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monitoring-report.

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Mr. Anthony Karwiel
Project Manager
New York State Department of Environmental Conservation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, NY 12233-7014

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Remedial Bureau C
Division of Environmental Remediation

ARCADIS
6723 Towpath Road
P.O. Box 66
Syracuse
New York 13214-0066
Tel 315.446.9120
Fax 315.446.8053
www.arcadis-us.com

ENVIRONMENTAL

Subject:

NAPL Monitoring Report
Passive Barrier Wall – Interim Remedial Measure
Binghamton Court Street, Former MGP
Site #7-04-031

Date:
November 17, 2008

Dear Mr. Karwiel:

Contact:
Keith White

On behalf of the New York State Gas & Electric Corporation (NYSEG), ARCADIS is pleased to present this letter report which summarizes the monitoring data collected in accordance with the *NAPL Barrier Wall Interim Remedial Measure Engineering Certification Report* (ARCADIS, 2007; referred to hereafter as the "Engineering Certification Report"). The purpose of the passive NAPL barrier is to prevent nonaqueous phase liquids (NAPLs) from leaving the site. The term "passive" refers to the fact that the barrier operates without the pumping or treating of groundwater. Construction of the passive NAPL barrier was substantially completed in November 2006; however, as discussed in the Engineering Certification Report, three NAPL-recovery wells (RW-20, RW-21, and RW-22) were not installed until January 2007. The formal monitoring program began in April 2007. In addition, one round of preliminary monitoring data was collected in January 2007, immediately after the final three NAPL-recovery wells were installed.

Phone:
315.671.9530

Email:
keith.white@
arcadis-us.com

Our ref:
B0013082.0001.00001
#2.04

The monitoring program, as described in the Engineering Certification Report, consisted of the following:

- Monthly monitoring of all 22 NAPL-recovery wells (identified as RW-1 through RW-22 on the attached Figure 1) for a period of one year.
- Semiannual monitoring of a series of "sentinel" wells located between the barrier and the Susquehanna River (MW97-7S, NMW-2, PZ01-02, PZ03-01D, PZ03-02A, PZ03-02D, PZ03-03A, PZ03-03B, PZ03-03D, PZ03-04A, PZ03-04B, PZ03-04D, PZ03-05A, PZ03-05B, PZ03-05C, PZ03-05D, PZ03-06A, PZ03-06B, PZ03-

Imagine the result

06C, PZ03-06D, PZ03-07A, PZ03-07B, PZ03-07C, PZ03-07D, PZ03-08A, PZ03-08B, PZ03-08C, and PZ03-08D) for a period of one year. The locations of these wells are shown on Figure 2.

During the monthly and semi-annual monitoring events each location was monitored for depth to groundwater, depth to bottom, and, if present, the thickness of accumulated light NAPL (LNAPL) or dense NAPL (DNAPL).

Data collected during the recovery-well and sentinel-well monitoring events are contained in Tables 1 and 2, respectively. The sentinel-well monitoring events were conducted in August 2007 and March 2008. All monitoring was performed by ARCADIS staff, or by a combination of staff from ARCADIS and AES, Inc.

At the completion of the year long monitoring event required by the Engineering Certification Report, the NYSDEC had not yet completed their review of the document. As a result and at the request of the NYSDEC, NYSEG agreed to perform three more monthly rounds of recovery-well monitoring. The three additional rounds of monitoring took place in May, June and July 2008.

As data were being evaluated, discrepancies between the installed depths and measured depths of several NAPL recovery wells were noted. Specifically, seven recovery wells (RW-2, RW-5, RW-6, RW-8, RW-13, RW-21 and RW-22) appeared to have two or more feet of accumulated sediment. A review of the available monitoring data indicated that there was no ongoing accumulation of sediment in these wells, rather, the sediment must have accumulated prior to implementation of the monitoring program, and therefore may have been related to the development of the barrier¹, or, in the case of RW-21 and RW-22, to the installation of the recovery wells themselves.

On June 5, 2008, the seven recovery wells mentioned above were redeveloped to remove the accumulated sediment. Wells were redeveloped using air-lifting techniques to maximize the amount of sediment removed. A table summarizing the amount of sediment removed from each well is located below. Water and sediment recovered during the redevelopment activities was pumped into an on-site poly tank

¹ The term "development" as used here refers to the process by which fluids in the barrier were recirculated upon barrier completion to "break" the biopolymer slurry that was used to facilitate the construction of the barrier.

for temporary storage. Residual sheens observed on the water surface within the poly tank were removed using absorbent pads. Once sediments were allowed sufficient time to settle and sheens were removed within the poly tank, water was pumped from the poly tank back into the recovery wells through a bag filter to remove any residual suspended sediments. The remaining sediment left in the bottom of the poly tank was later disposed of by Energy East.

Well ID	Depth to Sediment (Prior to Redevelopment) (ft btoc)	Depth to Sediment (Following Redevelopment) (ft btoc)	Sediment Thickness Removed (ft)
RW-2	49.25	52.45	3.20
RW-5	41.90	48.65	6.75
RW-6	35.50	48.80	13.30
RW-8	14.05	18.05	4.00
RW-13	13.14	18.62	5.48
RW-21	14.00	16.10	2.10
RW-22	48.50	52.25	3.75

As discussed at the site during the redevelopment, NYSEG proposed to conduct two additional rounds of barrier trench NAPL monitoring following the redevelopment to assess the re-occurrence of sediment in the recovery wells and for the presence of NAPL. These two additional rounds are represented by the July and August 2008 NAPL-monitoring events. NYSEG and the NYSDEC also agreed that if a measurable thickness of NAPL was not observed at any NAPL-recovery well during these two additional monitoring events, the frequency of the monitoring would be decreased to quarterly.

To date, no measurable NAPL has accumulated in any of the barrier trench recovery wells. Additionally, no significant sediment has accumulated at the bottom of the wells that were redeveloped. Only small amounts of LNAPL have been detected (using an interface probe and confirmed with a clear bailer) at well locations PZ01-02 (≤ 0.11 ft) and PZ-03-06B (≤ 0.22 ft) within Court Street; however LNAPL was identified in PZ01-02 prior to construction of the barrier trench; therefore this LNAPL is not interpreted to be related to the barrier trench.

Based on the findings of the 16 month monitoring program, NYSEG proposes to decrease the frequency of barrier trench NAPL monitoring to quarterly and will continue the semiannual monitoring of the wells listed in Table 2. Because the final

monthly monitoring event was in August, and to align the future monitoring schedule with the calendar year, the first quarter for the new monitoring program will be the fourth quarter of 2008 (i.e., October through December, 2008). After one-year's time, NYSEG will also prepare an annual report summarizing the findings of the quarterly and semi-annual monitoring events. The report will include updated versions of the two tables contained in this report. The report will also include recommendations for modifying the monitoring program, if necessary.

Sincerely,

ARCADIS



Keith A. White, C.P.G.
Principal-in-Charge

DAC/plf
Attachments

Copies:

Tracy Blazicek, New York State Electric & Gas Corporation
David A. Cornell, ARCADIS

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-1													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:45	7.59	834.72	52.83	789.48	1.37	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
04/25/07	NR	7.22	835.09	52.50	789.81	1.70	--	--	--	--	--	--	Coal-tar-like odor.
05/30/07	NR	9.76	832.55	52.54	789.77	1.66	--	--	--	--	--	--	Trace yellow NAPL on top of probe, coal-tar-like odor.
06/27/07	8:48	10.73	831.58	52.85	789.46	1.35	--	--	--	--	--	--	Silt on the last 1" of probe.
07/24/07	10:01	10.41	831.90	52.60	789.71	1.60	--	--	--	--	--	--	Coal-tar-like odor.
08/28/07	10:00	10.87	831.44	52.71	789.60	1.49	--	--	--	--	--	--	Soft bottom, Silt on probe, VOC = 0.7ppm.
09/20/07	9:30	10.86	831.45	52.65	789.66	1.55	--	--	--	--	--	--	Able to penetrate sediment in well 0.25', coal-tar-like odor, coal-tar-like material on probe.
10/31/07	8:30	9.33	832.98	52.50	789.81	1.70	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor, VOCs = 0.0 ppm.
11/20/07	8:51	9.00	833.31	52.53	789.78	1.67	--	--	--	--	--	--	Coal-tar-like odor.
12/18/07	8:52	8.79	833.52	52.51	789.80	1.69	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:25	9.18	833.13	52.45	789.86	1.75	--	--	--	--	--	--	Soft bottom.
02/21/08	15:02	7.96	834.35	52.71	789.60	1.49	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
03/18/08	13:10	7.86	834.45	52.74	789.57	1.46	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
05/12/08	8:50	9.98	832.33	52.91	789.40	1.29	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	11:35	10.62	831.69	53.35	788.96	0.85	--	--	--	--	--	--	Trace sheen, soft bottom.
07/08/08	8:20	10.89	831.42	52.62	789.69	1.58	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
08/06/08	8:31	10.42	831.89	52.70	789.61	1.50	--	--	--	--	--	--	Soft bottom.

