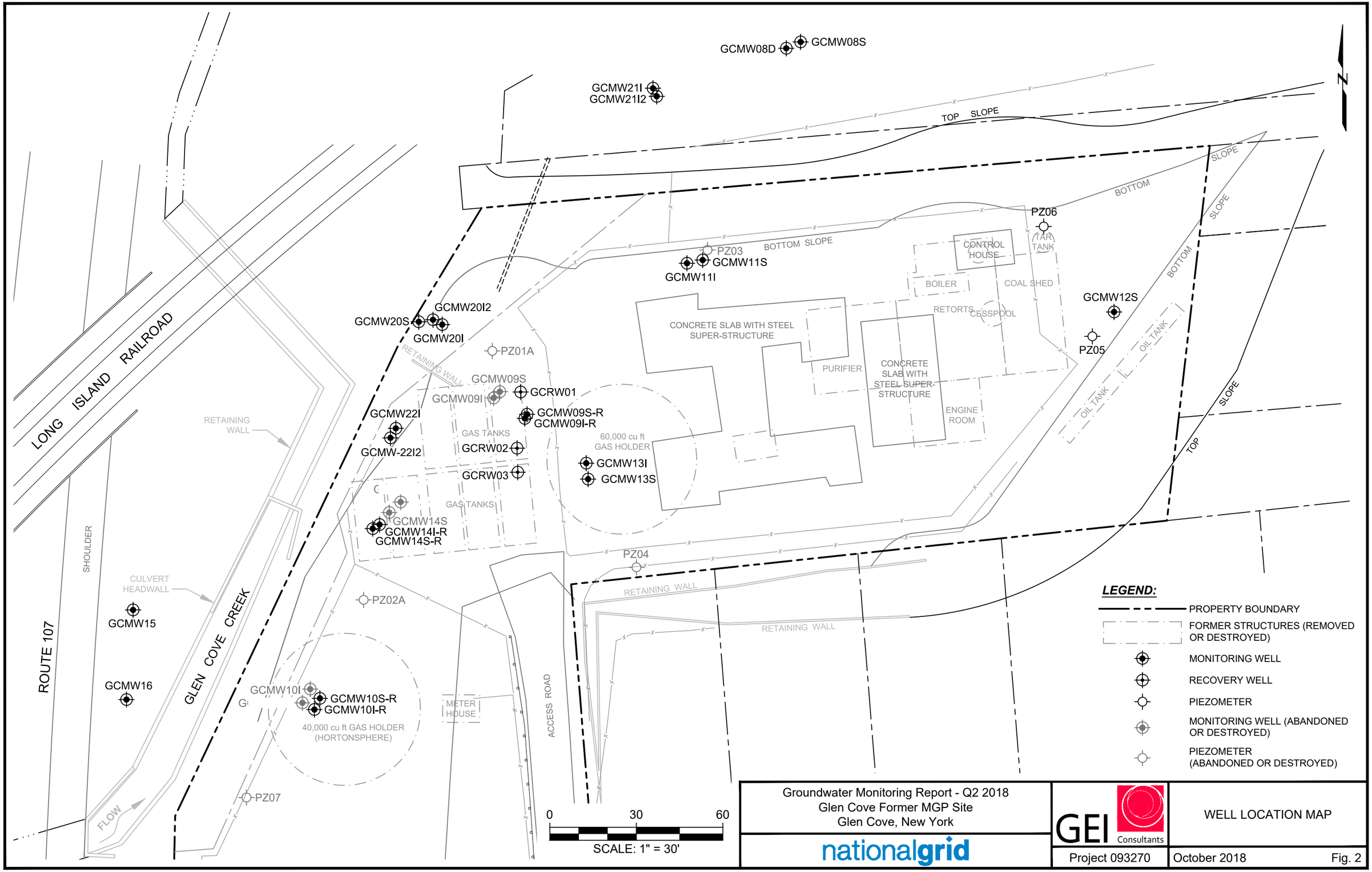

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WELL LOCATION MAP

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