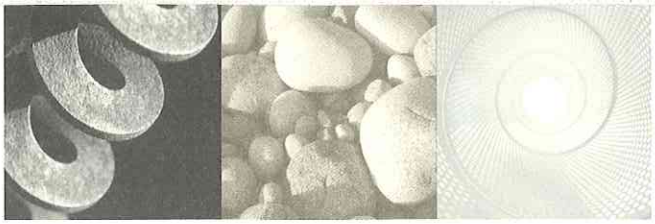

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

**Quarterly Groundwater Monitoring Report**
**Second Quarter (Q2) 2008**

# Sag Harbor Former MGP Site

Village of Sag Harbor
Suffolk County, Long Island, NY
Site ID No. 1-52-159

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

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# 1. Sag Harbor Site and Adjacent Off-Site Areas

## Q2 2008 Groundwater Monitoring Event Summary

**Event Date:** June16 through June 20, 2008

**Site Phase:** Quarterly groundwater monitoring

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

**Monitoring Program:**

*Number of Wells:* A total of **31** monitoring wells are located on-site and adjacent to the site (see **Figure 2**). MW-05 was destroyed sometime between March and June 2007.

*Hydrological Data:* Groundwater levels were measured at **29** monitoring wells. Depth to groundwater and calculated groundwater elevations are shown on **Table 1**. The groundwater flow direction was generally to the west towards Sag Harbor Cove (see **Figures 3** through **6**). The ranges in depth to water and water table elevation data, as well as calculated hydraulic gradients for the shallow and intermediate portions of the aquifer were as follows:

- Depth to the water table in shallow wells at high tide ranged from **0.49** (SHMW-12S) to **5.00** (SHMW-11S) feet below the well measuring point.
- Water table elevations in shallow wells at high tide ranged from **0.74** (SHMW-11S) to **3.81** (SHMW-08S) feet above mean sea level (MSL).
- Depth to the water table in shallow wells at low tide ranged from **0.51** (SHMW-12S) to **5.36** (SHMW-11S) feet below the well measuring point.
- Water table elevations in shallow wells at low tide ranged from **0.38** (SHMW-11S) to **3.83** (SHMW-08S) feet above MSL.
- The calculated shallow hydraulic gradient for high tide was **0.0074** feet/foot. The calculated shallow hydraulic gradient for low tide was **0.0085** feet/foot.

- Depth to groundwater in intermediate wells at high tide ranged from **0.26** (SHMW-12I) to **4.77** (SHMW-11I) feet below the well measuring point.
- Groundwater elevations in intermediate wells at high tide ranged from **1.02** (SHMW-11I) to **3.32** (SHMW-02I) feet above MSL.
- Depth to groundwater in intermediate wells at low tide ranged from **0.41** (SHMW-12I) to **5.54** (SHMW-11I) feet below the well measuring point.
- Groundwater elevations in intermediate wells at low tide ranged from **0.25** (SHMW-11I) to **2.90** (SHMW- 02I and SHMW-13I) feet above MSL.
- The calculated intermediate hydraulic gradient for high tide was **0.0060** feet/foot. The calculated intermediate hydraulic gradient for low tide was **0.0069** feet/foot.

*NAPL Thickness Data:*

**Table 2** provides a summary of historic non-aqueous phase liquid (NAPL) data. Seven monitoring wells (MW-02, MW-03, MW-04, SHMW-02I, SHMW-04S, SHMW-06S and SHMW-07S) are typically monitored for NAPL on a quarterly basis as part of the groundwater monitoring program. In addition, all of the wells are monitored for NAPL annually. In Q2 2008, 17 wells were monitored for NAPL.

As shown in **Table 2**, in Q2 2008, measurable thicknesses of dense non-aqueous phase liquid (DNAPL) were found in SHMW-02I and SHMW-04S at approximate thicknesses of 1.5 feet and 0.6 feet, respectively. Trace amounts of DNAPL were observed at MW-01, MW-02, MW-03, MW-04 and SHMW-06S.

*Chemical Data:* A total of **18** monitoring wells were sampled for BTEX and MTBE (EPA Method 8260) and PAHs (EPA Method 8270). Wells were sampled during the period June 17 to June 20, 2008. Chemical data for Q2 2008 (see **Table 3**) indicate:

- Total BTEX concentrations ranged from less than method detection limits in three of the wells sampled to **8,059** micrograms per liter (µg/L) in MW-04S.
- Total PAH concentrations ranged from less than method detection limits in eight of the wells sampled to **3,455** µg/L in MW-02.

**Data Trend Analysis:** Fairly consistent BTEX and PAH concentrations (see historical data in **Tables 4** and **5**) have been detected in shallow groundwater on and adjacent to the site in Q2 2008 when compared to previous sampling events.

In Q2 2008, BTEX concentrations were below laboratory detection limits in three of the 17 shallow wells sampled. BTEX concentrations have been below detection limits in two shallow wells (SHMW-11S and SHMW-13S) since these wells were installed in 2002. In 10 of the 14 shallow wells that had detectable BTEX concentrations, the BTEX concentrations were lower than their respective means. In three of the remaining 4 wells, the BTEX concentrations were similar to, within the same order of magnitude, as their respective means. In the final remaining well, the BTEX concentration was within one order of magnitude of the mean.

Between Q1 2008 and Q2 2008, BTEX concentrations decreased in four of the 12 shallow wells with detected BTEX concentrations that were sampled in both quarters. BTEX increases were observed in eight of the shallow wells, but these increases were consistent with typical historic fluctuations. Most of the BTEX increases were insignificant, within the same order of magnitude in concentrations between Q1 and Q2 2008.

In Q2 2008, one intermediate well, SHMW-02I, was sampled. The BTEX concentration in SHMW-02I remained similar between Q1 2008 (18 µg/l) and Q2 2008 (41 µg/l).

In Q2 2008, PAH concentrations were below the laboratory detection limits in eight of 17 shallow wells sampled. In all of the nine shallow wells that had detectable PAH concentrations, the PAH concentrations were lower than their respective means.

Between Q1 2008 and Q2 2008, PAH concentrations decreased in three of the 15 shallow wells that were sampled in both quarters, and remained below laboratory detection limits in six other shallow wells. PAHs increased in the six remaining shallow wells sampled; however, these increases were not significant being consistent with typical historic fluctuations, and were lower than their respective means.

In Q2 2008, one intermediate well, SHMW-02I, was sampled. The PAH concentration increased from 8 µg/l in Q1 2008 to 42 µg/l in Q2 2008.

MTBE concentrations remained below laboratory detection limits in all wells and were estimated at concentrations below the method detection level of 10 ug/L in three wells at concentrations of between 1 and 2 ug/L.

Water table elevations (see **Table 1**) at shallow wells during high tide conditions have decreased between Q1 2008 and Q2 2008 in 12 of the 16 wells. Decreases in these wells ranged from 0.16 to 1.11 feet. The average decrease over these wells was 0.7 feet. The remaining four wells had increases of between 0.1 and 0.51 feet.

Water table elevations at shallow wells during low tide conditions have decreased between Q1 2008 and Q2 2008 in 12 of 16 wells. Decreases ranged from 0.17 to 1.09 feet. The average decrease over these wells was 0.64 feet. For the remaining four wells, the increases ranged from 0.17 to 0.98 feet.

Variable dissolved constituent concentrations detected in shallow groundwater over the past events are likely due (in part) to the rise and fall of the water table resulting in periods of both decreased and increased dissolution of adsorbed BTEX and PAHs trapped beneath the interface.

The historical NAPL data (see **Table 2**) indicate that measurable quantities of NAPL have primarily been found in two on-site shallow monitoring wells (MW-02 and MW-05), one on-site intermediate well (SHMW-02I), and one off-site shallow well (SHMW-04S). Historically, trace amounts of NAPL have been found in two on-site shallow wells (MW-03 and MW-04), and one off-site shallow well (SHMW-06S). In Q2 2008, measurable quantities of NAPL were found in SHMW-02I and SHMW-04S, and trace amounts of NAPL were found in MW-01, MW-02, MW-03, MW-04 and SHMW-06S.

Since MW-05 was destroyed, it could not be checked for NAPL.