Top of Casing (FAMSL) = 842.31
 Well bottom elev. (installed; FAMSL) = 788.11
 Installed Well Depth (ft) = 54.20

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-2													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	17:05	8.10	834.02	49.53	792.59	2.77	—	—	—	—	—	—	Soft Bottom.
04/25/07	NR	7.40	834.72	49.15	792.97	3.15	—	—	—	—	—	—	Sheen on probe.
05/30/07	NR	10.32	831.80	49.20	792.92	3.10	—	—	—	—	—	—	Trace Silt on probe.
06/27/07	9:24	11.25	830.87	49.52	792.60	2.78	—	—	—	—	—	—	Black material on probe, tape and floating on the surface of the water.
07/24/07	10:25	10.73	831.39	49.78	792.34	2.52	—	—	—	—	—	—	Able to penetrate sediment in well 0.15', faint organic-like odor.
08/28/07	10:22	11.38	830.74	49.27	792.85	3.03	—	—	—	—	—	—	Soft bottom.
09/20/07	9:50	11.42	830.70	49.04	793.08	3.26	—	—	—	—	—	—	Able to penetrate sediment in well 0.3', slight coal-tar-like odor.
10/31/07	8:59	9.93	832.19	49.17	792.95	3.13	—	—	—	—	—	—	Able to penetrate sediment in well 0.2', strong coal-tar-like odor, manure-like odor, VOCs = 1.5 ppm.
11/20/07	9:16	9.60	832.52	49.30	792.82	3.00	—	—	—	—	—	—	Mild coal-tar-like odor.
12/18/07	9:25	9.42	832.70	49.10	793.02	3.20	—	—	—	—	—	—	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:19	9.69	832.43	49.28	792.84	3.02	—	—	—	—	—	—	Soft Bottom.
02/21/08	15:20	8.53	833.59	49.81	792.31	2.49	—	—	—	—	—	—	Soft bottom, coal-tar-like odor.
03/18/08	12:45	8.37	833.75	49.25	792.87	3.05	—	—	—	—	—	—	Soft bottom, sediment on probe. Vault lid will not close flush to the vault frame work, may be due to plowing or vehicles driving over the vault.
05/12/08	8:40	10.45	831.67	49.57	792.55	2.73	—	—	—	—	—	—	Soft bottom, coal-tar-like odor, sediment on probe.
06/05/08	11:58	11.19	830.93	52.27	789.85	0.03	—	—	—	—	—	—	Foam on the surface of the water.
07/08/08	8:36	11.44	830.68	52.18	789.94	0.12	—	—	—	—	—	—	Firm bottom, mild coal-tar-like odor.
08/06/08	8:46	11.00	831.12	52.02	790.10	0.28	—	—	—	—	—	—	Firm bottom, mild coal-tar-like odor.

Top of Casing (FAMSL) = 842.12
 Well bottom elev. (installed; FAMSL) = 789.82
 Installed Well Depth (ft) = 52.30

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 — = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-3													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:55	8.13	833.70	16.31	825.52	0.44	—	—	—	—	—	—	Soft bottom.
04/25/07	NR	7.90	833.93	16.50	825.33	0.25	—	—	—	—	—	—	
05/30/07	NR	10.33	831.50	16.39	825.44	0.36	—	—	—	—	—	—	Firm bottom, little dark gray sediment on probe.
06/27/07	9:30	11.26	830.57	16.15	825.68	0.60	—	—	—	—	—	—	Silt on the last 4" of probe.
07/24/07	10:28	10.72	831.11	16.70	825.13	0.05	—	—	—	—	—	—	Able to penetrate sediment in well 0.5', faint organic-like odor.
08/28/07	10:22	11.38	830.45	16.20	825.63	0.55	—	—	—	—	—	—	Soft bottom.
09/20/07	9:54	11.42	830.41	16.25	825.58	0.50	—	—	—	—	—	—	Able to penetrate sediment in well 0.2', slight coal-tar-like odor.
10/31/07	9:03	9.92	831.91	16.48	825.35	0.27	—	—	—	—	—	—	Able to penetrate sediment in well 0.2', slight coal-tar-like odor, manure-like odor, VOCs = 4.7 ppm.
11/20/07	9:23	9.59	832.24	16.26	825.57	0.49	—	—	—	—	—	—	Mild coal-tar-like odor.
12/18/07	9:29	9.43	832.40	16.25	825.58	0.50	—	—	—	—	—	—	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:18	9.66	832.17	16.17	825.66	0.58	—	—	—	—	—	—	
02/21/08	15:25	8.51	833.32	16.59	825.24	0.16	—	—	—	—	—	—	Soft bottom.
03/18/08	12:48	8.35	833.48	16.49	825.34	0.26	—	—	—	—	—	—	Soft bottom, coal-tar-like odor. Vault lid will not close flush to the vault frame work, may be due to plowing or vehicles driving over the vault.
05/12/08	8:41	10.45	831.38	16.59	825.24	0.16	—	—	—	—	—	—	Soft bottom, sediment on probe.
06/05/08	11:59	11.16	830.67	16.65	825.18	0.10	—	—	—	—	—	—	Approximately 0.25' of gray sediment in well.
07/08/08	8:40	11.44	830.39	16.51	825.32	0.24	—	—	—	—	—	—	Firm bottom.
08/06/08	8:47	10.99	830.84	16.29	825.54	0.46	—	—	—	—	—	—	Coal-tar-like odor.

Top of Casing (FAMSL) = 841.83
 Well bottom elev. (installed; FAMSL) = 825.08
 Installed Well Depth (ft) = 16.75

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 — = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-4													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:15	8.72	833.79	15.61	826.90	1.49	--	--	--	--	--	--	Soft Bottom.
04/25/07	NR	5.92	836.59	15.75	826.76	1.35	--	--	--	--	--	--	
05/30/07	NR	11.03	831.48	15.90	826.61	1.20	--	--	--	--	--	--	Soft bottom, little Silt on probe.
06/27/07	9:35	11.96	830.55	15.89	826.62	1.21	--	--	--	--	--	--	Mild coal-tar like odor, black material on probe.
07/24/07	10:37	11.42	831.09	15.76	826.75	1.34	--	--	--	--	--	--	Hard bottom, organic-like odor.
08/28/07	10:33	12.11	830.40	15.75	826.76	1.35	--	--	--	--	--	--	Mild manure-like odor.
09/20/07	9:58	12.14	830.37	15.76	826.75	1.34	--	--	--	--	--	--	Firm bottom, slight coal-tar-like odor, manure-like odor.
10/31/07	9:10	10.65	831.86	15.72	826.79	1.38	--	--	--	--	--	--	Firm bottom, slight coal-tar-like odor, manure-like odor, VOCs = 0.9 ppm.
11/20/07	9:31	10.32	832.19	15.79	826.72	1.31	--	--	--	--	--	--	Firm bottom.
12/18/07	9:39	10.14	832.37	15.80	826.71	1.30	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:12	10.38	832.13	15.69	826.82	1.41	--	--	--	--	--	--	Soft bottom.
02/21/08	13:30	9.08	833.43	15.88	826.63	1.22	--	--	--	--	--	--	Firm bottom, coal-tar-like odor, manure-like odor.
03/18/08	12:43	9.07	833.44	15.96	826.55	1.14	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor.
05/12/08	8:37	11.17	831.34	15.99	826.52	1.11	--	--	--	--	--	--	Firm bottom.
06/05/08	12:12	11.88	830.63	16.02	826.49	1.08	--	--	--	--	--	--	
07/08/08	8:45	12.16	830.35	15.91	826.60	1.19	--	--	--	--	--	--	Firm bottom.
08/06/08	8:50	11.70	830.81	15.90	826.61	1.20	--	--	--	--	--	--	Firm bottom.

