



Geotechnical
Environmental and
Water Resources
Engineering

**Quarterly Groundwater Monitoring Report
First Quarter (Q1) 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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1. Sag Harbor Site and Adjacent Off-Site Areas

First Quarter (Q1) 2011 Groundwater Monitoring Event Summary

Event Date: March 7, 8, 14 and 17, 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 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 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 slightly damaged prior to the Q1 2011 sampling round, likely altering the measuring point elevation. As a result, a groundwater level measurement was not collected from this well in Q1 2011.

Access to monitoring wells SHMW-09S and SHMW-09I could not be obtained for the Q1 2011 groundwater monitoring event.

Hydrological Data

Groundwater levels were measured on March 17, 2011 at 22 of the 25 monitoring wells, during low and high tide. 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 Q1 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	0.40 - 5.04	0.28 - 3.29	0.0038	0.37 - 5.77	-0.45 - 3.32	0.0045
Intermediate	0.19 - 4.87	0.76 - 2.05	0.0014	0.42 - 6.35	-0.74 - 3.32	0.0033

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

NAPL Thickness Data

Table 2 provides a summary of historical non-aqueous phase liquid (NAPL) data. In Q1 2011, 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 Q1 2011.

Chemical Data

In Q1 2011, a total of 12 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 March 7, 8 and 14, 2011 and included all accessible shallow wells on the quarterly sampling list, as well as intermediate monitoring well SHMW-02IR. The remaining intermediate and deep monitoring wells are sampled annually in the fourth quarter.

Chemical data for Q1 2011 (**Table 3**) indicate:

- BTEX concentrations ranged from below method detection limits (ND) in 5 of the 12 wells sampled to 702 micrograms per liter ($\mu\text{g/L}$) in SHMW-04SR.
- Total PAH concentrations ranged from below ND in 7 of the 12 wells sampled to 1,440 $\mu\text{g/L}$ in SHMW-04SR.
- MTBE concentrations ranged from ND in 11 of the 12 wells samples to 2 $\mu\text{g/L}$ in SHMW-08S.

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.

Shallow Zone	Historical*		Q4 2010		Q1 2011	
	Maximum	Average	Maximum	Average	Maximum	Average
BTEX	25,860	1,579	2,717	335	702	118
Total PAHs	7,211**	915	3,598	460	1,440	132

Concentrations in µg/L

*: Including data from existing wells only.

**: Historical maximum for all depth zones is 580,200 µg/L in SHMW-02I (3 µg/L in SHMW-02IR in Q1 2011).

Excluding monitoring well SHMW-08S, where the Q1 2011 BTEX concentration (7 µg/L) only slightly exceeded the historical mean (6 µg/L), all six of the remaining monitoring wells with BTEX detections in Q1 2011 were lower than the respective historical mean concentrations.

Elevated BTEX concentrations in shallow wells in Q1 2011 were limited to SHMW-04SR and SHMW-07SR. The concentration in SHMW-04SR (702 µg/L) was well below the historical mean concentration of 11,292 µg/L and was the lowest concentration detected during the historical monitoring period. The concentration in SHMW-07SR (455 µg/L) was well below the historical mean concentration of 1,651 µg/L, and was the lowest concentration detected since Q1 2007.

Five shallow wells had detectable total PAH concentrations in Q1 2011; however, four of the five detections were relatively low (maximum of 11 µg/L in SHMW-08S). The total PAH concentrations in Q1 2011 in SHMW-04SR (1,440 µg/L) and SHMW-07SR (non-detect), decreased significantly from Q4 2010 levels of 3,598 µg/L and 1,456 µg/L, respectively. The Q1 2011 total PAH concentrations in all of these wells were below their respective historical mean concentrations.

BTEX was not detected in SHMW-02IR in Q1 2011, which was the only deeper well sampled in Q1 2011. Total PAHs in SHMW-02IR remained relatively low in Q1 2011 with a concentration of 3 µg/L. The Q1 2011 BTEX and total PAHs concentrations in SHMW-02IR decreased in comparison to the Q4 2010 concentrations of 4 µg/L and 9 µg/L, respectively.

