First Quarter 2012
Groundwater Monitoring Report
Patchogue Former MGP Site
NYSDEC Site No. 1-52-182
Village of Patchogue, Suffolk County, New York

Prepared for

National Grid USA, Hicksville, New York

May 2012

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175 East Old Country Road
Hicksville, New York 11801

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Section 1

Introduction

Brown and Caldwell Associates (BC) is pleased to submit this report containing the data deliverables related to the First Quarter 2012 groundwater monitoring event conducted at the Patchogue Former Manufactured Gas Plant (MGP) Site (hereinafter referred to as the "Site"). The groundwater monitoring event and the preparation of this deliverable are part of the routine groundwater monitoring program being conducted at the Site. This report has been prepared for submittal to the New York State Department of Environmental Conservation (NYSDEC) and includes the following:

- Description of the scope of the field activities, methods and procedures;
- Table summarizing results of the water level measurements and the gauging in monitoring wells for the presence of non-aqueous phase liquids (NAPL) (Table 1);
- Table summarizing the analytical results of groundwater samples including a comparison to applicable groundwater quality criteria (Table 2);
- Comparison of data from this monitoring period to data from previous periods (Tables 3 and 4);
- Discussion of the results and findings from the groundwater monitoring data;
- Potentiometric surface map depicting generalized direction of groundwater flow based on groundwater elevation data from wells and surface water elevation data from staff gauges in the Patchogue River (Figure 1);
- Field Sampling Data Sheets (Appendix A);
- Laboratory Data Report (Appendix B);
- Data Usability Summary Report (Appendix C); and
- Electronic Data Deliverable (Appendix D).

1.1 Background

A total of eleven groundwater monitoring events have been conducted at the Site since March 2008. These eleven events include: two monitoring events conducted as part of the Remedial Investigation (RI) in March 2008 and July 2008; four semi-annual monitoring events conducted between March 2009 and September 2010; and five quarterly monitoring events in January 2011, April 2011, August 2011, November 2011, and February 2012. The February 2012 event is the subject of this report. Up until the March 2010 monitoring event, the concentrations and areal distribution of constituents in groundwater had been fairly consistent. Site-related dissolved-phase constituents (e.g., benzene, toluene, ethylbenzene, xylenes [BTEX], and polycyclic aromatic hydrocarbons [PAH]) were detected at concentrations above the Class GA groundwater quality criteria (i.e., standards from the 6 NYCRR Part 703 Standards and guidance values from the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1) in a limited area near the center of the Site. These elevated concentrations did not extend downgradient to the wells closer to the Patchogue River. However, during the March 2010 and September 2010 monitoring events, detections of BTEX and PAH compounds were more widely distributed than during previous events. It was surmised that this change was the result of a temporary dewatering operation at a construction project at the wastewater treatment facility (WWTF) across the river from the Site. Based on the understanding of Site conditions, it was anticipated that when the

dewatering operations had ceased, concentrations in groundwater would re-equilibrate with steady-state (i.e., pre-dewatering) groundwater flow conditions, and eventually return to levels similar to those prior to dewatering. To confirm this, National Grid increased the frequency of the groundwater monitoring from semi-annually to quarterly; these subsequent monitoring events did document the return of groundwater flow and groundwater quality to conditions consistent with those prior to the dewatering operations. The February 2012 monitoring event, described herein, is the first quarterly monitoring event conducted in 2012.

Section 2

Scope of Work

Field activities for the groundwater monitoring event were conducted by BC on February 22 through February 24, 2012. On February 22, 2012, prior to conducting groundwater sampling, depth-to-water measurements and NAPL gauging were conducted on the 14 monitoring wells associated with the Site. The level of the Patchogue River was also measured at the two staff gauges. Locations of the 14 monitoring wells and staff gauges are depicted on Figure 1.

Groundwater samples were collected from 12 monitoring wells on February 22 through February 24, 2012. Wells MW-5 and MW-6 were not sampled this quarter due to presence of NAPL in these wells. The presence of NAPL in these wells is consistent with observations during previous NAPL gauging activities conducted as part of the quarterly monitoring events. The standard protocol is that if NAPL is observed in a well during gauging or sampling, groundwater samples are not submitted for laboratory analyses. Groundwater sampling was conducted using low-flow purging and sampling techniques in accordance with USEPA (July 1996, Revised January 2010) protocol. Samples were submitted to an analytical laboratory and analyzed for: BTEX and methyl tertiary butyl ether (MTBE) using USEPA SW-846 Method 8260B; and PAHs, using USEPA SW-846 Method 8270C. The groundwater samples were also analyzed in the field for pH, specific conductivity, temperature, turbidity, oxidation-reduction potential (ORP), and dissolved oxygen (see Appendix A for field data sheets).

The samples were submitted for the above-described laboratory analyses to Lancaster Laboratories, Inc. (Lancaster) located in Lancaster, Pennsylvania. Lancaster is certified (Certification No. 10670) through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP). The laboratory report from Lancaster is provided as Appendix B. The laboratory analytical data were provided to BC in electronic form by Lancaster and have been incorporated into an environmental database for the Site.

In addition to the samples described above, quality assurance/quality control (QA/QC) samples were also collected. The QA/QC samples included: trip blanks (one per cooler containing samples for BTEX and MTBE analysis), a field duplicate, and an equipment blank. Also, extra sample volume was collected from one location to provide for matrix spike/matrix spike duplicate (MS/MSD) analysis. The trip blanks were analyzed for BTEX and MTBE only. The other QA/QC samples were analyzed for BTEX, MTBE and PAHs.

Laboratory results for the groundwater sample analyses were forwarded to a data validator, Environmental Data Services, Inc. of Williamsburg, Virginia, for review and preparation of a Data Usability Summary Report (DUSR). The DUSR presents a summary of data usability including a discussion of qualified data. The DUSR is provided as Appendix C. As described in the DUSR, the data were considered by the validator to be valid and usable. An Electronic Data Deliverable (EDD) of the validated analytical data is provided in Appendix D.

Section 3

Results and Findings

3.1 Water Level Data

Table 1 provides the water level data from the February 22, 2012 measurements. Figure 1 illustrates the elevation contours of the water table based on these data. The contours were developed using water level data only from the shallow wells at the Site (i.e., those with screens that straddle, or are just below, the water table) and the surface water staff gauges in the Patchogue River because these values are more representative of water table elevations than data from the deeper wells. However, the groundwater elevation (hydraulic head) values for the wells screened in deeper intervals are also posted on Figure 1., The water table is relatively shallow and is typically positioned in the fill that overlies the alluvial deposits and outwash deposits. The water table contours indicate that lateral groundwater flow is from northwest to southeast across the Site toward the Patchogue River. The upward vertical hydraulic gradient measured at the two well clusters adjacent to the river (MW-4S and D, and MW-9S and D), indicate that groundwater is discharging to the Patchogue River. Comparisons of the groundwater levels in the Site monitoring wells to the river elevations, as measured at the staff gauge locations, indicate the groundwater elevations are higher than the river level, thus providing further support to the conclusion that the groundwater discharges to the river. The general configuration of the water table contours (as shown on Figure 1), developed using the February 22, 2012 data, and the interpreted groundwater flow patterns, are consistent with those from previous rounds of water level measurements with one exception. The exception occurred during the March 2010 sampling event when the large-scale dewatering activities were being conducted on the WWTF site located east of the Site on the opposite side of the river (see discussion in Section 1.1). Operation of this dewatering system altered groundwater flow patterns and levels at the Site (see "Groundwater Monitoring Report, Second Semiannual 2010 Sampling Event" [GEI, November 2010]).

3.2 NAPL Gauging

Table 1 presents the results of the NAPL gauging conducted during the February 2012 quarterly groundwater sampling event. NAPL was identified in the following wells during the gauging activities:

- **MW-5:** Brown-black DNAPL on last 0.75 ft of threaded rod, strong tar-like odor.
- **MW-6:** Black NAPL blebs on bottom 0.5 ft of threaded rod, strong tar-like odor.

NAPL had been observed in these two wells on occasion during previous NAPL gauging events.

