Third Quarter 2011
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

October 2011

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Table of Contents

Appendices

List of Tables

List of Figures

Section 1

Introduction

Brown and Caldwell Associates (BC) is pleased to submit this report containing the data deliverables related to the Third Quarter 2011 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 represents the third quarterly monitoring event for 2011 (Third Quarter 2011). This report has been prepared for submittal to the New York State Department of Environmental Conservation (NYSDEC) and includes the following:

- A description of the scope of the field activities;
- 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);
- A discussion of the results and findings from the groundwater monitoring data;
- Potentiometric surface map depicting generalized direction of groundwater flow based on water level data from shallow wells surface water elevation control points (i.e., staff gauges) (Figure 1);
- Field Sampling Data Sheets (Appendix A);
- Laboratory Data Report (Appendix B); and
- Data Usability Summary Report (Appendix C).
- Electronic Data Deliverable (Appendix D).

1.1 Background

A total of nine groundwater monitoring events have been conducted at the Site since March 2008. These nine events include two monitoring events conducted as part of the Remedial Investigation (RI) in March 2008 and July 2008, four semi-annual monitoring events from March 2009 through September 2010, and three quarterly monitoring events in January 2011, April 2011 and August 2011. The August 2011 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. The August 2011 monitoring event, described herein, is the third quarterly monitoring event.

Section 2

Scope of Work

Field activities for the groundwater monitoring event were conducted by BC on August 10 and 11, 2011. On August 10, 2011, prior to conducting groundwater sampling, depth-to-water measurements and NAPL gauging were conducted on the 14 monitoring wells associated with the Site. Locations of the 14 monitoring wells are depicted on Figure 1.

Groundwater samples were collected from 12 monitoring wells on August 10 and 11, 2011. Wells MW-5 and MW-6 were not sampled this quarter due to presence of NAPL in these wells as observed during the NAPL gauging activities. 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 (Lancaster Laboratories, Inc.) 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 laboratory analysis 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 August 10, 2011 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 elevation control points (i.e., staff gauges) in the Patchogue River. The water level (hydraulic head) values for the wells screened in deeper intervals are posted on Figure 1, however, only the values from the shallow wells and staff gauges were used in developing the contour lines because these values more accurately represent water table elevations. 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 August 10, 2011 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 August 2011 quarterly groundwater sampling event. NAPL was identified in the following wells during the gauging activities:

- **MW-5:** NAPL/tar was observed adhering to oil/water interface probe. Strong tar-like odor was associated with the observed NAPL.
- **MW-6:** A large globule of NAPL/tar was observed adhering to oil/water interface probe. Strong tar-like odor was associated with the observed NAPL.

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 Third Quarter 2011 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 5 and 6, 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. Therefore, these two wells were not sampled. Groundwater samples were collected from the remaining 12 monitoring wells and submitted for analysis. BTEX compounds and MTBE were not detected at any sampling location. 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 wells MW-2D, MW-3, MW-9S, and MW-9D, one or more 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 Third Quarter 2011 (August 2011) event. In general, the PAH concentrations measured at these locations are not dissimilar from data from previous quarters. Of note, however, is that the method detection limits achieved by the laboratory for the analyzed constituents were substantially less than during the previous two sampling events (January and April 2011) and thus, the low-level concentrations that were measured this quarter, if present observed during the previous quarters, would not have been previously detected. The seven PAH compounds that were identified 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 six of these seven PAHs are unpromulgated guidance values rather than Part 703 standards, while the criteria for the seventh PAH, benzo(a)pyrene, is a Part 703 standard. The standard for benzo(a)pyrene was only exceeded in a sample from one well, MW-9S, at a concentration of 0.8 µg/L. The guidance value for the six 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 Third Quarter 2011 (August 2011), 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. Analysis of groundwater samples collected from the twelve other monitoring wells during this monitoring event did not detect BTEX compounds and MTBE at any sampling location. At eight 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 wells MW-2D, MW-3, MW-9S, and MW-9D, one or more PAH compounds were detected at low concentrations (i.e., slightly above the method detection limit), but above the Class GA groundwater quality criteria. Of the locations with a criteria exceedance, only one location has an exceedance of a Part 703 Standard; 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 detection of these constituents during this event may be a result of the decrease in the method detection limits achieved by the laboratory relative to previous monitoring periods. The seven 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 be further evaluated through subsequent quarterly monitoring events.