**Current Plans:** Continue quarterly groundwater and NAPL monitoring at selected monitoring wells.

# Tables

**Table 1**
**Sag Harbor Former MGP Site**
**Groundwater Monitoring Program**
**Water Level Measurements and Calculated Water Elevations - Q2 2008**

| Well ID | Top of Casing Elevation (ft) | Tide | Time | 6/16/2008 | | Notes |
|---|---|---|---|---|---|---|
| | | | | Depth to Water (ft) | Groundwater Elevation (ft) | |
| MW-01 | 5.09 | High | 949 | 1.47 | 3.62 | |
| | | Low | 1549 | 1.43 | 3.66 | |
| MW-02 | 4.48 | High | 945 | 0.78 | 3.70 | |
| | | Low | 1543 | 0.83 | 3.65 | |
| MW-03 | 4.59 | High | 948 | 1.80 | 2.79 | |
| | | Low | 1548 | 1.78 | 2.81 | |
| MW-04 | 4.13 | High | 946 | 0.83 | 3.30 | |
| | | Low | 1545 | 0.84 | 3.29 | |
| MW-05 | 5.07 | High | -- | -- | -- | Well destroyed. |
| | | Low | -- | -- | -- | |
| MW-06 | 5.38 | High | 951 | 1.90 | 3.48 | |
| | | Low | 1552 | 1.91 | 3.47 | |
| SHMW-01S | 4.52 | High | 947 | 1.64 | 2.88 | |
| | | Low | 1546 | 1.59 | 2.93 | |
| SHMW-01I | 4.47 | High | 947 | 1.36 | 3.11 | |
| | | Low | 1547 | 1.90 | 2.57 | |
| SHMW-02I | 5.22 | High | 949 | 1.90 | 3.32 | |
| | | Low | 1550 | 2.32 | 2.90 | |
| SHMW-02D | 5.19 | High | 956 | 1.58 | 3.61 | |
| | | Low | 1551 | 2.06 | 3.13 | |
| SHMW-03S | 5.43 | High | 924 | 3.13 | 2.30 | |
| | | Low | 1523 | 3.19 | 2.24 | |
| SHMW-03I | 5.43 | High | 925 | 2.41 | 3.02 | |
| | | Low | 1524 | 2.87 | 2.56 | |
| SHMW-04S | 5.71 | High | 923 | 3.47 | 2.24 | |
| | | Low | 1522 | 3.48 | 2.23 | |
| SHMW-04I | 5.71 | High | 922 | 2.51 | 3.20 | |
| | | Low | 1522 | 3.02 | 2.69 | |
| SHMW-05S | 6.23 | High | 921 | 3.69 | 2.54 | |
| | | Low | 1518 | 3.67 | 2.56 | |
| SHMW-05I | 6.14 | High | 921 | 3.23 | 2.91 | |
| | | Low | 1518 | 3.47 | 2.67 | |
| SHMW-06S | 4.44 | High | 938 | 1.18 | 3.26 | |
| | | Low | 1536 | 1.15 | 3.29 | |
| SHMW-06I | 4.43 | High | 938 | 1.43 | 3.00 | |
| | | Low | 1537 | 1.76 | 2.67 | |
| SHMW-07S | 5.05 | High | -- | -- | -- | Car parked over well during high and low tides and could not obtain water level. |
| | | Low | -- | -- | -- | |
| SHMW-07I | 5 | High | -- | -- | -- | Car parked over well during high and low tides and could not obtain water level. |
| | | Low | -- | -- | -- | |
| SHMW-08S | 5.26 | High | 942 | 1.45 | 3.81 | |
| | | Low | 1541 | 1.43 | 3.83 | |
| SHMW-08I | 5.08 | High | 943 | 1.89 | 3.19 | |
| | | Low | 1542 | 2.30 | 2.78 | |
| SHMW-09S | 4.36 | High | 933 | 1.91 | 2.45 | |
| | | Low | 1531 | 1.88 | 2.48 | |
| SHMW-09I | 4.41 | High | 934 | 1.54 | 2.87 | |
| | | Low | 1532 | 1.77 | 2.64 | |
| SHMW-10S | 5.91 | High | 928 | 4.13 | 1.78 | |
| | | Low | 1526 | 4.50 | 1.41 | |
| SHMW-10I | 5.89 | High | 929 | 3.55 | 2.34 | |
| | | Low | 1526 | 4.50 | 1.39 | |
| SHMW-11S | 5.74 | High | 931 | 5.00 | 0.74 | |
| | | Low | 1529 | 5.36 | 0.38 | |
| SHMW-11I | 5.79 | High | 931 | 4.77 | 1.02 | |
| | | Low | 1530 | 5.54 | 0.25 | |
| SHMW-12S | 3.42 | High | 935 | 0.49 | 2.93 | |
| | | Low | 1534 | 0.51 | 2.91 | |
| SHMW-12I | 3.29 | High | 936 | 0.26 | 3.03 | |
| | | Low | 1534 | 0.41 | 2.88 | |
| SHMW-13S | 4.68 | High | 940 | 1.31 | 3.37 | |
| | | Low | 1539 | 1.29 | 3.39 | |
| SHMW-13I | 4.7 | High | 941 | 1.47 | 3.23 | |
| | | Low | 1539 | 1.80 | 2.90 | |

-- Not Available

Table 2
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of Historic NAPL Observations

| Well ID | May 2002 Observations | May 2004 Observations | August 2004 Observations | October 2004 Observations | November 2004 Observations | December 2004 Observations | January 2005 Observations | February 2005 Observations | March 2005 Observations | April/Q1 2005 Observations | June/Q2 2005 Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-01 | None Observed | Odor | None Observed | Not Checked | NR | NR | NR | NR | NR | NR | NR |
| MW-02 | Approx. 0.16' of DNAPL, sheen on surface | Approx. 0.15' of DNAPL, sheen on surface | Approx. 0.29' of DNAPL | Approx. 0.2' of DNAPL | Approx. 0.01' of DNAPL, 1.0' intermittent DNAPL | Approx. 0.1' of DNAPL | Approx. 0.11' of DNAPL | Approx. 0.16' of DNAPL | Approx. 0.15' of DNAPL | Approx. 0.15' of DNAPL | Trace DNAPL at bottom of tape |
| MW-03 | Intermittent DNAPL for 1.5' | Approx. 0.03' of DNAPL, naphthalene-like odor | NR | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape |
| MW-04 | None Observed | Approx. 0.02' of DNAPL, naphthalene-like odor | NR | Trace DNAPL at bottom of tape | None Observed | None Observed | Trace DNAPL at bottom of tape | Not Checked (under snow pile) | None Observed | None Observed | None Observed |
| MW-05 | Blebs of LNAPL | Approx. 1.0' of DNAPL, naphthalene-like odor | Approx. 0.75' of DNAPL | Approx. 4.5' of LNAPL/NAPL | Approx. 0.35' of DNAPL, 3.6' intermittent DNAPL | Trace DNAPL at bottom of tape, bubbles in WC | Trace DNAPL at bottom of tape | Approx. 0.6' of DNAPL, approx. 0.02' of LNAPL | Sporadic DNAPL, approx. 0.1' of LNAPL. | Sporadic DNAPL, approx. 0.1' of LNAPL. | Approx. 3.0' of DNAPL |
| MW-06 | None Observed | Slight naphthalene-like odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-01S | None Observed | Slight naphthalene-like odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-01I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-02I | None Observed | Approx. 4.9' of DNAPL, sheen | Approx. 4.7' of DNAPL | Approx. 4.9' of DNAPL | Approx. 1.0' of DNAPL, 3.0' intermittent DNAPL | Approx. 0.6' of DNAPL | Approx. 0.65' of DNAPL | Approx. 0.5' of DNAPL | Approx. 0.45' of DNAPL | Approx. 1.1' of DNAPL | Approx. 0.75' of DNAPL |
| SHMW-02D | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |

**Notes:**
DNAPL - Dense Non-aqueous Phase Liquid
LNAPL - Light Non-aqueous Phase Liquid
WC - Water Column
NR - Gauging Not Required

Table 2
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of Historic NAPL Observations

| Well ID | May 2002 Observations | May 2004 Observations | August 2004 Observations | October 2004 Observations | November 2004 Observations | December 2004 Observations | January 2005 Observations | February 2005 Observations | March 2005 Observations | April/Q1 2005 Observations | June/Q2 2005 Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SHMW-03S | None Observed | Odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-03I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-04S | None Observed | Approx. 0.6' of DNAPL, naphthalene-like odor | NR | Approx. 0.7' of DNAPL, 2.3' intermittent DNAPL | Approx. 0.55' of DNAPL | Approx. 0.29' of DNAPL | Approx. 0.35' of DNAPL | Approx. 0.22' of DNAPL | Approx. 0.25' of DNAPL | Approx. 0.25' of DNAPL | Approx. 0.90' of DNAPL |
| SHMW-04I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-05S | None Observed | Blebs of DNAPL in purge water, odor | NR | None Observed | None Observed | None Observed | None Observed | None Observed | None Observed | None Observed | None Observed |
| SHMW-05I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-06S | Slight sheen and naphthalene-like odor | Naphthalene-like odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-06I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-07S | Sheen and naphthalene-like odor | Slight odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-07I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-08S | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |

**Notes:**
DNAPL - Dense Non-aqueous Phase Liquid
LNAPL - Light Non-aqueous Phase Liquid
WC - Water Column
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Table 2
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of Historic NAPL Observations

| Well ID | May 2002 Observations | May 2004 Observations | August 2004 Observations | October 2004 Observations | November 2004 Observations | December 2004 Observations | January 2005 Observations | February 2005 Observations | March 2005 Observations | April/Q1 2005 Observations | June/Q2 2005 Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SHMW-08I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-09S | None Observed | Slight naphthalene-like odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-09I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-10S | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-10I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-11S | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-11I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-12S | None Observed | Sheen, strong sulfur-like odor | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-12I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-13S | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| SHMW-13I | None Observed | None Observed | NR | NR | NR | NR | NR | NR | NR | NR | NR |