3.3 Groundwater Quality Data

Table 2 provides the results of the laboratory analyses of the groundwater samples collected during the First Quarter 2012 and a comparison of the data to the New York State Class GA groundwater quality criteria, i.e., standards from the 6 NYCRR Part 703 Standards and guidance values from the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. Tables that compare total BTEX and total PAH concentrations from this sampling event to previous sampling events are provided as Tables 3 and 4, respectively.

As described above, during water level monitoring and gauging activities, NAPL was identified in two of the 14 monitoring wells, MW-5 and MW-6; these two wells are located in the central part of the Site in the area of former MGP operations. Therefore, these two wells were not sampled. Groundwater samples were collected from the remaining 12 monitoring wells and submitted for analysis. In general, the analytical results were consistent with those from previous monitoring events. BTEX compounds were not detected in groundwater samples from any of these wells. At most locations, PAH compounds were either not detected or were detected at concentrations below the Class GA groundwater quality criteria. However, in samples collected from monitoring well MW-9D, six PAH compounds were detected at low concentrations (i.e., slightly above the laboratory method detection limit), but above the Class GA groundwater quality criteria during the First Quarter 2012 (February 2012) event.

The six PAH compounds that were identified in the groundwater sample from MW-9D at concentrations above the Class GA groundwater quality criteria--benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene and indeno(1,2,3-cd)pyrene--have very low aqueous solubilities, are not readily mobile in groundwater, and are unlikely to have migrated from the on-site source area. The criteria that were exceeded for five of these six PAHs are unpromulgated guidance values rather than Part 703 standards, while the criteria for the sixth PAH, benzo(a)pyrene, is a Part 703 standard. The standard for benzo(a)pyrene was exceeded at concentrations below the method quantitation limit. The guidance value for the five PAHs, 0.002 µg/L, is nearly two orders of magnitude below the method detection limit, and the standard for benzo(a)pyrene is "non-detect". Therefore, any detection of these compounds in groundwater will result in an exceedance. The concentrations of these constituents will be further evaluated through continued quarterly groundwater monitoring.

Section 4

Summary and Conclusions

NAPL was identified in two of the 14 monitoring wells, MW-5 and MW-6 during the First Quarter 2012 (February 2012), as in previous monitoring events. Both MW-5 and MW-6 are located in the center of the Site in the area of former MGP operations. No BTEX compounds were detected during the analysis of groundwater samples collected from the twelve other monitoring wells during this monitoring event. At eleven of the twelve wells, PAH compounds were either not detected or were detected at concentrations below the Class GA groundwater quality criteria. However, in samples collected from MW-9D, six PAH compounds were detected at low concentrations (i.e., slightly above the method detection limit), but above the Class GA groundwater quality criteria. These findings are consistent with those of previous monitoring events. At MW-9D, one of the PAH compounds exceeded Part 703 Standard while the other exceedances identified are exceedances of unpromulgated guidance values. The criteria for these compounds are extremely low, approximately two orders of magnitude below the laboratory method detection limit. The six PAH compounds that were identified at concentrations above the Class GA groundwater quality criteria have very low aqueous solubilities, are not readily mobile in groundwater, and are unlikely to have migrated from the on-site source area. This will continue to be evaluated through subsequent quarterly monitoring events.

During the last four quarters, the concentrations of BTEX and PAHs in the shallow groundwater and the areal distribution of these concentrations are similar to those from monitoring events which occurred prior to March 2010. This indicates that constituent concentrations in groundwater have decreased and have generally re-equilibrated with the steady-state groundwater flow conditions that existed prior to the operation of the large-scale temporary construction dewatering system (see Section 1.1) that affected the results of the March and September 2010 monitoring events, as anticipated. Quarterly monitoring will continue in order to confirm these conditions.

References

GEI, November 2010. Groundwater Monitoring Report, Second Semiannual 2010 Sampling Event, Patchogue Former MGP Site, Town of Brookhaven, Suffolk County, Long Island, New York, Site ID No. 1-52-182.

USEPA, July 1996; Revised January 2010. Low-Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells.

Tables

TABLE 1
WATER ELEVATIONS AND NAPL MONITORING DATA
FEBRUARY 2012
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

			2/22/2012			
Well ID	Top of Casing Elevation (ft., NAVD)	Depth to Water (ft., BTOC)	Water Elevation (ft., NAVD)	Depth to NAPL (ft., BTOC)	Total Depth of Well (ft., BGS)	Remarks
MW-1	11.23	6.09	5.14	ND	16.2	
MW-2S	8.97	4.67	4.30	ND	14.05	
MW-2D	8.23	4.00	4.23	ND	26.2	
MW-3	5.39	2.60	2.79	ND	10.48	
MW-4S	7.74	5.20	2.54	ND	12.1	
MW-4D	7.57	4.90	2.67	ND	26.5	
MW-5	7.93	4.29	3.64	15.9	16.65	Brown-black DNAPL on last 0.75 ft of threaded rod, strong tar-like odor.
MW-6	8.08	3.98	4.10	21.3	21.8	Black NAPL blebs on bottom 0.5 ft of threaded rod, strong tar-like odor.
MW-7S	8.21	4.75	3.46	ND	12.4	
MW-7D	8.09	4.51	3.58	ND	27.9	
MW-8S	4.86	0.98	3.88	ND	9.8	
MW-8D	4.77	0.95	3.82	ND	25.1	
MW-9S	4.47	1.66	2.81	ND	10.23	
MW-9D	4.66	1.65	3.01	ND	23.15	
SG-1	5.23	3.97	1.26	--	NA	
SG-2	5.16	3.81	1.35	--	NA	

Notes:
NAVD - North American Vertical Datum
BGS - Below Ground Surface
BTOC - Below Top of Casing
NAPL - Non-aqueous phase liquid
NA - Not applicable
ND - Not Detected

TABLE 2
GROUNDWATER ANALYSIS RESULTS
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

Constituent	Class GA Groundwater Criteria TOGS 1.1.1 Guidance	NYS Part 703 Standard	Units	Loc ID	MW-1	MW-1 DUP	MW-2S	MW-2D	MW-3	MW-4S	MW-4D
				Date	2/22/2012	2/22/2012	2/24/2012	2/24/2012	2/22/2012	2/23/2012	2/23/2012
Volatile Organic Compounds											
BTEX											
Benzene	NE	1	µg/L		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	NE	5	µg/L		0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Ethylbenzene	NE	5	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
m&p-Xylenes	NE	5	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
o-Xylene	NE	5	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Xylenes, Total	NE	NE	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Total BTEX	NE	NE	µg/L		ND	ND	ND	ND	ND	ND	ND
Other VOCs											
Methyl Tertiary Butyl Ether	10	NE	µg/L		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Semi-Volatile Organic Compounds (SVOCs)											
Polycyclic Aromatic Hydrocarbons (PAHs)											
Acenaphthene	20	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.7	0.1 U	0.3 J
Acenaphthylene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.7	0.4 J	2
Anthracene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.4 J	0.1 U	0.1 U
Benzo(a)anthracene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	NE	0	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenzo(a,h)anthracene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	2	0.1 U	0.1 U
Fluorene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 J	0.9 J
Indeno(1,2,3-cd)pyrene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

TABLE 2
GROUNDWATER ANALYSIS RESULTS
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

	Class GA Groundwater Criteria										
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-1	MW-1 DUP	MW-2S	MW-2D	MW-3	MW-4S	MW-4D
Constituent	Guidance	Standard	Units	Date	2/22/2012	2/22/2012	2/24/2012	2/24/2012	2/22/2012	2/23/2012	2/23/2012
Naphthalene	10	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	50	NE	µg/L		0.1 J	0.1 J	0.1 U	0.1 U	0.1 U	0.2 J	0.8
Pyrene	50	NE	µg/L		0.1 J	0.1 J	0.1 U	0.1 U	2	0.1 U	0.1 U
Total PAHs	NE	NE	µg/L		0.2	0.2	ND	ND	6	0.6	4

TABLE 2
GROUNDWATER ANALYSIS RESULTS
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