Top of Casing (FAMSL) = 842.51
 Well bottom elev. (installed; FAMSL) = 825.41
 Installed Well Depth (ft) = 17.10

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-5													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:19	8.76	833.72	39.95	802.53	8.65	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	5.58	836.90	40.10	802.38	8.50	--	--	--	--	--	--	Coal-tar-like odor.
05/30/07	NR	10.99	831.49	40.10	802.38	8.50	--	--	--	--	--	--	Soft bottom, trace Silt on probe, slight coal-tar-like odor.
06/27/07	9:41	11.94	830.54	40.22	802.26	8.38	--	--	--	--	--	--	Coal-tar-like odor, manure-like odor, Silt on the last 2" of probe.
07/24/07	10:40	11.41	831.07	40.07	802.41	8.53	--	--	--	--	--	--	Able to penetrate sediment in well 0.8'.
08/28/07	10:35	12.07	830.41	40.25	802.23	8.35	--	--	--	--	--	--	Silt on end of probe, manure-like odor.
09/20/07	10:04	12.09	830.39	40.11	802.37	8.49	--	--	--	--	--	--	Able to penetrate sediment in well 0.11', coal-tar-like odor, manure-like odor.
10/31/07	9:13	10.62	831.86	40.25	802.23	8.35	--	--	--	--	--	--	Able to penetrate sediment in well 0.2', manure-like odor, VOCs = 2.0 ppm.
11/20/07	9:39	10.28	832.20	40.09	802.39	8.51	--	--	--	--	--	--	Mild coal-tar-like odor.
12/18/07	9:43	10.11	832.37	40.17	802.31	8.43	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:10	10.34	832.14	40.04	802.44	8.56	--	--	--	--	--	--	Soft bottom.
02/21/08	13:41	9.11	833.37	40.90	801.58	7.70	--	--	--	--	--	--	Soft bottom, manure-like odor.
03/18/08	12:40	9.05	833.43	40.90	801.58	7.70	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
05/12/08	8:38	11.18	831.30	42.89	799.59	5.71	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	12:13	11.83	830.65	48.60	793.88	0.00	--	--	--	--	--	--	
07/08/08	8:46	12.11	830.37	48.59	793.89	0.01	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor.
08/06/08	8:52	11.69	830.79	48.60	793.88	0.00	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 842.48
 Well bottom elev. (installed; FAMSL) = 793.88
 Installed Well Depth (ft) = 48.60

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-6													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:05	9.52	834.05	32.90	810.67	16.20	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	9.12	834.45	32.80	810.77	16.30	--	--	--	--	--	--	Silty bottom, coal-tar-like odor, sheen on probe.
05/30/07	NR	11.54	832.03	32.90	810.67	16.20	--	--	--	--	--	--	Very soft bottom, Silt on the end of probe, strong coal-tar-like odor.
06/27/07	9:52	12.32	831.25	32.95	810.62	16.15	--	--	--	--	--	--	Coal-tar-like odor, Silt on the last 3" of probe, black material on the end of the probe and on the water surface.
07/24/07	10:44	12.09	831.48	33.13	810.44	15.97	--	--	--	--	--	--	Trace sheen on sediment on probe, strong organic-like odor and manure-like odor, able to penetrate sediment in well 0.1', black material on probe.
08/28/07	10:39	12.50	831.07	32.95	810.62	16.15	--	--	--	--	--	--	Soft bottom, Silt on end of probe, manure-like odor.
09/20/07	10:09	12.87	830.70	32.95	810.62	16.15	--	--	--	--	--	--	Able to penetrate sediment in well 0.2', brown material at the water surface, manure-like odor.
10/31/07	9:19	11.20	832.37	32.98	810.59	16.12	--	--	--	--	--	--	Able to penetrate sediment in well 0.2', film on water surface, brown slimy material on the probe (from the surface of the water), coal-tar-like and manure-like odors, VOCs = 1.3 ppm.
11/20/07	9:46	10.92	832.65	33.05	810.52	16.05	--	--	--	--	--	--	Manure-like odor.
12/18/07	9:49	10.71	832.86	33.20	810.37	15.90	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:09	10.92	832.65	33.00	810.57	16.10	--	--	--	--	--	--	
02/21/08	13:57	9.72	833.85	32.96	810.61	16.14	--	--	--	--	--	--	Soft bottom, strong coal-tar-like odor, manure-like odor, sheen on water surface, sheen on sediment on probe.
03/18/08	12:36	9.46	834.11	32.85	810.72	16.25	--	--	--	--	--	--	Soft bottom, trace sheen on sediment on probe, no odor.
05/12/08	8:34	11.55	832.02	35.69	807.88	13.41	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	14:15	11.68	831.89	48.75	794.82	0.35	--	--	--	--	--	--	
07/08/08	8:48	12.57	831.00	48.50	795.07	0.60	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor.
08/06/08	8:58	12.12	831.45	48.42	795.15	0.68	--	--	--	--	--	--	Firm bottom.

Top of Casing (FAMSL) = 843.57
 Well bottom elev. (installed; FAMSL) = 794.47
 Installed Well Depth (ft) = 49.10

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-7													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:08	9.58	834.00	18.75	824.83	-0.55	--	--	--	--	--	--	Firm bottom.
04/25/07	NR	9.23	834.35	18.79	824.79	-0.59	--	--	--	--	--	--	Coal-tar-like odor.
05/30/07	NR	11.55	832.03	18.87	824.71	-0.67	--	--	--	--	--	--	Trace Silt on probe.
06/27/07	9:57	12.40	831.18	18.85	824.73	-0.65	--	--	--	--	--	--	Mild coal-tar-like odor, black material on probe and on water surface.
07/24/07	10:49	12.04	831.54	18.72	824.86	-0.52	--	--	--	--	--	--	Strong manure-like odor, firm bottom, trace sheen on sediment on probe.
08/28/07	10:43	12.59	830.99	18.78	824.80	-0.58	--	--	--	--	--	--	Firm bottom, Silt on end of probe.
09/20/07	10:13	12.66	830.92	18.60	824.98	-0.40	--	--	--	--	--	--	Firm bottom, trace sediment on probe, manure-like odor.
10/31/07	9:23	11.31	832.27	18.73	824.85	-0.53	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, manure-like odor, VOCs = 6.3 ppm.
11/20/07	9:52	11.01	832.57	18.83	824.75	-0.63	--	--	--	--	--	--	Coal-tar-like odor, manure-like odor, sediment on probe.
12/18/07	9:53	10.76	832.82	18.95	824.63	-0.75	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:07	10.90	832.68	18.66	824.92	-0.46	--	--	--	--	--	--	Soft bottom.
02/21/08	13:59	9.78	833.80	18.73	824.85	-0.53	--	--	--	--	--	--	Firm bottom, coal-tar-like odor, manure-like odor.
03/18/08	12:34	9.55	834.03	18.80	824.78	-0.60	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, sediment on probe.
05/12/08	8:33	11.62	831.96	12.77	830.81	5.43	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.
06/05/08	14:17	11.34	832.24	18.74	824.84	-0.54	--	--	--	--	--	--	
07/08/08	8:49	12.62	830.96	18.73	824.85	-0.53	--	--	--	--	--	--	Firm bottom, sediment on probe.
08/06/08	9:01	12.16	831.42	18.70	824.88	-0.50	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.

Top of Casing (FAMSL) = 843.58
 Well bottom elev. (installed; FAMSL) = 825.38
 Installed Well Depth (ft) = 18.20

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-8													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:00	9.58	833.47	14.09	828.96	4.01	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	9.20	833.85	14.10	828.95	4.00	--	--	--	--	--	--	Very Silty, Silt on probe, trace sheen on sediment on probe.
05/30/07	NR	11.48	831.57	14.02	829.03	4.08	--	--	--	--	--	--	Silt on 2" of end of probe.
06/27/07	10:05	12.32	830.73	14.05	829.00	4.05	--	--	--	--	--	--	Coal-tar-like odor, Silt on the last 4" of probe, black material on probe and tape.
07/24/07	10:53	11.99	831.06	14.68	828.37	3.42	--	--	--	--	--	--	Able to penetrate sediment in well 0.9', trace coal-tar-like blebs and sheen in sediment, strong manure-like odor.
08/28/07	10:53	12.50	830.55	14.04	829.01	4.06	--	--	--	--	--	--	Soft bottom, approximately 3" of Silt on end of probe, mild manure-like odor.
09/20/07	10:26	12.58	830.47	13.90	829.15	4.20	--	--	--	--	--	--	Firm bottom, slight coal-tar-like odor.
10/31/07	9:34	11.31	831.74	14.39	828.66	3.71	--	--	--	--	--	--	Able to penetrate sediment in well 0.6', coal-tar-like odor, VOCs = 1.5 ppm. Vault lid is not closing flush to the surrounding vault frame work.
11/20/07	10:01	11.03	832.02	13.97	829.08	4.13	--	--	--	--	--	--	Manure-like odor, sediment on probe, slight coal-tar-like odor.
12/18/07	10:04	10.76	832.29	14.15	828.90	3.95	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:06	10.82	832.23	13.87	829.18	4.23	--	--	--	--	--	--	Soft bottom.
02/21/08	14:11	9.76	833.29	14.21	828.84	3.89	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
03/18/08	11:51	9.49	833.56	14.61	828.44	3.49	--	--	--	--	--	--	Soft bottom, coal-tar-like odor, trace brown/black oily coal-tar-like material on sediment on probe, sheen on sediment on probe.
05/12/08	8:28	11.50	831.55	14.84	828.21	3.26	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	12:46	12.10	830.95	18.03	825.02	0.07	--	--	--	--	--	--	
07/08/08	8:55	12.51	830.54	18.07	824.98	0.03	--	--	--	--	--	--	Firm bottom.
08/06/08	9:09	12.07	830.98	18.02	825.03	0.08	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.