**Notes:**
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NR - Gauging Not Required

Table 2
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of Historic NAPL Observations

| Well ID | September/Q3 2005 Observations | December/Q4 2005 Observations | March/Q1 2006 Observations | June/Q2 2006 Observations | September/Q3 2006 Observations | December/Q4 2006 Observations | March/Q1 2007 Observations | June/Q2 2007 Observations | September/Q3 2007 Observations | December/Q4 2007 Observations | March/Q1 2008 Observations | June/Q2 2008 Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-01 | NR | NR | NR | NR | NR | NR | NR | NR | NR | None Observed | None Observed | Trace DNAPL |
| MW-02 | Approx. 0.13' of DNAPL | Approx. 0.09' DNAPL, naphthalene-like odor | Approx. 0.01' DNAPL | Approx. 0.12 ' of DNAPL | Approx. 0.15' DNAPL | Approx. 0.10' DNAPL | Approx.0.20' DNAPL | Approx.0.07' DNAPL | Approx. 0.11' DNAPL | Approx. ~0.08' | Trace DNAPL | Moderate DNAPL; not measureable |
| MW-03 | Trace DNAPL at bottom of tape | None, naphthalene-like odor | No DNAPL observed | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | No DNAPL observed | Trace DNAPL (coating on tubes) | None Observed | Trace DNAPL (coating on tubes) | Trace | Trace DNAPL (On bottom 1.5' of tubes) | Trace DNAPL |
| MW-04 | Trace DNAPL at bottom of tape | Trace DNAPL at bottom of tape | Trace DNAPL | Trace DNAPL | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Approx. ~0.02' | NR | Trace DNAPL |
| MW-05 | Approx. 0.75' of DNAPL, approx. 0.12' of LNAPL | DNAPL blebs in purge H2O, 0.5' DNAPL coating on tubes | Approx. 0.15' of DNAPL, approx. 0.1' of LNAPL | Approx. 0.22' DNAPL; 0.05' of LNAPL | Approx. 0.55' DNAPL; 0.06' of LNAPL | Trace LNAPL; DNAPL in purge water (not measurable) | Trace LNAPL; DNAPL in purge water (not measurable) | Well Destroyed | Well Destroyed | Well Destroyed | Well Destroyed | Well Destroyed |
| MW-06 | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-01S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-01I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-02I | Approx. 0.4' of DNAPL | Approx. 1.3' of DNAPL, naphthalene-like odor | Approx. 0.35' of DNAPL | Approx. 0.43' of DNAPL | Approx. 0.5' of DNAPL | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Approx. ~0.60' | Approx. 3' DNAPL | Approx. 1.5' DNAPL |
| SHMW-02D | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |

**Notes:**
DNAPL - Dense Non-aqueous Phase Liquid
LNAPL - Light Non-aqueous Phase Liquid
WC - Water Column
NR - Gauging Not Required

Table 2
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of Historic NAPL Observations

| Well ID | September/Q3 2005 Observations | December/Q4 2005 Observations | March/Q1 2006 Observations | June/Q2 2006 Observations | September/Q3 2006 Observations | December/Q4 2006 Observations | March/Q1 2007 Observations | June/Q2 2007 Observations | September/Q3 2007 Observations | December/Q4 2007 Observations | March/Q1 2008 Observations | June/Q2 2008 Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHMW-03S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-03I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-04S | Approx. 0.26' of DNAPL | Approx. 0.5' DNAPL, naphthalene-like odor | Approx. 0.25' of DNAPL | Approx. 0.5' of DNAPL | Approx. 0.25' of DNAPL | Approx. 0.30' of DNAPL | Approx.0.40' DNAPL | Approx.0.50' DNAPL | Approx. 0.5' DNAPL | Approx. ~0.61' | Approx. 1.05' DNAPL | Approx.0.6' DNAPL |
| SHMW-04I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-05S | None Observed | None Observed | No DNAPL observed | None Observed | None Observed | None Observed | None Observed | None Observed | NR | None Observed | None Observed | None Observed |
| SHMW-05I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-06S | Trace DNAPL at bottom of tape | Approx. 0.10' DNAPL, naphthalene-like odor | Trace DNAPL | Approx. 0.2' of DNAPL | Approx. 0.2' of DNAPL | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace DNAPL (coating on tubes) | Trace | Trace DNAPL (on tubing) | Trace DNAPL |
| SHMW-06I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-07S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | Trace | NR | NR |
| SHMW-07I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-08S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |

**Notes:**
DNAPL - Dense Non-aqueous Phase Liquid
LNAPL - Light Non-aqueous Phase Liquid
WC - Water Column
NR - Gauging Not Required

Table 2
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of Historic NAPL Observations

| Well ID | September/Q3 2005 Observations | December/Q4 2005 Observations | March/Q1 2006 Observations | June/Q2 2006 Observations | September/Q3 2006 Observations | December/Q4 2006 Observations | March/Q1 2007 Observations | June/Q2 2007 Observations | September/Q3 2007 Observations | December/Q4 2007 Observations | March/Q1 2008 Observations | June/Q2 2008 Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHMW-08I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-09S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-09I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-10S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-10I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-11S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-11I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-12S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-12I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |
| SHMW-13S | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | None Observed | None Observed |
| SHMW-13I | NR | NR | NR | NR | NR | NR | None Observed | NR | NR | None Observed | NR | NR |

**Notes:**
DNAPL - Dense Non-aqueous Phase Liquid
LNAPL - Light Non-aqueous Phase Liquid
WC - Water Column
NR - Gauging Not Required

Table 3
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of BTEX, MTBE, and PAH Results Q2 2008

| **Sample Name:**<br>**Screened Interval:**<br>**Sample Date:** | NYS AWQS | MW-01<br>1.5-7.25 ft<br>6/20/2008 | MW-02<br>0.5-7.25 ft<br>6/17/2008 | MW-03<br>2-10 ft<br>6/19/2008 | MW-04<br>1.25-6.75 ft<br>6/18/2008 | MW-06<br>2.5-7.5 ft<br>6/18/2008 | SHMW-01S<br>1-6 ft<br>6/19/2008 | SHMW-02I<br>35-45 ft<br>6/20/2008 | SHMW-03S<br>2-12 ft<br>6/17/2008 | SHMW-04S<br>2-12 ft<br>6/19/2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| ***BTEX (ug/L)*** | | | | | | | | | | |
| Benzene | 1 | **120** | **370 J** | **1000** | **11** | **2 J** | **150** | **2 J** | 10 U | **4900** |
| Toluene | 5 | **5 J** | **45** | **51** | 10 U | **1 J** | **5 J** | **1 J** | 10 U | **59** |
| Ethylbenzene | 5 | **9 J** | **4500** | **630** | **3 J** | **14** | **77** | **4 J** | 10 U | **1700** |
| Xylene, total | 5 | **7 J** | **2500** | **560** | **1 J** | **16** | **74** | **34** | 10 U | **1400** |
| Total BTEX | NE | **141** | **7415** | **2241** | **15** | **33** | **306** | **41** | ND | **8059** |
| ***Other VOCs (ug/L)*** | | | | | | | | | | |
| Methyl tert-butyl ether | NE | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **2 J** | 10 U | 10 U |
| ***Non-carcinogenic PAHs (ug/L)*** | | | | | | | | | | |
| Acenaphthene | 20* | **2 J** | **210 J** | **74** | 10 U | 10 U | 10 U | **3 J** | 10 U | **180** |
| Acenaphthylene | NE | 10 U | **3 J** | **5 J** | 10 U | 10 U | 10 U | **21** | 10 U | **7** |
| Anthracene | 50* | 10 U | **15** | 10 U | 10 U | 10 U | 10 U | **2 J** | 10 U | **8** |
| Benzo[g,h,i]perylene | NE | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 50* | 10 U | **8** | **7** | 10 U | 10 U | 10 U | **2 J** | 10 U | **4 J** |
| Fluorene | 50* | 10 U | **43** | 10 U | 10 U | 10 U | 10 U | **5** | 10 U | **28** |
| Methylnaphthalene,2- | NE | 10 U | **410** | 10 U | 10 U | 10 U | 10 U | **7** | 10 U | **78** |
| Naphthalene | 10* | 10 U | **2700** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **1000** |
| Phenanthrene | 50* | 10 U | **57** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **18** |
| Pyrene | 50* | 10 U | **9** | **8** | 10 U | 10 U | 10 U | **2 J** | 10 U | **5** |
| Total Noncarcinogenic PAHs | NE | **2** | **3455** | **94** | ND | ND | ND | **42** | ND | **1328** |
| ***Carcinogenic PAHs (ug/L)*** | | | | | | | | | | |
| Benz[a]anthracene | 0.002* | 10 U | 10 U | **1 J** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo[a]pyrene | ND | 10 U | 10 U | **1 J** | 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 | 10 U | 10 U | 10 U |
| Benzo[k]fluoranthene | 0.002* | 10 U | 10 U | 10 U | 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 | 10 U | 10 U | 10 U |
| Dibenz[a,h]anthracene | NE | 10 U | 10 U | 10 U | 10 U | 10 U | 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 | 10 U | 10 U | 10 U |
| Total Carcinogenic PAHs | NE | ND | ND | **2** | ND | ND | ND | ND | ND | ND |
| ***Total PAHs (ug/L)*** | | | | | | | | | | |
| Total PAHs | NE | **2** | **3455** | **96** | ND | ND | ND | **42** | ND | **1328** |