Constituent	Class GA Groundwater Criteria TOGS 1.1.1 Guidance	NYS Part 703 Standard	Units	Loc ID / Date	MW-7S 2/23/2012	MW-7D 2/23/2012	MW-8S 2/23/2012	MW-8D 2/23/2012	MW-9S 2/23/2012	MW-9D 2/23/2012
Volatile Organic Compounds										
BTEX										
Benzene	NE	1	µg/L		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	NE	5	µg/L		0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Ethylbenzene	NE	5	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
m&p-Xylenes	NE	5	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
o-Xylene	NE	5	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Xylenes, Total	NE	NE	µg/L		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Total BTEX	NE	NE	µg/L		ND	ND	ND	ND	ND	ND
Other VOCs										
Methyl Tertiary Butyl Ether	10	NE	µg/L		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Semi-Volatile Organic Compounds (SVOCs)										
Polycyclic Aromatic Hydrocarbons (PAHs)										
Acenaphthene	20	NE	µg/L		0.1 U	0.1 U	0.5 J	0.1 U	3	0.1 U
Acenaphthylene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	1	0.1 J
Anthracene	50	NE	µg/L		0.1 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)anthracene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.2 J**
Benzo(a)pyrene	NE	0	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.2 J**
Benzo(b)fluoranthene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.3 J**
Benzo(g,h,i)perylene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 J
Benzo(k)fluoranthene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.2 J**
Chrysene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.3 J**
Dibenzo(a,h)anthracene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.2 J	0.4 J
Fluorene	50	NE	µg/L		0.1 U	0.1 U	0.1 J	0.1 U	0.5	0.1 J
Indeno(1,2,3-cd)pyrene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.1 J**

TABLE 2
GROUNDWATER ANALYSIS RESULTS
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

	Class GA Groundwater Criteria									
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D
Constituent	Guidance	Standard	Units	Date	2/23/2012	2/23/2012	2/23/2012	2/23/2012	2/23/2012	2/23/2012
Naphthalene	10	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 J	0.3 J
Pyrene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.3 J	0.5
Total PAHs	NE	NE	µg/L		0.1	ND	0.6	ND	5	2.9

Notes:
J - Estimated concentration. The result is below the practical quantitation limit but above the method detection limit.
U - The analyte was analyzed for, but was not detected.
µg/L - micrograms per liter
ND - Not detected.
NE - Not established.

Boxed concentrations are above New York State Class GA Groundwater Quality Standards or Guidance values.

TABLE 3
SUMMARY OF HISTORICAL BTEX CONCENTRATIONS
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

Sampling Date	Total BTEX Concentrations (µg/L)													
	Monitoring Well													
	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-5	MW-6	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D
Mar-08	0	0	0	0	3.4	0	1016	57	NS	NS	NS	NS	NS	NS
Jul-08	NS	0	0	0	0	0	678	0	0	0	0	0	0	0
Mar-09	0	0	0	0	0	0	975	0	0	1	0	0	0	0
Sep-09	0	0	0	0	0	0	1257	1	0	0	0	0	0	0
Mar-10	0	0	0	0	0	0	637	2	0	9	0	0	0	0
Sep-10	0	0	0	0	0	0	NS	0	0	0	0	0	27	0
Jan-11	1.7	0	0	0	0	0	NS	NS	0	0	0	0	1	0
Apr-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Aug-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Nov-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Feb-12	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Min	0	0	0	0	0	0	637	0	0	0	0	0	0	0
Max	1.7	0	0	0	3.4	0	1257	57	0	9	0	0	27	0
Mean	0.2	0	0	0	0.3	0	913	10	0	1.0	0	0	2.8	0

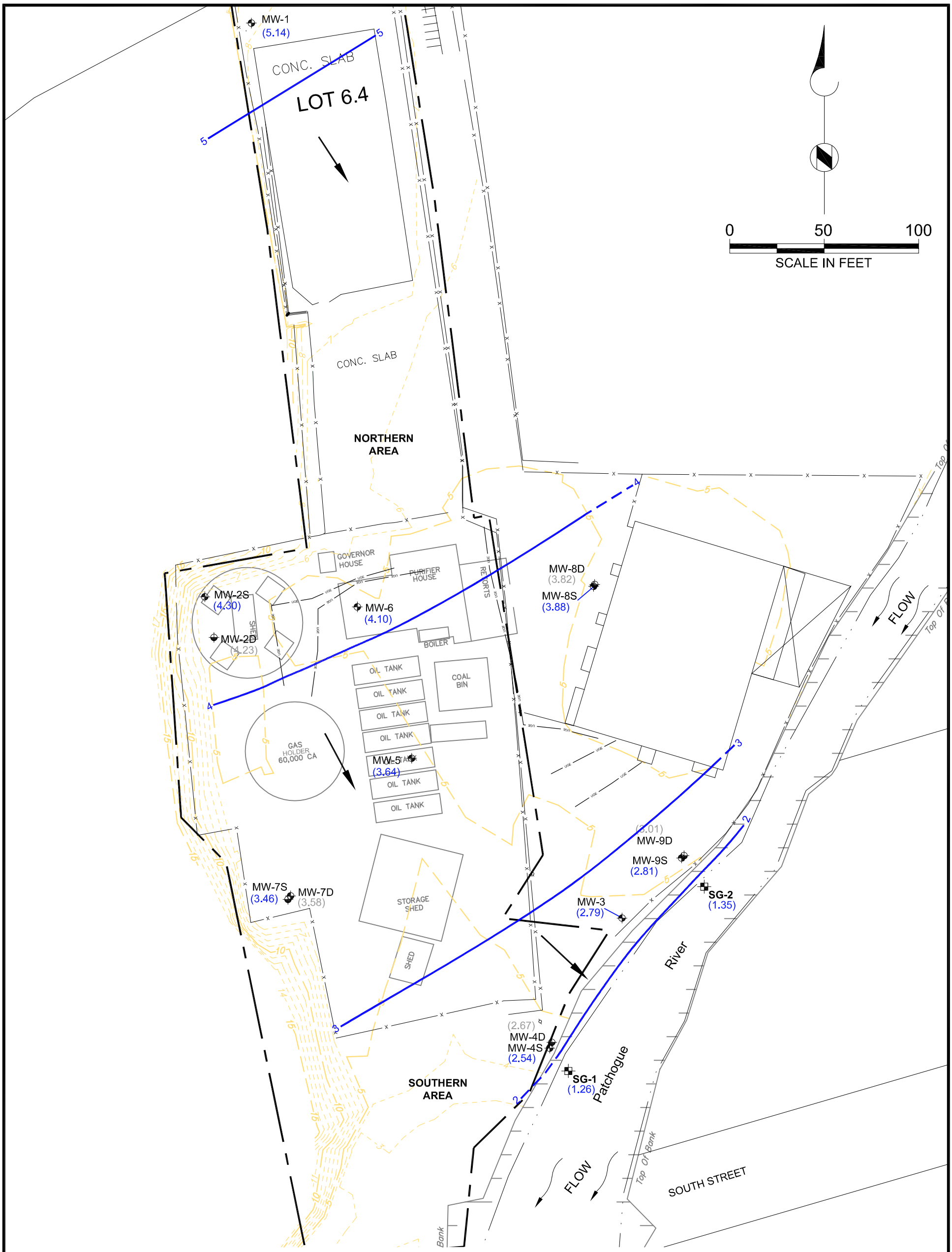
Notes:
BTEX - Benzene, toluene, ethylbenzene and xylene isomers
µg/L - micrograms per liter
NS - Not sampled.

