



Geotechnical
Environmental and
Water Resources
Engineering

**Quarterly Groundwater Monitoring Report
Fourth Quarter (Q4) 2010**

**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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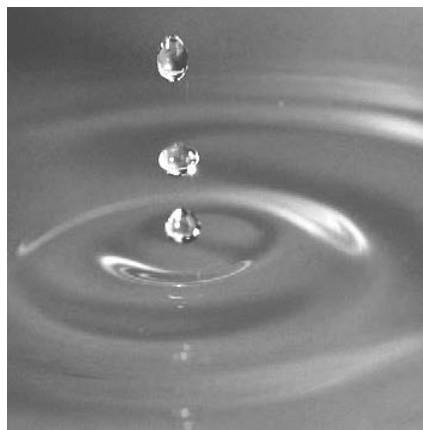


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1. Sag Harbor Site and Adjacent Off-Site Areas

Q4 2011 Groundwater Monitoring Event Summary

Event Date:	December 15, 16, 17, 20 and 21, 2010	
Site Phase:	Quarterly groundwater monitoring	
Location:	The location of the Sag Harbor Former MGP Site is depicted in Figure 1 .	
Monitoring Program:	<i>Number of Wells:</i>	A total of 25 monitoring wells are currently located at or in the vicinity of the Site (see 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 these 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 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.
	<i>Hydrological Data:</i>	Groundwater levels were measured at 23 of the 25 monitoring wells, during low and high tide. Access to monitoring wells SHMW-09S and SHMW-09I could not be obtained. 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 in **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 Q4 2010 were as follows:

- Depth to the water table in shallow wells at high tide ranged from **0.12** (SHMW-12S) to **4.45** (SHMW-11S) feet below the well measuring point.
- Water table elevations in shallow wells at high tide ranged from **0.66** (SHMW-01SR) to **2.89** (SHMW-08S) feet above mean sea level (MSL).
- Depth to the water table in shallow wells at low tide ranged from **0.12** (SHMW-12S) to **5.36** (SHMW-11S) feet below the well measuring point.
- Water table elevations in shallow wells at low tide ranged from **-0.04** (SHMW-11S) to **2.87** (SHMW-08S) feet above MSL.
- The calculated shallow hydraulic gradient for high tide was **0.0024** feet/foot. The calculated shallow hydraulic gradient for low tide was **0.0027** feet/foot.
- Depth to groundwater in intermediate wells at high tide ranged from **+0.14** (SHMW-12I) to **4.10** (SHMW-11I) feet below the well measuring point.
- Groundwater elevations in intermediate wells at high tide ranged from **1.53** (SHMW-11I) to **2.46** (SHMW-13I) feet above MSL.
- Depth to groundwater in intermediate wells at low tide ranged from **0.35** (SHMW-12I) to **5.85** (SHMW-11I) feet below the well measuring point.
- Groundwater elevations in intermediate wells at low tide ranged from **-0.22** (SHMW-11I) to **3.03** (SHMW-07IR) feet above MSL.
- The calculated intermediate hydraulic gradient for high tide was **0.0008** feet/foot. The calculated intermediate hydraulic gradient for low tide was **0.0031** feet/foot.

*NAPL
Thickness
Data:*

Table 2 provides a summary of historical non-aqueous phase liquid (NAPL) data. In Q4 2010, all 23 accessible monitoring wells were monitored for NAPL as part of the groundwater monitoring program. Trace amounts of light non-aqueous phase liquid (LNAPL) and trace amounts of DNAPL were found in monitoring wells SHMW-04SR and SHMW-07SR. There was no evidence of LNAPL or DNAPL in the remaining monitoring wells during Q4 2010.

*Chemical
Data:*

A total of 23 monitoring 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 December 15, 16, 20 and 21, 2010 and included all accessible shallow wells on the quarterly sampling list.

Chemical data for Q4 2010 (**Table 3**) indicate:

- Total BTEX concentrations ranged from below method detection limits (ND) in 15 of the 23 wells sampled to **2,717** micrograms per liter (µg/L) in SHMW-04SR.
- Total PAH concentrations ranged from below ND in 19 of the 23 wells sampled to **3,538** µg/L in SHMW-04SR.
- MTBE concentrations ranged from ND in 22 of the 23 wells samples to 1 µg/L in SHMW-08S.