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 (**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 intermittently in 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.

Consistent with historical results, trace amounts of LNAPL and DNAPL were found in monitoring wells SHMW-04SR and SHMW-07SR in Q1 2011. There was no evidence of NAPL in the remaining monitoring wells during Q1 2011.

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NATIONAL GRID
MAY 2011

Future Plans

Continue quarterly groundwater and NAPL monitoring at site monitoring wells.

Q1 2011 GROUNDWATER MONITORING REPORT
SAG HARBOR FORMER MGP SITE
NATIONAL GRID
MAY 2011

Tables

Table 1
Water Level Measurements and Calculated Water Elevations
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q1 2011

Well ID	Top of Casing Elevation (ft)*	Tide	Time	3/17/2011		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	0846	2.45	1.26	Well replaced in Q4 2010
		Low	1457	2.44	1.27	
SHMW-01IR	3.81	High	0846	2.54	1.27	Well replaced in Q4 2010
		Low	1458	2.98	0.83	
SHMW-01D	3.67	High	0847	1.73	1.94	Well installed in Q4 2010
		Low	1458	2.73	0.94	
SHMW-02S	3.95	High	0844	2.49	1.46	Well installed in Q4 2010
		Low	1455	2.42	1.53	
SHMW-02IR	3.92	High	--	NM	--	Measuring point altered
		Low	--	NM	--	
SHMW-02DR	3.66	High	0844	2.07	1.59	Well replaced in Q4 2010
		Low	1455	3.04	0.62	
SHMW-03S	3.83	High	0853	3.22	0.61	
		Low	1509	3.51	0.32	
SHMW-03I	3.85	High	0854	2.34	1.51	
		Low	1510	3.39	0.46	
SHMW-04SR	3.90	High	0848	3.32	0.58	Well replaced in Q4 2010
		Low	1502	3.23	0.67	
SHMW-04I	5.71	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-05SR	5.03	High	0851	3.84	1.19	Well replaced in Q4 2010
		Low	1505	3.83	1.20	
SHMW-05IR	4.96	High	0851	3.81	1.15	Well replaced in Q4 2010
		Low	1505	4.11	0.85	
SHMW-06S	4.44	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-06I	4.43	High	--	--	--	Well abandoned
		Low	--	--	--	
SHMW-07SR	3.48	High	0904	0.56	2.92	Well replaced in Q4 2010
		Low	1536	0.52	2.96	
SHMW-07IR	3.38	High	0909	1.64	1.74	Well replaced in Q4 2010
		Low	1537	2.36	1.02	
SHMW-08S	3.69	High	0913	0.40	3.29	
		Low	1543	0.37	3.32	
SHMW-08I	3.79	High	0913	1.84	1.95	
		Low	1545	2.71	1.08	
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	0856	4.37	0.38	
		Low	1515	4.75	0.00	
SHMW-10I	4.75	High	0857	3.56	1.19	
		Low	1515	5.49	-0.74	
SHMW-11S	5.32	High	0859	5.04	0.28	
		Low	1522	5.77	-0.45	
SHMW-11I	5.63	High	0901	4.87	0.76	
		Low	1524	6.35	-0.72	
SHMW-12S	1.98	High	0903	+0.02	2.00	Artesian
		Low	1528	+0.02	2.00	
SHMW-12I	1.99	High	0904	0.19	1.80	
		Low	1531	0.42	1.57	
SHMW-13S	3.36	High	0910	0.55	2.81	
		Low	1540	0.52	2.84	
SHMW-13I	3.50	High	0911	1.45	2.05	
		Low	1541	2.13	1.37	