TABLE 4
SUMMARY OF HISTORICAL PAH CONCENTRATIONS
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

Sampling Date	Total PAH Concentrations (µg/L)													
	Monitoring Well													
	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-5	MW-6	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D
Mar-08	0	0	0	0.76	0.6	4.3	1774	214	NS	NS	NS	NS	NS	NS
Jul-08	NS	0.7	0	0	8.0	0	1799	154	0	0.47	0	0	12.0	0
Mar-09	0	0	0	0	0	0	2730	0	0	0	0	0	0	0
Sep-09	0	0	0	0	0	0	3373	1	0	0	0	0	0	0
Mar-10	0	0	0	0	0	39	2390	17	0	0	22	0	2	0
Sep-10	0	0	0	128	0	6	NS	14	0	0	11	0	396	0
Jan-11	22	0	0	17	0	12	NS	NS	0	0	6	0	42	5
Apr-11	0	0	0	6	0	20	NS	NS	0	0	0	0	9	0
Aug-11	0	0	0.1	14	0.1	0	NS	NS	0	0	0.4	0	16	1.2
Nov-11	0	0	0.2	10	0.4	0	NS	NS	0	0	0.8	0.2	8	3.4
Feb-12	0.2	0	0	6	0.6	4	NS	NS	0.1	0	0.6	0	5	2.9
Min	0	0	0	0	0	0	1774	0	0	0	0	0	0	0
Max	22	0.7	0.2	128	8.0	39	3373	214	0.1	0.5	22	0.2	396	5
Mean	2.2	0.1	0	17	0.9	7.8	2413	67	0	0	4.1	0	49	1.3

Notes:
PAH - Polycyclic aromatic hydrocarbons
µg/L - micrograms per liter
NS - Not sampled.

Figures



LEGEND:

- SHALLOW MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- STAFF GAUGE
- PROPERTY LINE
- FENCE
- TOPOGRAPHIC CONTOUR (FT., NAVD)
- UNDERGROUND ELECTRIC LINE
- WATER TABLE CONTOUR (FT., NAVD) DASHED WHERE INFERRED
- GENERALIZED DIRECTION OF GROUNDWATER FLOW
- (3.46) WATER ELEVATION (FT., NAVD) FOR SHALLOW MONITORING WELL OR STAFF GAUGE
- (2.67) GROUNDWATER HEAD ELEVATION (FT., NAVD) FOR WELLS SCREENED BELOW WATER TABLE (FROM DEEP MONITORING WELL)

FIGURE 1

WATER TABLE CONTOUR MAP
FEBRUARY 22, 2012

NATIONAL GRID
PATCHOGUE FORMER MGP SITE
VILLAGE OF PATCHOGUE, NEW YORK

DATE	PROJECT NUMBER
4/12	142128.410

Brown AND Caldwell
ASSOCIATES
ALLENDALE, NEW JERSEY

P:\DRAFTING\NATIONAL_GRID\PATCHOGUE\QUARTERLY-GW-CONTOUR-MAP\FEBRUARY-22-2012\FIGURE 1.DWG 05/10/2012 02:57:34PM By:RJames XREFS: Rev_Basemap_1-12-11 Layout: Layout1

Appendix A: Field Sampling Sheets

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-1
Sample I.D.: MW-1 (if different from well no.)

Project: Patchogue
Personnel: COM/NPB

Date: 2/22/12 Time: 13:37
Weather: Pt. Sunny Air Temp.: 40s

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 6.61 ft Bottom of Well: 12 ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☒ Yes ☐ No Is well clean to bottom? ☒ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☒ Yes ☐ No
Does Weep Hole adequately drain well head? ☒ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☒ Yes ☐ No
Is Padlock Functional? ☒ Yes ☐ No ☐ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☒ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☒ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200-250mL/m Elapsed Time: 30min Volume Pumped: 2.5 gal.
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☒ Teflon® ☒ Stainless Steel
Tubing/Rope: ☐ Teflon® ☒ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 4.23 Meter Model: Horiba U-22 Meter S/N: –
Temperature: 12.42 Spec. Cond.: 0.000 Meter Model: Horiba U-22 Meter S/N: –
ORP: 210 DO: 10.32 Turbidity: 81.2
DUP : ☐ No ☒ Yes Name: DUP 022212
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☒ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/22/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Project Number: 142128
Personnel: CM/NPB
Well ID: MW-1
Purge/Sample Depth: 10'
Sample ID: MW-1

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
13:37	3.99	11.90	232	0.000	13.21	81.5	6.61	200mL/m	—
13:40	4.09	11.84	228	0.000	13.18	78.7	—	—	—
13:43	4.14	11.78	224	0.000	13.17	78.7	—	—	—
13:46	4.19	11.75	221	0.000	13.21	78.9	—	—	—
13:49	4.19	11.900	220	0.000	13.25	79.7	—	—	—
13:52	4.22	12.03	216	0.000	13.29	80.7	6.61	250mL/m	—
13:55	4.21	12.05	216	0.000	13.30	80.7	—	—	—
13:58	4.23	12.19	214	0.000	13.30	80.9	—	—	—
14:01	4.23	12.28	213	0.000	13.30	81.8	—	—	—
14:04	4.23	12.37	211	0.000	13.31	81.1	—	—	—
14:07	4.23	12.42	210	0.000	13.32	81.2	6.61	250mL/m	—
14:10	Sample MW-1 collected								
	DUP02222212 collected								

CM
2/22/12

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-3
Sample I.D.: (if different from well no.)

Project: Paterson
Personnel: NMS COM

Date: 2/22/12 Time: 1457
Weather: sunny Air Temp.: 55

WELL DATA:

Casing Diameter: N/A ☐ Stainless Steel ☐ Steel ☐ PVC ☐ Teflon® ☐ Other:
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 2.65 ft Bottom of Well: 10' ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☒ No Is well clean to bottom? ☒ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☐ No Pad destroyed.
Does Weep Hole adequately drain well head? ☐ Yes ☒ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☒ No destroyed
Is Padlock Functional? ☐ Yes ☐ No ☒ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☐ Yes ☒ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☒ Teflon® ☒ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☐ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 mL/min Elapsed Time: 30 min Volume Pumped: 2.5 gal
Was well Evacuated? ☐ Yes ☐ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel
Tubing/Rope: ☐ Teflon® ☒ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 4.09 Meter Model: Horiba U-22 Meter S/N: _____
Temperature: 11.46 Spec. Cond.: over Meter Model: ^ Meter S/N: _____
ORP: 211 DO: 12.54 Turbidity: 79.8
DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☒ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/22/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: NPB CJM
Purge/Sample Depth: 8'
Project Number:
Well ID: MW-3
Sample ID:

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1451	4.02	13.65	225	0.000	12.50	76.9	2.65	250	
1454	4.04	13.19	223	0.000	12.59	76.9	2.67		
1457	4.06	12.69	221	0.000	12.67	77.1			
1500	4.07	12.18	219	0.000	12.72	77.2			
1503	4.08	11.92	217	0.000	12.71	77.4		250	
1506	4.08	11.76	216	0.000	12.65	77.5	2.70		
1509	4.08	11.67	215	0.000	12.67	77.6			
1512	4.09	11.57	214	0.000	12.62	77.7			
1516	4.08	11.53	212	0.000	12.59	77.7			
1518	4.09	11.51	212	0.000	12.59	77.8	2.80		
1521	4.09	11.46	211	0.000	12.54	77.8			
1524	Sample Collected								

7/22/19

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-9D
Sample I.D.: MW-9D (if different from well no.)

Project: Patchogue
Personnel: CM/NPB

Date: 2/23/12 Time: 9:30
Weather: Sunny Air Temp.: 40

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 1.94 ft Bottom of Well: 25 ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☒ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☒ No
Does Weep Hole adequately drain well head? ☐ Yes ☒ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☒ No
Is Padlock Functional? ☐ Yes ☐ No ☒ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☐ Yes ☒ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☒ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200mL/m Elapsed Time: 33m Volume Pumped: 4.0gal
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel
Tubing/Rope: ☐ Teflon® ☒ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 5.86 Meter Model: Horiba U-22 Meter S/N: _____
Temperature: 13.95 Spec. Cond.: 8.9 Meter Model: Horiba U-22 Meter S/N: _____
ORP: 58 DO: 0.05 Turbidity: 10.00
DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☒ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: COM | NPB
Purge/Sample Depth: 221
Project Number:
Well ID: MW-9D
Sample ID: MW-9D

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
8:30	6.21	13.02	9	0.66	0.21	659.0	1.84	200mL/m	—
8:33	6.41	13.55	-18	60.0	0.00	451.0	—	—	—
8:36	6.35	13.64	-19	72.0	0.00	372.0	—	—	—
8:39	6.33	13.67	-15	72.7	0.00	363.0	—	—	—
8:42	6.13	13.76	17	58.2	0.00	223.0	—	—	—
8:45	6.02	13.79	37	41.5	0.00	150.0	1.95	200mL/m	—
8:48	6.01	13.90	39.6	39	0.00	134.0	—	—	—
8:51	5.94	13.84	20.2	53	0.00	106.0	—	—	—
8:54	5.91	13.85	54.0	14.0	0.00	130.0	—	—	—
8:57	5.89	13.86	55.0	11.6	0.00	124.0	1.99	200mL/m	—
9:00	5.88	13.86	56.0	9.5	0.00	104.0	—	—	—
9:03	5.86	13.85	58.0	8.9	0.00	100.0	—	—	—
9:05	sample	MW-9D	collect						

2/23/18

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-9S
Sample I.D.: (if different from well no.)

