



Geotechnical
Environmental and
Water Resources
Engineering

**Quarterly Groundwater Monitoring Report
Third Quarter (Q3) 2011**

**Sag Harbor
Former MGP Site**

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

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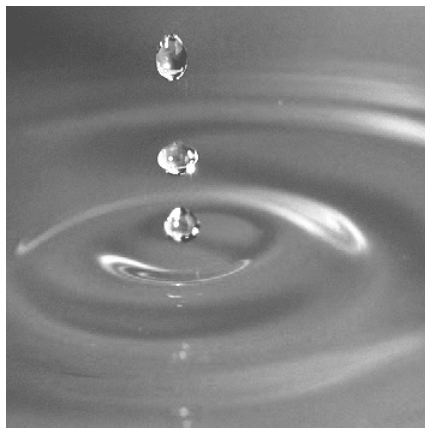


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1. Sag Harbor Site and Adjacent Offsite Areas

Third Quarter (Q3) 2011 Groundwater Monitoring Event Summary

Event Date: September 19, 20 and 21, 2011

Site Phase: Quarterly groundwater monitoring

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

Monitoring Well Network

A total of 25 monitoring wells are currently located at or in the vicinity of the site (Figure 2). MW-05 was destroyed sometime between March and June 2007. Monitoring wells MW-01, MW-02, MW-03, MW-04, MW-06, SHMW-01S, SHMW-01I, SHMW-02I, SHMW-02D, SHMW-04S, SHMW-04I, SHMW-05S, SHMW-05I, SHMW-06S, and SHMW-06I were abandoned prior to the Q4 2008 sampling event due to the remediation activities being conducted at the site. Seven of the monitoring wells, including SHMW-01SR, SHMW-01IR, SHMW-02IR, SHMW-02DR, SHMW-04SR, SHMW-05SR and SHMW-05IR, were replaced as part of the replacement post remediation monitoring well installation program in Q4 2010.

Monitoring wells SHMW-02IR and SHMW-04SR were installed as larger diameter, potential dense non-aqueous phase liquid (DNAPL) recovery wells. In addition to the installation of the replacement monitoring wells listed above, new monitoring wells SHMW-01D and SHMW-02S were also installed as part of this program. Monitoring wells SHMW-07S and SHMW-07I, which were damaged presumably during the remedial activities, were abandoned during the replacement well installation program and reinstalled.

Monitoring well SHMW-02IR was damaged prior to the Q2 2011 sampling round, allowing debris to enter the well. This well was repaired late in Q3 2011, but was unable to be sampled during the Q3 2011 sampling event. This well will be sampled during Q4 2011.

Access to monitoring wells SHMW-09S and SHMW-09I could not be obtained for the Q3 2011 groundwater monitoring event.

Hydrological Data

Groundwater levels were measured on September 19, 2011 at 22 of the 25 monitoring wells, during low and high tide. Monitoring well SHMW-02I was repaired during Q3 2011, altering the survey point. As a result, a groundwater level measurement was not taken. Depth to groundwater and calculated groundwater elevations are provided in Table 1. Shallow and intermediate groundwater contours for high and low tidal conditions are depicted on Figures 3 through 6.

The groundwater flow direction was generally to the west towards Sag Harbor Cove. 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 in Q3 2011, are shown in the following table:

Depth Zone	High Tide			Low Tide		
	Range		Gradient ³	Range		Gradient ³
	DTW ¹	WLE ²		DTW ¹	WLE ²	
Shallow	+0.25* – 4.36	0.92 – 2.67	0.0009	0.43 – 5.20	0.12 – 2.69	0.008
Intermediate	+0.72* – 3.80	1.58 – 2.71	0.0031	0.16 – 4.46	0.97 – 1.91	0.0015

¹: Depth to water - Measured as feet below top of casing

²: Water level elevation - Calculated as feet above mean sea level

³: feet/foot

*: Artesian conditions

NAPL Thickness Data

Table 2 provides a summary of historical non-aqueous phase liquid (NAPL) data. In Q3 2011, all 23 of the accessible monitoring wells were monitored for NAPL as part of the groundwater monitoring program. There was no evidence of LNAPL or DNAPL in any of the monitoring wells during Q3 2011.

Chemical Data

In Q3 2011, a total of 11 wells were sampled for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tert-butyl ether (MTBE) by Environmental Protection Agency (EPA) Method 8260, and for polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270. Well sampling was performed on September 20 and 21, 2011 and included all accessible wells on the quarterly sampling list excluding SHMW-02I, for reasons detailed above. The remaining intermediate and deep monitoring wells are sampled annually in the fourth quarter.

Chemical data for Q3 2011 (Table 3) indicate:

- BTEX concentrations ranged from below method detection limits (ND) in 4 of the 11 wells sampled to 607 micrograms per liter (µg/L) in SHMW-07SR.
- Total PAH concentrations ranged from below ND in 3 of the 11 wells sampled to 885 µg/L in SHMW-07SR.
- MTBE concentrations ranged from ND in 9 of the 11 wells sampled to 2 µg/L in SHMW-08S and SHMW-12S.

Data Trend Analysis

In general, BTEX and total PAH concentrations (see historical data in Tables 4 and 5) are decreasing in shallow groundwater on and adjacent to the site as indicated in the table below. However, variations in BTEX and total PAH concentrations have been observed in recent sampling events. Following increases observed during Q2 2011, concentrations in Q3 2011 generally decreased. Overall, the concentrations observed during recent sampling events remain significantly below historical levels.

Shallow Zone	Historical*		Q1 2011		Q2 2011		Q3 2011	
	Max	Average	Max	Average	Max	Average	Max	Average
BTEX	25,860	1,315	702	118	1,172	214	607	128
Total PAHs	7,211**	776	1,440	132	1,736	406	885	267

Concentrations in µg/L

*: Including data from existing wells only.

**: Historical maximum for all depth zones is 580,200 µg/L (total PAH) in SHMW-021.

Detectable concentrations of BTEX were identified in seven wells in Q3 2011. The concentration in monitoring well SHMW-13S (3 µg/L) was the first detection in this well in the historical monitoring period, but is relatively low.

Elevated BTEX concentrations in the remaining shallow wells in Q3 2011 were limited to SHMW-04SR, SHMW-07SR and SHMW-12S. The concentrations in SHMW-04SR (292 µg/L) have continued to decrease since the well was reinstalled in Q4 2010. The Q3 2011 concentration in this well remains well below the historical mean concentration (10,300 µg/L) and was the lowest concentration detected during the historical monitoring period. The concentration in SHMW-07SR (607 µg/L) decreased relative to Q2 2011 and remains below the historical mean concentration (1,588 µg/L). The Q3 2011 concentration in monitoring well SHMW-12S (473 µg/L) decreased relative to Q2 2011, but slightly exceeded its historical mean concentration (247 µg/L).