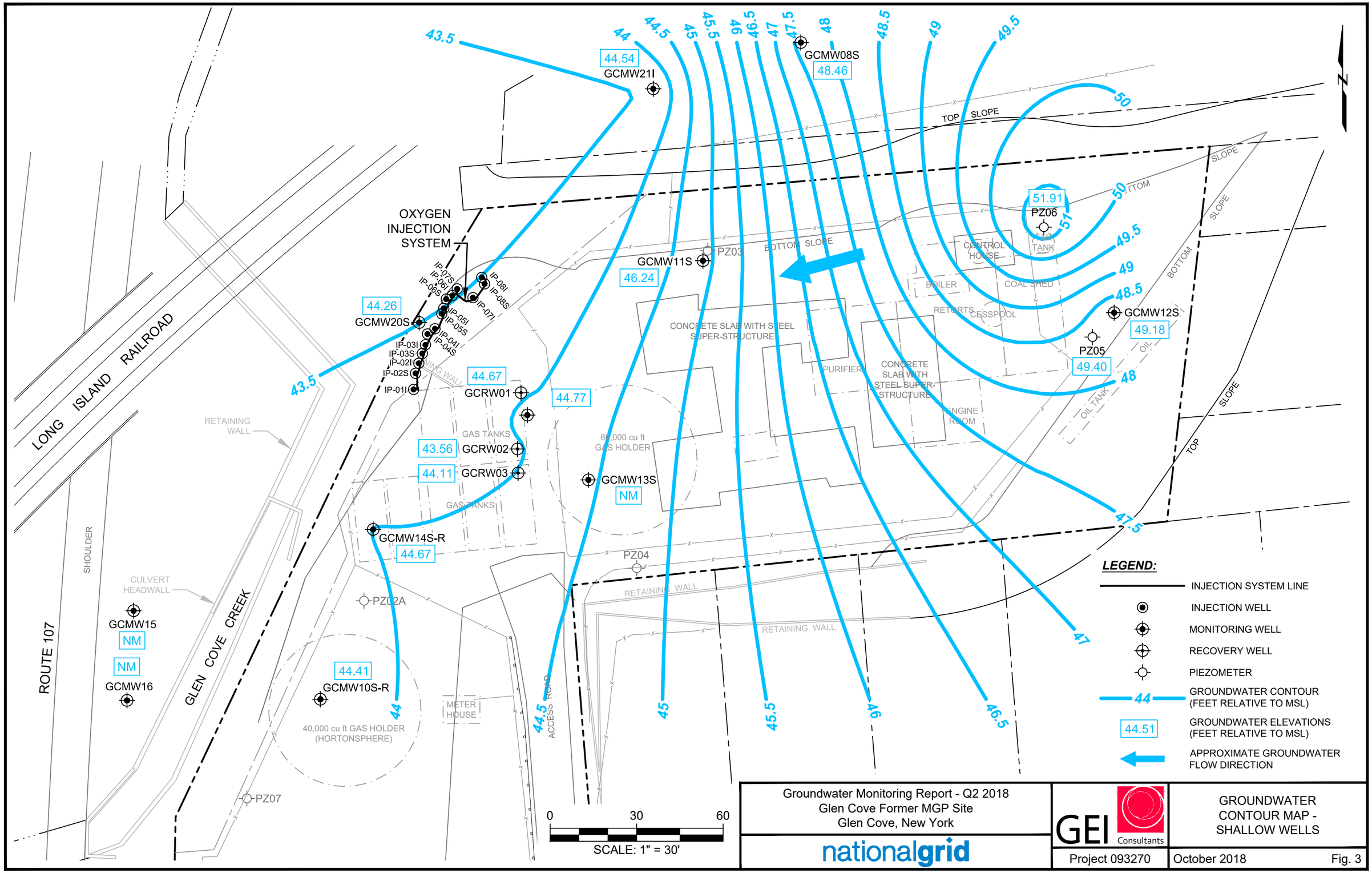

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GROUNDWATER CONTOUR MAP - SHALLOW WELLS