Project: Petromagna
Personnel: NPB com

Date: 2/23/12 Time: 0911
Weather: sun Air Temp.: 45

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other:
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 1.82 ft Bottom of Well: 10 ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☑ No
Does Weep Hole adequately drain well head? ☐ Yes ☑ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☑ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: — To be purged: —

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other:
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other:

Pumping Rate: 200 Elapsed Time: 30 min Volume Pumped: 2 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed:
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other:

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method:
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.95 Meter Model: Horiba U-22 Meter S/N:
Temperature: 11.52 Spec. Cond.: 0.90 ms/cm Meter Model: Meter S/N:
ORP: -134 mV DO: 0.00 Turbidity: 12.7
DUP : ☑ No ☐ Yes Name:
MS/MSD : ☑ No ☐ Yes Name:
Field Lab Results: ☑ N/A pH: DO: Temperature:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Project Number:
Personnel: NPB CJM Well ID: MW-95
Purge/Sample Depth: 8' Sample ID:

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
0911	6.79	10.77	-112	5.07	0.24	194.0	1.82	200	
0914	6.89	10.87	-124	79.7	0.00	206.0			
0917	6.96	11.14	-133	16.7	0.00	133.0	~~[illegible]~~		
0920	6.96	11.24	-135	11.8	0.00	106.0			
0923	6.96	11.35	-135	2.65	0.00	66.0	1.85	200	
0926	6.97	11.43	-136	1.59	0.00	40.3			
0929	6.96	11.45	-136	1.15	0.00	33.6			
0932	6.96	11.49	-136	0.92	0.00	22.8			
0935	6.96	11.53	-135	0.90	0.00	20.9			
0938	6.96	11.52	-136	0.90	0.00	14.7	1.90		
0941	6.95	11.52	-134	0.90	0.00	12.7			
0944	Sample collected								

N/A 2/28/12

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-8S
Sample I.D.: MW-8S (if different from well no.)

Project: Patchogue
Personnel: CDM | NPB

Date: 2/23/12 Time: 10:17
Weather: Sunny Air Temp.: 40s

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 1.10 ft Bottom of Well: 10 ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☒ Yes ☐ No Is well clean to bottom? ☒ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☒ No
Does Weep Hole adequately drain well head? ☐ Yes ☒ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☒ No
Is Padlock Functional? ☐ Yes ☐ No ☒ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☐ Yes ☒ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☒ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200mL/m Elapsed Time: 30 min Volume Pumped: 3 gal
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel
Tubing/Rope: ☐ Teflon® ☒ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.72 Meter Model: Horiba U-22 Meter S/N: —
Temperature: 12.18 Spec. Cond.: 1.09 Meter Model: Horiba U-22 Meter S/N: —
ORP: -64 DO: 0.00 Turbidity: 94.0
DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☒ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: CAM | NPB
Purge/Sample Depth: 8'
Project Number: 142128
Well ID: MW-8S
Sample ID: MW-8S

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
10:17	6.61	11.58	-15	0.999	0.00	~50*	1.10	200mL/m	—
10:20	6.69	11.81	-30	1.94	0.00	985.0	—	—	—
10:23	6.70	11.89	-36	4.92	0.00	840.0	—	—	—
10:26	6.70	11.96	-42	37.3	0.00	503.0	—	—	—
10:29	6.71	12.62	-48	19.0	0.00	390.0	—	—	—
10:32	6.71	12.03	-51	11.7	0.00	247.0	—	—	—
10:35	6.71	12.10	-56	2.10	0.00	195.0	1.10	200mL/m	—
10:38	6.72	12.10	-59	1.43	0.00	176.0	—	—	—
10:41	6.72	12.13	-61	1.25	0.00	149.0	—	—	—
10:44	6.72	12.17	-64	1.10	0.00	117.0	—	—	—
10:47	6.72	12.18	-64	1.09	0.00	94.0	1.12	—	—
10:50	Sample MW-8S								

CAM 2/23/12

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-8D
Sample I.D.: (if different from well no.)

Project: Patchogue
Personnel: NDB CJM

Date: 2/23/12 Time: 1057
Weather: SUN Air Temp.: 50

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 0.9 ft Bottom of Well: 25 ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☑ No
Does Weep Hole adequately drain well head? ☐ Yes ☑ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☑ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: _____ Elapsed Time: _____ Volume Pumped: _____
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.59 Meter Model: Horiba U-22 Meter S/N: _____
Temperature: 14.15 Spec. Cond.: 0.888 Meter Model: _____ Meter S/N: _____
ORP: 99 DO: 0.02 Turbidity: 48.0
DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☒ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: NAB LTM
Purge/Sample Depth: 20'

Project Number:
Well ID: MW-8D
Sample ID:

Actual Time	pH	Temp (ºC)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1057	6.91	13.15	-2	0.710	2.12	162.0	0.9		
1100	6.80	13.73	25	1.60	0.27	135.0			
1103	6.75	13.88	44	8.25	0.00	115.0			
1106	6.70	14.00	67	89.6	0.00	89.7			
1109	6.68	14.05	74	59.3	0.00	86.0			
1112	6.64	14.10	85	1.40	0.00	83.0			
1115	6.64	14.09	86	1.25	0.00	72.5			
1118	6.67	14.12	89	0.90	0.30	73.5			
1121	6.64	14.13	96	0.999	0.00	58.9			
1124	6.57	14.16	97	0.90	0.09	64.0			
1127	6.59	14.15	99	9.888	0.00	48.0			
1130	Sample		collected						

NB 2/23/17

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-7S
Sample I.D.: (if different from well no.)

Project: Patchogue
Personnel: NPB CDM

Date: 2/23/12 Time: 1327
Weather: sun Air Temp.: 50

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 4.85 ft Bottom of Well: 17.40 ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 300 Elapsed Time: 30m Volume Pumped: 3gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.64 Meter Model: Horiba U-22 Meter S/N: _____
Temperature: 8.87 Spec. Cond.: 1.36 Meter Model: " Meter S/N: _____
ORP: -62 DO: 0.00 Turbidity: 26.4
DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____
Field Lab Results: ☑ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: NPB CJM
Purge/Sample Depth: 10'
Project Number:
Well ID: MW-75
Sample ID:

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1327	6.64	8.86	-19	0.455	0.00	—	4.85		
1330	6.59	8.23	-24	0.459	1.57	238.0			
1333	6.51	8.04	-31	0.440	0.16	751.0			
1336	6.51	8.35	-48	4.31	0.00	103.0			
1339	6.52	8.43	-50	19.1	0.00	129.0			
1342	6.53	8.49	-53	0.90	0.00	102.0			
1345	6.50	8.52	-54	0.90	0.00	82.3			
1348	6.57	8.62	-56	6.02	0.00	40.5			
1351	6.60	8.80	-59	98.7	0.00	48.5			
1354	6.63	8.74	-61	2.11	0.00	40.0			
1357	6.64	8.87	-62	1.36	0.00	26.4			
1400		Sample collected							

NPB 2/23/22

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-7D
Sample I.D.: MW-7D (if different from well no.)