Table 3
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of BTEX, MTBE, and PAH Results Q2 2008

| Sample Name: / Screened Interval: / Sample Date: | NYS AWQS | SHMW-05S 2-12 ft 6/18/2008 | Duplicate of SHMW-05S 2-12 ft 6/18/2008 | SHMW-06S 2-6 ft 6/18/2008 | SHMW-07S 1-11 ft 6/19/2008 | SHMW-08S 1-7 ft 6/17/2008 | SHMW-09S 2-12 ft 6/19/2008 | SHMW-10S 5-15 ft 6/18/2008 | SHMW-11S 3.5-13.5 ft 6/17/2008 | SHMW-12S 1.5-6.5 ft 6/18/2008 | SHMW-13S 1.5-6.5 ft 6/17/2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***BTEX (ug/L)*** | | | | | | | | | | | |
| Benzene | 1 | **35** | **34** | **290** | **320** | **9 J** | **460** | 10 U | 10 U | **400** | 10 U |
| Toluene | 5 | 10 U | 10 U | **23** | **15** | 10 U | **18** | 10 U | 10 U | **2 J** | 10 U |
| Ethylbenzene | 5 | **26** | **28** | **660** | **450** | 10 U | **560** | **1 J** | 10 U | **30** | 10 U |
| Xylene, total | 5 | **22** | **22** | **370** | **290** | 10 U | **260** | 10 U | 10 U | **50** | 10 U |
| Total BTEX | NE | **83** | **84** | **1343** | **1075** | **9** | **1298** | **1** | ND | **482** | ND |
| ***Other VOCs (ug/L)*** | | | | | | | | | | | |
| Methyl tert-butyl ether | NE | 10 U | 10 U | 10 U | 10 U | **1 J** | 10 U | 10 U | 10 U | **2 J** | 10 U |
| ***Non-carcinogenic PAHs (ug/L)*** | | | | | | | | | | | |
| Acenaphthene | 20* | 10 U | 10 U | **34** | **41** | **11 J** | **67** | 10 U | 10 U | **4 J** | 10 U |
| Acenaphthylene | NE | 10 U | 10 U | **3 J** | **2 J** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 50* | 10 U | 10 U | 10 U | 10 U | 10 U | **2 J** | 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 | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 50* | 10 U | 10 U | **3 J** | **3 J** | **3 J** | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 50* | 10 U | 10 U | 10 U | **4 J** | **1 J** | **16** | 10 U | 10 U | 10 U | 10 U |
| Methylnaphthalene,2- | NE | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **3 J** | 10 U |
| Naphthalene | 10* | 10 U | 10 U | 10 U | 10 U | **3 J** | 10 U | 10 U | 10 U | **130** | 10 U |
| Phenanthrene | 50* | 10 U | 10 U | 10 U | 10 U | 10 U | **7** | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 50* | 10 U | 10 U | **4 J** | **4 J** | **3 J** | 10 U | 10 U | 10 U | 10 U | 10 U |
| Total Noncarcinogenic PAHs | NE | ND | ND | **44** | **54** | **21** | **92** | ND | ND | **137** | ND |
| ***Carcinogenic PAHs (ug/L)*** | | | | | | | | | | | |
| Benz[a]anthracene | 0.002* | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo[a]pyrene | ND | 10 U | 10 U | 10 U | 10 U | 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 | 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 | 10 U | 10 U | 10 U | 10 U |
| Chrysene | 0.002* | 10 U | 10 U | 10 U | 10 U | 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 | 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 | 10 U | 10 U | 10 U | 10 U |
| Total Carcinogenic PAHs | NE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ***Total PAHs (ug/L)*** | | | | | | | | | | | |
| Total PAHs | NE | ND | ND | **44** | **54** | **21** | **92** | ND | ND | **137** | ND |

Table 3
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of BTEX, MTBE, and PAH Results Q2 2008

**Notes:**

ug/L - micrograms per liter or parts per billion (ppb)

BTEX - benzene, toluene, ethylbenzene, and xylenes

VOCs - volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

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

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

Bolding indicates a detected result value

Shading and bolding indicates that the detected result value exceeds the NYS AWQS objective it was compared to

Total BTEX and Total PAHs are calculated using detects only

J - estimated value

U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

**Table 4**
**Sag Harbor Former MGP Site**
**Groundwater Monitoring Program**
**Summary of Historic Total BTEX Results**

| Well No. | Screen Interval (feet) | Total BTEX Concentrations (ug/L) | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sampling Date | | | | | | | | | | | | | | | | | | | | | | |
| | | 1995 | 2000 | | 2002 | 2004 | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | Min | Max | Mean |
| | | Nov | Mar | Apr | May | May | Aug | Mar/Apr | June | Sept | Dec | March | June | Sept | Dec | March | June | Sept | Dec | March | June | | | |
| MW-01 | 1.50 - 7.32 | 2,720 | 10 | 68 | 9 | 4 | 0 | 0 | 12 | 67 | 0 | 21 | 47 | 310 | 190 | 160 | 240 | 150 | 270 | 337 | 141 | 0 | 2,720 | 238 |
| MW-02 | 0.50 - 7.25 | 5,429 | 8,840 | 7,940 | 5,840 | 13,287 | 8,740 | 7,333 | 13,010 | -- | 13,720 | 7,591 | -- | 14,174 | 12,267 | 8,678 | 12,810 | 15,181 | 98 | 8,865 | 7,415 | 98 | 15,181 | 9,512 |
| MW-03 | 2.17 - 10.17 | 1,222 | 668 | 1,553 | 1,363 | 2,573 | -- | 2,050 | 2,867 | 560 | 2,622 | 4,880 | 1,971 | 4,965 | 2,398 | 1,680 | 2,930 | 3,225 | 2,831 | 2,842 | 2,241 | 560 | 4,965 | 2,392 |
| MW-04 | 1.25 - 6.81 | 864 | 35 | -- | 10 | 208 | -- | 0 | 0 | 225 | 299 | 268 | 193 | 181 | 101 | 0 | 51 | 89 | 66 | -- | 15 | 0 | 864 | 153 |
| MW-05 | 2.46 - 7.46 | 9,100 | 170 | 5 | 102 | 11,600 | 2,938 | 2,697 | 18,900 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5 | 18,900 | 5,689 |
| MW-06 | 2.47 - 7.47 | 334 | 47 | 30 | 91 | 49 | -- | 33 | 55 | 39 | 36 | 74 | 37 | 11 | 54 | 0 | 37 | 31 | 0 | 1 | 33 | 0 | 334 | 52 |
| SHMW-01S | 1.0 - 6.0 | -- | -- | 1,413 | 874 | 2,102 | -- | 1,367 | 1,810 | 406 | 1,313 | 2,562 | 2,085 | 5,183 | 2,915 | 691 | 2,460 | 2,600 | 1,684 | 1,595 | 306 | 306 | 5,183 | 1,845 |
| SHMW-01I | 35.0 - 45.0 | -- | -- | 5 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | -- | 0 | 5 | 1 |
| SHMW-02I | 35.0 - 45.0 | -- | -- | 26 | 0 | 1,179 | 16 | 20 | 20 | 19 | 25 | 0 | 0 | 0 | 0 | -- | 11 | 12 | 15 | 18 | 41 | 0 | 1,179 | 82 |
| SHMW-02D | 65.0 - 75.0 | -- | -- | 5 | 4 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 5 | 2 |
| SHMW-03S | 2.0 - 12.0 | -- | -- | 63 | 0 | 110 | -- | 48 | 53 | 46 | 75 | 131 | 67 | 97 | 13 | 122 | 80 | 12 | 50 | 3 | 0 | 0 | 131 | 57 |
| SHMW-03I | 35.0 - 45.0 | -- | -- | 0 | 52 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 52 | 9 |
| SHMW-04S | 2.0 - 12.0 | -- | -- | 7,940 | 3,154 | 12,180 | -- | 9,369 | 17,730 | 8,960 | 21,920 | 25,860 | 9,361 | 18,398 | 10,489 | 6,883 | 20,488 | 16,120 | 10,378 | 7,567 | 8,059 | 3,154 | 25,860 | 12,639 |
| SHMW-04I | 35.0 - 45.0 | -- | -- | 5 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 5 | 1 |
| SHMW-05S | 2.0 - 12.0 | -- | -- | 37 | 69 | 83 | -- | 107 | 282 | 2,960 | 115 | 202 | 45 | 43 | 26 | 35 | 458 | 676 | 98 | 77 | 83 | 26 | 2,960 | 317 |
| SHMW-05I | 35.0 - 45.0 | -- | -- | 0 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-06S | 2.0 - 6.0 | -- | -- | 2,392 | 2,463 | 3,057 | -- | 2,630 | 1,950 | -- | 2,910 | 2,622 | 1,702 | 4,289 | 2,196 | 1,475 | 2,285 | 2,162 | 1,565 | 1,296 | 1,343 | 1,296 | 4,289 | 2,271 |
| SHMW-06I | 35.0 - 45.0 | -- | -- | 0 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-07S | 1.0 - 11.0 | -- | -- | 2,011 | 1,562 | 414 | -- | 1,482 | 3,340 | 2,458 | 1,722 | 1,400 | 1,060 | -- | 1,137 | 185 | -- | 2,139 | 726 | -- | 1,075 | 185 | 3,340 | 1,479 |
| SHMW-07I | 35.0 - 45.0 | -- | -- | 0 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-08S | 1.0 - 7.0 | -- | -- | 5 | 2 | 9 | -- | 0 | 14 | 0 | 15 | 11 | 0 | 19 | 0 | 0 | 0 | 0 | 12 | 8 | 9 | 0 | 19 | 6 |
| SHMW-08I | 35.0 - 45.0 | -- | -- | 0 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-09S | 2.0 - 12.0 | -- | -- | 1,024 | 506 | 1,100 | -- | 500 | 1,000 | -- | 920 | 1,130 | 770 | 768 | 500 | 418 | 1,240 | 178 | 600 | 1,039 | 1,298 | 178 | 1,298 | 812 |
| SHMW-09I | 35.0 -45.0 | -- | -- | 0 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-10S | 5.0 -15.0 | -- | -- | -- | 0 | 0 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| SHMW-10I | 35.5 - 45.5 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-11S | 3.5 - 13.5 | -- | -- | -- | 0 | 0 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SHMW-11I | 35.0 - 45.0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-12S | 1.5 - 6.5 | -- | -- | -- | 0 | 344 | -- | 142 | 930 | 69 | 290 | 140 | 463 | 581 | 182 | 85 | 623 | 81 | 0 | 166 | 482 | 0 | 930 | 286 |
| SHMW-12I | 35.0 - 45.0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 23 | -- | -- | 0 | 23 | 5 |
| SHMW-13S | 1.5 - 6.5 | -- | -- | -- | 0 | 0 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SHMW-13I | 35.0- 45.0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |

**NOTES:**

-- not analyzed or not applicable

ug/L - micrograms per liter

BTEX - benzene, toluene, ethylbenzene, and xylene

**Table 5**
**Sag Harbor Former MGP Site**
**Groundwater Monitoring Program**
**Summary of Historic Total PAH Results**

| Well No. | Screen Interval (feet) | Total PAH Concentrations (ug/L) | | | | | | | | | | | | | | | | | | | | Min | Max | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sampling Date | | | | | | | | | | | | | | | | | | | | | | |
| | | 1995 | 2000 | | 2002 | 2004 | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | | |
| | | Nov | Mar | Apr | May | May | Aug | Mar/Apr | June | Sept | Dec | March | June | Sept | Dec | March | June | Sept | Dec | March | June | | | |
| MW-01 | 1.50 - 7.32 | 4,906 | 1,548 | 257 | 402 | 30 | 24 | 0 | 61 | 200 | 0 | 0 | 0 | 97 | 95 | 0 | 54 | 87 | 39 | 145 | 2 | 0 | 4,906 | 397 |
| MW-02 | 0.50 - 7.25 | 6,991 | 5,511 | 5,114 | 10,729 | 25,167 | 4,414 | 5,809 | 10,504 | -- | 6,919 | 5,209 | -- | 0 | 8,617 | 3,150 | 7,421 | 5,398 | 165 | 400 | 3,455 | 0 | 25,167 | 6,387 |
| MW-03 | 2.17 - 10.17 | 7,034 | 3,065 | 3,433 | 3,774 | 3,522 | -- | 2,272 | 4,557 | 516 | 92 | 1,256 | 565 | 4,831 | 6,212 | 349 | 489 | 463 | 2,904 | 508 | 96 | 92 | 7,034 | 2,418 |
| MW-04 | 1.25 - 6.81 | 3,612 | 75 | -- | 0 | 90 | -- | 0 | 22 | 1,098 | 103 | 11 | 37 | 66 | 31 | 0 | 66 | 238 | 6 | -- | 0 | 0 | 3,612 | 321 |
| MW-05 | 2.46 - 7.46 | 16,386 | 779 | 101 | 1,160 | 431,600 | 2,049 | 918 | 188,200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 101 | 431,600 | 80,149 |
| MW-06 | 2.47 - 7.47 | 5,416 | 894 | 653 | 258 | 33 | -- | 90 | 79 | 204 | 0 | 22 | 0 | 0 | 645 | 35 | 46 | 17 | 0 | 0 | 0 | 0 | 5,416 | 442 |
| SHMW-01S | 1.0 - 6.0 | -- | -- | 4,147 | 2,663 | 2,424 | -- | 1,989 | 2,185 | 840 | 0 | 42 | 115 | 3,989 | 3,874 | 0 | 1,058 | 1,691 | 42 | 0 | 0 | 0 | 4,147 | 1,474 |
| SHMW-01I | 35.0 - 45.0 | -- | -- | 32 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | -- | -- | -- | 0 | 32 | 6 |
| SHMW-02I | 35.0 - 45.0 | -- | -- | 266 | 0 | 580,200 | 41 | 185 | 124 | 271 | 30 | 74 | 32 | 91 | 89 | 0 | 10 | 175 | 32 | 8 | 42 | 0 | 580,200 | 32,315 |
| SHMW-02D | 65.0 - 75.0 | -- | -- | 308 | 76 | 89 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 15 | -- | -- | 0 | 308 | 81 |
| SHMW-03S | 2.0 - 12.0 | -- | -- | 422 | 0 | 295 | -- | 79 | 130 | 117 | 339 | 0 | 0 | 147 | 118 | 430 | 191 | 12 | 154 | 0 | 0 | 0 | 430 | 143 |
| SHMW-03I | 35.0 - 45.0 | -- | -- | 2 | 320 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 320 | 54 |
| SHMW-04S | 2.0 - 12.0 | -- | -- | 4,275 | 5,107 | 5,965 | -- | 3,959 | 6,669 | 4,684 | 5,879 | 2,364 | 3,572 | 4,196 | 6,250 | 2,632 | 3,999 | 4,693 | 4,305 | 0 | 1,328 | 0 | 6,669 | 4,110 |
| SHMW-04I | 35.0 - 45.0 | -- | -- | 18 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 18 | 3 |
| SHMW-05S | 2.0 - 12.0 | -- | -- | 13 | 170 | 94 | -- | 82 | 91 | 26 | 53 | 17 | 11 | 11 | 110 | 0 | 0 | 14 | 8 | 2 | 0 | 0 | 170 | 41 |
| SHMW-05I | 35.0 - 45.0 | -- | -- | 0 | 17 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 17 | 3 |
| SHMW-06S | 2.0 - 6.0 | -- | -- | 4,130 | 4,694 | 3,024 | -- | 3,162 | 2,366 | -- | 4,157 | 120 | 201 | 3,900 | 4,062 | 1,703 | 3,574 | 4,368 | 380 | 0 | 44 | 0 | 4,694 | 2,493 |
| SHMW-06I | 35.0 - 45.0 | -- | -- | 2 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 2 | 0 |
| SHMW-07S | 1.0 - 11.0 | -- | -- | 7,211 | 6,585 | 2,708 | -- | 3,224 | 4,604 | 6,187 | 3,507 | 2,004 | 3,119 | -- | 3,721 | 0 | -- | 3,902 | 4 | -- | 54 | 0 | 7,211 | 3,345 |
| SHMW-07I | 35.0 - 45.0 | -- | -- | 0 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 2,212 | -- | -- | -- | 0 | -- | -- | 0 | 2,212 | 369 |
| SHMW-08S | 1.0 - 7.0 | -- | -- | 110 | 71 | 94 | -- | 25 | 70 | 33 | 83 | 112 | 57 | 77 | 99 | 13 | 90 | 10 | 13 | 14 | 21 | 10 | 112 | 58 |
| SHMW-08I | 35.0 - 45.0 | -- | -- | 13 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 13 | 2 |
| SHMW-09S | 2.0 - 12.0 | -- | -- | 1,787 | 2,472 | 1,697 | -- | 1,463 | 1,600 | -- | 2,609 | 94 | 1,935 | 1,138 | 2,737 | 48 | 206 | 2,246 | 130 | 0 | 92 | 0 | 2,737 | 1,266 |
| SHMW-09I | 35.0 -45.0 | -- | -- | 3 | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 3 | 1 |
| SHMW-10S | 5.0 -15.0 | -- | -- | -- | 22 | 6 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 22 | 2 |
| SHMW-10I | 35.5 - 45.5 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |
| SHMW-11S | 3.5 - 13.5 | -- | -- | -- | 0 | 3 | -- | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 11 |
| SHMW-11I | 35.0 - 45.0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 4 | -- | -- | 0 | 4 | 1 |
| SHMW-12S | 1.5 - 6.5 | -- | -- | -- | 60 | 218 | -- | 71 | 600 | 230 | 260 | 110 | 470 | 310 | 280 | 15 | 560 | 0 | 155 | 9 | 137 | 0 | 600 | 218 |
| SHMW-12I | 35.0 - 45.0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 20 | -- | -- | 0 | 20 | 4 |
| SHMW-13S | 1.5 - 6.5 | -- | -- | -- | 0 | 0 | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SHMW-13I | 35.0- 45.0 | -- | -- | -- | 0 | 0 | -- | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | -- | 0 | -- | -- | 0 | 0 | 0 |