Top of Casing (FAMSL) = 843.05
 Well bottom elev. (installed; FAMSL) = 824.95
 Installed Well Depth (ft) = 18.10

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-9													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:10	9.59	833.93	52.93	790.59	0.02	--	--	--	--	--	--	Firm bottom.
04/25/07	NR	9.20	834.32	53.10	790.42	-0.15	--	--	--	--	--	--	
05/30/07	NR	11.44	832.08	53.25	790.27	-0.30	--	--	--	--	--	--	Trace Silt on probe.
06/27/07	10:11	12.32	831.20	53.05	790.47	-0.10	--	--	--	--	--	--	Mild coal-tar-like odor.
07/24/07	10:58	12.00	831.52	52.92	790.60	0.03	--	--	--	--	--	--	Able to penetrate sediment in well 0.1'.
08/28/07	10:49	12.51	831.01	53.05	790.47	-0.10	--	--	--	--	--	--	Trace black material on end of probe, mild manure-like odor.
09/20/07	10:20	12.59	830.93	52.91	790.61	0.04	--	--	--	--	--	--	Bubbles on surface of water, able to penetrate sediment in well 0.1', other wise firm bottom.
10/31/07	9:31	11.33	832.19	52.90	790.62	0.05	--	--	--	--	--	--	Soft bottom, mild coal-tar-like odor, thin film on water surface, VOCs = 7.4 ppm. Vault lid is not closing flush to surrounding vault frame work.
11/20/07	10:08	11.03	832.49	53.31	790.21	-0.36	--	--	--	--	--	--	Manure-like odor.
12/18/07	9:59	10.77	832.75	53.30	790.22	-0.35	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:05	10.81	832.71	52.85	790.67	0.10	--	--	--	--	--	--	Soft bottom.
02/21/08	14:12	9.75	833.77	52.93	790.59	0.02	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
03/18/08	11:54	9.48	834.04	52.97	790.55	-0.02	--	--	--	--	--	--	Soft bottom.
05/12/08	8:28	11.49	832.03	53.01	790.51	-0.06	--	--	--	--	--	--	Soft bottom.
06/05/08	12:45	12.10	831.42	52.92	790.60	0.03	--	--	--	--	--	--	
07/08/08	8:54	12.50	831.02	52.92	790.60	0.03	--	--	--	--	--	--	Soft bottom, mild coal-tar-like odor.
08/06/08	9:06	12.07	831.45	52.92	790.60	0.03	--	--	--	--	--	--	Soft bottom, mild coal-tar-like odor.

Top of Casing (FAMSL) = 843.52
 Well bottom elev. (installed; FAMSL) = 790.57
 Installed Well Depth (ft) = 52.95

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-10													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:20	9.99	833.92	16.44	827.47	0.16	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	9.60	834.31	16.20	827.71	0.40	--	--	--	--	--	--	Soft bottom, trace sheen on probe.
05/30/07	NR	11.89	832.02	16.31	827.60	0.29	--	--	--	--	--	--	
06/27/07	10:16	12.40	831.51	16.05	827.86	0.55	--	--	--	--	--	--	Mild coal-tar-like odor, Silt on the last 2" of probe, trace sheen on probe.
07/24/07	11:01	12.41	831.50	16.78	827.13	-0.18	--	--	--	--	--	--	Able to penetrate sediment in well 0.6', black material on probe, trace coal-tar-like blebs on probe.
08/28/07	10:56	12.90	831.01	16.07	827.84	0.53	--	--	--	--	--	--	Soft bottom, approximately 3" Silt on end of probe, mild manure-like odor.
09/20/07	10:33	12.99	830.92	16.26	827.65	0.34	--	--	--	--	--	--	Brown material on probe (from water surface), bubbles on water surface, able to penetrate sediment in well 0.2', coal-tar-like odor and coal-tar-like material on probe.
10/31/07	9:43	11.73	832.18	16.31	827.60	0.29	--	--	--	--	--	--	Able to penetrate sediment in well 0.3', VOCs = 2.2 ppm.
11/20/07	10:15	11.46	832.45	16.16	827.75	0.44	--	--	--	--	--	--	Sediment on probe, strong coal-tar-like odor.
12/18/07	10:18	11.16	832.75	16.22	827.69	0.38	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:02	11.24	832.67	16.00	827.91	0.60	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
02/21/08	14:23	10.18	833.73	16.34	827.57	0.26	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
03/18/08	11:57	9.89	834.02	16.26	827.65	0.34	--	--	--	--	--	--	Soft bottom, coal-tar-like odor, sheen on sediment on probe.
05/12/08	8:25	11.39	832.52	16.37	827.54	0.23	--	--	--	--	--	--	Sediment on probe, coal-tar-like odor.
06/05/08	12:49	12.51	831.40	16.79	827.12	-0.19	--	--	--	--	--	--	Soft, approximately 0.6' of gray sediment, trace sheen.
07/08/08	9:02	12.42	831.49	16.25	827.66	0.35	--	--	--	--	--	--	Soft bottom, coal-tar-like odor, sediment on probe.
08/06/08	9:12	12.48	831.43	16.34	827.57	0.26	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 843.91
 Well bottom elev. (installed; FAMSL) = 827.31
 Installed Well Depth (ft) = 16.60

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-11													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:23	9.97	833.87	49.51	794.33	0.19	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	9.60	834.24	49.50	794.34	0.20	--	--	--	--	--	--	Soft bottom, mothball-like odor.
05/30/07	NR	11.87	831.97	49.80	794.04	-0.10	--	--	--	--	--	--	Trace Silt on probe.
06/27/07	10:23	12.40	831.44	49.52	794.32	0.18	--	--	--	--	--	--	Mild coal-tar-like odor, trace Silt on probe, black material on probe and tape.
07/24/07	11:06	12.39	831.45	49.49	794.35	0.21	--	--	--	--	--	--	Able to penetrate sediment in well 0.3', black material on probe.
08/28/07	10:59	12.90	830.94	49.50	794.34	0.20	--	--	--	--	--	--	Soft bottom, manure-like odor.
09/20/07	10:40	12.97	830.87	49.39	794.45	0.31	--	--	--	--	--	--	Brown material on probe (from water surface), bubbles on water surface, firm bottom.
10/31/07	9:46	11.71	832.13	49.36	794.48	0.34	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 4.5 ppm.
11/20/07	10:20	11.41	832.43	49.39	794.45	0.31	--	--	--	--	--	--	Coal-tar-like odor.
12/18/07	10:23	11.13	832.71	49.75	794.09	-0.05	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:00	11.21	832.63	49.37	794.47	0.33	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
02/21/08	14:25	10.17	833.67	49.40	794.44	0.30	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
03/18/08	11:59	9.86	833.98	49.37	794.47	0.33	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
05/12/08	8:26	11.39	832.45	49.38	794.46	0.32	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	12:50	12.50	831.34	49.36	794.48	0.34	--	--	--	--	--	--	
07/08/08	9:07	12.58	831.26	49.38	794.46	0.32	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor.
08/06/08	9:15	12.47	831.37	49.45	794.39	0.25	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor.