Project: Patchogue
Personnel: COM/NPB

Date: 2/23/12 Time: 14:30
Weather: Sunny Air Temp.: 40s

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☐ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 4.91 ft Bottom of Well: 28 ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☒ Yes ☐ No Is well clean to bottom? ☒ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☒ Yes ☐ No
Does Weep Hole adequately drain well head? ☒ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☒ Yes ☐ No
Is Padlock Functional? ☒ Yes ☐ No ☐ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☒ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☒ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250ml/m Elapsed Time: 30m Volume Pumped: 3gal
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel
Tubing/Rope: ☐ Teflon® ☒ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☐ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.49 Meter Model: Horiba U-22 Meter S/N: —
Temperature: 12.03 Spec. Cond.: 99.9 Meter Model: Horiba U-22 Meter S/N: —
ORP: 92 DO: 4.08 Turbidity: 81.0
DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☐N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: CJM/NPB
Purge/Sample Depth: 25'

Project Number: 142128
Well ID: MW-7D
Sample ID: MW-7D

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
14:30	6.74	12.34	51	0.485	4.95	153.0	4.50	200mL/m	—
14:33	6.50	12.49	64	0.528	4.29	199.0	—	—	—
14:36	6.55	12.52	66	0.90	4.36	232.0	—	—	—
14:39	6.52	12.63	70	99.9	4.32	213.0	—	—	—
14:42	6.47	12.67	70	99.9	4.29	184.0	—	—	—
14:45	6.45	12.71	75	99.9	4.16	169.0	4.55	200mL/m	—
14:48	6.47	12.74	77	99.9	3.53	137.0	—	—	—
14:51	6.47	12.82	82	99.9	4.02	114.0	—	—	—
14:54	6.49	12.85	85	99.9	4.08	105.1	—	—	—
14:57	6.48	12.91	88	99.9	4.14	83.7	4.55	250mL/m	—
15:00	6.49	12.83	92	99.9	4.08	81.0	—	—	—
15:05	Sample - MW-7D								

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-45
Sample I.D.: (if different from well no.)

Project: Patchogue
Personnel: NPB Conn

Date: 2/23/12 Time: 1540
Weather: Sun Air Temp.: 45

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 5.25 ft Bottom of Well: 25 ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 150 mL/min Elapsed Time: 30 min Volume Pumped: 1.5 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.55 Meter Model: Horiba U-22 Meter S/N: _____
Temperature: 11.68 Spec. Cond.: 1.14 Meter Model: " Meter S/N: _____
ORP: 73 DO: 0.00 Turbidity: 59.8
DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____
Field Lab Results: ☑ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/12

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: VPB CTM
Purge/Sample Depth: _____
Project Number: _____
Well ID: MW-45
Sample ID: _____

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1540	6.70	12.17	118	99.9	0.78	467.0	5.25	150	
1543	6.62	11.67	114	67.7	0.82	961.0			
1546	6.57	11.53	103	98.8	0.28	684.0			
1549	6.58	11.51	100	0.488	3.30	412.0			
1552	6.50	11.55	91	92.8	0.00	272.0			
1555	6.52	11.49	86	93.8	0.00	184.0			
1558	6.53	11.56	83	33.3	0.00	152.0			
1601	6.53	11.57	82	30.8	0.00	114.0			
1604	6.53	11.68	77	14.6	0.00	78.1			
1607	6.54	11.66	74	2.16	0.00	62.5			
1610	6.55	11.68	73	1.14	0.00	59.8			
1613	Sample collected								

VPB
2/23/18

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-4D
Sample I.D.: MW-4D (if different from well no.)

Project: Pathogue
Personnel: Cam / NPB

Date: 2/23/11 Time: 16:17
Weather: Sunny Air Temp.: 40s

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 5.15 ft Bottom of Well: — ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☐ Yes ☒ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☒ Yes ☐ No
Does Weep Hole adequately drain well head? ☐ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☒ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☒ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☒ Stainless Steel ☐ PVC ☒ Other: peri
Tubing/Rope: ☐ Teflon® ☒ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 300 mL/m Elapsed Time: 30m Volume Pumped: 3.5 gal
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

METHOD: ☒ Bailer, Size: ____ ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☒ Teflon® ☐ Stainless Steel
Tubing/Rope: ☐ Teflon® ☐ Polyethylene

SAMPLING EQUIPMENT: ☑ Dedicated ☐ Prepared Off-Site ☐ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.07 Meter Model: Horiba U-22 Meter S/N: —
Temperature: 13.12 Spec. Cond.: 0.575 Meter Model: Horiba U-22 Meter S/N: _____
ORP: 213 DO: 0.00 Turbidity: 24.1
DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____
Field Lab Results: ☒ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/23/11

P:*Office*Field_Lab\Field_Data_Sheets\Well_Info_Sheet.doc

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: CJM / NPB
Purge/Sample Depth: _____

Project Number: 142128
Well ID: MW-4D
Sample ID: MW-4D

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
16:17	6.16	12.74	146	99.4	0.25	5.9	5.15	300 mL/m	—
16:20	6.09	12.72	165	99.9	0.00	6.8	—	300 mL/m	—
16:23	6.09	13.01	183	37.9	0.00	13.0	—	—	—
16:26	6.09	12.92	185	26.0	0.00	10.7	—	—	—
16:29	6.08	12.95	193	1.17	0.00	18.5	5.15	—	—
16:32	6.03	13.16	203	0.90	0.00	17.7	—	—	—
16:35	6.08	13.05	205	0.90	0.00	18.0	—	—	—
16:38	6.08	13.11	207	0.64	0.00	19.6	5.19	—	—
16:41	4.07	13.14	212	0.578	0.00	25.5	—	—	—
16:44	6.07	13.13	213	0.576	0.00	24.8	—	—	—
16:47	6.07	13.12	213	0.575	0.00	24.1	5.19	—	—
16:50	Sample MW-4D collected								

2 L/m
2 L/m

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-2D
Sample I.D.: MW-2D (if different from well no.)

Project: Patchogue
Personnel: CAM/NPB

Date: 2/24/11 Time: 9:26
Weather: Rain Air Temp.: 30°.

WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 4.05 ft Bottom of Well: 26 ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200-300 mL/m Elapsed Time: 30m Volume Pumped: 2.5 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.47 Meter Model: Horiba U-22 Meter S/N: -
Temperature: 13.82 Spec. Cond.: 2.03 Meter Model: Horiba U-22 Meter S/N: -
ORP: 304 DO: 6.00 Turbidity: 42.2
DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☐ No ☒ Yes Name: MW-2D
Field Lab Results: ☐ N/A pH: _____ DO: _____ Temperature: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: _____ Date: 2/24/11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: CAM/NPB
Purge/Sample Depth: 20'

Project Number: 142128
Well ID: MW-2D
Sample ID: MW-2D

Actual Time	pH	Temp (ºC)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
9:26	4.97	12.48	290	999	1.81	44.1	4.05	200mL/m	–
9:29	5.27	13.02	285	99.9	0.86	45.8	–	–	–
9:32	5.46	13.49	285	99.9	0.00	46.9	–	–	–
9:35	5.48	13.67	289	99.9	0.00	43.1	–	–	–
9:38	5.49	13.59	292	99.9	0.00	45.8	–	–	–
9:41	5.49	13.75	296	99.9	0.00	70.7	4.05	300mL/m	–
9:44	5.49	13.70	297	99.9	0.00	58.4	–	–	–
9:47	5.48	13.81	299	42.6	0.00	65.5	–	–	–
9:50	5.48	13.81	299	2.21	0.00	60.3	–	–	–
9:53	5.47	13.82	303	2.08	0.00	39.7	4.08	–	–
9:56	5.47	13.82	304	2.03	0.00	42.2	–	–	–
10:00	Sample MW-2D collected MS/MSD								

[illegible]
2/04/11

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-25
Sample I.D.: (if different from well no.)