The concentrations in the remaining three wells (SHMW-03S, SHMW-05SR and SHMW-08S) with BTEX detections in Q3 2011 were relatively low and remained lower than the respective historical mean concentrations.

For total PAH concentrations, eight shallow wells also had detections in Q3 2011, with two of the eight detections being near detection levels (2 µg/L in SHMW-11S and 3 µg/L in SHMW-13S). Similar to BTEX, the total PAH detection in SHMW-13S was the first detection in this well in the historical monitoring period.

The total PAH concentrations in Q3 2011 in SHMW-05SR (273 µg/L), SHMW-08S (195 µg/L) and SHMW-12S (739 µg/L) all increased from Q2 2011 levels and were above their respective historical mean concentrations. The Q3 2011 concentrations in SHMW-05S and SHMW-12S represent the maximum values recorded during the historical monitoring period, but are within the same order of magnitude as the respective previous historical maximum value. The total PAH concentration in SHMW-03S (25 µg/L) also increased during Q3 2011, but was below its historical mean concentration.

Total PAH concentrations in SHMW-04SR (811 µg/L) have continued to decrease since the well was reinstalled in Q4 2010 and have remained significantly below the historical mean concentration of 3,703 µg/L. The total PAH concentration in SHMW-07SR (885 µg/L) decreased significantly from Q2 2011 and is below its historical average.

Variable dissolved constituent concentrations detected in shallow groundwater over the past sampling 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 PAH trapped beneath the groundwater/soil vapor interface.

The historical NAPL data (Table 2) indicates that measurable quantities of NAPL have primarily been found in two onsite shallow monitoring wells (MW-02 and MW-05), one onsite intermediate well (SHMW-02I), and one offsite shallow well (SHMW-04S/04SR). Historically, trace amounts of NAPL have been found in two onsite shallow wells, MW-03 and MW-04, and two offsite shallow wells, SHMW-06S and SHMW-02IR, and intermittently in SHMW-07S and SHMW-07SR. Excluding SHMW-07S and SHMW-07SR, all of the wells identified above in which NAPL has been historically detected were either destroyed or abandoned prior to the start of remedial activities. Monitoring well SHMW-07S was damaged presumably during remedial activities and subsequently replaced.

Trace amounts of LNAPL and DNAPL have historically been found in monitoring wells SHMW-04SR and SHMW-07SR. However, there was no evidence of NAPL in these monitoring wells or any of the remaining monitoring wells during Q3 2011.

Future Plans

Continue quarterly groundwater and NAPL monitoring at site monitoring wells.

Tables

Table 1
Water Level Measurements and Calculated Water Elevations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Top of Casing Elevation (ft)*	Tide	Time	9/19/2011		Notes
				Depth to Water (ft)	Groundwater Elevation (ft)	
MW-01	5.09	High	--	--	--	Well abandoned
		Low	--	--	--	
MW-02	4.48	High	--	--	--	Well abandoned
		Low	--	--	--	
MW-03	4.59	High	--	--	--	Well abandoned
		Low	--	--	--	
MW-04	4.13	High	--	--	--	Well abandoned
		Low	--	--	--	
MW-05	5.07	High	--	--	--	Well destroyed
		Low	--	--	--	
MW-06	5.38	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-01SR	3.71	High	1548	2.79	0.92	Well replaced in Q4 2010
		Low	0929	2.81	0.90	
SHMW-01IR	3.81	High	1548	2.23	1.58	Well replaced in Q4 2010
		Low	0930	2.54	1.27	
SHMW-01D	3.67	High	1548	1.41	2.26	Well installed in Q4 2010
		Low	0930	2.06	1.61	
SHMW-02S	3.95	High	1445	2.48	1.47	Well installed in Q4 2010
		Low	0926	2.62	1.33	
SHMW-02IR	3.92	High	--	NM	--	Survey point altered
		Low	--	NM	--	
SHMW-02DR	3.66	High	1545	1.80	1.86	Well replaced in Q4 2010
		Low	0928	2.29	1.37	
SHMW-03S	3.83	High	1538	2.76	1.07	
		Low	0936	2.96	0.87	
SHMW-03I	3.85	High	1558	1.92	1.93	
		Low	0936	2.64	1.21	
SHMW-04SR	3.90	High	1550	2.90	1.00	Well replaced in Q4 2010
		Low	0932	2.96	0.94	
SHMW-04I	5.71	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-05SR	5.03	High	1555	3.69	1.34	Well replaced in Q4 2010
		Low	0934	3.70	1.33	
SHMW-05IR	4.96	High	1559	3.35	1.61	Well replaced in Q4 2010
		Low	0934	3.66	1.30	
SHMW-06S	4.44	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-06I	4.43	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-07SR	3.48	High	1605	1.05	2.43	
		Low	0951	1.02	2.46	
SHMW-07IR	3.38	High	1606	1.75	1.63	
		Low	0952	1.83	1.55	
SHMW-08S	3.69	High	1610	1.02	2.67	
		Low	0955	1.00	2.69	
SHMW-08I	3.79	High	1610	1.53	2.26	
		Low	0956	2.08	1.71	
SHMW-09S	3.06	High	--	NM	--	Access not provided
		Low	--	NM	--	
SHMW-09I	2.82	High	--	NM	--	Access not provided
		Low	--	NM	--	
SHMW-10S	4.75	High	1600	3.70	1.05	
		Low	0938	4.27	0.48	
SHMW-10I	4.75	High	1600	3.00	1.75	
		Low	0939	3.78	0.97	
SHMW-11S	5.32	High	1602	4.36	0.96	
		Low	0940	5.20	0.12	
SHMW-11I	5.63	High	1602	3.80	1.83	
		Low	0940	4.46	1.17	
SHMW-12S	1.98	High	1603	+0.25	2.23	Artesian at high tide
		Low	0946	0.43	1.55	
SHMW-12I	1.99	High	1603	+0.72	2.71	Artesian at high tide
		Low	0947	0.16	1.83	
SHMW-13S	3.36	High	1608	0.71	2.65	
		Low	0953	0.91	2.45	
SHMW-13I	3.50	High	1608	1.23	2.27	
		Low	0954	1.59	1.91	

* Elevations were re-surveyed in November 2010.