During the third quarter 2011, and the previous two quarters (first and second quarter 2011), 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 concentrations of chemical constituents 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
AUGUST 2011
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

Well ID	Top of Casing Elevation (ft., NAVD)	Screened Interval (ft., BGS)	8/10/2011 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	7-12	5.91	5.32	ND	16.2	
MW-2S	8.97	5-10	4.50	4.47	ND	14.05	
MW-2D	8.23	20-25	3.85	4.38	ND	26.2	
MW-3	5.39	5-10	2.51	2.88	ND	10.48	
MW-4S	7.74	5-10	4.92	2.82	ND	12.1	
MW-4D	7.57	20-25	4.70	2.87	ND	26.5	
MW-5	7.93	5-15	4.12	3.81	16.58	16.65	NAPL/tar was observed adhering to oil/water interface probe; strong tar-like odor was associated with the observed NAPL.
MW-6	8.08	5-20	3.77	4.31	(1)	21.8	Large globule of NAPL/tar was observed adhering to oil/water interface probe; strong tar-like odor was associated with the observed NAPL.
MW-7S	8.21	4-9	4.44	3.77	ND	12.4	
MW-7D	8.09	20-25	4.36	3.73	ND	27.9	
MW-8S	4.86	4-9	0.90	3.96	ND	9.8	
MW-8D	4.77	20-25	0.80	3.97	ND	25.1	
MW-9S	4.47	4-9	1.41	3.06	ND	10.23	
MW-9D	4.66	20-25	1.42	3.24	ND	23.15	
SG-1	5.23	NA	4.06	1.17	--	NA	
SG-2	5.16	NA	3.82	1.34	--	NA	

Notes:
NAVD - North American Vertical Datum
BGS - Below Ground Surface
BTOC - Below Top of Casing
NAPL - Non-aqueous phase liquid
NA - Not applicable
NM - Not measured
(1) - - NAPL was not detected with oil/water interface probe, however, upon removal of the probe, NAPL/tar with a tar-like odor was observed on the end of the probe.

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-1 8/10/2011	MW-2S 8/11/2011	MW-2D 8/11/2011	MW-3 8/10/2011	MW-4S 8/11/2011	MW-4D 8/11/2011	MW-7S 8/11/2011
Volitile 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	2	0.1 U	0.1 U	0.1 U
Acenaphthylene	NE	NE	µg/L		0.1 U	0.1 U	0.1 U	2	0.1 U	0.1 U	0.1 U
Anthracene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	1	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 J**	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 J**	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	4	0.1 U	0.1 U	0.1 U
Fluorene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	0.2 J	0.1 U	0.1 U	0.1 U
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-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-7S
Constituent	Guidance	Standard	Units	Date	8/10/2011	8/11/2011	8/11/2011	8/10/2011	8/11/2011	8/11/2011	8/11/2011
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 U	0.1 U	0.1 U	0.4 J	0.1 U	0.1 U	0.1 U
Pyrene	50	NE	µg/L		0.1 U	0.1 U	0.1 U	4	0.1 J	0.1 U	0.1 U
Total PAHs	NE	NE	µg/L		ND	ND	0.1	14	0.1	ND	ND

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-7D 8/11/2011	MW-8S 8/10/2011	MW-8S DUP 8/10/2011	MW-8D 8/10/2011	MW-9S 8/10/2011	MW-9D 8/10/2011
Volitile 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 J	0.5 J	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	0.09 U	0.09 U	0.1 U	4	0.1 U
Acenaphthylene	NE	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	2	0.1 U
Anthracene	50	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	0.4 J	0.1 U
Benzo(a)anthracene	0.002	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	**0.7**	**0.1 J**
Benzo(a)pyrene	NE	0	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	**0.8**	0.1 U
Benzo(b)fluoranthene	0.002	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	**0.7**	0.1 U
Benzo(g,h,i)perylene	NE	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	0.5 J	0.1 U
Benzo(k)fluoranthene	0.002	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	**0.3 J**	0.1 U
Chrysene	0.002	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	**0.7**	**0.1 J**
Dibenzo(a,h)anthracene	NE	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	0.09 U	0.1 U
Fluoranthene	50	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	1	0.3 J
Fluorene	50	NE	µg/L		0.1 U	0.2 J	0.2 J	0.1 U	1	0.1 U
Indeno(1,2,3-cd)pyrene	0.002	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	**0.3 J**	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-7D	MW-8S	MW-8S DUP	MW-8D	MW-9S	MW-9D
Constituent	Guidance	Standard	Units	Date	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
Naphthalene	10	NE	µg/L		0.1 U	0.2 J	0.1 J	0.1 U	0.3 J	0.1 U
Phenanthrene	50	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	2	0.3 J
Pyrene	50	NE	µg/L		0.1 U	0.09 U	0.09 U	0.1 U	1	0.4 J
Total PAHs	NE	NE	µg/L		ND	0.4	0.3	ND	16	1.2

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 Standards or Guidance values.

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

		Total BTEX Concentrations (µg/L)											
		Sampling Date											
	Total Depth	2008		2009		2010		2011					
Well ID	(ft., bgs)	March	July	March	September	March	September	January	April	August	Min	Max	Mean
MW-1	16.2	0	NS	0	0	0	0	1.7	0	0	0	1.7	0.21
MW-2S	14.05	0	0	0	0	0	0	0	0	0	0	0	0
MW-2D	26.2	0	0	0	0	0	0	0	0	0	0	0	0
MW-3	10.48	0	0	0	0	0	0	0	0	0	0	0	0
MW-4S	12.1	3.4	0	0	0	0	0	0	0	0	0	3.4	0.38
MW-4D	26.5	0	0	0	0	0	0	0	0	0	0	0	0
MW-5	16.65	1016	678	975	1257	637	NS	NS	NS	NS	637	1257	913
MW-6	21.8	57.3	0	0	1	2	0	NS	NS	NS	0	57.3	10
MW-7S	12.4	NS	0	0	0	0	0	0	0	0	0	0	0
MW-7D	27.9	NS	0	1	0	9	0	0	0	0	0	9	1.25
MW-8S	9.8	NS	0	0	0	0	0	0	0	0	0	0	0
MW-8D	25.1	NS	0	0	0	0	0	0	0	0	0	0	0
MW-9S	10.23	NS	0	0	0	0	27	1	0	0	0	27	3.5
MW-9D	23.15	NS	0	0	0	0	0	0	0	0	0	0	0