Project: Patchogue
Personnel: NPB GJM

Date: 2/24/12 Time: 1017
Weather: rain Air Temp.: 40

WELL DATA:

Casing Diameter: 4" ❑ Stainless Steel ☑ Steel ❑ PVC ❑ Teflon® ❑ Other: ______
Intake Diameter: 2" ❑ Stainless Steel ❑ Galv. Steel ☑ PVC ❑ Teflon® ❑ Open rock
DEPTH TO: Static Water Level: 4.65 ft Bottom of Well: _____ ft
DATUM: ❑ Top of Protective Casing ☑ Top of Well Casing ❑ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ❑ No Is well clean to bottom? ☑ Yes ❑ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ❑ No
Does Weep Hole adequately drain well head? ☑ Yes ❑ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ❑ No
Is Padlock Functional? ☑ Yes ❑ No ❑ NA Is Inner Casing Intact? ☑ Yes ❑ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ❑ No
VOLUME OF WATER: Standing in well: ______ To be purged: ______

PURGE DATA:

METHOD: ❑ Bailer, Size: ____ ☑ Bladder Pump ❑ 2" Submersible Pump ❑ 4" Submersible Pump
❑ Centrifugal Pump ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: ______

MATERIALS: Pump/Bailer: ❑ Teflon® ☑ Stainless Steel ❑ PVC ❑ Other: ______
Tubing/Rope: ❑ Teflon® ☑ Polyethylene ❑ Polypropylene ❑ Other: ______

Pumping Rate: 400 Elapsed Time: 30 min Volume Pumped: 4 gal
Was well Evacuated? ❑ Yes ❑ No Number of Well Volumes Removed: ______
PURGING EQUIPMENT: ❑ Dedicated ❑ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

METHOD: ❑ Bailer, Size: ____ ☑ Bladder Pump ❑ 2" Submersible Pump ❑ 4" Submersible Pump
❑ Syringe Sampler ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: ______

MATERIALS: Pump/Bailer: ❑ Teflon® ☑ Stainless Steel Tubing/Rope: ❑ Teflon® ☑ Polyethylene
SAMPLING EQUIPMENT: ❑ Dedicated ❑ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ❑ Yes ☑ No Method: ______
APPEARANCE: ☑ Clear ❑ Turbid ❑ Color: ______ ❑ Contains Immiscible Liquid
FIELD DETERMINATIONS: pH: 6.70 Meter Model: Horiba U-22 Meter S/N: ______
Temperature: 12.15 Spec. Cond.: 99.9 Meter Model: " " Meter S/N: ______
ORP: 159 DO: 3.67 Turbidity: 14.7
DUP: ☑ No ❑ Yes Name: ______
MS/MSD: ☑ No ❑ Yes Name: ______
Field Lab Results: ☑ N/A pH: ______ DO: ______ Temperature: ______

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: [signature] Date: 2/24/12

P:\Office\Field_Lab\Field_Data_Sheets\Well_Info_Sheet.doc

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: NPR CJM
Purge/Sample Depth: 11'
Project Number:
Well ID: MW-25
Sample ID:

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1017	6.58	11.60	189	0.96	2.29	86.4	4.68	400	
1020	6.65	11.83	191	99.9	2.91	142.0		"	
1023	6.66	12.00	193	99.9	2.83	188.0			
1026	6.73	12.13	195	99.9	2.67	105.0			
1029	6.69	12.15	197	99.9	3.81	94.7		400	
1032	6.73	12.19	197	99.9	3.02	67.9		"	
1035	6.69	12.12	196	99.9	2.77	52.1		"	
1038	6.69	12.18	197	99.9	2.99	28.7		"	
1041	6.67	12.19	198	99.9	2.84	18.9		"	
1044	6.71	12.27	198	99.9	3.09	18.3		"	
1047	6.70	12.15	199	99.9	3.67	14.7		"	
1050	Sample collected								

Appendix B: Laboratory Reports (CD-ROM)

Appendix C: Data Usability Summary Report

ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
PATCHOGUE, NEW YORK

Client: Brown and Caldwell, Allendale, New Jersey
SDG: PCH10
Laboratory: Lancaster Laboratories, Lancaster, Pennsylvania
Site: Patchogue, New York
Date: April 5, 2012

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-1	6558503	Water
2	DUP022212	6558504	Water
3	MW-3	6558505	Water
4	FB022212	6558506	Water
5	MW-9D	6558507	Water
6	MW-9S	6558508	Water
7	MW-8S	6558509	Water
8	MW-8D	6558510	Water
9	MW-7S	6558511	Water
10	MW-7D	6558512	Water
11	MW-4S	6558513	Water
12	MW-4D	6558514	Water
13	MW-2D	6558515	Water
13MS	MW-2DMS	6558516MS	Water
13MSD	MW-2DMSD	6558517MSD	Water
14	MW-2S	6558518	Water
15*	TB022412	6558519	Water

A Data Usability Summary Review was performed on the analytical data for thirteen water samples, one aqueous field blank sample, and one aqueous trip blank sample collected February 22-24, 2012 by Brown and Caldwell at the Patchogue, New York Site. The samples were analyzed under Environmental Protection Agency (USEPA) *"Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions"*.

Specific method references are as follows:

Analysis	*Method References*
VOC (BTEX and MTBE)	USEPA SW-846 Method 8260B
SVOC (PAH)	USEPA SW-846 Method 8270C

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods and the USEPA Region II Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-24, Revision 2, August 2008: Validating Volatile Organic Compounds by SW-846 Method 8260B;

- SOP Number HW-22, Revision 4, August 2008: Validating Semivolatile Organic Compounds by SW-846 Method 8270D;
- and the reviewer's professional judgment.

Organics

The following items/criteria were reviewed:

- Data Completeness
- Holding times and sample preservation
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Duplicate (LCS/LCSD) recoveries
- Method blank and field blank contamination
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning
- Initial and continuing calibration summaries
- Compound Quantitation
- Internal standard area and retention time summary forms
- Field Duplicate sample precision

Overall Usability Issues:

There were no rejections of data.

Overall the data is acceptable for the intended purposes. Data were qualified for the following deficiencies.

- Naphthalene was qualified as nondetected in all samples due to field blank contamination.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

Volatile Organic Compounds (BTEX and MTBE)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable percent recoveries (%R) and/or relative percent differences (RPD).

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Method Blank

- The method blanks were free of contamination.

Field Blank

- The following table summarizes field blank contamination.

Blank ID	Compound	Conc. ug/L	Action Level ug/L	Qualifier	Affected Samples
FB022212	None- ND	-	-	-	-
TB022412	None- ND	-	-	-	-

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and average RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Compound Quantitation

- All criteria were met.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

VOC				
Compound	MW-1 ug/L	DUP022212 ug/L	RPD	Qualifier
None	ND	ND	-	-

Semivolatile Organics Compounds (PAH)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable percent recoveries (%R) and/or relative percent differences (RPD).

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Method Blank

- The method blanks were free of contamination.

Field Blanks

- The following table summarizes field blank contamination.

Blank ID	Compound	Conc. ug/L	Action Level ug/L	Qualifier	Affected Samples
FB022212	Naphthalene	0.2	2.0	U	1-14

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and average RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Compound Quantitation

- All criteria were met.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

PAH				
Compound	MW-3 ug/L	DUP111611 ug/L	RPD	Qualifier
Phenanthrene	0.1	0.1	0%	None
Pyrene	0.1	0.1	0%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 4/9/12

Nancy Weaver
Senior Chemist

Data Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.

U = The analyte was analyzed for, but was not detected above the sample reporting limit.

R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

Sample Description: MW-1 Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558503
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/22/2012 14:10 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

12128 SDG#: PCH10-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	~~J~~	0.1	1
07805	**Phenanthrene**	85-01-8	**0.1**	**J**	0.1	1
07805	**Pyrene**	129-00-0	**0.1**	**J**	0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 01:26	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 01:26	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 05:55	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0012

NW
4/5/12

Lancaster Laboratories, Inc.
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

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Analysis Report

2

Sample Description: DUP022212 Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558504
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/22/2012 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

D2128 SDG#: PCH10-02FD

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	~~J~~	0.1	1
07805	**Phenanthrene**	85-01-8	**0.1**	**J**	0.1	1
07805	**Pyrene**	129-00-0	**0.1**	**J**	0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 01:50	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 01:50	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 06:19	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0813

NW
4/5/12

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Analysis Report

3

Sample Description: MW-3 Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558505
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/22/2012 15:24 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

32128 SDG#: PCH10-03

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	**Acenaphthene**	83-32-9	**0.7**		0.1	1
07805	**Acenaphthylene**	208-96-8	**0.7**		0.1	1
07805	**Anthracene**	120-12-7	**0.4**	J	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	**Fluoranthene**	206-44-0	**2**		0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	J	0.1	1
07805	Phenanthrene	85-01-8	N.D.		0.1	1
07805	**Pyrene**	129-00-0	**2**		0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 02:14	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 02:14	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 06:42	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0003