**Data Trend
Analysis:**

In general, 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. Monitoring wells SHMW-01SR, SHMW-01IR, SHMW-02IR, SHMW-02DR, SHMW-04SR, SHMW-05SR, and SHMW-05IR, which were installed as part of the replacement monitoring well program, have not been sampled since the remedial activities began at the site in Q3 2008.

The BTEX concentrations in five of the seven shallow wells with detections in Q4 2010 (SHMW-03S, SHMW-04SR, SHMW-05SR, SHMW-07SR, and SHMW-12S), were all lower than the respective historical mean concentrations. The Q4 2010 BTEX concentrations in SHMW-03S (9 µg/L), SHMW-05SR (20 µg/L), and SHMW-12S (70 µg/L), as well as in SHMW-08S (9 µg/L), where the concentration

only slightly exceeded the historical mean, were relatively low (below 100 µg/L). The Q4 2010 BTEX concentration in SHMW-02S (3 µg/L), was the first detection in this well, as it was installed as part of the replacement well installation program in Q4 2010.

Elevated concentrations in shallow wells in Q4 2010 were limited to SHMW-04SR and SHMW-07SR. The concentration in SHMW-07SR (858 µg/L) was well below the historical mean concentration of 1,708 µg/L, and was the lowest concentration detected since Q4 2007. The concentration in SHMW-04SR (2,717 µg/L) was well below the historical mean concentration of 11,849 µg/L and the lowest concentration detected recorded during the historical monitoring period.

BTEX detections in the intermediate or deep zone in Q4 2010 were limited to SHMW-02IR, with a concentration of 4 µg/L.

Three shallow wells had detectable total PAH concentrations in Q4 2010; SHMW-04SR (3,586 µg/L), SHMW-07SR (1,456 µg/L), and SHMW-08S (3 µg/L). The Q4 2010 total PAH concentrations in these wells were all below their respective historical mean concentrations.

Total PAH detections in the intermediate or deep zone in Q4 2010 were limited to SHMW-02IR, with a concentration of 9 µg/L.

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/air interface.

The historical NAPL data (see **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). Historically, trace amounts of NAPL have been found in two onsite shallow wells (MW-03 and MW-04), and one offsite shallow well (SHMW-06S). Trace amounts of NAPL have also been intermittently observed in offsite well SHMW-07S. Excluding SHMW-07S, 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.

As mentioned above, trace amounts of LNAPL and DNAPL were found in monitoring wells SHMW-04SR and SHMW-07SR. The DNAPL observations in these wells are consistent with historical data.

There was no evidence of NAPL in the remaining monitoring wells during Q4 2010.

Current 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 - Q4 2010

Well ID	Top of Casing Elevation (ft)**	Tide	Time	12/17/2010		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	720	3.05	0.66	Well replaced in Q4 2010
		Low	1342	3.06	0.65	
SHMW-01IR	3.81	High	719	2.23	1.58	Well replaced in Q4 2010
		Low	1341	2.76	1.05	
SHMW-01D	3.67	High	720	1.34	2.33	Well installed in Q4 2010
		Low	1343	2.37	1.30	
SHMW-02S	3.95	High	722	2.87	1.08	Well installed in Q4 2010
		Low	1344	2.90	1.05	
SHMW-02IR	3.92	High	721	2.10	1.82	Well replaced in Q4 2010
		Low	1344	2.71	1.21	
SHMW-02DR	3.66	High	723	1.70	1.96	Well replaced in Q4 2010
		Low	1345	2.70	0.96	
SHMW-03S	3.83	High	713	2.90	0.93	
		Low	1335	3.19	0.64	
SHMW-03I	3.85	High	712	1.88	1.97	
		Low	1334	2.96	0.89	
SHMW-04SR	3.90	High	714	3.10	0.80	Well replaced in Q4 2010
		Low	1337	3.10	0.80	
SHMW-04I	5.71	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-05SR	5.03	High	717	3.77	1.26	Well replaced in Q4 2010
		Low	1339	3.78	1.25	
SHMW-05IR	4.96	High	716	3.39	1.57	Well replaced in Q4 2010
		Low	1338	4.00	0.96	
SHMW-06S	4.44	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-06I	4.43	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-07SR	3.48	High	700	0.96	2.52	Well replaced in Q4 2010
		Low	1321	0.97	2.51	
SHMW-07IR	3.38	High	701	1.41	1.97	Well replaced in Q4 2010
		Low	1321	2.05	3.03	
SHMW-08S	3.69	High	654	0.80	2.89	
		Low	1320	0.82	2.87	
SHMW-08I	3.79	High	656	1.54	2.25	
		Low	1319	2.35	1.44	
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	711	3.80	0.95	
		Low	1332	4.10	0.65	
SHMW-10I	4.75	High	710	2.80	1.95	
		Low	1331	4.85	-0.10	
SHMW-11S	5.32	High	705	4.45	0.87	
		Low	1327	5.36	-0.04	
SHMW-11I	5.63	High	707	4.10	1.53	
		Low	1328	5.85	-0.22	
SHMW-12S	1.98	High	703	0.12	1.86	
		Low	1321	0.12	1.86	
SHMW-12I	1.99	High	703	+0.14	2.13	Artesian conditions at high tide (+0.14)
		Low	1324	0.35	1.64	
SHMW-13S	3.36	High	1455	0.91	2.45	
		Low	838	0.97	2.39	
SHMW-13I	3.50	High	1456	1.04	2.46	
		Low	838	1.61	1.89	