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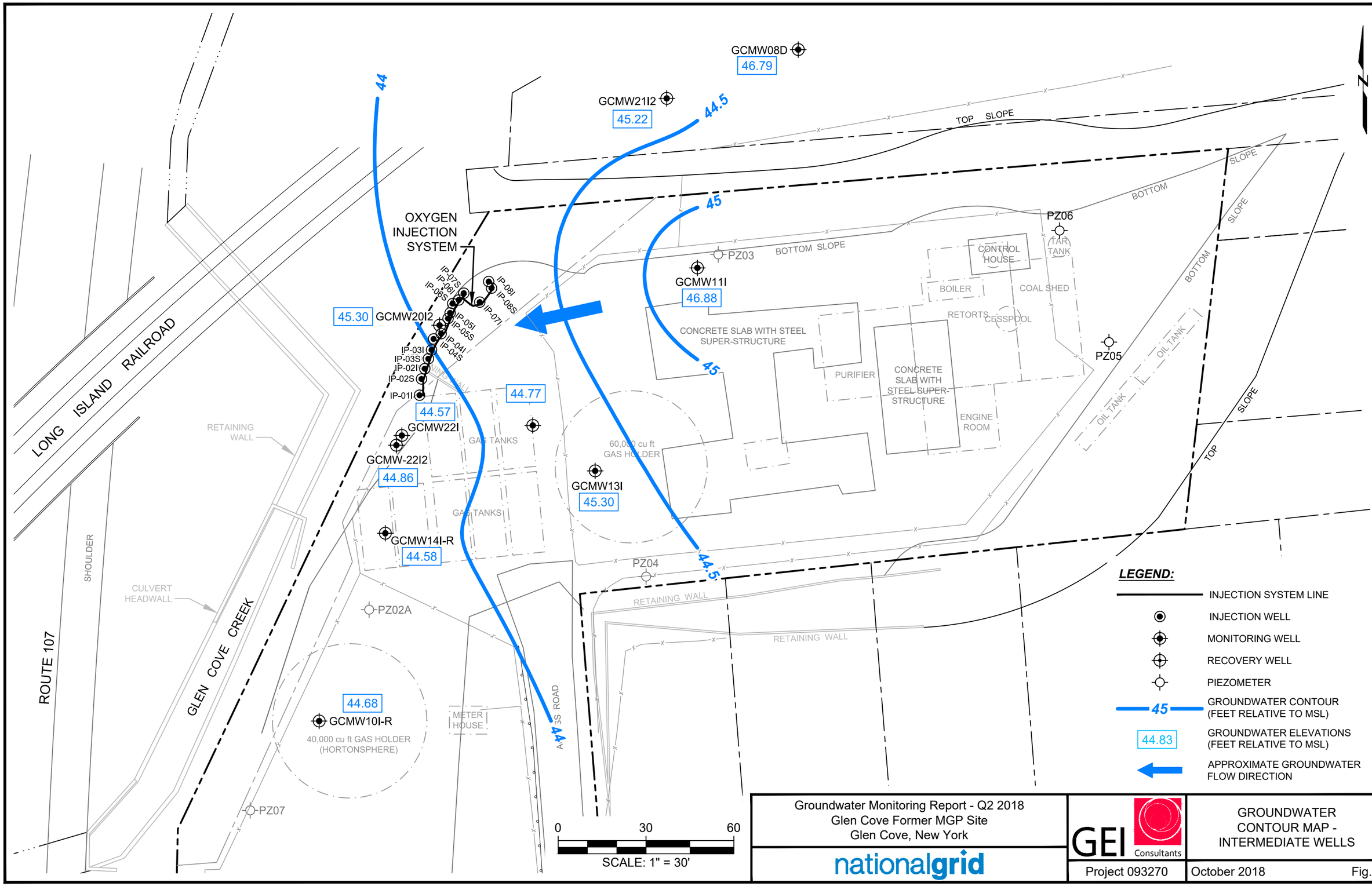

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GROUNDWATER CONTOUR MAP - INTERMEDIATE WELLS

Project 093270 | October 2018 | Fig. 4

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Sample ID:	GCMW-09S						
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010
BTEX (µg/L)	30	133	2	98	118	65	45
PAHs (µg/L)	305	272	380	543	1,907	495	451

Sample ID:	GCMW-11S														
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	1,003	1,776	1,319	1,163	1,070	1,048	1,002	1,073	449	983	922	924	711	394	456.2	516.5
PAHs (µg/L)	6,523	4,455	7,421	6,462	4,964	5,036	4,750	5,685	5,206	6,066	6,774	5,914	5,262	2,329	371.7	4,185