-- = Not Available

NM = Not Measured

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	May 2002 Observations	May 2004 Observations	Aug 2004 Observations	Oct 2004 Observations	Nov 2004 Observations	Dec 2004 Observations	Jan 2005 Observations	Feb 2005 Observations	Mar 2005 Observations
MW-01	None Observed	Odor	None Observed	Not Checked	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
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
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
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.
MW-06	None Observed	Slight naphthalene- like odor	NR	NR	NR	NR	NR	NR	NR
SHMW-01S/01SR	None Observed	Slight naphthalene- like odor	NR	NR	NR	NR	NR	NR	NR
SHMW-01I/01IR	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-01D	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02S	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02I/02IR	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
SHMW-02D/02DR	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-03S	None Observed	Odor	NR	NR	NR	NR	NR	NR	NR
SHMW-03I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-04S/04SR	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
SHMW-04I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-05S/05SR	None Observed	Blebs of DNAPL in purge water, odor	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-05I/05IR	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	May 2002 Observations	May 2004 Observations	Aug 2004 Observations	Oct 2004 Observations	Nov 2004 Observations	Dec 2004 Observations	Jan 2005 Observations	Feb 2005 Observations	Mar 2005 Observations
SHMW-06S	Slight sheen and naphthalene-like odor	Naphthalene-like odor	NR	NR	NR	NR	NR	NR	NR
SHMW-06I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-07S/07SR	Sheen and naphthalene-like odor	Slight odor	NR	NR	NR	NR	NR	NR	NR
SHMW-07I/07IR	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-08S	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-08I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-09S	None Observed	Slight naphthalene- like odor	NR	NR	NR	NR	NR	NR	NR
SHMW-09I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-10S	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-10I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-11S	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-11I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-12S	None Observed	Sheen, strong sulfur- like odor	NR	NR	NR	NR	NR	NR	NR
SHMW-12I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-13S	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR
SHMW-13I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Apr/Q1 2005 Observations	Jun/Q2 2005 Observations	Sep/Q3 2005 Observations	Dec/Q4 2005 Observations	Mar/Q1 2006 Observations	Jun/Q2 2006 Observations	Sep/Q3 2006 Observations	Dec/Q4 2006 Observations	Mar/Q1 2007 Observations
MW-01	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-02	Approx. 0.15' of DNAPL	Trace DNAPL at bottom of tape	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
MW-03	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape	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)
MW-04	None Observed	None Observed	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)
MW-05	Sporadic DNAPL, approx. 0.1' of LNAPL	Approx. 3.0' of DNAPL	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)
MW-06	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-01S/01SR	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-01I/01IR	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-01D	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02S	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02I/02IR	Approx. 1.1' of DNAPL	Approx. 0.75' of DNAPL	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)
SHMW-02D/02DR	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-03S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-03I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-04S/04SR	Approx. 0.25' of DNAPL	Approx. 0.90' of DNAPL	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
SHMW-04I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-05S/05SR	None Observed	None Observed	None Observed	None Observed	No DNAPL observed	None Observed	None Observed	None Observed	None Observed
SHMW-05I/05IR	NR	NR	NR	NR	NR	NR	NR	NR	None Observed

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Apr/Q1 2005 Observations	Jun/Q2 2005 Observations	Sep/Q3 2005 Observations	Dec/Q4 2005 Observations	Mar/Q1 2006 Observations	Jun/Q2 2006 Observations	Sep/Q3 2006 Observations	Dec/Q4 2006 Observations	Mar/Q1 2007 Observations
SHMW-06S	NR	NR	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)
SHMW-06I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-07S/07SR	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-07I/07IR	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-08S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-08I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-09S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-09I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-10S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-10I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-11S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-11I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-12S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-12I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-13S	NR	NR	NR	NR	NR	NR	NR	NR	None Observed
SHMW-13I	NR	NR	NR	NR	NR	NR	NR	NR	None Observed

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Jun/Q2 2007 Observations	Sep/Q3 2007 Observations	Dec/Q4 2007 Observations	Mar/Q1 2008 Observations	Jun/Q2 2008 Observations	Sep/Q3 2008 Observations	Dec/Q4 2008 Observations	Mar/Q1 2009 Observations	Jun/Q2 2009 Observations
MW-01	NR	NR	None Observed	None Observed	Trace DNAPL	Trace DNAPL (at bottom of tubing)	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
MW-02	Approx.0.07' DNAPL	Approx. 0.11' DNAPL	Approx. ~0.08'	Trace DNAPL	Moderate DNAPL; not measureable	Trace DNAPL	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
MW-03	None Observed	Trace DNAPL (coating on tubes)	Trace	Trace DNAPL (On bottom 1.5' of tubes)	Trace DNAPL	Trace DNAPL (0.05' at bottom of tubing)	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
MW-04	Trace DNAPL (coating on tubes)	Trace DNAPL (coating on tubes)	Approx. ~0.02'	NR	Trace DNAPL	Trace DNAPL (at bottom of tubing)	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
MW-05	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed
MW-06	NR	NR	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-01S/01SR	NR	NR	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-01I/01IR	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-01D	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02S	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02I/02IR	Trace DNAPL (coating on tubes)	Trace DNAPL (coating on tubes)	Approx. ~0.60'	Approx. 3' DNAPL	Approx. 1.5' DNAPL	Approx. 4' DNAPL	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-02D/02DR	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-03S	NR	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-03I	NR	NR	None Observed	NR	NR	NR	None Observed	NR	None Observed
SHMW-04S/04SR	Approx.0.50' DNAPL	Approx. 0.5' DNAPL	Approx. ~0.61'	Approx. 1.05' DNAPL	Approx.0.6' DNAPL	Approx.0.75' DNAPL	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-04I	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-05S/05SR	None Observed	NR	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-05I/05IR	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Jun/Q2 2007 Observations	Sep/Q3 2007 Observations	Dec/Q4 2007 Observations	Mar/Q1 2008 Observations	Jun/Q2 2008 Observations	Sep/Q3 2008 Observations	Dec/Q4 2008 Observations	Mar/Q1 2009 Observations	Jun/Q2 2009 Observations
SHMW-06S	Trace DNAPL (coating on tubes)	Trace DNAPL (coating on tubes)	Trace	Trace DNAPL (on tubing)	Trace DNAPL	Trace DNAPL (on tubing)	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-06I	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned
SHMW-07S/07SR	NR	NR	Trace	NR	NR	Trace DNAPL (on side of tubing approx 1' off bottom)	Well Inaccessible or Abandoned	Well Inaccessible	None Observed
SHMW-07I/07IR	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Inaccessible	None Observed
SHMW-08S	NR	NR	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Inaccessible	None Observed
SHMW-08I	NR	NR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Inaccessible	None Observed
SHMW-09S	NR	NR	None Observed	None Observed	None Observed	None Observed	None Observed	Well Inaccessible	None Observed
SHMW-09I	NR	NR	None Observed	NR	NR	NR	NR	NR	NR
SHMW-10S	NR	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-10I	NR	NR	None Observed	NR	NR	NR	NR	NR	NR
SHMW-11S	NR	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-11I	NR	NR	None Observed	NR	NR	NR	NR	NR	NR
SHMW-12S	NR	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-12I	NR	NR	None Observed	NR	NR	NR	NR	NR	NR
SHMW-13S	NR	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-13I	NR	NR	None Observed	NR	NR	NR	NR	NR	NR