**NOTES:**
-- not analyzed or not applicable
ug/L - micrograms per liter
PAHs - polycyclic aromatic hydrocarbons

# Figures


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

SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK

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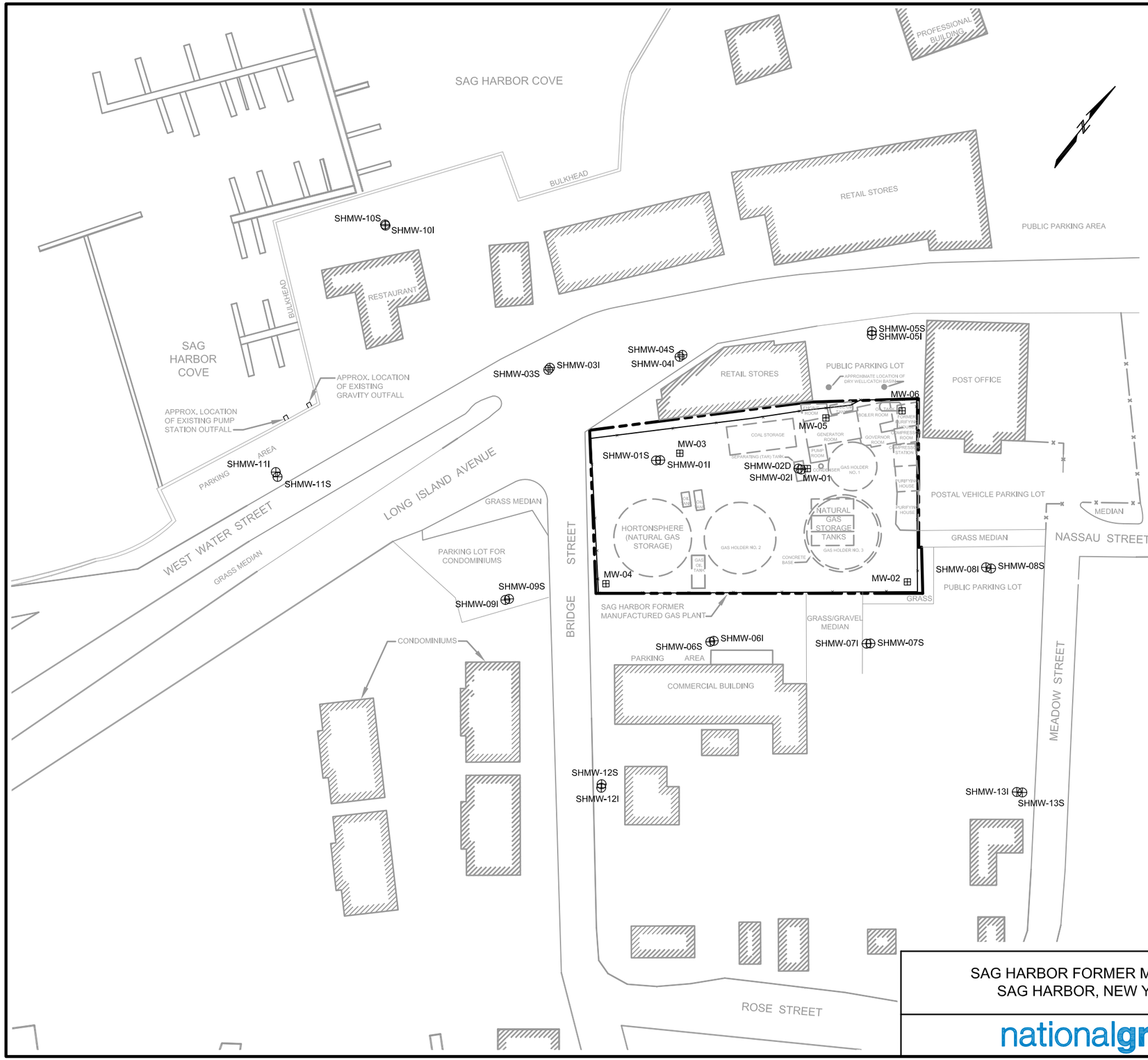
# SITE LOCATION MAP

Project 061140-18-2704

August 2008

Figure 1

KEYSPAN\SAG HARBOR\GROUNDWATER\SAG-LOC.CDR




## LEGEND

- APPROXIMATE LOCATION OF FORMER MGP STRUCTURE
- LOCATION OF EXISTING STRUCTURE
- CURRENT SITE BOUNDARY
- FENCE
- SHMW-05S, MW-01 — EXISTING MONITORING WELL LOCATION

0 80 160

SCALE, FEET

**SOURCE:**

BASE MAP SITE SURVEY DATA PROVIDED BY KEYSPAN ENERGY SURVEY DIVISION. APPROXIMATE LOCATIONS OF FORMER MGP STRUCTURES BASED ON: 1916 SITE PLAN (DWG 2907); 1915 SURVEY BY THE TITLE GUARANTEE & TRUST CO. OF N.Y. (DWG 2290); AND SANBORN MAPS; SAG HARBOR FORMER MGP SITE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, PREPARED BY DVIRKA & BARTILUCCI, DATED DECEMBER 2002.

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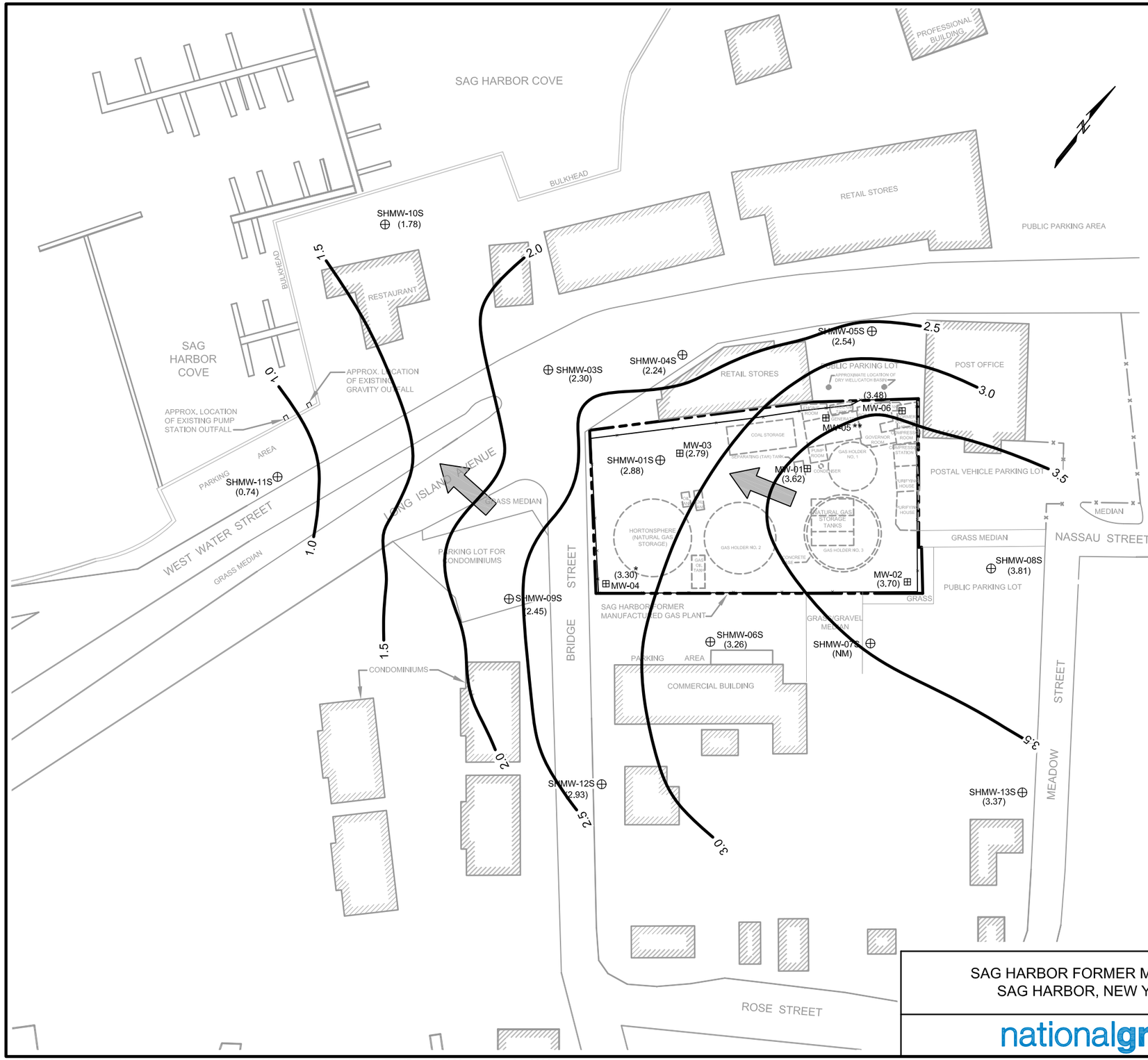
**MONITORING WELL LOCATION MAP**