* 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 - Q1 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 - Q1 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						
SHMW-06I	None Observed	None Observed	NR						
SHMW-07S/07SR	Sheen and naphthalene-like odor	Slight odor	NR						
SHMW-07I/07IR	None Observed	None Observed	NR						
SHMW-08S	None Observed	None Observed	NR						
SHMW-08I	None Observed	None Observed	NR						
SHMW-09S	None Observed	Slight naphthalene-like odor	NR						
SHMW-09I	None Observed	None Observed	NR						
SHMW-10S	None Observed	None Observed	NR						
SHMW-10I	None Observed	None Observed	NR						
SHMW-11S	None Observed	None Observed	NR						
SHMW-11I	None Observed	None Observed	NR						
SHMW-12S	None Observed	Sheen, strong sulfur-like odor	NR						
SHMW-12I	None Observed	None Observed	NR						
SHMW-13S	None Observed	None Observed	NR						
SHMW-13I	None Observed	None Observed	NR						

Table 2
 Summary of Historical NAPL Observations
 Sag Harbor Former MGP Site
 Groundwater Monitoring Program - Q1 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 H ₂ O, 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 - Q1 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 - Q1 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 - Q1 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 - Q1 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
MW-01	Well Abandoned	Well Abandoned					
MW-02	Well Abandoned	Well Abandoned					
MW-03	Well Abandoned	Well Abandoned					
MW-04	Well Abandoned	Well Abandoned					
MW-05	Well Destroyed	Well Destroyed					
MW-06	Well Abandoned	Well Abandoned					
SHMW-01S/01SR	Well Abandoned	None Observed	None Observed				
SHMW-01I/01IR	Well Abandoned	None Observed	None Observed				
SHMW-01D	NI	NI	NI	NI	NI	None Observed	None Observed
SHMW-02S	NI	NI	NI	NI	NI	None Observed	None Observed
SHMW-02I/02IR	Well Abandoned	None Observed	None Observed				
SHMW-02D/02DR	Well Abandoned	None Observed	None Observed				
SHMW-03S	None Observed	None Observed					
SHMW-03I	NR	None Observed	None Observed				
SHMW-04S/04SR	Well Abandoned	Trace LNAPL - DNAPL observed on tubing	Trace LNAPL - DNAPL observed on tubing				
SHMW-04I	Well Abandoned	Well Abandoned					
SHMW-05S/05SR	Well Abandoned	None Observed	None Observed				
SHMW-05I/05IR	Well Abandoned	None Observed	None Observed				

Table 2
 Summary of Historical NAPL Observations
 Sag Harbor Former MGP Site
 Groundwater Monitoring Program - Q1 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
SHMW-06S	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
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
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
SHMW-08S	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
SHMW-09S	None Observed	None Observed	Well Inaccessible	None Observed	None Observed	No access	No access
SHMW-09I	NR	None Observed	None Observed	None Observed	None Observed	No access	No access
SHMW-10S	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
SHMW-11S	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
SHMW-12S	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
SHMW-13S	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

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 - Q1 2011
 Sag Harbor Former MGP Site
 Groundwater Monitoring Program - Q1 2011

Sample Name: Sample Date:	NYS AWQS	SHMW-01SR 3/8/2011	SHMW-02S 3/14/2011	SHMW-02IR 3/14/2011	SHMW-03S 3/8/2011	Duplicate of: SHMW-03S 3/8/2011	SHMW-04SR 3/8/2011	SHMW-05SR 3/7/2011	SHMW-07SR 3/7/2011	SHMW-08S 3/7/2011	SHMW-10S 3/7/2011	Duplicate of: SHMW-10S 3/7/2011	SHMW-11S 3/8/2011	SHMW-12S 3/7/2011	SHMW-13S 3/14/2011
BTEX (µg/L)															
Benzene	1	1 U	1 U	1 U	6	6	330 D	13	160	7	1 U	1 U	1 U	71	1 U
Toluene	5	1	1 U	1 U	1 U	1 U	12	1 U	5	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	11	10	200 D	5	190	1 U	1 U	1 U	1 U	3	1 U
Xylene, total	5	1 U	1 U	1 U	7	6	160	4	100	1 U	1 U	1 U	1 U	8	1 U
Total BTEX	NE	1	ND	ND	24	22	702	22	455	7	ND	ND	ND	82	ND
Other VOCs (µg/L)															
Methyl tert-butyl ether	10*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U
Non-carcinogenic PAHs (µg/L)															
Acenaphthene	20*	10 U	10 U	10 U	10 U	10 U	180 DJ	4 J	10 U	6 J	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	NE	10 U	10 U	10 U	10 U	10 U	3 J	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	17	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	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	50*	10 U	10 U	10 U	1 J	10 U	10 U	12	10 U	10 U	3 J	10 U	10 U	10 U	10 U
Fluorene	50*	10 U	10 U	10 U	10 U	10 U	56	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	230 D	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	840 D	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	77 DJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	50*	10 U	10 U	2 J	2 J	2 J	17	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U
Carcinogenic PAHs (µg/L)															
Benz[a]anthracene	0.002*	10 U	10 U	10 U	10 U	10 U	3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo[a]pyrene	NE	10 U	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[b]fluoranthene	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	10 U
Benzo[k]fluoranthene	0.002*	10 U	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
Chrysene	0.002*	10 U	10 U	10 U	10 U	10 U	3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	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	10 U
Total PAHs	NE	ND	ND	3	2	2	1,440	4	ND	11	ND	ND	ND	ND	ND