** 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 - Q4 2010

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 - Q4 2010

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 - Q4 2010

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 - Q4 2010

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 - Q4 2010

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 - Q4 2010

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 - Q4 2010

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
MW-01	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
MW-03	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
MW-05	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
SHMW-01S/01SR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed
SHMW-01I/01IR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed
SHMW-01D	NI	NI	NI	NI	NI	None Observed
SHMW-02S	NI	NI	NI	NI	NI	None Observed
SHMW-02I/02IR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed
SHMW-02D/02DR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed
SHMW-03S	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
SHMW-04S/04SR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Trace LNAPL - DNAPL observed on tubing
SHMW-04I	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
SHMW-05I/05IR	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	None Observed

Table 2
Summary of Historical NAPL Observations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q4 2010

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
SHMW-06S	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
SHMW-07S/07SR	Trace DNAPL (on side of tubing)	None Observed	None Observed	Well Inaccessible	Well Inaccessible	Trace LNAPL - DNAPL observed on tubing
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
SHMW-08S	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
SHMW-09S	None Observed	None Observed	Well Inaccessible	None Observed	None Observed	No access
SHMW-09I	NR	None Observed	None Observed	None Observed	None Observed	No access
SHMW-10S	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
SHMW-11S	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
SHMW-12S	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
SHMW-13S	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

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 - Q4 2010

Sample Name: Sample Date:	NYS AWQS	SHMW-01SR 12/20/2010	SHMW-01IR 12/20/2010	SHMW-01D 12/20/2010	SHMW-02S 12/20/2010	SHMW-02IR 12/21/2010	Duplicate of: SHMW-02IR 12/21/2010	SHMW-02DR 12/20/2010
BTEX (ug/L)								
Benzene	1	1 U	1 U	1 U	3	1 U	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	1	1	1 U
Xylene, total	5	1 U	1 U	1 U	1 U	3	3	1 U
Total BTEX	NE	ND	ND	ND	3	4	4	ND
Other VOCs (ug/L)								
Methyl tert-butyl ether	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Non-carcinogenic PAHs (ug/L)								
Acenaphthene	20*	10 U	10 U	10 U	10 U	10 U	1 J	10 U
Acenaphthylene	NE	10 U	10 U	10 U	10 U	3 J	3 J	10 U
Anthracene	50*	10 U	10 U	10 U	10 U	1 J	1 J	10 U
Benzo[g,h,i]perylene	NE	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Fluoranthene	50*	10 U	10 U	10 U	10 U	1 J	2 J	10 U
Fluorene	50*	10 U	10 U	10 U	10 U	2 J	2 J	10 U
Methylnaphthalene,2-	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	50*	10 U	10 U	10 U	10 U	2 J	2 J	10 U
Carcinogenic PAHs (ug/L)								
Benz[a]anthracene	0.002*	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
Benzo[b]fluoranthene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo[k]fluoranthene	0.002*	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	10 UJ
Chrysene	0.002*	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
Indeno[1,2,3-cd]pyrene	0.002*	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total PAHs	NE	ND	ND	ND	ND	9	11	ND

Table 3
Summary of BTEX, MTBE and PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q4 2010