Top of Casing (FAMSL) = 843.84
 Well bottom elev. (installed; FAMSL) = 794.14
 Installed Well Depth (ft) = 49.70

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-12													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:39	11.09	833.56	47.92	796.73	0.04	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	10.53	834.12	47.95	796.70	0.01	--	--	--	--	--	--	Vault has been damaged, sides of vault have been pushed in, j-plugs cannot be placed in wells because the vault has settled and cannot close properly with j-plugs in place. This may have been caused by heavy equipment driving near vault and compacting sediment around vault (there are long plastic pipes stacked next to vault).
05/30/07	NR	12.68	831.97	48.00	796.65	-0.04	--	--	--	--	--	--	
06/27/07	10:32	13.42	831.23	48.05	796.60	-0.09	--	--	--	--	--	--	Mild coal-tar-like odor, trace Silt on probe.
07/24/07	11:12	13.28	831.37	47.88	796.77	0.08	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', sediment at water surface, no apparent odor.
08/28/07	11:03	13.68	830.97	48.00	796.65	-0.04	--	--	--	--	--	--	Soft bottom. Vault lid was difficult to close, appears that vault has had more damage done since the last time fluid levels were measured.
09/20/07	10:47	13.77	830.88	47.90	796.75	0.06	--	--	--	--	--	--	Soft bottom, slight coal-tar-like odor, drain material in vault has settled approximately 2.0'.
10/31/07	9:53	12.69	831.96	47.87	796.78	0.09	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 1.8 ppm.
11/20/07	10:24	12.47	832.18	48.00	796.65	-0.04	--	--	--	--	--	--	Mild coal-tar-like odor.
12/18/07	10:11	12.02	832.63	47.92	796.73	0.04	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	10:58	12.01	832.64	47.83	796.82	0.13	--	--	--	--	--	--	Soft bottom.
02/21/08	14:35	11.08	833.57	47.93	796.72	0.03	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
03/18/08	12:08	10.62	834.03	47.90	796.75	0.06	--	--	--	--	--	--	Soft bottom.
05/12/08	8:19	12.60	832.05	47.90	796.75	0.06	--	--	--	--	--	--	Soft bottom.
06/05/08	13:36	13.29	831.36	47.90	796.75	0.06	--	--	--	--	--	--	
07/08/08	9:12	13.69	830.96	47.95	796.70	0.01	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
08/06/08	9:18	13.24	831.41	47.95	796.70	0.01	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.

Top of Casing (FAMSL) = 844.65
 Well bottom elev. (installed; FAMSL) = 796.69
 Installed Well Depth (ft) = 47.96

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-13													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:33	11.03	833.72	14.99	829.76	3.71	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
04/25/07	NR	10.52	834.23	14.89	829.86	3.81	--	--	--	--	--	--	Vault has been damaged, sides of vault have been pushed in, j-plugs cannot be placed in wells because the vault has settled and cannot close properly with j-plugs in place. This may have been caused by heavy equipment driving near vault and compacting sediment around vault (there are long plastic pipes stacked next to vault).
05/30/07	NR	12.70	832.05	14.95	829.80	3.75	--	--	--	--	--	--	
06/27/07	10:36	13.35	831.40	13.50	831.25	5.20	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, Silt on the last 2" of probe.
07/24/07	11:16	13.11	831.64	13.48	831.27	5.22	--	--	--	--	--	--	Able to penetrate sediment in well 0.5', organic-like odor, brown sediment at water surface.
08/28/07	11:06	13.30	831.45	13.30	831.45	5.40	--	--	--	--	--	--	Meter sounded at the bottom of well (saturated sediment in well bottom), approximately 1.5" of Silt on end of probe. Vault lid was difficult to close, appears that vault has had more damage done since the last time fluid levels were measured.
09/20/07	10:54	13.25	831.50	13.25	831.50	5.45	--	--	--	--	--	--	Meter sounded when it hit the sediment at the bottom of the well (saturated sediment in well bottom), no measurable water in well, sediment on the probe, drain material in vault has settled approximately 2.0'.
10/31/07	9:57	12.68	832.07	13.19	831.56	5.51	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 1.3 ppm.
11/20/07	10:29	12.22	832.53	13.22	831.53	5.48	--	--	--	--	--	--	Firm bottom.
12/18/07	10:15	12.02	832.73	13.18	831.57	5.52	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	10:56	12.03	832.72	13.14	831.61	5.56	--	--	--	--	--	--	
02/21/08	14:36	11.06	833.69	13.43	831.32	5.27	--	--	--	--	--	--	Firm bottom.
03/18/08	12:05	10.61	834.14	13.38	831.37	5.32	--	--	--	--	--	--	Firm bottom.
05/12/08	8:18	12.59	832.16	12.55	832.20	6.15	--	--	--	--	--	--	Soft bottom.
06/05/08	13:37	13.32	831.43	18.60	826.15	0.10	--	--	--	--	--	--	Hard bottom.
07/08/08	9:15	13.71	831.04	18.55	826.20	0.15	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.
08/06/08	9:20	13.25	831.50	18.55	826.20	0.15	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.

Top of Casing (FAMSL) = 844.75
 Well bottom elev. (installed; FAMSL) = 826.05
 Installed Well Depth (ft) = 18.70

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-14													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:44	12.07	833.20	17.09	828.18	0.51	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	11.57	833.70	17.20	828.07	0.40	--	--	--	--	--	--	
05/30/07	NR	14.74	830.53	17.07	828.20	0.53	--	--	--	--	--	--	
06/27/07	10:47	14.45	830.82	17.16	828.11	0.44	--	--	--	--	--	--	Mild, coal-tar-like odor, Silt on the last 2" of probe.
07/24/07	11:20	14.33	830.94	17.69	827.58	-0.09	--	--	--	--	--	--	Able to penetrate sediment in well 0.7', trace sheen and black material on end of probe, faint coal-tar-like odor.
08/28/07	11:10	14.72	830.55	17.12	828.15	0.48	--	--	--	--	--	--	Silt on end of probe, mild manure-like odor.
09/20/07	11:01	14.83	830.44	17.00	828.27	0.60	--	--	--	--	--	--	Firm bottom.
10/31/07	10:09	13.75	831.52	17.04	828.23	0.56	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 0.5 ppm.
11/20/07	10:34	13.45	831.82	17.05	828.22	0.55	--	--	--	--	--	--	Coal-tar-like odor.
12/18/07	10:20	13.05	832.22	17.30	827.97	0.30	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	10:53	13.06	832.21	16.93	828.34	0.67	--	--	--	--	--	--	
02/21/08	14:45	12.11	833.16	17.15	828.12	0.45	--	--	--	--	--	--	Firm bottom.
03/18/08	12:12	11.64	833.63	17.15	828.12	0.45	--	--	--	--	--	--	Firm bottom.
05/12/08	8:17	12.63	832.64	17.05	828.22	0.55	--	--	--	--	--	--	Soft bottom.
06/05/08	13:44	14.33	830.94	17.14	828.13	0.46	--	--	--	--	--	--	Hard bottom.
07/08/08	9:17	14.72	830.55	17.17	828.10	0.43	--	--	--	--	--	--	Firm bottom, coal-tar-like-odor.
08/06/08	9:24	14.28	830.99	17.12	828.15	0.48	--	--	--	--	--	--	Firm bottom, coal-tar-like-odor.

Top of Casing (FAMSL) = 845.27
 Well bottom elev. (installed; FAMSL) = 827.67
 Installed Well Depth (ft) = 17.60

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-15													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	13:46	12.07	833.16	48.98	796.25	0.22	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
04/25/07	NR	11.54	833.69	48.95	796.28	0.25	--	--	--	--	--	--	
05/30/07	NR	13.66	831.57	49.30	795.93	-0.10	--	--	--	--	--	--	
06/27/07	10:51	14.43	830.80	49.00	796.23	0.20	--	--	--	--	--	--	Trace Silt on probe, mild coal-tar-like odor.
07/24/07	11:27	14.28	830.95	48.95	796.28	0.25	--	--	--	--	--	--	Able to penetrate sediment in well 0.2', trace coal-tar-like blebs and black material on end of probe, organic-like odor.
08/28/07	11:13	14.68	830.55	48.97	796.26	0.23	--	--	--	--	--	--	Orange material on probe.
09/20/07	11:06	14.78	830.45	48.95	796.28	0.25	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
10/31/07	10:13	13.70	831.53	48.91	796.32	0.29	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 0.9 ppm.
11/20/07	10:38	13.42	831.81	49.05	796.18	0.15	--	--	--	--	--	--	Coal-tar-like odor.
12/18/07	10:29	13.02	832.21	51.72	793.51	-2.52	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	10:50	12.99	832.24	48.89	796.34	0.31	--	--	--	--	--	--	Soft bottom.
02/21/08	14:46	12.08	833.15	48.90	796.33	0.30	--	--	--	--	--	--	Firm bottom.
03/18/08	12:10	11.60	833.63	48.90	796.33	0.30	--	--	--	--	--	--	Firm bottom.
05/12/08	8:15	12.57	832.66	48.95	796.28	0.25	--	--	--	--	--	--	Firm bottom.
06/05/08	13:45	14.28	830.95	48.90	796.33	0.30	--	--	--	--	--	--	Hard bottom.
07/08/08	9:19	14.69	830.54	48.93	796.30	0.27	--	--	--	--	--	--	Coal-tar-like odor.
08/06/08	9:25	14.21	831.02	49.29	795.94	-0.09	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 845.23
 Well bottom elev. (installed; FAMSL) = 796.03
 Installed Well Depth (ft) = 49.20

