



Geotechnical Environmental Water Resources Ecological

Quarterly Groundwater Monitoring Report Second Quarter (Q2) 2014

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 Offsite Areas

Second Quarter (Q2) 2014 Groundwater Monitoring Event Summary

Event Date: June 17, 18 and July 17, 2014

Site Phase: Quarterly groundwater monitoring

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

Monitoring Program

Criteria to reduce the scope of the groundwater monitoring program based on historical and future analytical results were proposed, and subsequently approved by the New York State Department of Environmental Conservation (NYSDEC) on March 21, 2014. The criteria and the resulting reductions to the program were detailed in a follow-up letter to NYSDEC dated May 13, 2014. NYSDEC has required that several monitoring wells in the intermediate zone be exempt from reduction criteria and be sampled annually. These wells include SHMW-03I, SHMW-05I and SHMW-08I.

Based on the established criteria, eight wells in the intermediate or deep zones were eliminated from the sampling program and five shallow wells were reduced to annual sampling. The reductions in the scope of work are shown in the table below. Going forward, the sampling list will be re-evaluated on a quarterly basis, with changes made, as appropriate.

	Sampling	Frequency		Samplin	g Frequency
Monitoring Well	Former Current		Monitoring Well	Former	Current
SHMW-01SR	Quarterly	Annual	SHMW-02DR	Annual	Eliminated
SHMW-02S	Quarterly	Annual	SHMW-07IR	Annual	Eliminated
SHMW-03S	Quarterly	Annual	SHMW-10I	Annual	Eliminated
SHMW-10S	Quarterly	Annual	SHMW-11I	Annual	Eliminated
SHMW-13S	Quarterly	Annual	SHMW-12I	Annual	Eliminated
SHMW-01IR	Annual	Eliminated	SHMW-13I	Annual	Eliminated
SHMW-01D	Annual	Eliminated			

The reductions to the sampling scope were implemented during Q2 2014. A total of seven wells were included on the Q2 2014 quarterly sampling list. Based on a review of seasonal data trends, the annual sampling round will be conducted during the third quarter of each year.



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 post-remediation monitoring well replacement/installation program in Q4 2010.

Monitoring wells SHMW-02IR and SHMW-04SR were installed as larger diameter wells for potential dense non-aqueous phase liquid (DNAPL) recovery. 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.

Hydrological Data

Groundwater levels were measured on June 17, 2014 at 23 of the 25 monitoring wells, during low and high tides. A car was parked over monitoring well SHMW-09S during high tide, as a result only a low tide measurement was collected at this well. Monitoring well SHMW-02IR 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 Q2 2014, are provided in the following table:

		High Tide		Low Tide				
Depth Zone	Ran	ige	04:43	Rai	nge	Gradient ³		
	DTW ¹	WLE ²	Gradient ³	DTW ¹	WLE ²			
Shallow	+0.12 - 4.07	0.76 - 3.28	0.0015	+0.20 - 5.01	-0.16 - 3.04	0.0039		
Intermediate	+0.15 – 4.57 0.18 – 2.23		0.0032	+0.25 - 5.32 -0.03 - 2.24		0.0026		

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

NAPL Thickness Data

Table 2 provides a summary of historical non-aqueous phase liquid (NAPL) data. In Q2 2014, all of the 25 monitoring wells were monitored for NAPL as part of the groundwater monitoring program. Evidence of light non-aqueous phase liquid (LNAPL) or DNAPL in any



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

^{3:} Feet/Feet

of the monitoring wells during Q2 2014 was limited to blebs of DNAPL observed on the sample tubing at monitoring well SHMW-07SR.

Chemical Data

In Q2 2014, a total of seven 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 June 18 and July 17, 2014 and included all wells on the reduced quarterly sampling list.

Chemical data for Q2 2014 (**Table 3**) indicate:

- BTEX concentrations ranged from below method detection limits (ND) in SHMW-11S to 1,991 micrograms per liter (μg/L) in SHMW-07SR.
- Total PAH concentrations ranged from ND in SHMW-11S to 5,945 μg/L in SHMW-07SR.
- MTBE concentrations were ND in each of the wells sampled, excluding an estimated detection of 5 μg/L in SHMW-08S.

Data Trend Analysis

In general, BTEX and total PAH concentrations (see historical data in **Tables 4** and **5**) have been generally decreasing in shallow groundwater on and adjacent to the site. As a result of these decreases, the reporting frequency was reduced for several monitoring wells as discussed above. An analysis of the current and historical data for wells on the current quarterly sampling list is presented in the table below. As indicated in the table, concentrations of BTEX and total PAHs in these wells, which are all within the shallow monitoring zone, have been variable in recent sampling events, but generally remain below historical levels.

Historical*		Q4 2013		Q1	2014	Q2 2014		
Max	Average	Max	Average	Max	Average	Max	Average	
25,860	1,523	1,846	534	769	167	1,991	411	
7,211	985	1,916	702	1,733	374	5,945	1,140	
	Max 25,860	Max Average 25,860 1,523	Max Average Max 25,860 1,523 1,846	Max Average Max Average 25,860 1,523 1,846 534	Max Average Max Average Max 25,860 1,523 1,846 534 769	Max Average Max Average Max Average 25,860 1,523 1,846 534 769 167	Max Average Max Average Max Average Max 25,860 1,523 1,846 534 769 167 1,991	

Concentrations in µg/L

Concentrations of BTEX were identified in six of the seven shallow monitoring wells sampled during in Q2 2014. The concentrations in monitoring wells SHMW-05SR (12 μ g/L), SHMW-08S (4 μ g/L), and SHMW-11S (non-detect), were at, or near detection levels. The Q2 2014 detections in each of these wells were similar to, or below its respective historical mean concentration.