NW
4/5/12

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Analysis Report

4

Sample Description: FB022212 Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558506
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/22/2012 16:00 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

FB128 SDG#: PCH10-04FB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	**0.2**	**J**	0.1	1
07805	Phenanthrene	85-01-8	N.D.		0.1	1
07805	Pyrene	129-00-0	N.D.		0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/28/2012 23:26	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/28/2012 23:26	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 07:05	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0015

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4/5/12

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Sample Description: MW-9D Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558507
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 09:05 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

9D128 SDG#: PCH10-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	**Acenaphthylene**	208-96-8	**0.1**	**J**	0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	**Benzo(a)anthracene**	56-55-3	**0.2**	**J**	0.1	1
07805	**Benzo(a)pyrene**	50-32-8	**0.2**	**J**	0.1	1
07805	**Benzo(b)fluoranthene**	205-99-2	**0.3**	**J**	0.1	1
07805	**Benzo(g,h,i)perylene**	191-24-2	**0.2**	**J**	0.1	1
07805	**Benzo(k)fluoranthene**	207-08-9	**0.2**	**J**	0.1	1
07805	**Chrysene**	218-01-9	**0.3**	**J**	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	**Fluoranthene**	206-44-0	**0.4**	**J**	0.1	1
07805	**Fluorene**	86-73-7	**0.1**	**J**	0.1	1
07805	**Indeno(1,2,3-cd)pyrene**	193-39-5	**0.1**	**J**	0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	~~J~~	0.1	1
07805	**Phenanthrene**	85-01-8	**0.3**	**J**	0.1	1
07805	**Pyrene**	129-00-0	**0.5**		0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 02:38	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 02:38	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 07:28	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

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NJ
4/5/12

Sample Description: MW-9S Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558508
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 09:44 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

9S128 SDG#: PCH10-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	**Acenaphthene**	83-32-9	**3**		0.1	1
07805	**Acenaphthylene**	208-96-8	**1**		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	**Fluoranthene**	206-44-0	**0.2**	J	0.1	1
07805	**Fluorene**	86-73-7	**0.5**		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	~~J~~	0.1	1
07805	**Phenanthrene**	85-01-8	**0.1**	J	0.1	1
07805	**Pyrene**	129-00-0	**0.3**	J	0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 03:01	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 03:01	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 07:51	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH1B 0817

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4/5/12

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Analysis Report

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Sample Description: MW-8S Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558509
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 10:50 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

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110 Commerce Dr.
Allendale NJ 07401

8S128 SDG#: PCH10-07

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	**Acenaphthene**	83-32-9	**0.5**	J	0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	**Fluorene**	86-73-7	**0.1**	J	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	~~J~~	0.1	1
07805	Phenanthrene	85-01-8	N.D.		0.1	1
07805	Pyrene	129-00-0	N.D.		0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 03:25	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 03:25	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 08:14	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 8S12

NW
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Analysis Report

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Sample Description: MW-8D Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558510
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 11:30 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

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8D128 SDG#: PCH10-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.1	1
07805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	**Naphthalene**	91-20-3	ND 0.2 J	0.1	1
07805	Phenanthrene	85-01-8	N.D.	0.1	1
07805	Pyrene	129-00-0	N.D.	0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 03:49	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 03:49	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 08:38	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10-080819

NW
4/5/12

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Analysis Report

9

Sample Description: MW-7S Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558511
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 14:00 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

7S128 SDG#: PCH10-09

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	**Anthracene**	120-12-7	**0.1**	**J**	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	~~J~~	0.1	1
07805	Phenanthrene	85-01-8	N.D.		0.1	1
07805	Pyrene	129-00-0	N.D.		0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 04:13	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 04:13	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 09:01	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0828

NW
4/5/12

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Analysis Report

10

Sample Description: MW-7D Grab Water
COC: 300750
Patchogue, NY

LLI Sample # WW 6558512
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 15:05 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

7D128 SDG#: PCH10-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.1	1
07805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~ J	0.1	1
07805	Phenanthrene	85-01-8	N.D.	0.1	1
07805	Pyrene	129-00-0	N.D.	0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 04:37	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 04:37	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 09:24	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0021

NW
4/5/12

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Analysis Report

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Sample Description: MW-4S Grab Water
COC: 300748
Patchogue, NY

LLI Sample # WW 6558513
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 16:13 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

4S128 SDG#: PCH10-11

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	**Acenaphthylene**	208-96-8	**0.4**	J	0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	**Fluorene**	86-73-7	**0.1**	J	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.1~~	J	0.1	1
07805	**Phenanthrene**	85-01-8	**0.2**	J	0.1	1
07805	Pyrene	129-00-0	N.D.		0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 05:01	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 05:01	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 09:48	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 0822

NW
4/5/12

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Sample Description: MW-4D Grab Water
COC: 300748
Patchogue, NY

LLI Sample # WW 6558514
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/23/2012 16:50 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

4D128 SDG#: PCH10-12

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l		ug/l	
07805	**Acenaphthene**	83-32-9	**0.3**	J	0.09	1
07805	**Acenaphthylene**	208-96-8	**2**		0.09	1
07805	Anthracene	120-12-7	N.D.		0.09	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.09	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.09	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.09	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.09	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.09	1
07805	Chrysene	218-01-9	N.D.		0.09	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.09	1
07805	Fluoranthene	206-44-0	N.D.		0.09	1
07805	**Fluorene**	86-73-7	**0.9**		0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.09	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~	J	0.09	1
07805	**Phenanthrene**	85-01-8	**0.8**		0.09	1
07805	Pyrene	129-00-0	N.D.		0.09	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 05:25	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 05:25	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 10:11	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH10 8823

NW
4/5/12

Lancaster Laboratories, Inc.
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Sample Description: MW-2D Grab Water
COC: 300748
Patchogue, NY

LLI Sample # WW 6558515
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/24/2012 10:00 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

2D128 SDG#: PCH10-13BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.1	1
07805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	**Naphthalene**	91-20-3	ND ~~0.2~~ J	0.1	1
07805	Phenanthrene	85-01-8	N.D.	0.1	1
07805	Pyrene	129-00-0	N.D.	0.1	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 00:14	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 00:14	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 04:22	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH1B 0024

NW
4/5/12

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Sample Description: MW-2S Grab Water
COC: 300748
Patchogue, NY

LLI Sample # WW 6558518
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/24/2012 10:50 by CJM

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

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110 Commerce Dr.
Allendale NJ 07401

2S128 SDG#: PCH10-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.09	1
07805	Acenaphthylene	208-96-8	N.D.	0.09	1
07805	Anthracene	120-12-7	N.D.	0.09	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.09	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.09	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.09	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.09	1
07805	Chrysene	218-01-9	N.D.	0.09	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.09	1
07805	Fluoranthene	206-44-0	N.D.	0.09	1
07805	Fluorene	86-73-7	N.D.	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.09	1
07805	**Naphthalene**	91-20-3	NP 0.1	0.09	1
07805	Phenanthrene	85-01-8	N.D.	0.09	1
07805	Pyrene	129-00-0	N.D.	0.09	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/29/2012 05:49	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/29/2012 05:49	Holly Berry	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12059WAG026	03/01/2012 10:34	Brian K Graham	1
07807	BNA Water Extraction	SW-846 3510C	1	12059WAG026	02/29/2012 09:00	William H Saadeh	1

PCH1S 0827

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Analysis Report

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Sample Description: TB022412 Water
COC: 300748
Patchogue, NY

LLI Sample # WW 6558519
LLI Group # 1291649
Account # 09286

Project Name: Patchogue, NY

Collected: 02/24/2012

Submitted: 02/24/2012 18:15
Reported: 03/02/2012 10:57

Brown & Caldwell
110 Commerce Dr.
Allendale NJ 07401

TB128 SDG#: PCH10-15TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	T120592AA	02/28/2012 23:50	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T120592AA	02/28/2012 23:50	Holly Berry	1

PCH10-0828

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4/5/12

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Appendix D: Electronic Data Deliverable (CD-ROM)