Sample ID:	PZ-03					
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010
BTEX (µg/L)	283	221	NS	NS	NS	NS
PAHs (µg/L)	3,221	1,242	NS	NS	NS	NS

Sample ID:	GCMW-20S				
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018	
BTEX (µg/L)	NS	3	1.57	0.57	
PAHs (µg/L)	NS	116	50.13	7.35	

Sample ID:	GCRW-01						
Sample Date:	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	293	102	75	62	14	23.37	90
PAHs (µg/L)	5,894	3,928	2,587	651	555	43.8	171.8

Sample ID:	GCMW-21I			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	3	ND	0.31	ND
PAHs (µg/L)	274	64	117	29.45

Sample ID:	GCMW-08S							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011
BTEX (µg/L)	1	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	346	282	14	180	229	5	322	37
Sample ID:	GCMW-08S							
Sample Date:	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	13.15	ND
PAHs (µg/L)	ND	203	59	132	47	256	95.99	91.9

Sample ID:	GCMW-09S-R			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	385	141	102.4	60.2
PAHs (µg/L)	2,482	1,670	946.5	1,047

Sample ID:	GCRW-02						
Sample Date:	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	16	38	62	100	ND	2.1	0.39
PAHs (µg/L)	1,576	37	719	348	3	2.4	0.76

Sample ID:	GCRW-03						
Sample Date:	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	122	65	96	11	5	0.5	ND
PAHs (µg/L)	2,274	261	339	37	83	ND	1.8

Sample ID:	GCMW-14S							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jun-2018
BTEX (µg/L)	3	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	9	ND	21	ND	ND	2	ND	ND

Sample ID:	GCMW-14S-R			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	4	ND	ND	ND
PAHs (µg/L)	11	ND	ND	ND

Sample ID:	GCMW-15							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011
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-15							
Sample Date:	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	0.37	0.51
PAHs (µg/L)	1	1	3	ND	4	4	3.42	6.1

Sample ID:	PZ-02A							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011
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-16							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011
BTEX (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND
Sample ID:	GCMW-16							
Sample Date:	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
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-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jun-2011
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-10S							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jun-2011
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-R			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND

Sample ID:	GCMW-13S										
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011	Jan-2012	Jul-2012	Jan-2013	Jul-2013
BTEX (µg/L)	456	NS	1,327	564	836	939	950	821	624	656	469	NS
PAHs (µg/L)	4,581	NS	11,047	7,128	10,498	8,591	11,885	13,387	16,538	12,174	19,987	NS

Sample ID:	PZ-04						
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	11	3	ND	ND	ND	ND	ND

Sample ID:	PZ-06							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Oct-2010	Jul-2011
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	NS
PAHs (µg/L)	ND	3	ND	ND	ND	ND	ND	NS
Sample ID:	PZ-06							
Sample Date:	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND

Sample ID:	GCMW-12S							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	6	1	ND	ND	ND	ND	ND	ND
Sample ID:	GCMW-12S							
Sample Date:	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
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-05							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	10/1/10	Jul-2011
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND	NS
PAHs (µg/L)	ND	ND	ND	ND	ND	ND	ND	NS
Sample ID:	PZ-05							
Sample Date:	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	NS	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	NS	ND	ND	ND	ND	ND	ND	1.9

LEGEND:

- PROPERTY BOUNDARY
- FORMER STRUCTURES (REMOVED OR DESTROYED)
- MONITORING WELL
- RECOVERY WELL
- PIEZOMETER
- MONITORING WELL (ABANDONED OR DESTROYED)
- PIEZOMETER (ABANDONED OR DESTROYED)
- NS NOT SAMPLED
- ND NOT DETECTED
- PAHs POLYCYCLIC AROMATIC HYDROCARBONS
- BTEX BENZENE, TOLUENE, ETHYLBENZENE, XYLENE
- * NOT SAMPLED DUE TO MEASURABLE LEVELS OF DNAPL
- GCMW8S Q2 2018 INDIVIDUAL BTEX OR PAH CONCENTRATION EXCEEDS NYSAWQS