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-16													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	14:39	14.81	833.60	49.73	798.68	0.18	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
04/25/07	NR	14.21	834.20	49.75	798.66	0.16	--	--	--	--	--	--	Bubbles at surface of water, black material on probe.
05/30/07	NR	16.30	832.11	49.85	798.56	0.06	--	--	--	--	--	--	Trace Silt on probe.
06/27/07	11:13	17.05	831.36	49.80	798.61	0.11	--	--	--	--	--	--	Mild coal-tar-like odor, black material on probe.
07/24/07	11:35	16.95	831.46	49.78	798.63	0.13	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', strong coal-tar-like odor, trace coal-tar-like blebs on probe.
08/28/07	11:22	17.32	831.09	49.75	798.66	0.16	--	--	--	--	--	--	Firm bottom.
09/20/07	11:14	17.42	830.99	49.62	798.79	0.29	--	--	--	--	--	--	Soft bottom, brown material on probe (from water surface), slight coal-tar-like odor, coal-tar-like material on probe.
10/31/07	10:27	16.37	832.04	49.64	798.77	0.27	--	--	--	--	--	--	Firm bottom, brown slime on probe (from water surface), VOCs = 0.8 ppm.
11/20/07	10:45	16.09	832.32	49.80	798.61	0.11	--	--	--	--	--	--	Manure-like odor.
12/18/07	10:38	15.66	832.75	49.92	798.49	-0.01	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:35	15.61	832.80	49.78	798.63	0.13	--	--	--	--	--	--	Soft bottom.
02/21/08	15:31	14.73	833.68	49.75	798.66	0.16	--	--	--	--	--	--	Soft bottom, manure-like odor.
03/18/08	12:20	14.21	834.20	49.75	798.66	0.16	--	--	--	--	--	--	Firm bottom, coal-tar-like odor, trace brown/black sticky coal-tar-like material on probe, bubbles on the water surface, brown slimy material on probe from water surface.
05/12/08	8:55	16.17	832.24	49.77	798.64	0.14	--	--	--	--	--	--	Firm bottom.
06/05/08	13:56	16.85	831.56	49.70	798.71	0.21	--	--	--	--	--	--	Sheen, foam.
07/08/08	9:23	17.26	831.15	49.72	798.69	0.19	--	--	--	--	--	--	Firm bottom.
08/06/08	9:32	16.83	831.58	49.75	798.66	0.16	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 848.41
 Well bottom elev. (installed; FAMSL) = 798.50
 Installed Well Depth (ft) = 49.91

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-17													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	14:36	14.80	833.54	24.34	824.00	0.16	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	14.17	834.17	24.35	823.99	0.15	--	--	--	--	--	--	Bubbles at surface of water, black material on probe.
05/30/07	NR	16.28	832.06	24.34	824.00	0.16	--	--	--	--	--	--	Trace Silt on probe.
06/27/07	11:17	17.02	831.32	24.78	823.56	-0.28	--	--	--	--	--	--	Black material on probe.
07/24/07	11:39	16.92	831.42	24.70	823.64	-0.20	--	--	--	--	--	--	Able to penetrate sediment in well 0.5', black material on probe, trace coal-tar-like blebs on probe.
08/28/07	11:25	17.27	831.07	24.32	824.02	0.18	--	--	--	--	--	--	Firm bottom.
09/20/07	11:19	17.38	830.96	24.42	823.92	0.08	--	--	--	--	--	--	Firm bottom, brown material on probe (from water surface).
10/31/07	10:31	16.34	832.00	24.33	824.01	0.17	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 0.9 ppm.
11/20/07	10:48	16.09	832.25	24.39	823.95	0.11	--	--	--	--	--	--	Mild coal-tar-like odor.
12/18/07	10:41	15.65	832.69	24.53	823.81	-0.03	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:37	15.59	832.75	24.37	823.97	0.13	--	--	--	--	--	--	Soft bottom.
02/21/08	15:35	14.72	833.62	24.45	823.89	0.05	--	--	--	--	--	--	Firm bottom.
03/18/08	12:18	14.19	834.15	24.49	823.85	0.01	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, trace brown/black sticky coal-tar-like material on probe, bubbles on the water surface.
05/12/08	8:57	16.11	832.23	24.53	823.81	-0.03	--	--	--	--	--	--	Firm bottom.
06/05/08	13:57	16.83	831.51	24.70	823.64	-0.20	--	--	--	--	--	--	Slightly soft.
07/08/08	9:26	17.21	831.13	24.65	823.69	-0.15	--	--	--	--	--	--	Firm bottom, trace streaks of yellow coal-tar-like material on probe, coal-tar-like odor.
08/06/08	9:35	16.82	831.52	24.35	823.99	0.15	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 848.34
 Well bottom elev. (installed; FAMSL) = 823.84
 Installed Well Depth (ft) = 24.50

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.
5. Installed well depth is an average of measured depths to bottom for measurements taken from 1/18/07-7/08/08.

NR = Not Recorded.
 TOC = Top of Casing.
 TOC = Top of Casing.
 -- = NAPL not present.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-18													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	14:52	12.23	833.59	42.08	803.74	-0.10	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	11.62	834.20	42.05	803.77	-0.07	--	--	--	--	--	--	Coal-tar-like odor.
05/30/07	NR	13.71	832.11	42.15	803.67	-0.17	--	--	--	--	--	--	
06/27/07	11:07	14.44	831.38	42.05	803.77	-0.07	--	--	--	--	--	--	Mild coal-tar-like odor, black material on probe.
07/24/07	11:42	14.36	831.46	42.00	803.82	-0.02	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', reddish material on probe.
08/28/07	11:33	14.71	831.11	42.00	803.82	-0.02	--	--	--	--	--	--	Firm bottom, mild manure-like odor.
09/20/07	11:32	14.84	830.98	41.90	803.92	0.08	--	--	--	--	--	--	Firm bottom, brown material on probe (from water surface).
10/31/07	10:47	13.81	832.01	41.78	804.04	0.20	--	--	--	--	--	--	Firm bottom, coal-tar-like odor, VOCs = 0.4 ppm.
11/20/07	10:52	13.53	832.29	41.98	803.84	0.00	--	--	--	--	--	--	Strong coal-tar-like odor.
12/18/07	10:46	13.11	832.71	42.25	803.57	-0.27	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	NR	NR	NR	NR	NR	NR	--	--	--	--	--	--	Could not open vault lid.
02/21/08	15:43	12.17	833.65	41.98	803.84	0.00	--	--	--	--	--	--	Soft bottom.
03/18/08	12:28	11.62	834.20	41.93	803.89	0.05	--	--	--	--	--	--	Soft bottom, coal-tar-like odor, trace brown/black sticky coal-tar-like material on probe, bubbles on the water surface, brown slimy material on probe from water surface.
05/12/08	9:03	13.57	832.25	41.97	803.85	0.01	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	14:03	14.27	831.55	42.04	803.78	-0.06	--	--	--	--	--	--	Slightly soft.
07/08/08	9:32	14.71	831.11	42.07	803.75	-0.09	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.
08/06/08	9:38	14.24	831.58	41.95	803.87	0.03	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 845.82
 Well bottom elev. (installed; FAMSL) = 803.84
 Installed Well Depth (ft) = 41.98