Elevated BTEX concentrations in the remaining shallow wells in Q2 2014 were limited to SHMW-04SR, SHMW-07SR, SHMW-09S, and SHMW-12S. The Q2 2014 concentrations in each of these wells increased relative to Q1 2014 levels. The concentrations in SHMW-04SR (504 μ g/L), SHMW-09S (193 μ g/L), and SHMW-12S (175 μ g/L) were below their



^{*} Includes data from wells on current sampling list only

respective historical mean concentration. The concentration in SHMW-07SR, (1,991 μ g/L) was above its historical mean concentration, but within the historical concentration range. Excluding SHMW-09S, the BTEX concentrations in each of these wells remain variable.

Excluding SHMW-11S, detections of total PAHs were identified in each of the seven monitoring wells sampled during Q2 2014. Elevated total PAH concentrations in Q2 2014 were identified in the remaining shallow wells, ranging from 153 μ g/L in SHMW-05SR to 5,945 μ g/L in SHMW-07SR. The concentrations in SHMW-04SR (523 μ g/L) and SHMW-09S (832 μ g/L) were below their respective historical means, while the concentrations in SHMW-05SR, SHMW-07SR, SHMW-08S (174 μ g/L) and SHMW-12S (353 μ g/L) were above their respective historical mean concentrations. All of the Q2 2014 total PAH detections were within their respective historical concentration ranges. The total PAH concentrations in SHMW-04SR, SHMW-07SR, and SHMW-12S remain variable, while the concentrations in the remaining wells remain relatively stable.

DNAPL Occurrence

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). Non-measurable (trace) amounts of NAPL have historically been found in two onsite shallow wells, MW-03 and MW-04, as well as in offsite shallow well SHMW-06S, and was intermittently found in SHMW-07S. All of the wells identified above in which NAPL has been historically detected were either destroyed or abandoned prior to, or during, remedial activities.

No measurable (trace) amounts of LNAPL and DNAPL were found in replacement monitoring wells SHMW-04SR and SHMW-07SR during the first three monitoring events following the installation of these wells. To date, no evidence of NAPL has been found in these monitoring wells or any of the remaining monitoring wells since Q2 2011, with one exception: approximately six inches of DNAPL were measured in well SHMW-02IR during Q4 2013. As mentioned above, SHMW-02IR was installed to replace SHMW-02I, which was abandoned prior to the Q4 2008 sampling event due to the remediation activities being conducted at the site. DNAPL thicknesses in SHMW-02I reached a maximum of approximately 4 feet immediately prior to abandonment during the Q3 2008 monitoring event. SHMW-02IR was installed as a larger diameter well for potential DNAPL recovery. No DNAPL was observed in this well during Q1 or Q2 2014. Thicknesses in this well will continue to be monitored during future sampling events.

Future Plans

 Continue quarterly groundwater and NAPL monitoring at onsite and offsite monitoring wells.



Tables



Table 1. Water Level Measurements and Calculated Groundwater Elevations Sag Harbor Former MGP Site Groundwater Monitoring Program - Q2 2014