N

GCMW08S
GCMW21I
GCMW11S
PZ03
PZ06
GCMW12S
PZ05
GCRW01
GCMW09S-R
GCRW02
GCRW03
GCMW13S
GCMW14S
GCMW14S-R
GCMW15
PZ02A
GCMW16
GCMW10S-R
PZ07
PZ04
GCMW09S

TOP SLOPE
BOTTOM SLOPE
BOTTOM
SLOPE
TOP SLOPE
BOTTOM SLOPE
RETAINING WALL
CONTROL HOUSE
TAR TANK
BOILER
COAL SHED
RETORTS
DESSPOOL
CONCRETE SLAB WITH STEEL SUPER-STRUCTURE
PURIFIER
CONCRETE SLAB WITH STEEL SUPER-STRUCTURE
ENGINE ROOM
OIL TANK
OIL TANK
GAS TANKS
60,000 cu ft GAS HOLDER
GAS TANKS
SHOULDER
CULVERT HEADWALL
GLEN COVE CREEK
ROUTE 107
FLOW
METER HOUSE
ACCESS ROAD
0,000 cu ft GAS HOLDER (HORTONSPHERE)
RETAINING WALL
RETAINING WALL
SLOPE
LONG ISLAND RAILROAD

0 20 40
SCALE: 1" = 20'

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GROUNDWATER ANALYTICAL RESULTS - SHALLOW WELLS

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Sample ID:	GCMW-08D																
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND
PAHs (µg/L)	10	ND	ND	ND	ND	ND	ND	ND	230	ND	ND	ND	ND	ND	ND	ND

Sample ID:	GCMW-11I															
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	1,062	275	ND	21	34	47	23	12	13	5	4	6	4	2	139	38.63
PAHs (µg/L)	1,488	16	5	ND	ND	617	ND	ND	529	550	378	500	212	167	580.7	6.4

Sample ID:	GCMW-21I2			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND
PAHs (µg/L)	1	10	ND	ND

Sample ID:	GCMW-20I2			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND

Sample ID:	GCMW-20I			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	2	ND	ND	ND
PAHs (µg/L)	997	58	9.54	13.15

Sample ID:	PZ-01A						
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010
BTEX (µg/L)	223	116	4	ND	ND	ND	ND
PAHs (µg/L)	581	199	7	2	ND	ND	ND

Sample ID:	GCMW-09I						
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010
BTEX (µg/L)	38	9	35	ND	ND	1	ND
PAHs (µg/L)	1,564	633	281	55	342	286	22

Sample ID:	GCMW-09I-R			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	6	ND	ND	ND
PAHs (µg/L)	157	148	1.1	ND

Sample ID:	GCMW-22I			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	4	ND	ND	ND
PAHs (µg/L)	26	8	ND	ND

Sample ID:	GCMW-22I2			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND

Sample ID:	GCMW-14I						
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010
BTEX (µg/L)	ND	ND	ND	ND	ND	ND	ND
PAHs (µg/L)	10	ND	ND	ND	ND	1	ND

Sample ID:	GCMW-14I-R			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	ND	ND

Sample ID:	GCMW-10I							
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jun-2011
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-10I-R			
Sample Date:	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	ND	ND	ND	ND
PAHs (µg/L)	ND	ND	2.3	ND

Sample ID:	GCMW-13I															
Sample Date:	2004	2005	Feb-2008	Mar-2010	Jun-2010	Sep-2010	Dec-2010	Jul-2011	Jan-2012	Jul-2012	Jan-2013	Jul-2013	Jul-2014	Feb-2016	Mar-2018	Jun-2018
BTEX (µg/L)	438	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	261.8	292.9
PAHs (µg/L)	3,748	48	ND	25	ND	9	ND	ND	16	13	19	10	4	65	3,181	3,710

LEGEND:

- PROPERTY BOUNDARY
- FORMER STRUCTURES (REMOVED OR DESTROYED)
- MONITORING WELL
- RECOVERY WELL
- PIEZOMETER
- MONITORING WELL (ABANDONED OR DESTROYED)
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- GCMW11I — Q2 2018 INDIVIDUAL BTEX OR PAH CONCENTRATION EXCEEDS NYSAWQS

N

0 20 40

SCALE: 1" = 20'

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GROUNDWATER ANALYTICAL RESULTS - INTERMEDIATE WELLS

October 2018 Fig. 6

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