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Sep/Q3 2009 Observations	Dec/Q4 2009 Observations	Mar/Q1 2010 Observations	Jun/Q2 2010 Observations	Sep/Q3 2010 Observations	Dec/Q4 2010 Observations	Mar/Q1 2011 Observations	Jun/Q2 2011 Observations	Sep/Q3 2011 Observations
MW-01	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
MW-02	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
MW-03	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
MW-04	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
MW-05	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed
MW-06	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-01S/01SR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed
SHMW-01I/01IR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed
SHMW-01D	NI	NI	NI	NI	NI	None Observed	None Observed	None Observed	None Observed
SHMW-02S	NI	NI	NI	NI	NI	None Observed	None Observed	None Observed	None Observed
SHMW-02I/02IR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed	Well Damaged	Well Damaged	Well Damaged
SHMW-02D/02DR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed
SHMW-03S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-03I	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-04S/04SR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Trace LNAPL - DNAPL observed on tubing	Trace LNAPL - DNAPL observed on tubing	Trace LNAPL - DNAPL observed on tubing	None Observed
SHMW-04I	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-05S/05SR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed
SHMW-05I/05IR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well ID	Sep/Q3 2009 Observations	Dec/Q4 2009 Observations	Mar/Q1 2010 Observations	Jun/Q2 2010 Observations	Sep/Q3 2010 Observations	Dec/Q4 2010 Observations	Mar/Q1 2011 Observations	Jun/Q2 2011 Observations	Sep/Q3 2011 Observations
SHMW-06S	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-06I	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-07S/07SR	Trace DNAPL (on side of tubing)	None Observed	None Observed	Well Inaccessible	Well Inaccessible	Trace LNAPL - DNAPL observed on tubing	Trace LNAPL - DNAPL observed on tubing	Trace LNAPL - DNAPL observed on tubing	None Observed
SHMW-07I/07IR	NR	None Observed (approximately 10 feet of sand present in well)	None Observed (approximately 10 feet of sand present in well)	Well Inaccessible	Well Inaccessible	None Observed	None Observed	None Observed	None Observed
SHMW-08S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-08I	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-09S	None Observed	None Observed	Well Inaccessible	None Observed	None Observed	No access	No access	No access	No access
SHMW-09I	NR	None Observed	None Observed	None Observed	None Observed	No access	No access	No access	No access
SHMW-10S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-10I	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-11S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-11I	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-12S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-12I	NR	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-13S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-13I	NR	None Observed	None Observed	None Observed	None Observed	None Observed	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
NI = Not Installed

Table 3
Summary of BTEX, MTBE and PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Sample Name Sample Date	NYS AWQS					Duplicate of:						Duplicate of:		
		SHMW-01SR	SHMW-02S	SHMW-03S	SHMW-04SR	SHMW-04SR	SHMW-05SR	SHMW-07SR	SHMW-08S	SHMW-10S	SHMW-11S	SHMW-11S	SHMW-12S	SHMW-13S
		9/21/2011	9/21/2011	9/20/2011	9/20/2011	9/20/2011	9/21/2011	9/20/2011	9/20/2011	9/21/2011	9/20/2011	9/20/2011	9/20/2011	9/20/2011
BTEX (ug/L)														
Benzene	1	1 U	1 U	3	160	150	17	280 D	5	1 U	1 U	1 U	380 D	2
Toluene	5	1 U	1 U	1 U	6	6	1 U	7	1 U	1 U	1 U	1 U	2	1 U
Ethylbenzene	5	1 U	1 U	1 U	59	53	5	210 D	1 U	1 U	1 U	1 U	28	1
Total Xylene	5	1 U	1 U	1 U	67	61	5	110	1 U	1 U	1 U	1 U	63	1 U
Total BTEX	NE	ND	ND	3	292	270	27	607	5	ND	ND	ND	473	3
Other VOCs (ug/L)														
Methyl tert-butyl ether	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 J	10 U	10 U	10 U	2 J	10 U
Total VOCs	NE	ND	ND	3	292	270	27	607	7	ND	ND	ND	475	3
Non-carcinogenic PAHs (ug/L)														
Acenaphthene	20*	10 U	10 U	14	130 D	120 D	42	56	29	10 U	2 J	2 J	9 J	10 U
Acenaphthylene	NE	10 U	10 U	10 U	3 J	3 J	10 U	4 J	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50*	10 U	10 U	1 J	20	18	10 U	11	5	10 U	10 U	10 U	10 U	10 U
Benzo[g,h,i]perylene	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	50*	10 U	10 U	10 U	16	16	10 U	8 J	6	10 U	10 U	10 U	10 U	10 U
Fluorene	50*	10 U	10 U	4 J	30	27	10	23	15	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	NE	10 U	10 U	10 U	110 D	91 DJ	7 J	68	4 J	10 U	10 U	10 U	10	10 U
Naphthalene	10*	10 U	10 U	3 J	390 D	310 D	210 D	660 D	95	10 U	10 U	10 U	720 D	3 J
Phenanthrene	50*	10 U	10 U	3 J	84 DJ	76	4 J	46	34	10 U	10 U	10 U	10 U	10 U
Pyrene	50*	10 U	10 U	10 U	19	20	10 U	9 J	7	10 U	10 U	10 U	10 U	10 U
Carcinogenic PAHs (ug/L)														
Benzo[a]anthracene	0.002*	10 U	10 U	10 U	3 J	4 J	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	2 J	2 J	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	1 J	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	1 J	2 J	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	3 J	3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo[a,h]anthracene	NE	10 U	10 U	10 U	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	10 U	10 U	10 U
Total PAHs	NE	ND	ND	25	811	693	273	885	195	ND	2	2	739	3

Table 3
Summary of BTEX, MTBE and PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

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

VOCs - volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

Total BTEX, Total VOCs, and Total PAHs are calculated using detects only.

NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater

* indicates the value is a guidance value and not a standard

NE - not established

NA - not analyzed

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

Bolding indicates a detected concentration

Gray shading indicates that the detected result value exceeds NYS AWQS

Data Qualifiers:

D - Results for dilution

J - estimated value

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

Table 4
Summary of Historical BTEX Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well No.	Screen Interval (feet)	BTEX Concentrations (µg/L)																	
		Sampling Date																	
		1995 Nov	2000 Mar Apr		2002 May	2004 May Aug		2005 Mar/Apr June Sept Dec				2006 March June Sept Dec				2007 March June Sept Dec			
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
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
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
MW-04	1.25 - 6.81	864	35	--	10	208	--	0	0	225	299	268	193	181	101	0	51	89	66
MW-05	2.46 - 7.46	9,100	170	5	102	11,600	2,938	2,697	18,900	--	--	--	--	--	--	--	--	--	--
MW-06	2.47 - 7.47	334	47	30	91	49	--	33	55	39	36	74	37	11	54	0	37	31	0
SHMW-01S/01SR	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
SHMW-01I	35.0 - 45.0	--	--	5	0	0	--	--	--	--	0	--	--	--	0	0	--	--	--
SHMW-01D	65.0 - 75.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SHMW-02S	1.0 - 6.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SHMW-02I/02IR	35.0 - 45.0	--	--	26	0	1,179	16	20	20	19	25	0	0	0	0	--	11	12	15
SHMW-02D	65.0 - 75.0	--	--	5	4	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-03S	2.0 - 12.0	--	--	63	0	110	--	48	53	46	75	131	67	97	13	122	80	12	50
SHMW-03I	35.0 - 45.0	--	--	0	52	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-04S/04SR	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
SHMW-04I	35.0 - 45.0	--	--	5	0	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-05S/05SR	2.0 - 12.0	--	--	37	69	83	--	107	282	2,960	115	202	45	43	26	35	458	676	98
SHMW-05I	35.0 - 45.0	--	--	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
SHMW-06I	35.0 - 45.0	--	--	0	0	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-07S/07SR	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
SHMW-07I	35.0 - 45.0	--	--	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
SHMW-08I	35.0 - 45.0	--	--	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
SHMW-09I	35.0 - 45.0	--	--	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
SHMW-10I	35.5 - 45.5	--	--	--	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
SHMW-11I	35.0 - 45.0	--	--	--	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
SHMW-12I	35.0 - 45.0	--	--	--	0	0	--	--	--	--	0	--	--	--	0	--	--	--	23
SHMW-13S	1.5 - 6.5	--	--	--	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

Table 4
Summary of Historical BTEX Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well No.	Screen Interval (feet)	BTEX Concentrations (µg/L)															Min	Max	Mean
		Sampling Date																	
		2008				2009				2010				2011					
March	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept					
MW-01	1.50 - 7.32	337	141	208	--	--	--	--	--	--	--	--	--	--	--	0	2,720	236	
MW-02	0.50 - 7.25	8,865	7,415	2,240	--	--	--	--	--	--	--	--	--	--	--	98	15,181	9,129	
MW-03	2.17 - 10.17	2,842	2,241	2,875	--	--	--	--	--	--	--	--	--	--	--	560	4,965	2,416	
MW-04	1.25 - 6.81	--	15	79	--	--	--	--	--	--	--	--	--	--	--	0	864	149	
MW-05	2.46 - 7.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	18,900	5,689	
MW-06	2.47 - 7.47	1	33	7	--	--	--	--	--	--	--	--	--	--	--	0	334	50	
SHMW-01S/01SR	1.0 - 6.0	1,595	306	243	--	--	--	--	--	--	--	0	1	0	0	0	5,183	1,437	
SHMW-01I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	5	1	
SHMW-01D	65.0 - 75.0	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	0	0	
SHMW-02S	1.0 - 6.0	--	--	--	--	--	--	--	--	--	--	3	0	3	0	0	3	2	
SHMW-02I/02IR	35.0 - 45.0	18	41	29	--	--	--	--	--	--	--	4	0	--	--	0	1,179	72	
SHMW-02D	65.0 - 75.0	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	5	1	
SHMW-03S	2.0 - 12.0	3	0	5	13	111	24	4	9	40	5	0	9	24	2	3	0	131	41
SHMW-03I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	52	5
SHMW-04S/04SR	2.0 - 12.0	7,567	8,059	7,561	--	--	--	--	--	--	--	2,717	702	469	292	292	25,860	10,300	
SHMW-04I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	5	1	
SHMW-05S/05SR	2.0 - 12.0	77	83	64	--	--	--	--	--	--	--	--	20	22	25	27	20	2,960	252
SHMW-05I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	0	0
SHMW-06S	2.0 - 6.0	1,296	1,343	1,298	--	--	--	--	--	--	--	--	--	--	--	--	1,296	4,289	2,214
SHMW-06I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0	0
SHMW-07S/07SR	1.0 - 11.0	--	1,075	1,374	--	--	1,500	3,472	2,183	1,825	3,946	--	858	455	1,172	607	185	3,946	1,588
SHMW-07I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	0	0
SHMW-08S	1.0 - 7.0	8	9	10	--	--	5	5	4	6	13	4	9	7	10	5	0	19	7
SHMW-08I	35.0 - 45.0	--	--	--	--	--	0	--	0	--	--	--	0	--	--	--	0	0	0
SHMW-09S	2.0 - 12.0	1,039	1,298	671	483	--	584	455	224	--	--	--	--	--	--	--	178	1,298	734
SHMW-09I	35.0 -45.0	--	--	--	0	--	0	--	0	--	--	--	--	--	--	--	0	0	0
SHMW-10S	5.0 -15.0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
SHMW-10I	35.5 - 45.5	--	--	--	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
SHMW-11I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	0	0
SHMW-12S	1.5 - 6.5	166	482	111	279	28	315	45	58	222	217	8	70	82	672	473	0	930	247
SHMW-12I	35.0 - 45.0	--	--	--	0	--	--	--	2	--	--	--	0	--	--	--	0	23	3
SHMW-13S	1.5 - 6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0
SHMW-13I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	0	0

NOTES:

-- not analyzed or not applicable

µg/L - micrograms per liter

BTEX - benzene, toluene, ethylbenzene, and xylene

Table 5
Summary of Historical Total PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well No.	Screen Interval (feet)	Total PAH Concentrations (µg/L)																	
		Sampling Date																	
		1995	2000			2002	2004			2005				2006				2007	
Nov	Mar	Apr	May	May	Aug	Mar/Apr	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept	Dec		
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
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
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
MW-04	1.25 - 6.81	3,612	75	--	0	90	--	0	22	1,098	103	11	37	66	31	0	66	238	6
MW-05	2.46 - 7.46	16,386	779	101	1,160	431,600	2,049	918	188,200	--	--	--	--	--	--	--	--	--	--
MW-06	2.47 - 7.47	5,416	894	653	258	33	--	90	79	204	0	22	0	0	645	35	46	17	0
SHMW-01S/01SR	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
SHMW-01I	35.0 - 45.0	--	--	32	0	0	--	--	--	--	0	--	--	--	0	--	--	--	--
SHMW-01D	65.0 - 75.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SHMW-02S	1.0 - 6.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SHMW-02I/02IR	35.0 - 45.0	--	--	266	0	580,200	41	185	124	271	30	74	32	91	89	0	10	175	32
SHMW-02D	65.0 - 75.0	--	--	308	76	89	--	--	--	--	0	--	--	--	0	--	--	--	15
SHMW-03S	2.0 - 12.0	--	--	422	0	295	--	79	130	117	339	0	0	147	118	430	191	12	154
SHMW-03I	35.0 - 45.0	--	--	2	320	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-04S/04SR	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
SHMW-04I	35.0 - 45.0	--	--	18	0	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-05S/05SR	2.0 - 12.0	--	--	13	170	94	--	82	91	26	53	17	11	11	110	0	0	14	8
SHMW-05I	35.0 - 45.0	--	--	0	17	0	--	--	--	--	0	--	--	--	0	--	--	--	0
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
SHMW-06I	35.0 - 45.0	--	--	2	0	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-07S/07SR	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
SHMW-07I	35.0 - 45.0	--	--	0	0	0	--	--	--	--	0	--	--	--	2,212	--	--	--	0
SHMW-08S	1.0 - 7.0	--	--	110	71	94	--	25	70	33	83	112	57	77	99	13	90	10	13
SHMW-08I	35.0 - 45.0	--	--	13	0	0	--	--	--	--	0	--	--	--	0	--	--	--	0
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
SHMW-09I	35.0 - 45.0	--	--	3	0	0	--	--	--	--	0	--	--	--	0	--	--	--	0
SHMW-10S	5.0 -15.0	--	--	--	22	6	--	0	0	0	0	0	0	0	0	0	0	0	1
SHMW-10I	35.5 - 45.5	--	--	--	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
SHMW-11I	35.0 - 45.0	--	--	--	0	0	--	--	--	--	0	--	--	--	0	--	--	--	4
SHMW-12S	1.5 - 6.5	--	--	--	60	218	--	71	600	230	260	110	470	310	280	15	560	0	155
SHMW-12I	35.0 - 45.0	--	--	--	0	0	--	--	--	--	0	--	--	--	0	--	--	--	20
SHMW-13S	1.5 - 6.5	--	--	--	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