	Top of Casing		T		7/2014	
Well ID	Elevation (ft)*	Tide	Time	Depth to	Groundwater	Notes
	Licvation (it)			Water (ft)	Elevation (ft)	
SHMW-01SR	3.71	High	1436	2.17	1.54	Well replaced in Q4 2010
OF HAVIOR OF TOTAL	5.71	Low	0818	2.15	1.56	Well replaced in Q+ 2010
SHMW-01IR	3.81	High	1436	2.27	1.54	Well replaced in Q4 2010
OF HAVE OTHER	3.01	Low	0818	2.80	1.01	Well replaced in Q+ 2010
SHMW-01D	3.67	High	1438	2.47	1.20	Well installed in Q4 2010
OF INVITED	0.01	Low	0820	2.42	1.25	Wolf frictance in Q + 2010
SHMW-02S	3.95	High	1430	2.30	1.65	Well installed in Q4 2010
01 IIVIVV 020	5.55	Low	0810	2.25	1.70	Well installed in Q4 2010
SHMW-02IR	3.92	High	NM	NM	NM	Survey point altered
SHIVIVY-UZIK	3.92	Low	NM	NM	NM	Survey point altered
SHMW-02DR	3.66	High	1434	1.89	1.77	Well replaced in Q4 2010
SHIVIW-02DK	3.00	Low	0814	2.89	0.77	Well replaced in Q4 2010
SHMW-03S	3.83	High	1443	3.07	0.76	
OI 110100 -033	3.03	Low	0837	3.43	0.40	
SHMW-03I	3.85	High	1444	2.20	1.65	
3F1WW-03I	3.00	Low	0838	2.27	1.58	
SHMW-04SR	3.90	High	1442	3.02	0.88	Well replaced in Q4 2010
31 11VIVV-043R	3.80	Low	0835	3.02	0.88	well replaced in Q4 2010
SHMW-05SR	5.03	High	1440	3.89	1.14	Well replaced in Q4 2010
SHIVIVY-033K	5.05	Low	0825	3.70	1.33	Well replaced III Q4 2010
SHMW-05IR	4.96	High	1441	3.99	0.97	Well replaced in Q4 2010
SHIVIVY-USIK	4.90	Low	0827	3.61	1.35	Well replaced in Q4 2010
SHMW-07SR	3.48	High	1506	0.74	2.74	
SHIVIVY-U/SK	3.40	Low	0858	0.96	2.52	
SHMW-07IR	3.38	High	1508	1.40	1.98	
SHIVIVV-U/IK	3.30	Low	0859	1.90	1.48	
SHMW-08S	2.00	High	1502	0.41	3.28	
SUIMM-002	3.69	Low	0759	0.65	3.04	
SHMW-08I	3.79	High	1504	1.58	2.21	
2HIVIVV-081	3.79	Low	0801	2.52	1.27	
SHMW-09S	3.06	High	NM	NM		Connected assessmell at high tide
2HIVIVV-092	3.06	Low	0850	1.60	1.46	Car parked over well at high tide
SHMW-09I	2.82	High	1458	1.33	1.49	
9HIVIVV-09I	2.82	Low	0855	1.79	1.03	
SHMW-10S	4.75	High	1448	3.21	1.54	
3HIVIVV-105	4.75	Low	0840	4.59	0.16	
SHMW-10I	4.75	High	1448	4.57	0.18	
SHIVIVV-101	4.75	Low	0844	4.78	-0.03	
SHMW-11S	5.32	High	1450	4.07	1.25	
SHIVIVV-115	5.32	Low	0845	5.01	0.31	
SHMW-11I	5.63	High	1455	4.00	1.63	
SHIVIVV-111	5.03	Low	0847	5.32	0.31	
SHMW-12S	1.98	High	1458	+0.12	2.10	Artesian
3HIVIVV-125	1.90	Low	0857	+0.20	2.18	Allesiali
CLIMANA/ 401	1.00	High	1500	+0.15	2.14	Artonian
SHMW-12I	1.99	Low	0858	+0.25	2.24	Artesian
CHMW 400	2.20	High	1510	0.85	2.51	
SHMW-13S	3.36	Low	0804	0.72	2.64	
CLIMANA/ 4CL	2.50	High	1515	1.27	2.23	
SHMW-13I	3.50	Low	0807	1.90	1.60	

General Notes:

* Elevations were re-surveyed in November 2010.

NM = Not Measured

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	Apr/Q1 2005 Observations
MW-01	None Observed	Odor	None Observed	Not Checked	NR	NR	NR	NR	NR	NR
MW-02	Approx. 0.16' of DNAPL, sheen on surface	Approx. 0.15' of DNAPL, sheen on surface	Approx. 0.29' of DNAPL	Approx. 0.2' of DNAPL	Approx. 0.01' of DNAPL, 1.0' intermittent DNAPL	Approx. 0.1' of DNAPL	Approx. 0.11' of DNAPL	Approx. 0.16' of DNAPL	Approx. 0.15' of DNAPL	Approx. 0.15' of DNAPL
MW-03	Intermittent DNAPL for 1.5'	Approx. 0.03' of DNAPL, naphthalene-like odor	NR	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape	Trace DNAPL at bottom of tape
MW-04	None Observed	Approx. 0.02' of DNAPL, naphthalene- like odor	NR	Trace DNAPL at bottom of tape	None Observed	None Observed	Trace DNAPL at bottom of tape	Not Checked (under snow pile)	None Observed	None Observed
MW-05	Blebs of LNAPL	Approx. 1.0' of DNAPL, naphthalene- like odor	Approx. 0.75' of DNAPL	Approx. 4.5' of LNAPL/NAPL	Approx. 0.35' of DNAPL, 3.6' intermittent DNAPL	Trace DNAPL at bottom of tape, bubbles in WC	Trace DNAPL at bottom of tape	Approx. 0.6' of DNAPL, approx. 0.02' of LNAPL	Sporadic DNAPL, approx. 0.1' of LNAPL.	Sporadic DNAPL, approx. 0.1' of LNAPL.
MW-06	None Observed	Slight naphthalene- like odor	NR	NR	NR	NR	NR	NR	NR	NR
SHMW-01S/01SR	None Observed	Slight naphthalene- like odor	NR	NR	NR	NR	NR	NR	NR	NR
SHMW-01I/01IR	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR	NR
SHMW-01D	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02S	NI	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	Approx. 1.1' of DNAPL
SHMW-02D/02DR	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR	NR
SHMW-03S	None Observed	Odor	NR	NR	NR	NR	NR	NR	NR	NR
SHMW-03I	None Observed	None Observed	NR	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	Approx. 0.25' of DNAPL
SHMW-04I	None Observed	None Observed	NR	NR	NR	NR	NR	NR	NR	NR

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	Apr/Q1 2005 Observations
SHMW-05S/05SR	None Observed	Blebs of DNAPL in purge water, odor	NR	None Observed						
SHMW-05I/05IR	None Observed	None Observed	NR							
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							