Project 061140-18-2704 | August 2008 | Figure 2

KEYSPAN\SAG HARBOR\GROUNDWATER\SAG-MWELL.dwg




## *LEGEND*

- APPROXIMATE LOCATION OF FORMER MGP STRUCTURE
- LOCATION OF EXISTING STRUCTURE
- CURRENT SITE BOUNDARY
- FENCE
- SHMW-05S ⊕ / MW-01 ⊞ — EXISTING MONITORING WELL LOCATION
- 2.0 — GROUNDWATER CONTOUR
- (2.36) — GROUNDWATER ELEVATION
- (NM) — NOT MEASURED - WELL WAS INACCESSIBLE AND GROUNDWATER LEVEL MEASUREMENT COULD NOT BE OBTAINED
- GROUNDWATER FLOW DIRECTION
- * — GROUNDWATER ELEVATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- ** — WELL DESTROYED

0 80 160

SCALE, FEET

***SOURCE:***

BASE MAP SITE SURVEY DATA PROVIDED BY KEYSPAN ENERGY SURVEY DIVISION. APPROXIMATE LOCATIONS OF FORMER MGP STRUCTURES BASED ON: 1916 SITE PLAN (DWG 2907); 1915 SURVEY BY THE TITLE GUARANTEE & TRUST CO. OF N.Y. (DWG 2290); AND SANBORN MAPS; SAG HARBOR FORMER MGP SITE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, PREPARED BY DVIRKA & BARTILUCCI, DATED DECEMBER 2002.

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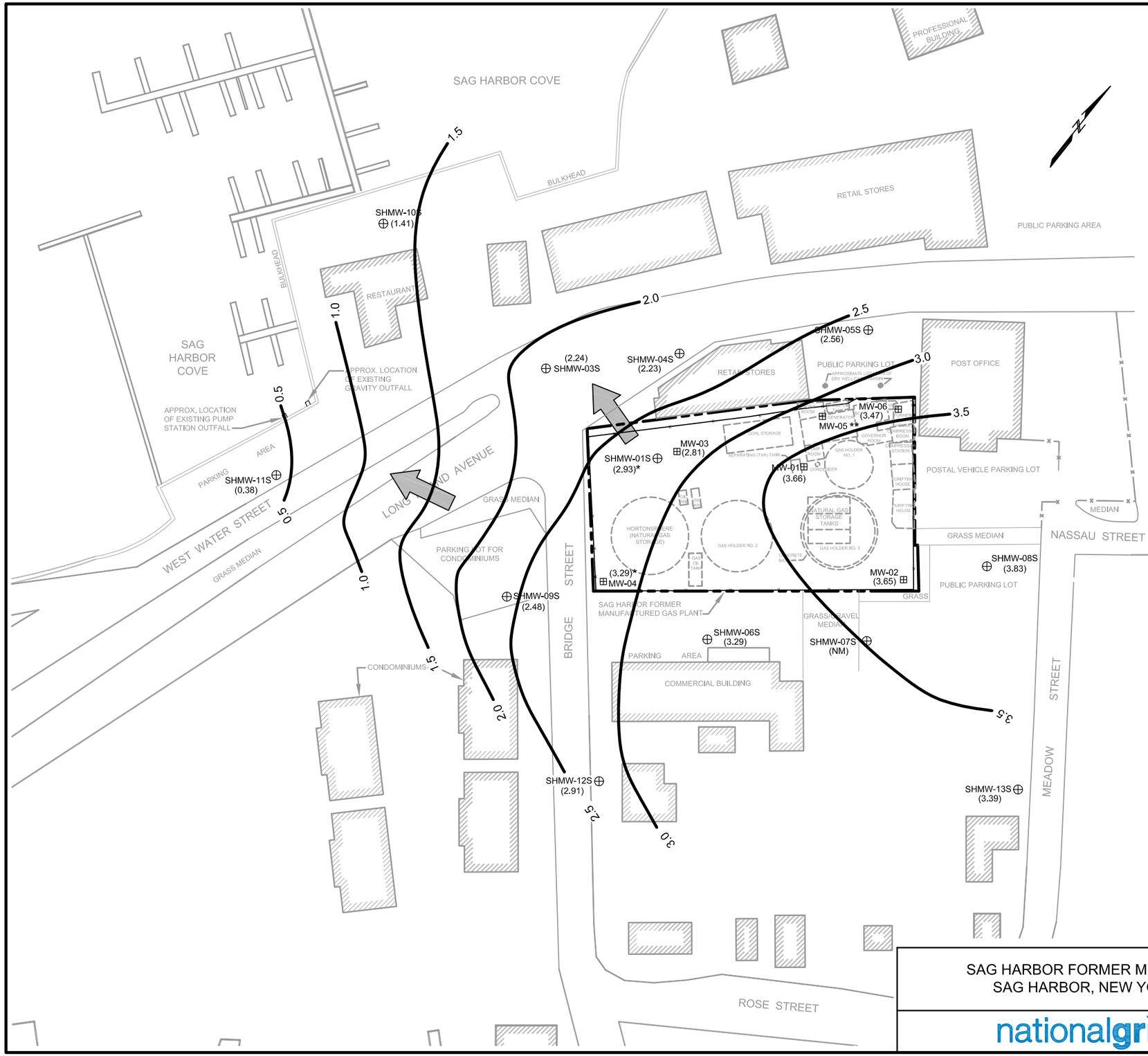
**SHALLOW GROUNDWATER CONTOURS - HIGH TIDE 6/16/08**

August 2008 Figure 3

I:\GEI\National Grid\Sag Harbor\Groundwater-Quarterly Monitoring\ SAG-GW CONTOURS Q2-2008.dwg \Aug 04, 2008




## LEGEND

- APPROXIMATE LOCATION OF FORMER MGP STRUCTURE
- LOCATION OF EXISTING STRUCTURE
- CURRENT SITE BOUNDARY
- FENCE
- SHMW-05S ⊕ / MW-01 ⊞ — EXISTING MONITORING WELL LOCATION
- 2.5 — GROUNDWATER CONTOUR
- (2.75) — GROUNDWATER ELEVATION
- (NM) — NOT MEASURED - WELL WAS INACCESSIBLE AND GROUNDWATER LEVEL MEASUREMENT COULD NOT BE OBTAINED
- GROUNDWATER FLOW DIRECTION
- * — GROUNDWATER ELEVATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- ** — WELL DESTROYED

0 80 160

SCALE, FEET

**SOURCE:**

BASE MAP SITE SURVEY DATA PROVIDED BY KEYSPAN ENERGY SURVEY DIVISION. APPROXIMATE LOCATIONS OF FORMER MGP STRUCTURES BASED ON: 1916 SITE PLAN (DWG 2907); 1915 SURVEY BY THE TITLE GUARANTEE & TRUST CO. OF N.Y. (DWG 2290); AND SANBORN MAPS; SAG HARBOR FORMER MGP SITE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, PREPARED BY DVIRKA & BARTILUCCI, DATED DECEMBER 2002.

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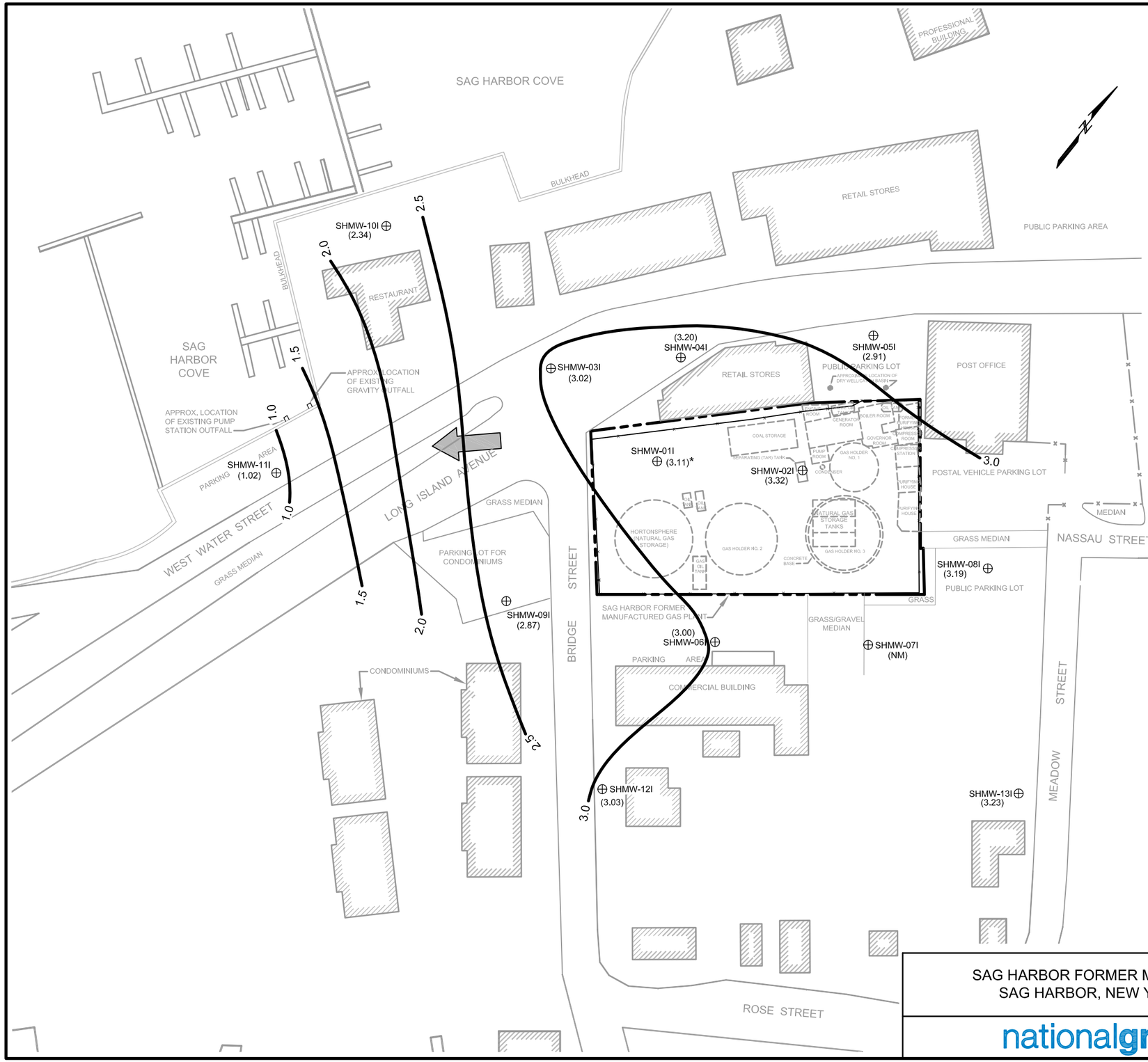
**SHALLOW GROUNDWATER CONTOURS - LOW TIDE 6/16/08**