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-19													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	14:47	12.25	833.56	19.08	826.73	0.03	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	11.63	834.18	16.16	829.65	2.95	--	--	--	--	--	--	Mild coal-tar-like odor. Depth to bottom measurement questionable.
05/30/07	NR	13.72	832.09	19.15	826.66	-0.04	--	--	--	--	--	--	Hard bottom, trace sediment on probe.
06/27/07	11:03	14.46	831.35	19.18	826.63	-0.07	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, black material on probe
07/24/07	11:45	14.37	831.44	19.17	826.64	-0.06	--	--	--	--	--	--	Black material on probe, organic-like odor, trace coal-tar-like blebs on probe.
08/28/07	11:30	14.72	831.09	19.22	826.59	-0.11	--	--	--	--	--	--	Firm bottom, manure-like odor.
09/20/07	11:26	14.85	830.96	19.17	826.64	-0.06	--	--	--	--	--	--	Firm bottom, brown material on probe (from water surface), coal-tar-like odor, coal-tar-like material on probe.
10/31/07	10:43	13.83	831.98	19.16	826.65	-0.05	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor, VOCs = 0.9 ppm.
11/20/07	10:59	13.58	832.23	19.11	826.7	0.00	--	--	--	--	--	--	Strong coal-tar-like odor.
12/18/07	10:50	13.13	832.68	19.30	826.51	-0.19	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	NR	NR	NR	NR	NR	NR	--	--	--	--	--	--	Could not open vault lid.
02/21/08	15:38	12.20	833.61	19.17	826.64	-0.06	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.
03/18/08	12:25	11.63	834.18	19.25	826.56	-0.14	--	--	--	--	--	--	Firm bottom, bubbles on the water surface.
05/12/08	9:05	13.59	832.22	19.21	826.60	-0.10	--	--	--	--	--	--	Firm bottom.
06/05/08	14:04	14.30	831.51	19.23	826.58	-0.12	--	--	--	--	--	--	Slightly soft.
07/08/08	9:35	14.72	831.09	19.22	826.59	-0.11	--	--	--	--	--	--	Firm bottom, coal-tar-like odor.
08/06/08	9:40	14.26	831.55	19.17	826.64	-0.06	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 845.81
 Well bottom elev. (installed; FAMSL) = 826.70
 Installed Well Depth (ft) = 19.11

Notes:

1. Elevations referenced to the NAVD 88 Datum.
2. Surface elevation = the elevation of the vault lid or curb box lid.
3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
4. Well bottom elevations are approximate.

FAMSL = Feet Above Mean Sea Level.
 TOC = Top of Casing.
 -- = NAPL not present.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-20													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	16:25	7.59	834.37	13.80	828.16	1.65	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	6.88	835.08	13.90	828.06	1.55	--	--	--	--	--	--	Silty bottom.
05/30/07	NR	9.72	832.24	13.44	828.52	2.01	--	--	--	--	--	--	Soft bottom, entire probe covered with gray Silt, coal-tar-like odor.
06/27/07	8:57	10.50	831.46	13.68	828.28	1.77	--	--	--	--	--	--	Very Silty bottom, entire probe (6") covered in Silt.
07/24/07	10:13	10.18	831.78	15.33	826.63	0.12	--	--	--	--	--	--	Able to penetrate sediment in well 0.3', organic-like odor, soft bottom.
08/28/07	10:03	10.74	831.22	13.50	828.46	1.95	--	--	--	--	--	--	Approximately 4" of Silt on end of probe. Curb box settled, J-plug rim cracked.
09/20/07	9:35	10.98	830.98	13.58	828.38	1.87	--	--	--	--	--	--	Able to penetrate sediment in well 0.4', sediment on probe, coal-tar-like odor, coal-tar-like material on probe.
10/31/07	8:37	9.38	832.58	13.64	828.32	1.81	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor, VOCs = 0.0 ppm.
11/20/07	8:57	8.61	833.35	13.48	828.48	1.97	--	--	--	--	--	--	Coal-tar-like odor.
12/18/07	8:57	7.80	834.16	13.62	828.34	1.83	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:23	8.41	833.55	12.44	829.52	3.01	--	--	--	--	--	--	Soft Bottom.
02/21/08	15:08	7.20	834.76	14.27	827.69	1.18	--	--	--	--	--	--	Soft Bottom, coal-tar-like odor.
03/18/08	13:05	7.19	834.77	13.53	828.43	1.92	--	--	--	--	--	--	Mild coal-tar-like odor, trace sheen on sediment on probe. J-plug rim cracked due to curb box settling.
05/12/08	8:51	9.94	832.02	13.57	828.39	1.88	--	--	--	--	--	--	Sediment on probe, faint coal-tar-like odor.
06/05/08	11:43	10.62	831.34	15.40	826.56	0.05	--	--	--	--	--	--	Little gray sediment on probe.
07/08/08	8:21	10.96	831.00	13.85	828.11	1.60	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
08/06/08	8:36	10.47	831.49	13.85	828.11	1.60	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.

Top of Casing (FAMSL) 841.96
 Well bottom elev. (installed; FAMSL) = 826.51
 Installed Well Depth (ft) = 15.45

Notes:

1. Elevations referenced to the NAVD 88 Datum.
 2. Surface elevation = the elevation of the vault lid or curb box lid.
 3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
- FAMSL = Feet Above Mean Sea Level.

bmp = below measuring point.
 TOC = Top of Casing.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-21													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	8:10	8.13	833.89	13.25	828.77	2.75	—	—	—	—	—	—	Soft bottom.
04/25/07	NR	7.54	834.48	15.30	826.72	0.70	—	—	—	—	—	—	Very Silty.
05/30/07	NR	9.80	832.22	14.38	827.64	1.62	—	—	—	—	—	—	Soft bottom, coal-tar-like odor.
06/27/07	9:10	10.46	831.56	14.03	827.99	1.97	—	—	—	—	—	—	Silt on the last 3" of the probe.
07/24/07	10:17	10.00	832.02	14.79	827.23	1.21	—	—	—	—	—	—	Soft bottom, sediment on probe, trace sheen on probe, faint coal-tar-like odor.
08/28/07	10:13	10.95	831.07	14.20	827.82	1.80	—	—	—	—	—	—	Soft bottom, approximately 3" of Silt on end of probe, manure-like odor. Curb box settled, lid will not close completely.
09/20/07	9:39	10.98	831.04	14.11	827.91	1.89	—	—	—	—	—	—	Able to penetrate sediment in well 0.2', sediment on probe, coal-tar-like odor.
10/31/07	8:45	9.47	832.55	14.14	827.88	1.86	—	—	—	—	—	—	Able to penetrate sediment in well 0.2', mild coal-tar-like odor, VOCs = 0.0 ppm.
11/20/07	9:03	9.09	832.93	14.11	827.91	1.89	—	—	—	—	—	—	Coal-tar-like odor, sediment on probe.
12/18/07	9:16	9.17	832.85	13.95	828.07	2.05	—	—	—	—	—	—	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:17	9.41	832.61	13.97	828.05	2.03	—	—	—	—	—	—	Soft bottom.
02/21/08	15:14	8.15	833.87	14.37	827.65	1.63	—	—	—	—	—	—	Soft bottom, mild coal-tar-like odor.
03/18/08	13:00	8.04	833.98	14.28	827.74	1.72	—	—	—	—	—	—	Soft bottom.
05/12/08	8:50	9.97	832.05	13.86	828.16	2.14	—	—	—	—	—	—	Soft bottom, sediment on probe.
06/05/08	11:52	10.85	831.17	16.09	825.93	-0.09	—	—	—	—	—	—	
07/08/08	8:30	11.13	830.89	16.09	825.93	-0.09	—	—	—	—	—	—	Firm bottom, sediment on probe.
08/06/08	8:42	10.66	831.36	15.85	826.17	0.15	—	—	—	—	—	—	

Top of Casing (FAMSL) = 842.02
 Well bottom elev. (installed; FAMSL) = 826.02
 Installed Well Depth (ft) = 16.00

Notes:

1. Elevations referenced to the NAVD 88 Datum.
 2. Surface elevation = the elevation of the vault lid or curb box lid.
 3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
- FAMSL = Feet Above Mean Sea Level.

bmp = below measuring point.
 TOC = Top of Casing.
 NR = Not Recorded.