Well ID	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	Jun/Q2 2007 Observations	Sep/Q3 2007 Observations
MW-01	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-02	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	Approx.0.07' DNAPL	Approx. 0.11' DNAPL
MW-03	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)	None Observed	Trace DNAPL (coating on tubes)
MW-04	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)	Trace DNAPL (coating on tubes)	Trace DNAPL (coating on tubes)
MW-05	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)	Well Destroyed	Well Destroyed
MW-06	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-01S/01SR	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-01I/01IR	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-01D	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02I/02IR	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)	Trace DNAPL (coating on tubes)	Trace DNAPL (coating on tubes)
SHMW-02D/02DR	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-03S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-03I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-04S/04SR	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	Approx.0.50' DNAPL	Approx. 0.5' DNAPL
SHMW-04I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR

Well ID	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	Jun/Q2 2007 Observations	Sep/Q3 2007 Observations
SHMW-05S/05SR	None Observed	None Observed	None Observed	No DNAPL observed	None Observed	None Observed	None Observed	None Observed	None Observed	NR
SHMW-05I/05IR	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-06S	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)			
SHMW-06I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-07S/07SR	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-07I/07IR	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-08S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-08I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-09S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-09I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-10S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-10I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-11S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-11I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-12S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-12I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-13S	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR
SHMW-13I	NR	NR	NR	NR	NR	NR	NR	None Observed	NR	NR

Well ID	Dec/Q4 2007 Observations	Mar/Q1 2008 Observations	Jun/Q2 2008 Observations	Sep/Q3 2008 Obsevations	Dec/Q4 2008 Obsevations	Mar/Q1 2009 Observations	Jun/Q2 2009 Observations	Sep/Q3 2009 Observations	Dec/Q4 2009 Observations	Mar/Q1 2010 Observations
MW-01	None Observed	None Observed	Trace DNAPL	Trace DNAPL (at bottom of tubing)	Well Inaccessible or Abandoned	Well Abandoned				
MW-02	Approx. ~0.08'	Trace DNAPL	Moderate DNAPL; not measureable	Trace DNAPL	Well Inaccessible or Abandoned	Well Abandoned				
MW-03	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				
MW-04	Approx. ~0.02'	NR	Trace DNAPL	Trace DNAPL (at bottom of tubing)	Well Inaccessible or Abandoned	Well Abandoned				
MW-05	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed	Well Destroyed
MW-06	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Abandoned				
SHMW-01S/01SR	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Abandoned				
SHMW-01I/01IR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned				
SHMW-01D	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02S	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
SHMW-02I/02IR	Approx. ~0.60'	Approx. 3' DNAPL	Approx. 1.5' DNAPL	Approx. 4' DNAPL	Well Inaccessible or Abandoned	Well Abandoned				
SHMW-02D/02DR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned				
SHMW-03S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-03I	None Observed	NR	NR	NR	None Observed	NR	None Observed	NR	None Observed	None Observed
SHMW-04S/04SR	Approx. ~0.61'	Approx. 1.05' DNAPL	Approx.0.6' DNAPL	Approx.0.75' DNAPL	Well Inaccessible or Abandoned	Well Abandoned				
SHMW-04I	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned				

Well ID	Dec/Q4 2007 Observations	Mar/Q1 2008 Observations	Jun/Q2 2008 Observations	Sep/Q3 2008 Obsevations	Dec/Q4 2008 Obsevations	Mar/Q1 2009 Observations	Jun/Q2 2009 Observations	Sep/Q3 2009 Observations	Dec/Q4 2009 Observations	Mar/Q1 2010 Observations
SHMW-05S/05SR	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-05I/05IR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-06S	Trace	Trace DNAPL (on tubing)	Trace DNAPL	Trace DNAPL (on tubing)	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-06I	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned	Well Abandoned
SHMW-07S/07SR	Trace	NR	NR	Trace DNAPL (on side of tubing approx 1' off bottom)	Well Inaccessible or Abandoned	Well Inaccessible	None Observed	Trace DNAPL (on side of tubing)	None Observed	None Observed
SHMW-07l/07IR	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Inaccessible	None Observed	NR	None Observed (approximately 10 feet of sand present in well)	None Observed (approximately 10 feet of sand present in well)
SHMW-08S	None Observed	None Observed	None Observed	None Observed	Well Inaccessible or Abandoned	Well Inaccessible	None Observed	None Observed	None Observed	None Observed
SHMW-08I	None Observed	NR	NR	NR	Well Inaccessible or Abandoned	Well Inaccessible	None Observed	NR	None Observed	None Observed
SHMW-09S	None Observed	None Observed	None Observed	None Observed	None Observed	Well Inaccessible	None Observed	None Observed	None Observed	Well Inaccessible
SHMW-09I	None Observed	NR	NR	NR	NR	NR	NR	NR	None Observed	None Observed
SHMW-10S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-10I	None Observed	NR	NR	NR	NR	NR	NR	NR	None Observed	None Observed
SHMW-11S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-11I	None Observed	NR	NR	NR	NR	NR	NR	NR	None Observed	None Observed
SHMW-12S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-12I	None Observed	NR	NR	NR	NR	NR	NR	NR	None Observed	None Observed
SHMW-13S	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-13I	None Observed	NR	NR	NR	NR	NR	NR	NR	None Observed	None Observed