August 2008 Figure 4

I:\GEI\National Grid\Sag Harbor\Groundwater-Quarterly Monitoring\ SAG-GW CONTOURS Q2-2008.dwg \Aug 04, 2008




## LEGEND

- APPROXIMATE LOCATION OF FORMER MGP STRUCTURE
- LOCATION OF EXISTING STRUCTURE
- CURRENT SITE BOUNDARY
- FENCE
- SHMW-05I ⊕ — EXISTING MONITORING WELL LOCATION
- 2.5 — GROUNDWATER CONTOUR
- (2.54) — GROUNDWATER ELEVATION
- (NM) — NOT MEASURED - WELL WAS INACCESSIBLE AND GROUNDWATER LEVEL MEASUREMENT COULD NOT BE OBTAINED
- GROUNDWATER FLOW DIRECTION
- * — GROUNDWATER ELEVATION NOT USED TO GENERATE GROUNDWATER CONTOURS

0 80 160

SCALE, FEET

**SOURCE:**

BASE MAP SITE SURVEY DATA PROVIDED BY KEYSPAN ENERGY SURVEY DIVISION. APPROXIMATE LOCATIONS OF FORMER MGP STRUCTURES BASED ON: 1916 SITE PLAN (DWG 2907); 1915 SURVEY BY THE TITLE GUARANTEE & TRUST CO. OF N.Y. (DWG 2290); AND SANBORN MAPS; SAG HARBOR FORMER MGP SITE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, PREPARED BY DVIRKA & BARTILUCCI, DATED DECEMBER 2002.

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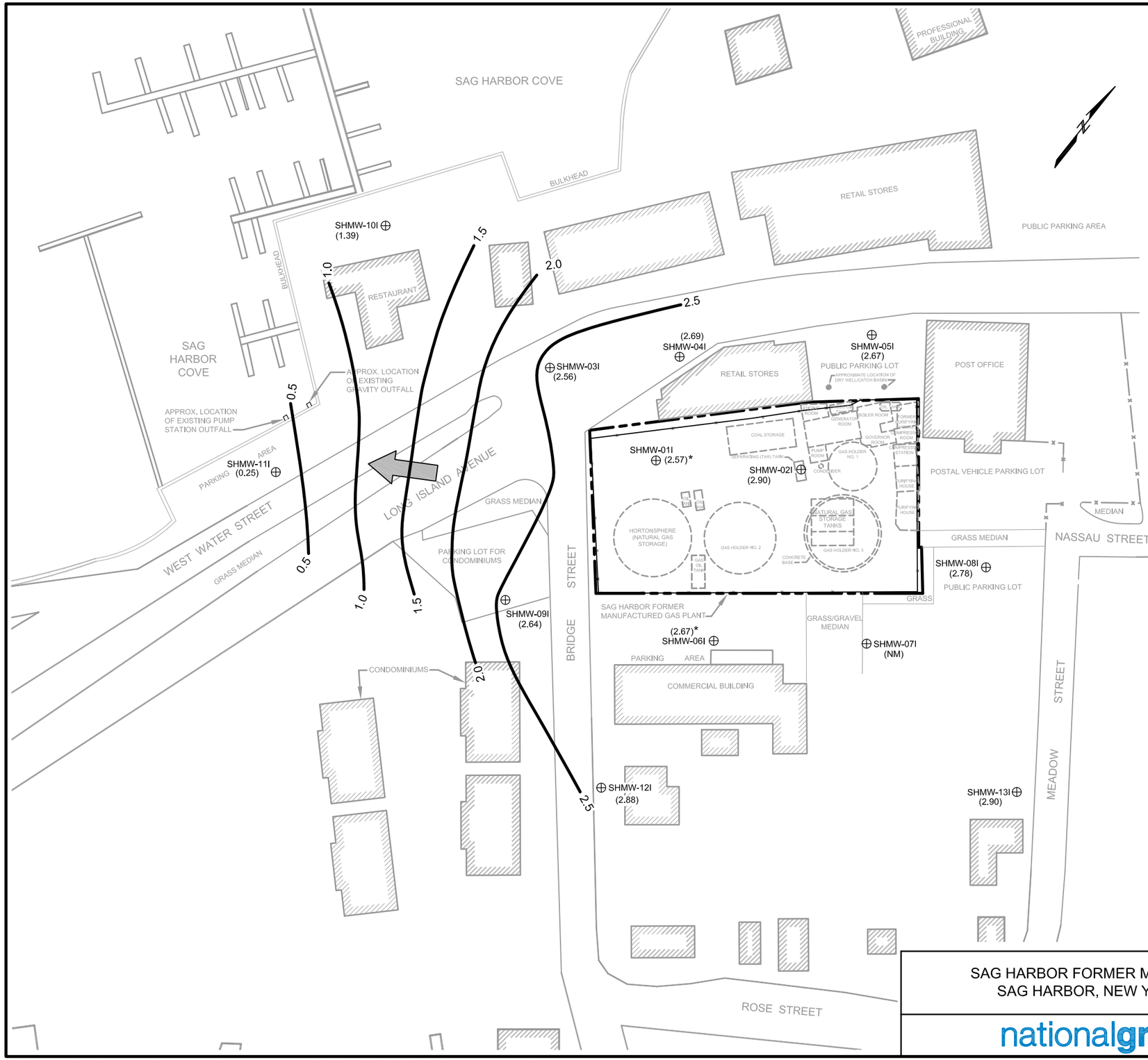
**INTERMEDIATE GROUNDWATER CONTOURS HIGH TIDE 6/16/08**

August 2008 Figure 5

I:\GEI\National Grid\Sag Harbor\Groundwater-Quarterly Monitoring\ SAG-GW CONTOURS Q2-2008.dwg \Aug 11, 2008




## LEGEND

- APPROXIMATE LOCATION OF FORMER MGP STRUCTURE
- LOCATION OF EXISTING STRUCTURE
- CURRENT SITE BOUNDARY
- FENCE
- SHMW-05I ⊕ EXISTING MONITORING WELL LOCATION
- 2.5 GROUNDWATER CONTOUR
- (2.28) GROUNDWATER ELEVATION
- (NM) NOT MEASURED - WELL WAS INACCESSIBLE AND GROUNDWATER LEVEL MEASUREMENT COULD NOT BE OBTAINED
- GROUNDWATER FLOW DIRECTION
- * GROUNDWATER ELEVATION NOT USED TO GENERATE GROUNDWATER CONTOURS

0 80 160

SCALE, FEET

**SOURCE:**

BASE MAP SITE SURVEY DATA PROVIDED BY KEYSPAN ENERGY SURVEY DIVISION. APPROXIMATE LOCATIONS OF FORMER MGP STRUCTURES BASED ON: 1916 SITE PLAN (DWG 2907); 1915 SURVEY BY THE TITLE GUARANTEE & TRUST CO. OF N.Y. (DWG 2290); AND SANBORN MAPS; SAG HARBOR FORMER MGP SITE DRAFT FINAL REMEDIAL INVESTIGATION REPORT, PREPARED BY DVIRKA & BARTILUCCI, DATED DECEMBER 2002.

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**INTERMEDIATE GROUNDWATER CONTOURS LOW TIDE 6/16/08**

August 2008 Figure 6

I:\GEI\National Grid\Sag Harbor\Groundwater-Quarterly Monitoring\ SAG-GW CONTOURS Q2-2008.dwg \Aug 11, 2008