Table 5
Summary of Historical Total PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q3 2011

Well No.	Screen Interval (feet)	Total PAH Concentrations (µg/L)															Min	Max	Mean
		Sampling Date																	
		2008				2009				2010				2011					
		March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept			
MW-01	1.50 - 7.32	145	2	35	--	--	--	--	--	--	--	--	--	--	--	--	0	4,906	380
MW-02	0.50 - 7.25	400	3,455	3,488	--	--	--	--	--	--	--	--	--	--	--	--	0	25,167	6,235
MW-03	2.17 - 10.17	508	96	1,109	--	--	--	--	--	--	--	--	--	--	--	--	92	7,034	2,352
MW-04	1.25 - 6.81	--	0	22	--	--	--	--	--	--	--	--	--	--	--	--	0	3,612	304
MW-05	2.46 - 7.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	101	431,600	80,149
MW-06	2.47 - 7.47	0	0	10	--	--	--	--	--	--	--	--	--	--	--	--	0	5,416	420
SHMW-01S/01SR	1.0 - 6.0	0	0	0	--	--	--	--	--	--	--	--	0	0	0	0	0	4,147	1,139
SHMW-01I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	32	5
SHMW-01D	65.0 - 75.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	0	0
SHMW-02S	1.0 - 6.0	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0	0	0
SHMW-02I/02IR	35.0 - 45.0	8	42	209	--	--	--	--	--	--	--	--	9	3	--	--	0	580,200	27,709
SHMW-02D	65.0 - 75.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	308	70
SHMW-03S	2.0 - 12.0	0	0	17	29	0	20	0	0	0	22	0	0	2	7	25	0	430	87
SHMW-03I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	320	32
SHMW-04S/04SR	2.0 - 12.0	0	1,328	1,868	--	--	--	--	--	--	--	--	3,598	1,440	978	811	0	6,669	3,571
SHMW-04I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	18	3
SHMW-05S/05SR	2.0 - 12.0	2	0	31	--	--	--	--	--	--	--	--	0	4	167	273	0	273	54
SHMW-05I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	17	2
SHMW-06S	2.0 - 6.0	0	44	5,848	--	--	--	--	--	--	--	--	--	--	--	--	0	5,848	2,690
SHMW-06I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	2	0
SHMW-07S/07SR	1.0 - 11.0	--	54	3,252	--	--	2,919	4,722	5,286	3,410	4,547	--	1,456	0	1,736	885	0	7,211	3,127
SHMW-07I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	--	--	--	0	2,212	316
SHMW-08S	1.0 - 7.0	14	21	55	--	--	59	60	112	129	201	34	3	11	185	195	3	201	73
SHMW-08I	35.0 - 45.0	--	--	--	--	--	1	--	0	--	--	--	0	--	--	--	0	13	2
SHMW-09S	2.0 - 12.0	0	92	485	503	--	68	39	389	--	--	--	--	--	--	--	0	2,737	1,035
SHMW-09I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	--	--	--	--	0	3	0
SHMW-10S	5.0 - 15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	1
SHMW-10I	35.5 - 45.5	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	0	0
SHMW-11S	3.5 - 13.5	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	173	6
SHMW-11I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	4	0
SHMW-12S	1.5 - 6.5	9	137	259	280	0	332	4	216	177	585	3	0	0	584	739	0	739	230
SHMW-12I	35.0 - 45.0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	20	3
SHMW-13S	1.5 - 6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0
SHMW-13I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	--	--	0	0	0

NOTES:

-- not analyzed or not applicable

µg/L - micrograms per liter

PAH - polycyclic aromatic hydrocarbons

Figures



SOURCE: Map created with TOPO! © ©2001 National Geographic
(www.nationalgeographic.com/topo)"



**SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK**

nationalgrid

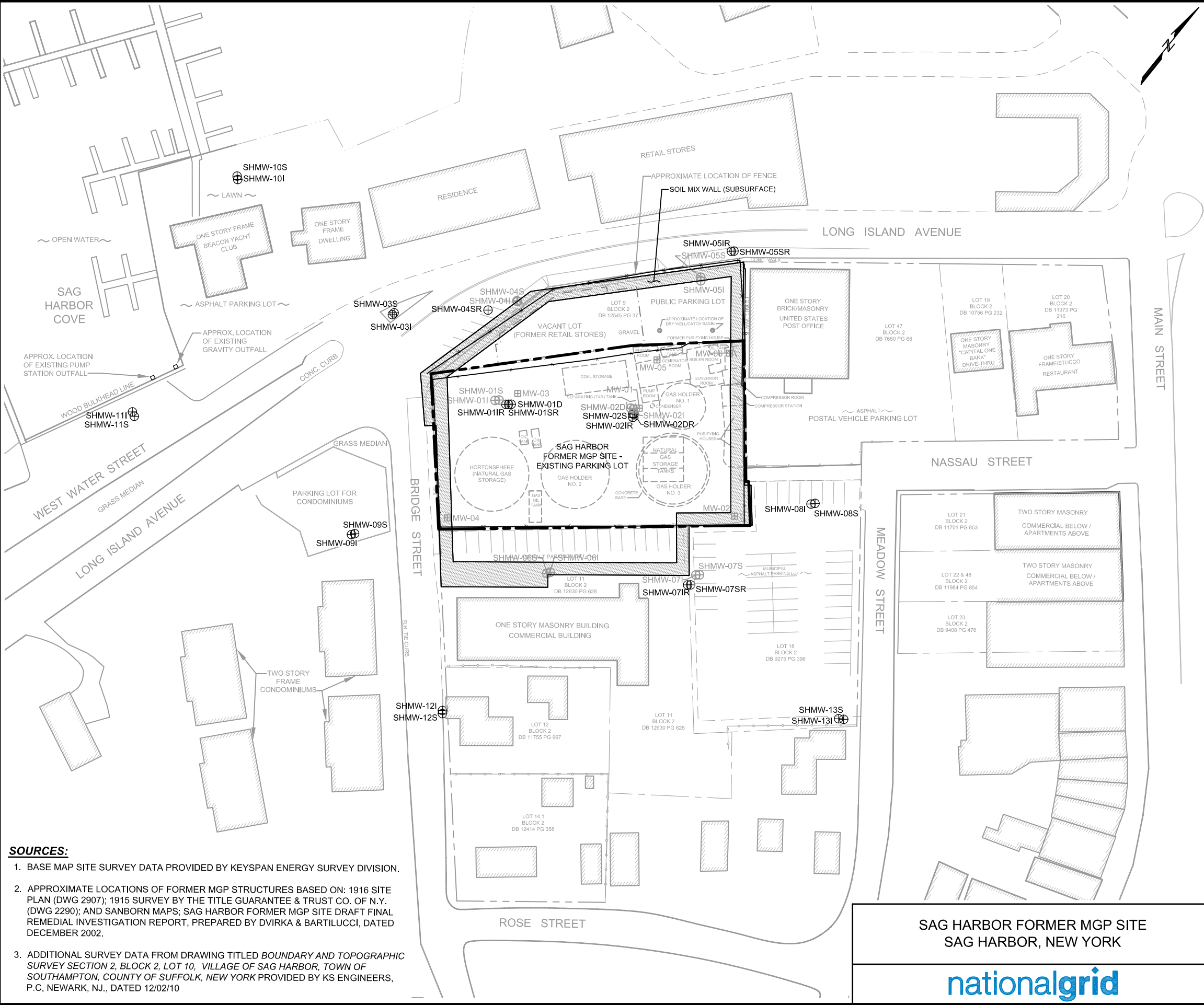


Project 093190-2-1203

SITE LOCATION MAP

November 2011

Figure 1



LEGEND

APPROXIMATE LOCATION OF FORMER MGP STRUCTURE

LOCATION OF EXISTING STRUCTURE

CURRENT SITE BOUNDARY

ADJACENT SITE BOUNDARY

CHAIN-LINK FENCE

STOCKADE FENCE

SHMW-05S

FORMER MONITORING WELL (WELL ABANDONED OR DESTROYED)

SHMW-03S

MONITORING WELL LOCATION

- SOURCES:**
1. BASE MAP SITE SURVEY DATA PROVIDED BY KEYSpan ENERGY SURVEY DIVISION.
 2. 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.
 3. ADDITIONAL SURVEY DATA FROM DRAWING TITLED *BOUNDARY AND TOPOGRAPHIC SURVEY SECTION 2, BLOCK 2, LOT 10, VILLAGE OF SAG HARBOR, TOWN OF SOUTHAMPTON, COUNTY OF SUFFOLK, NEW YORK* PROVIDED BY KS ENGINEERS, P.C, NEWARK, NJ., DATED 12/02/10



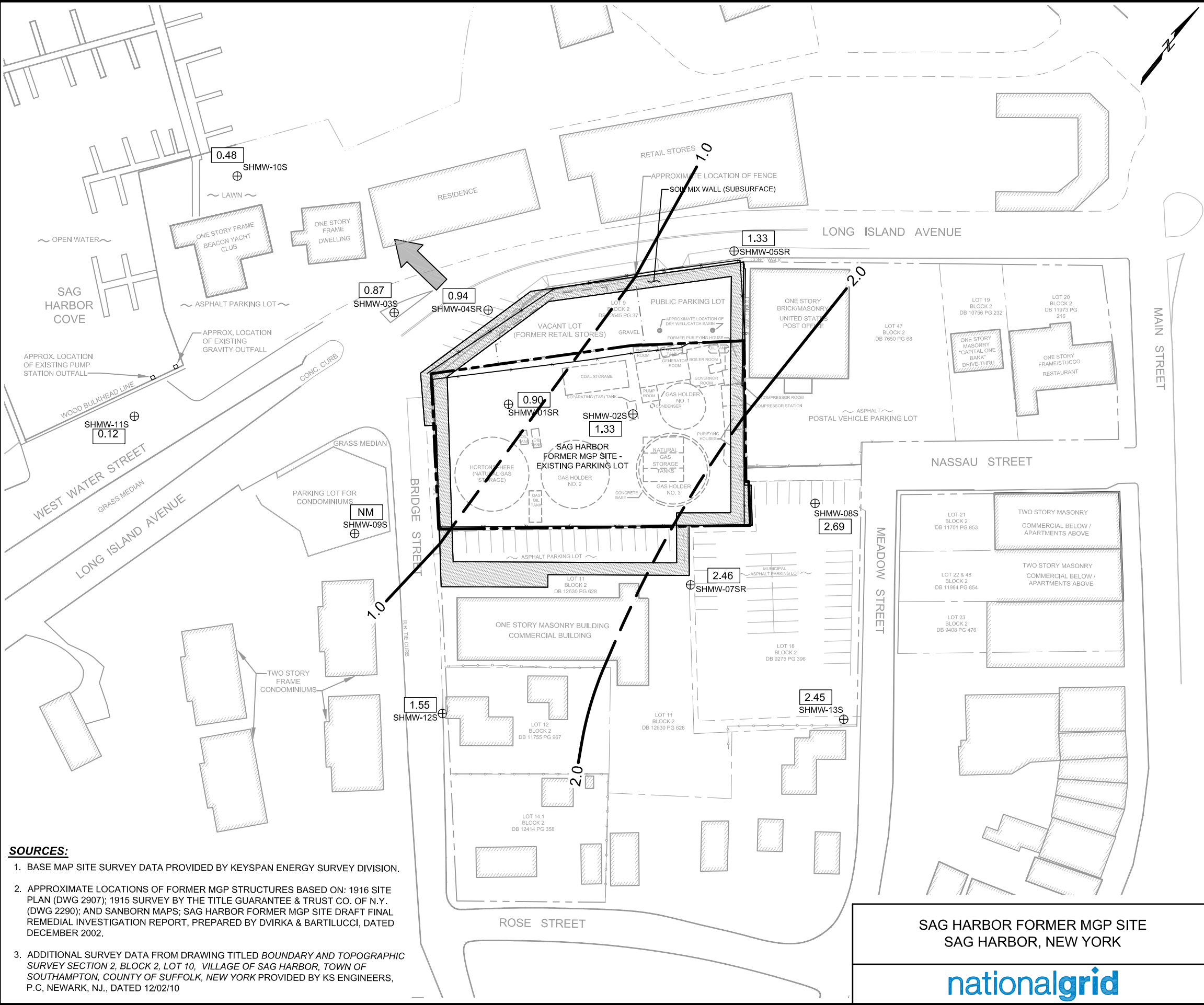
SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK

Project 093190-2-1203

MONITORING WELL
LOCATION MAP

November 2011

Figure 2



LEGEND

APPROXIMATE LOCATION OF FORMER MGP STRUCTURE

LOCATION OF EXISTING STRUCTURE

CURRENT SITE BOUNDARY

ADJACENT SITE BOUNDARY

CHAIN-LINK FENCE

STOCKADE FENCE

SHMW-05S

FORMER MONITORING WELL (WELL ABANDONED OR DESTROYED)

SHMW-03S

MONITORING WELL LOCATION

1.33

GROUNDWATER ELEVATION IN FEET

NM

WELL NOT MEASURED

2.0

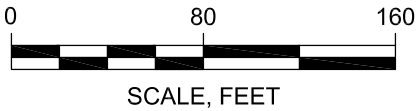
GROUNDWATER CONTOUR (FT)

2.0

GROUNDWATER CONTOUR (INFERRED)

APPROXIMATE GROUNDWATER FLOW DIRECTION

- SOURCES:**
1. BASE MAP SITE SURVEY DATA PROVIDED BY KEYSpan ENERGY SURVEY DIVISION.
 2. 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.
 3. ADDITIONAL SURVEY DATA FROM DRAWING TITLED *BOUNDARY AND TOPOGRAPHIC SURVEY SECTION 2, BLOCK 2, LOT 10, VILLAGE OF SAG HARBOR, TOWN OF SOUTHAMPTON, COUNTY OF SUFFOLK, NEW YORK* PROVIDED BY KS ENGINEERS, P.C, NEWARK, NJ., DATED 12/02/10



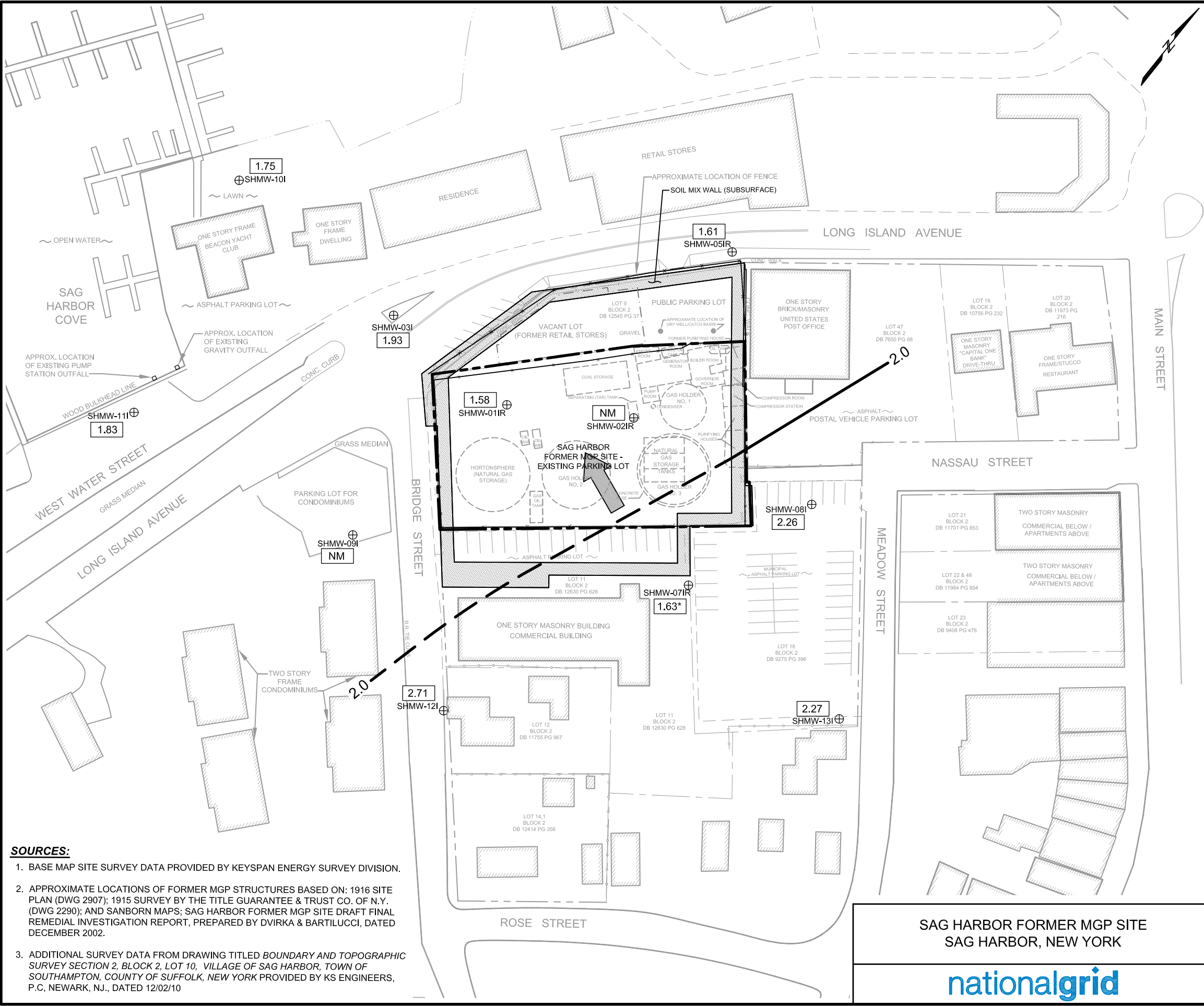
SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK

Project 093190-2-1203

SHALLOW GROUNDWATER
CONTOURS - LOW TIDE
9/19/11

November 2011

Figure 4



LEGEND

APPROXIMATE LOCATION OF FORMER MGP STRUCTURE

LOCATION OF EXISTING STRUCTURE

CURRENT SITE BOUNDARY

ADJACENT SITE BOUNDARY

CHAIN-LINK FENCE

STOCKADE FENCE

SHMW-02I

FORMER MONITORING WELL (WELL ABANDONED OR DESTROYED)

SHMW-03I

MONITORING WELL LOCATION

2.26

GROUNDWATER ELEVATION IN FEET

NM

WELL NOT MEASURED

1.63*

MEASUREMENT NOT USED TO GENERATE CONTOURS

2.0

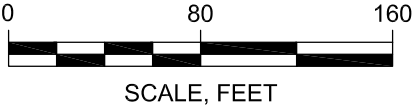
GROUNDWATER CONTOUR (FT)

2.0

GROUNDWATER CONTOUR (INFERRED)

APPROXIMATE GROUNDWATER FLOW DIRECTION

- SOURCES:**
1. BASE MAP SITE SURVEY DATA PROVIDED BY KEYSpan ENERGY SURVEY DIVISION.
 2. 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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SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK

nationalgrid



Project 093190-2-1203

**INTERMEDIATE
GROUNDWATER CONTOURS
HIGH TIDE
9/19/11**

November 2011

Figure 5