Well ID	Jun/Q2 2010 Observations	Sep/Q3 2010 Observations	Dec/Q4 2010 Observations	Mar/Q1 2011 Observations	Jun/Q2 2011 Observations	Sep/Q3 2011 Observations	Dec/Q4 2011 Observations	Mar/Q1 2012 Observations	Jun/Q2 2012 Observations	Sep/Q3 2012 Observations
MW-01	Well Abandoned	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	Well Abandoned
MW-03	Well Abandoned	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	Well Abandoned
MW-05	Well Destroyed	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	Well Abandoned
SHMW-01S/01SR	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-01I/01IR	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-01D	NI	NI	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-02S	NI	NI	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-02I/02IR	Well Abandoned	Well Abandoned	None Observed	Well Damaged	Well Damaged	Well Damaged	None Observed	None Observed	None Observed	None Observed
SHMW-02D/02DR	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed	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	None Observed
SHMW-03I	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-04S/04SR	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	Well Abandoned

Well ID	Jun/Q2 2010 Observations	Sep/Q3 2010 Observations	Dec/Q4 2010 Observations	Mar/Q1 2011 Observations	Jun/Q2 2011 Observations	Sep/Q3 2011 Observations	Dec/Q4 2011 Observations	Mar/Q1 2012 Observations	Jun/Q2 2012 Observations	Sep/Q3 2012 Observations
SHMW-05S/05SR	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-05I/05IR	Well Abandoned	Well Abandoned	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-06S	Well Abandoned	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	Well Abandoned
SHMW-07S/07SR	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	Well Inaccessible	Well Inaccessible	None Observed	None Observed	None Observed	None Observed	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	None Observed
SHMW-08I	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed
SHMW-09S	None Observed	None Observed	No access	No access	No access	No access	No access	No access	No access	No access
SHMW-09I	None Observed	None Observed	No access	No access	No access	No access	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	None Observed
SHMW-10I	None Observed	None Observed	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	None Observed
SHMW-11I	None Observed	None Observed	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	None Observed
SHMW-12I	None Observed	None Observed	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	None Observed
SHMW-13I	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed	None Observed

Well ID	Dec/Q4 2012 Observations	Mar/Q1 2013 Observations	Jun/Q2 2013 Observations	Sep/Q3 2013 Observations	Dec/Q4 2013 Observations	Mar/Q1 2014 Observations	Jun/Q2 2014 Observations
MW-01	Well Abandoned						
MW-02	Well Abandoned						
MW-03	Well Abandoned						
MW-04	Well Abandoned						
MW-05	Well Destroyed						
MW-06	Well Abandoned						
SHMW-01S/01SR	None Observed						
SHMW-01I/01IR	None Observed						
SHMW-01D	None Observed						
SHMW-02S	None Observed						
SHMW-02I/02IR	None Observed	None Observed	None Observed	None Observed	Approx. 6" of DNAPL	None Observed	None Observed
SHMW-02D/02DR	None Observed						
SHMW-03S	None Observed						
SHMW-03I	None Observed						
SHMW-04S/04SR	None Observed						
SHMW-04I	Well Abandoned						

Well ID	Dec/Q4 2012 Observations	Mar/Q1 2013 Observations	Jun/Q2 2013 Observations	Sep/Q3 2013 Observations	Dec/Q4 2013 Observations	Mar/Q1 2014 Observations	Jun/Q2 2014 Observations
SHMW-05S/05SR	None Observed						
SHMW-05I/05IR	None Observed						
SHMW-06S	Well Abandoned						
SHMW-06I	Well Abandoned						
SHMW-07S/07SR	None Observed	DNAPL Blebs on tubing					
SHMW-07I/07IR	None Observed						
SHMW-08S	None Observed						
SHMW-08I	None Observed						
SHMW-09S	No access	No access	None Observed				
SHMW-09I	No access	No access	None Observed				
SHMW-10S	None Observed						
SHMW-10I	None Observed						
SHMW-11S	None Observed						
SHMW-11I	None Observed						
SHMW-12S	None Observed						
SHMW-12I	None Observed						
SHMW-13S	None Observed						
SHMW-13I	None Observed						
	General Notes:						