Table 3
Summary of BTEX, MTBE and PAH Results
Sag Harbor Former MGP Site
Groundwater Monitoring Program - Q1 2011

Notes:

µg/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

ND - not detected

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

D - Results for dilution

DJ-Results for dilution and is an estimated value

Table 4
 Summary of Historical BTEX Results
 Sag Harbor Former MGP Site
 Groundwater Monitoring Program - Q1 2011

Well No.	Screen Interval (feet)	BTEX Concentrations (µg/L)																	
		Sampling Date																	
		1995 Nov	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	35.0 - 45.0	--	--	5	0	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 - Q1 2011

Well No.	Screen Interval (feet)	BTEX Concentrations (µg/L)														Min	Max	Mean	
		Sampling Date												March					
		2008				2009				2010									
		March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March					
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	5,183	1,581	
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	0	3	2	
SHMW-02I/02IR	35.0 - 45.0	18	41	29	--	--	--	--	--	--	--	--	--	4	0	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	0	131	43		
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	702	25,860	11,292	
SHMW-04I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	--	0	5	1		
SHMW-05S/05SR	2.0 - 12.0	77	83	64	--	--	--	--	--	--	--	--	--	20	22	20	2,960	275	
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	185	3,946	1,651		
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	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	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		
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	0	930	223		
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	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 - Q1 2011

Well No.	Screen Interval (feet)	Total PAH Concentrations ($\mu\text{g/L}$)																	
		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 - Q1 2011

Well No.	Screen Interval (feet)	Total PAH Concentrations ($\mu\text{g/L}$)												Min	Max	Mean		
		Sampling Date																
		2008				2009				2010				2011				
		March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March				
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	4,147	1,253	
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	
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	0	430	93	
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	0	6,669	3,839	
SHMW-04I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	--	--	0	18	3	
SHMW-05S/05SR	2.0 - 12.0	2	0	31	--	--	--	--	--	--	--	--	0	4	0	170	37	
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	0	7,211	3,292	
SHMW-07I	35.0 - 45.0	--	--	--	--	--	--	--	--	--	--	--	0	--	0	0	2,212	
SHMW-08S	1.0 - 7.0	14	21	55	--	--	59	60	112	129	201	34	3	11	3	201	64	
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	22	
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	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	0	600	198	
SHMW-12I	35.0 - 45.0	--	--	--	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	0	
SHMW-13I	35.0 - 45.0	--	--	--	0	--	0	--	0	--	--	--	0	--	0	0	0	

NOTES:

-- not analyzed or not applicable

$\mu\text{g/L}$ - micrograms per liter

PAH - polycyclic aromatic hydrocarbons

Q1 2011 GROUNDWATER MONITORING REPORT
SAG HARBOR FORMER MGP SITE
NATIONAL GRID
MAY 2011

Figures



SAG HARBOR FORMER MGP SITE
SAG HARBOR, NEW YORK



SITE LOCATION MAP

nationalgrid

Project 093190-2-1203

May 2011

Figure 1