Table 1. Barrier Wall Fluid-Level Monitoring, New York State Electric & Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

RECOVERY WELL RW-22													
Date	Time	Depth to Water (ft bTOC)	GW Elevation (FAMSL)	Depth to Bottom (ft bTOC)	Well Bottom Elevation (FAMSL)	Sediment Thickness (ft)	LNAPL			DNAPL			Comments/Observations
							Depth to LNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	Depth to DNAPL (ft bTOC)	Thickness of Layer (ft)	Volume Purged (liters)	
01/18/07	8:04	8.02	833.95	49.12	792.85	3.08	--	--	--	--	--	--	Soft bottom.
04/25/07	NR	7.45	834.52	47.60	794.37	4.60	--	--	--	--	--	--	
05/30/07	NR	9.83	832.14	47.60	794.37	4.60	--	--	--	--	--	--	Little Silt on probe, slight coal-tar-like odor.
06/27/07	9:19	10.75	831.22	47.78	794.19	4.42	--	--	--	--	--	--	
07/24/07	10:20	10.28	831.69	48.98	792.99	3.22	--	--	--	--	--	--	Probe appeared to sink through 1' sediment, organic-like odor.
08/28/07	10:16	10.92	831.05	47.75	794.22	4.45	--	--	--	--	--	--	Soft bottom, LEL = 9%, O ₂ = 19.3ppm, VOC = 9.4ppm.
09/20/07	9:45	10.97	831.00	48.75	793.22	3.45	--	--	--	--	--	--	Able to penetrate sediment in well 0.15'.
10/31/07	8:52	9.53	832.44	47.68	794.29	4.52	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', mild coal-tar-like odor, VOCs = 0.9 ppm.
11/20/07	9:09	9.19	832.78	47.82	794.15	4.38	--	--	--	--	--	--	Coal-tar-like odor.
12/18/07	9:00	9.00	832.97	47.64	794.33	4.56	--	--	--	--	--	--	Able to penetrate sediment in well 0.1', coal-tar-like odor.
01/31/08	11:16	9.22	832.75	47.65	794.32	4.55	--	--	--	--	--	--	Soft bottom.
02/21/08	15:17	8.71	833.26	48.88	793.09	3.32	--	--	--	--	--	--	Soft bottom, manure-like odor.
03/18/08	12:58	7.91	834.06	47.75	794.22	4.45	--	--	--	--	--	--	Soft bottom, coal-tar-like odor, black sediment on probe. Curb box has settled, tire tracks over and around curb box.
05/12/08	8:45	9.99	831.98	48.01	793.96	4.19	--	--	--	--	--	--	Soft bottom, coal-tar-like odor.
06/05/08	11:53	10.82	831.15	52.22	789.75	-0.02	--	--	--	--	--	--	
07/08/08	8:31	11.03	830.94	51.87	790.10	0.33	--	--	--	--	--	--	Firm bottom, mild coal-tar-like odor.
08/06/08	8:46	10.54	831.43	51.80	790.17	0.40	--	--	--	--	--	--	Coal-tar-like odor.

Top of Casing (FAMSL) = 841.97
 Well bottom elev. (installed; FAMSL) = 789.77
 Installed Well Depth (ft) = 52.20

Notes:

1. Elevations referenced to the NAVD 88 Datum.
 2. Surface elevation = the elevation of the vault lid or curb box lid.
 3. Used weighted measuring tape for depth to bottom starting on 7/24/07.
- FAMSL = Feet Above Mean Sea Level.

bmp = below measuring point.
 TOC = Top of Casing.
 NR = Not Recorded.

Table 2. Offsite Fluid-Level Monitoring, New York State Electric and Gas Corporation, Binghamton Court Street Former MGP Site, Binghamton, New York

Well ID	Installed Well Depth (ft-bgs)	11/24/2004				1/28/2005				8/9/2007				3/18/2008			
		DTW (ft-TIC)	DTB (ft-TIC)	DTNAPL (ft-TIC)	NAPL Thickness (ft)	DTW (ft-TIC)	DTB (ft-TIC)	DTNAPL (ft-TIC)	NAPL Thickness (ft)	DTW (ft-TIC)	DTB (ft-TIC)	DTNAPL (ft-TIC)	NAPL Thickness (ft)	DTW (ft-TIC)	DTB (ft-TIC)	DTNAPL (ft-TIC)	NAPL Thickness (ft)
MW97-07S	NA	17.43	24.86	--	--	15.8	24.65	--	--	18.09	24.83	--	--	15.21	24.81	--	--
MW01-07R	NA	16.47	100+	--	--	14.6	108.65	--	--	16.70	+100	--	--	13.71	108.79	--	--
NMW-1	44.00	14.38	40.35	--	--	15.87	40.35	--	--	18.01	40.05	--	--	15.70	40.03	--	--
NMW-2	44.00	14.47	42.66	--	--	NA	NA	--	--	15.10	42.78	--	--	12.26	42.75	--	--
PZ01-02	21.00	10.03	20.58	10.00	0.03	8.31	20.6	8.28	0.03	10.57	17.40	--	--	7.68	17.25	7.57	0.11
PZ03-01D	47.00	15.78	46.72	--	--	14.17	46.5	--	--	16.39	46.70	--	--	13.55	46.76	--	--
PZ03-02A	16.00	14.08	15.35	--	--	12.25	15.1	--	--	Dry	14.67	--	--	11.78	14.70	--	--
PZ03-02D	55.50	14.28	54.72	--	--	12.35	54.5	--	--	14.82	54.13	--	--	12.00	54.10	--	--
PZ03-03A	11.00	10.71	10.96	--	--	10.15	10.9	--	--	8.68	8.68	--	--	8.67	8.67	--	--
PZ03-03B	22.00	11.78	22.2	--	--	10.1	22.1	--	--	12.51	21.90	--	--	9.65	21.21	--	--
PZ03-03D	50.00	11.89	49.41	--	--	NA	NA	--	--	12.56	48.10	--	--	9.69	48.05	--	--
PZ03-04A	15.00	10.33	14.60	--	--	9.25	14.60	--	--	10.97	14.60	--	--	8.12	14.38	--	--
PZ03-04B	22.00	10.96	22.06	--	--	9.52	22.06	--	--	11.70	21.19	--	--	8.82	21.21	--	--
PZ03-04D	42.00	11.07	41.62	--	--	9.46	41.60	--	--	11.75	41.50	--	--	8.91	41.18	--	--
PZ03-05A	13.00	10.64	12.38	--	--	9.23	12.35	--	--	6.20	6.20	--	--	Dry	6.20	--	--
PZ03-05B	17.00	10.66	15.92	--	--	9.33	15.95	--	--	11.42	15.76	--	--	8.11	15.70	--	--
PZ03-05C	28.00	10.75	27.59	--	--	9.15	27.60	--	--	11.48	24.67	--	--	7.78	24.70	--	--
PZ03-05D	45.00	10.61	44.80	--	--	9.93	44.80	--	--	9.85	33.74	--	--	5.89	33.75	--	--
PZ03-06A	12.00	9.70	11.51	--	--	8.27	11.50	--	--	10.30	11.50	--	--	6.92	11.46	--	--
PZ03-06B	19.00	10.31	18.05	10.30	0.01	8.75	18.00	8.53	0.22	10.85	17.81	10.76	0.09	8.40	17.25	8.26	0.14
PZ03-06C	33.00	10.25	32.68	--	--	6.07	32.65	--	--	11.00	31.90	--	--	8.14	31.75	--	--
PZ03-06D	51.50	5.90	51.00	--	--	8.55	51.00	--	--	7.01	50.98	--	--	6.07	50.95	--	--
PZ03-07A	11.00	8.85	10.50	--	--	7.50	10.50	--	--	8.61	10.35	--	--	6.42	10.38	--	--
PZ03-07B	17.00	9.31	16.67	--	--	7.68	16.70	--	--	10.00	16.26	--	--	7.38	16.22	--	--
PZ03-07C	31.00	9.46	32.85	--	--	7.80	32.85	--	--	10.10	31.20	--	--	7.23	30.90	--	--
PZ03-07D	55.50	9.50	52.90	--	--	7.80	52.90	--	--	10.23	52.76	--	--	7.31	52.62	--	--
PZ03-08A	12.00	9.89	11.45	--	--	7.10	11.45	--	--	9.28	10.97	--	--	6.39	10.98	--	--
PZ03-08B	18.00	9.08	18.68	--	--	7.45	18.65	--	--	9.75	17.35	--	--	6.91	17.40	--	--
PZ03-08C	31.00	9.15	30.65	--	--	7.50	30.65	--	--	9.84	30.27	--	--	6.98	30.30	--	--
PZ03-08D	56.00	9.12	54.68	--	--	7.50	54.70	--	--	9.81	55.22	--	--	6.98	55.00	--	--
PZ03-09A	23.00	19.47	47.17	--	--	18.00	21.50	--	--	NA	NA	--	--	17.43	21.80	--	--
PZ03-09D	48.00	19.12	47.17	--	--	17.54	47.00	--	--	NA	NA	--	--	16.91	47.13	--	--