General 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 - Q2 2014

		Sai S		12	SHMW-04SR DUP-01 SH 2 12 ft 6/18/2014 SHMW-04SR	SHMW-05SR SHMW-05SR 2 12 ft 6/18/2014	SHMW-07SR SHMW-07SR 1 11 ft 6/18/2014	SHMW-08S SHMW-08S 1 7 ft 6/18/2014	SHMW-09S SHMW-09S 2 12 ft 7/17/2014	SHMW-09S SHDUP-02 2 12 ft 7/17/2014 SHMW-09S	SHMW-11S SHMW-11S 3.5 13.5 ft 6/18/2014	SHMW-12S SHMW-12S 1.5 6.5 ft 6/18/2014
Analyte	Units	CAS No.	NYS AWQS									
BTEX												
Benzene	μg/L	71-43-2	1	160	150	7	760 D	4	130	120	1 U	130
Toluene	μg/L	108-88-3	5	14	14	1 U	21	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	μg/L	100-41-4	5	180	180	2	800 D	1 U	28	27	1 U	13
Total Xylene	μg/L	1330-20-7	5	150	150	3	410	1 U	35	34	1 U	32
Total BTEX (ND=0)	μg/L	TBTEX_ND0	NE	504	494	12	1991	4	193	181	ND	175
Other VOCs												
Methyl tert-butyl ether (MTBE)	μg/L	1634-04-4	10*	1 U	1 U	1 U	1 U	5 J	10 UJ	10 UJ	1 U	1 U
NYSDEC PAH17												
Acenaphthene	μg/L	83-32-9	20*	120 D	120 D	34	490 DJ	32	110	100	10 U	7 J
Acenaphthylene	μg/L	208-96-8	NE	4 J	5 J	10 U	40	2 J	10 U	10 U	10 U	10 U
Anthracene	μg/L	120-12-7	50*	10	8 J	10 U	230 DJ	5 J	3 J	3 J	10 U	10 U
Benzo(a)anthracene	μg/L	56-55-3	0.002*	10 U	10 U	10 U	170 DJ	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	μg/L	205-99-2	0.002*	10 U	10 U	10 U	91 DJ	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	μg/L	207-08-9	0.002*	10 U	10 U	10 U	47	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	μg/L	191-24-2	NE	10 U	10 U	10 U	32	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	μg/L	50-32-8	ND	10 U	10 U	10 U	110 DJ	10 U	10 U	10 U	10 U	10 U
Chrysene	μg/L	218-01-9	0.002*	10 U	10 U	10 U	150 DJ	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	μg/L	53-70-3	NE	10 U	10 U	10 U	9 J	10 U	10 U	10 U	10 U	10 U
Fluoranthene	μg/L	206-44-0	50*	7 J	6 J	10 U	320 DJ	5 J	10 U	10 U	10 U	10 U
Fluorene	μg/L	86-73-7	50*	40	32	9 J	210 DJ	17	22	23	10 U	10 U
Indeno(1,2,3-cd)pyrene	μg/L	193-39-5	0.002*	10 U	10 U	10 U	26	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	μg/L	91-57-6	NE	81 D	43	6 J	470 DJ	3 J	8 J	8 J	10 U	6 J
Naphthalene	μg/L	91-20-3	10*	200 D	100 D	100 D	2200 D	71	670	650	10 U	340 D
Phenanthrene	μg/L	85-01-8	50*	53	19	4 J	880 D	33	19	20	10 U	10 U
Pyrene	μg/L	129-00-0	50*	8 J	8 J	10 U	470 DJ	6 J	10 U	10 U	10 U	10 U
Total PAH (17) (ND=0)	μg/L	TPAH17_ND0	NE	523	341	153	5945	174	832	804	ND	353

Table 3. Summary of BTEX, MTBE and PAH Results **Sag Harbor Former MGP Site Groundwater Monitoring Program - Q2 2014**

Notes:

μg/L = micrograms per liter or parts per billion (ppb)

BTEX = benzene, toluene, ethylbenzene, and xylenes

PAHs = polycyclic aromatic hydrocarbons

VOCs = volatile organic compounds

Total BTEX and Total PAHs are calculated using detects only.

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater * indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number

NE = not established

ND = not detected

MGP = Manufactured Gas Plant

Bolding indicates a detected result concentration

Shading and bolding indicates that the detected concentration is above the NYSDOH guidance it was compared to

Data Qualifiers:

D = Results for dilution

J = estimated value

U = indicates not detected to the reporting limit

UJ = not detected at or above the reporting limit shown and the reporting limit is estimated

October 2014

Table 4. Summary of Historical Total BTEX Results Sag Harbor Former MGP Site Groundwater Monitoring Program - Q2 2014

	Coroon								ВТЕ	EX Concen	ntrations (µ	ıg/L)							
Well No.	Screen									Sampli	ing Date								
Well No.	Interval (feet)	1995	20	000	2002	20	04		20	05			20	006			20	07	
	(ICCI)	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				ł	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 - Q2 2014

	Screen								BTI	EX Concen	trations (µ	ıg/L)							
Well No.	Interval									Samplir	ng Date								
Well No.	(feet)		20	008			20	009			20	010			20)11		20)12
	(leet)	March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March	June
MW-01	1.50 - 7.32	337	141	208	-														
MW-02	0.50 - 7.25	8,865	7,415	2,240															
MW-03	2.17 - 10.17	2,842	2,241	2,875															
MW-04	1.25 - 6.81		15	79															
MW-05	2.46 - 7.46																		
MW-06	2.47 - 7.47	1	33	7															
SHMW-01S/01SR	1.0 - 6.0	1,595	306	243									0	1	0	0	3	0	0
SHMW-01I/01IR	35.0 - 45.0												0				3		
SHMW-01D	65.0 - 75.0												0				3		
SHMW-02S	1.0 - 6.0												3	0	3	0	5	1	0
SHMW-02I/02IR	35.0 - 45.0	18	41	29									4	0			14		
SHMW-02D/02DR	65.0 - 75.0												0				0		
SHMW-03S	2.0 - 12.0	3	0	5	13	111	24	4	9	40	5	0	9	24	2	3	18	0	1
SHMW-03I	35.0 - 45.0				0		0		0				0				0		
SHMW-04S/04SR	2.0 - 12.0	7,567	8,059	7,561									2,717	702	469	292	572	391	709
SHMW-04I	35.0 - 45.0																		
SHMW-05S/05SR	2.0 - 12.0	77	83	64									20	22	25	27	45	25	29
SHMW-05I/05IR	35.0 - 45.0												0				0		
SHMW-06S	2.0 - 6.0	1,296	1,343	1,298															
SHMW-06I	35.0 - 45.0																		
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	700	1,418	670
SHMW-07I/07IR	35.0 - 45.0												0				11		
SHMW-08S	1.0 - 7.0	8	9	10			5	5	4	6	13	4	9	7	10	5	9	5	7
SHMW-08I	35.0 - 45.0						0		0				0				5		
SHMW-09S	2.0 - 12.0	1,039	1,298	671	483		584	455	224										
SHMW-09I	35.0 -45.0				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	0	0
SHMW-10I	35.5 - 45.5				0		0		0				0				5		
SHMW-11S	3.5 - 13.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
SHMW-11I	35.0 - 45.0				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	337	127	434
SHMW-12I	35.0 - 45.0				0				2				0				6		
SHMW-13S	1.5 - 6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	12	0
SHMW-13I	35.0 - 45.0				0		0		0				0				0		