Sample Name: Sample Date:	NYS AWQS	SHMW-03S 12/16/2010	SHMW-03I 12/16/2010	SHMW-04SR 12/21/2010	SHMW-05SR 12/15/2010	SHMW-05IR 12/15/2010	SHMW-07SR 12/16/2010	SHMW-07IR 12/16/2010	SHMW-08S 12/15/2010
BTEX (ug/L)									
Benzene	1	3	1 U	1,500 D	12	1 U	200	1 U	8
Toluene	5	1 U	1 U	27	1 U	1 U	8	1 U	1 U
Ethylbenzene	5	4	1 U	650 D	4	1 U	370 D	1 U	1
Xylene, total	5	2	1 U	540	4	1 U	280	1 U	1 U
Total BTEX	NE	9	ND	2,717	20	ND	858	ND	9
Other VOCs (ug/L)									
Methyl tert-butyl ether	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 J
Non-carcinogenic PAHs (ug/L)									
Acenaphthene	20*	10 U	10 U	240 DJ	10 U	10 U	120 DJ	10 U	10 U
Acenaphthylene	NE	10 U	10 U	4 J	10 U	10 U	4 J	10 U	10 U
Anthracene	50*	10 U	10 U	22	10 U	10 U	9 J	10 U	10 U
Benzo[g,h,i]perylene	NE	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U
Fluoranthene	50*	10 U	10 U	21	10 U	10 U	5 J	10 U	1 J
Fluorene	50*	10 U	10 U	58	10 U	10 U	31	10 U	10 U
Methylnaphthalene,2-	NE	10 U	10 U	370 DJ	10 U	10 U	140 DJ	10 U	10 U
Naphthalene	10*	10 U	10 U	2,700 D	10 U	10 U	1,100 D	10 U	10 U
Phenanthrene	50*	10 U	10 U	130 E	10 U	10 U	42	10 U	10 U
Pyrene	50*	10 U	10 U	30	10 U	10 U	5 J	10 U	2 J
Carcinogenic PAHs (ug/L)									
Benz[a]anthracene	0.002*	10 U	10 U	6 J	10 U	10 U	10 U	10 U	10 U
Benzo[a]pyrene	ND	10 U	10 U	4 J	10 U	10 U	10 U	10 U	10 U
Benzo[b]fluoranthene	0.002*	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U
Benzo[k]fluoranthene	0.002*	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U
Chrysene	0.002*	10 U	10 U	6 J	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
Indeno[1,2,3-cd]pyrene	0.002*	10 U	10 U	1 J	10 U	10 U	10 U	10 U	10 U
Total PAHs	NE	ND	ND	3,598	ND	ND	1,456	ND	3

Table 3
Summary of BTEX, MTBE and PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q4 2010

Sample Name: Sample Date:	NYS AWQS	Duplicate of: SHMW-08S 12/15/2010	SHMW-08I 12/15/2010	SHMW-10S 12/20/2010	SHMW-10I 12/20/2010	SHMW-11S 12/16/2010	SHMW-11I 12/16/2010	SHMW-12S 12/15/2010	SHMW-12I 12/20/2010
BTEX (ug/L)									
Benzene	1	7	1 U	1 U	1 U	1 U	1 U	57	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	2	1 U
Xylene, total	5	1 U	1 U	1 U	1 U	1 U	1 U	11	1 U
Total BTEX	NE	7	ND	ND	ND	ND	ND	70	ND
Other VOCs (ug/L)									
Methyl tert-butyl ether	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Non-carcinogenic PAHs (ug/L)									
Acenaphthene	20*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50*	10 U	10 U	10 U	10 U	10 U	10 U	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
Fluoranthene	50*	1 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	50*	10 U	10 U	10 U	10 U	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
Naphthalene	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	50*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	50*	2 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U
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
Benzo[a]pyrene	ND	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
Benzo[k]fluoranthene	0.002*	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
Dibenz[a,h]anthracene	NE	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
Total PAHs	NE	3	ND	ND	ND	ND	ND	ND	ND

Table 3
Summary of BTEX, MTBE and PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q4 2010