	Screen					BTEX Co	oncentratio	ns (µg/L)				
Well No.	Interval				Sampli	ng Date						
Well INO.	(feet)	20)12		20	13		20	114	Min	Max	Mean
	(ICCI)	Sept	Dec	March	June	Sept	Dec	March	June			
MW-01	1.50 - 7.32									0	2,720	236
MW-02	0.50 - 7.25									98	15,181	9,129
MW-03	2.17 - 10.17	-								560	4,965	2,416
MW-04	1.25 - 6.81	-								0	864	149
MW-05	2.46 - 7.46	-								5	18,900	5,689
MW-06	2.47 - 7.47	-								0	334	50
SHMW-01S/01SR	1.0 - 6.0	0	0	1	8	0	0	0		0	5,183	988
SHMW-01I/01IR	35.0 - 45.0		0				1			0	5	1
SHMW-01D	65.0 - 75.0		0				0			0	3	1
SHMW-02S	1.0 - 6.0	0	0	0	5	0	0	0		0	5	1
SHMW-02I/02IR	35.0 - 45.0	-	0				11			0	1,179	63
SHMW-02D/02DR	65.0 - 75.0		0				0			0	5	1
SHMW-03S	2.0 - 12.0	1	0	6	0	0	2	3	-	0	131	31
SHMW-03I	35.0 - 45.0		0				4			0	52	4
SHMW-04S/04SR	2.0 - 12.0	654	449	158	14	949	1,846	145	504	14	25,860	7,060
SHMW-04I	35.0 - 45.0									0	5	1
SHMW-05S/05SR	2.0 - 12.0	28	16	16	683	17	21	13	12	12	2,960	196
SHMW-05I/05IR	35.0 - 45.0		0				0			0	0	0
SHMW-06S	2.0 - 6.0									1,296	4,289	2,214
SHMW-06I	35.0 - 45.0								-	0	0	0
SHMW-07S/07SR	1.0 - 11.0	2,822	251	1,289	852	972	1,305	769	1991	185	3,946	1,461
SHMW-07I/07IR	35.0 - 45.0		0				0			0	11	1
SHMW-08S	1.0 - 7.0	2	6	5	6	4	3	8	4	0	19	6
SHMW-08I	35.0 - 45.0		0				0			0	5	0
SHMW-09S	2.0 - 12.0	130	165	167	198	118	93	155	193	93	1,298	573
SHMW-09I	35.0 -45.0	0	0				2			0	2	0
SHMW-10S	5.0 -15.0	0	0	0	0	0	0	0		0	1	0
SHMW-10I	35.5 - 45.5	-	0				0			0	5	0
SHMW-11S	3.5 - 13.5	0	0	0	0	0	0	0	0	0	8	0
SHMW-11I	35.0 - 45.0		0				0		-	0	0	0
SHMW-12S	1.5 - 6.5	41	19	87	175	142	26	67	175	0	930	220
SHMW-12I	35.0 - 45.0	-	0				0		-	0	23	3
SHMW-13S	1.5 - 6.5	0	0	0	0	0	0	0		0	12	0
SHMW-13I	35.0 - 45.0		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 PAH Results Sag Harbor Former MGP Site Groundwater Monitoring Program - Q2 2014

	0								Total	PAH Conc	entrations	(µg/L)							
Well No.	Screen Interval									Sampli	ng Date								
Well No.	(feet)	1995	20	000	2002	20	04		20	05			20	06			20	07	
	(leet)	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 SHMW-10S	35.0 -45.0 5.0 -15.0			3	0 22	0 6		0	0	0	0	0	0	0	0	0	0	0	0
SHMW-105					0			-					-	-		-	-	-	
SHMW-101	35.5 - 45.5 3.5 - 13.5				0	3		173			0	0	0	0	0	0			0
SHMW-11I	35.0 - 45.0				0	0		1/3	0	0	0				0		0	0	4
SHMW-111	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				230	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
OI 11VIVV - 131	33.0 - 43.0				U	U					U				U				U

Table 5. Summary of Historical PAH Results Sag Harbor Former MGP Site Groundwater Monitoring Program - Q2 2014

	C								Total	PAH Conc	entrations	(µg/L)							
Well No.	Screen Interval									Sampli	ng Date								
well no.	(feet)		20	008			20	009			20)10			20)11		20	012
	(leet)	March	June	Sep	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept	Dec	March	June
MW-01	1.50 - 7.32	145	2	35															
MW-02	0.50 - 7.25	400	3,455	3,488															
MW-03	2.17 - 10.17	508	96	1,109											-				
MW-04	1.25 - 6.81		0	22															
MW-05	2.46 - 7.46																		
MW-06	2.47 - 7.47	0	0	10															
SHMW-01S/01SR	1.0 - 6.0	0	0	0									0	0	0	0	4	7	21
SHMW-01I/01IR	35.0 - 45.0												0				0		
SHMW-01D	65.0 - 75.0												0				0		
SHMW-02S	1.0 - 6.0												0	0	0	0	0	5	0
SHMW-02I/02IR	35.0 - 45.0	8	42	209		-							9	3			0		
SHMW-02D/02DR	65.0 - 75.0												0				0		
SHMW-03S	2.0 - 12.0	0	0	17	29	0	20	0	0	0	22	0	0	2	7	25	22	6	10
SHMW-03I	35.0 - 45.0				0		0		0				0				0		
SHMW-04S/04SR	2.0 - 12.0	0	1,328	1,868									3,598	1,440	978	811	942	581	1,296
SHMW-04I	35.0 - 45.0																		
SHMW-05S/05SR	2.0 - 12.0	2	0	31									0	4	167	273	131	309	219
SHMW-05I/05IR	35.0 - 45.0												0				0		
SHMW-06S	2.0 - 6.0	0	44	5,848															
SHMW-06I	35.0 - 45.0																		
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	955	927	444
SHMW-07I/07IR	35.0 - 45.0												0				4		
SHMW-08S	1.0 - 7.0	14	21	55			59	60	112	129	201	34	3	11	185	195	35	152	111
SHMW-08I SHMW-09S	35.0 - 45.0						1		0				0				0		
SHMW-095	2.0 - 12.0 35.0 -45.0	0	92	485	503		68	39	389										
SHMW-10S	5.0 -45.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
SHMW-103	35.5 - 45.5	-	-		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	4	6	0
SHMW-11I	35.0 - 45.0				0		0		0				0				0		
SHMW-12S	1.5 - 6.5	9	137	259	280	0	332	4	216	177	585	3	0	0	584	739	513	154	361
SHMW-12I	35.0 - 45.0				0				0				0				2		
SHMW-13S	1.5 - 6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2	0
SHMW-13I	35.0 - 45.0				0		0		0				0				1		
C1 11/1/1/ 1/01	55.0 1 5.0	1	l	l				l	U	1	L	1		l	l	l	<u> </u>	L	

Table 5. Summary of Historical PAH Results Sag Harbor Former MGP Site Groundwater Monitoring Program - Q2 2014

						Total PAH	Concentra	tions (µg/L	.)			
MAZ - II M I -	Screen				Sampli	ng Date			-			
Well No.	Interval (feet)	20)12		20)13		20)14	Min	Max	Mean
	(leet)	Sept	Dec	March	June	Sept	Dec	March	June			
MW-01	1.50 - 7.32									0	4,906	380
MW-02	0.50 - 7.25									0	25,167	6,235
MW-03	2.17 - 10.17	-								92	7,034	2,352
MW-04	1.25 - 6.81	-								0	3,612	304
MW-05	2.46 - 7.46	-								101	431,600	80,149
MW-06	2.47 - 7.47									0	5,416	420
SHMW-01S/01SR	1.0 - 6.0	0	0	8	0	0	0	67		0	4,147	786
SHMW-01I/01IR	35.0 - 45.0		0				0			0	32	4
SHMW-01D	65.0 - 75.0		0				0			0	0	0
SHMW-02S	1.0 - 6.0	0	0	5	0	0	0	0		0	5	1
SHMW-02I/02IR	35.0 - 45.0		56				245			0	580,200	24,258
SHMW-02D/02DR	65.0 - 75.0	-	0				0			0	308	49
SHMW-03S	2.0 - 12.0	22	2	23	14	16	6	5		0	430	67
SHMW-03I	35.0 - 45.0		0				4			0	320	25
SHMW-04S/04SR	2.0 - 12.0	1,195	639	402	100	1,875	1,916	190	523	0	6,669	2,674
SHMW-04I	35.0 - 45.0	-								0	18	3
SHMW-05S/05SR	2.0 - 12.0	420	20	107	175	155	291	171	153	0	420	101
SHMW-05I/05IR	35.0 - 45.0		0				0			0	17	2
SHMW-06S	2.0 - 6.0									0	5,848	2,690
SHMW-06I	35.0 - 45.0	-								0	2	0
SHMW-07S/07SR	1.0 - 11.0	4,342	419	2,620	950	4,030	1,381	1733	5945	0	7,211	2,823
SHMW-07I/07IR	35.0 - 45.0		0				1			0	2,212	222
SHMW-08S	1.0 - 7.0	113	182	95	151	180	148	147	174	3	201	90
SHMW-08I	35.0 - 45.0		0				0			0	13	1
SHMW-09S	2.0 - 12.0	787	690	721	575	603	211	560	832	0	2,737	921
SHMW-09I	35.0 -45.0	0	0				2			0	3	0
SHMW-10S	5.0 -15.0	0	0	0	0	0	1	0		0	22	1
SHMW-10I	35.5 - 45.5	-	0				0			0	0	0
SHMW-11S	3.5 - 13.5	0	2	1	0	7	16	1	0	0	173	5
SHMW-11I	35.0 - 45.0		0				1			0	4	0
SHMW-12S	1.5 - 6.5	217	104	62	410	604	133	0	353	0	739	239
SHMW-12I	35.0 - 45.0	-	0				0			0	20	2
SHMW-13S	1.5 - 6.5	0	0	0	0	0	0	0		0	3	0
SHMW-13I	35.0 - 45.0		0				0			0	1	0

NOTES:

-- not analyzed or not applicable

μg/L - micrograms per liter

PAH - polycyclic aromatic hydrocarbons

Figures