Sample Name: Sample Date:	NYS AWQS	SHMW-13S 12/16/2010	SHMW-13I 12/16/2010
BTEX (ug/L)			
Benzene	1	1 U	1 U
Toluene	5	1 U	1 U
Ethylbenzene	5	1 U	1 U
Xylene, total	5	1 U	1 U
Total BTEX	NE	ND	ND
Other VOCs (ug/L)			
Methyl tert-butyl ether	10*	10 U	10 U
Non-carcinogenic PAHs (ug/L)			
Acenaphthene	20*	10 U	10 U
Acenaphthylene	NE	10 U	10 U
Anthracene	50*	10 U	10 U
Benzo[g,h,i]perylene	NE	10 U	10 U
Fluoranthene	50*	10 U	10 U
Fluorene	50*	10 U	10 U
Methylnaphthalene,2-	NE	10 U	10 U
Naphthalene	10*	10 U	10 U
Phenanthrene	50*	10 U	10 U
Pyrene	50*	10 U	10 U
Carcinogenic PAHs (ug/L)			
Benz[a]anthracene	0.002*	10 U	10 U
Benzo[a]pyrene	ND	10 U	10 U
Benzo[b]fluoranthene	0.002*	10 U	10 U
Benzo[k]fluoranthene	0.002*	10 U	10 U
Chrysene	0.002*	10 U	10 U
Dibenz[a,h]anthracene	NE	10 U	10 U
Indeno[1,2,3-cd]pyrene	0.002*	10 U	10 U
Total PAHs	NE	ND	ND

Table 3
Sag Harbor Former MGP Site
Groundwater Monitoring Program
Summary of BTEX, MTBE and PAH Results - Q4 2010

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
SVOCs - semivolatile organic compounds

Total BTEX 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

Bolding indicates a detected concentration

Shading and bolding indicates that the detected concentration is above the NYS AWQS objective it was compared to

Data Qualifiers:

J - estimated value

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

UJ - not detected above the reported sample quantitation limit and the reported quantitation limit is an approximate concentration

E - Value above quantitation range

D - Results for dilution

Table 4
Summary of Historical Total BTEX Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q4 2010

Well No.	Screen Interval (feet)	Total BTEX 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	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/01IR	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/02DR	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/05IR	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/07IR	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 Total BTEX Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q4 2010

Well No.	Screen Interval (feet)	Total BTEX Concentrations (µg/L)														Min	Max	Mean
		Sampling Date																
		2008				2009				2010								
		March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec					
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	0	5,183	1,664		
SHMW-01I/01IR	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	3	3	3		
SHMW-02I/02IR	35.0 - 45.0	18	41	29	--	--	--	--	--	--	--	--	4	0	1,179	76		
SHMW-02D/02DR	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	0	131	44		
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	2,717	25,860	11,849		
SHMW-04I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	0	5	1		
SHMW-05S/05SR	2.0 - 12.0	77	83	64	--	--	--	--	--	--	--	--	20	20	2,960	288		
SHMW-05I/05IR	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	185	3,946	1,708		
SHMW-07I/07IR	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0		
SHMW-08S	1.0 - 7.0	8	9	10	--	--	5	5	4	6	13	4	9	0	19	6		
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	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		
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	0	930	228		
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	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 - Q4 2010

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/01IR	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/02DR	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/05IR	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/07IR	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 - Q4 2010

Well No.	Screen Interval (feet)	Total PAH Concentrations (µg/L)												Min	Max	Mean
		Sampling Date														
		2008				2009				2010						
		March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec			
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	4,147	1,319
SHMW-01I/01IR	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
SHMW-02I/02IR	35.0 - 45.0	8	42	209	--	--	--	--	--	--	--	--	9	0	580,200	29,094
SHMW-02D/02DR	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	0	430	96
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	0	6,669	3,965
SHMW-04I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	0	18	3
SHMW-05S/05SR	2.0 - 12.0	2	0	31	--	--	--	--	--	--	--	--	0	0	170	39
SHMW-05I/05IR	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	7,211	3,449
SHMW-07I/07IR	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	3	201	66
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	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	173	7
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	600	205
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	0
SHMW-13I	35.0- 45.0	--	--	--	0	--	0	--	0	--	--	--	0	0	0	0

NOTES:

-- not analyzed or not applicable

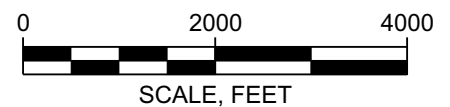
µg/L - micrograms per liter

PAH - polycyclic aromatic hydrocarbons

Figures



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SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK

nationalgrid



Project 093190-2-1203

SITE LOCATION MAP

February 2011

Figure 1