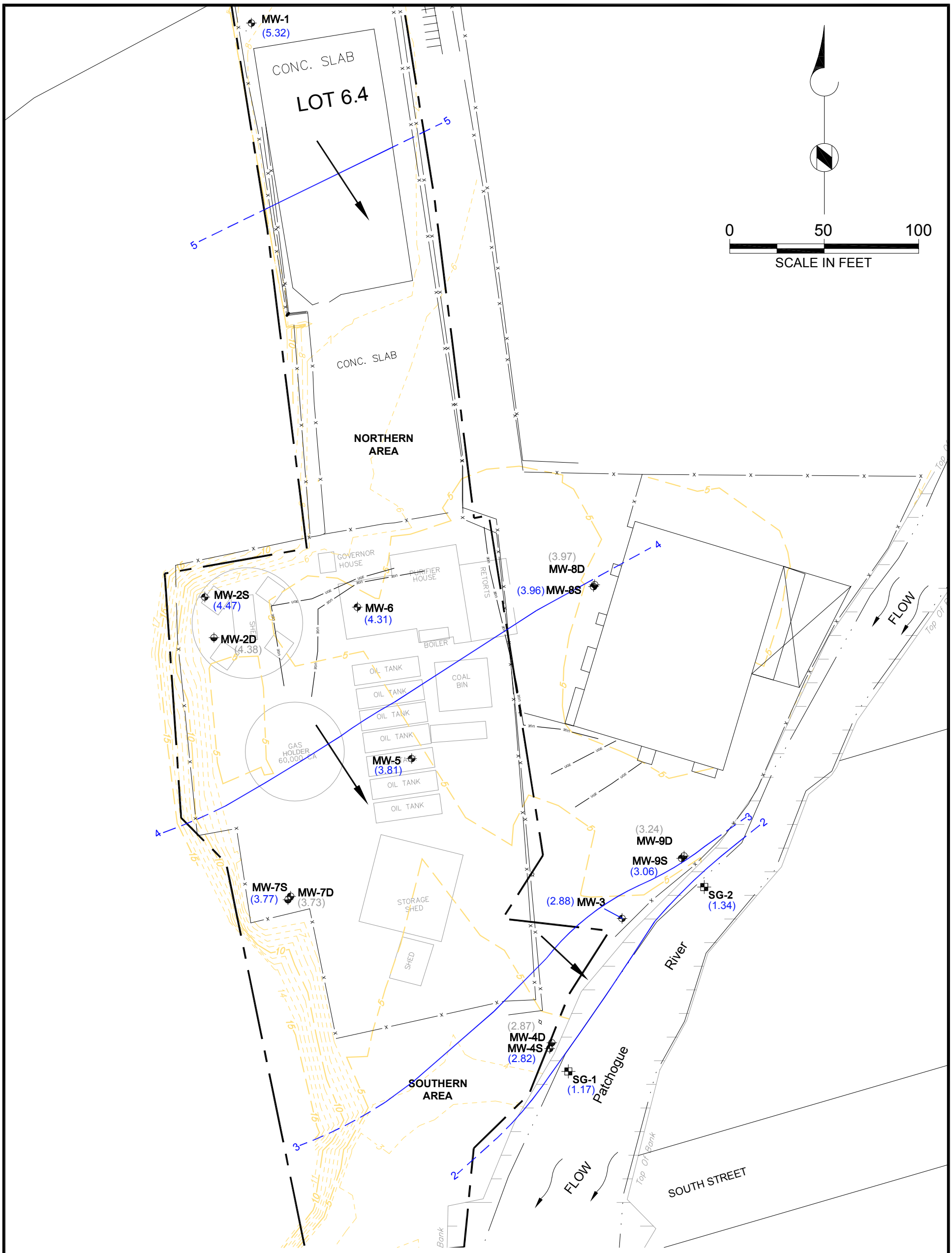
Notes:
BTEX - Benzene, toluene, ethylbenzene and xylene isomers
µg/L - micrograms per liter
NS - Not sampled.

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

		Total PAH Concentrations (µg/L)											
		Sampling Date											
	Total Depth	2008		2009		2010		2011					
Well ID	(ft., bgs)	March	July	March	September	March	September	January	April	August	Min	Max	Mean
MW-1	16.2	0	NS	0	0	0	0	22	0	0	0	22	2.8
MW-2S	14.05	0	0.7	0	0	0	0	0	0	0	0	0.7	0.08
MW-2D	26.2	0	0	0	0	0	0	0	0	0.1	0	0.1	0.01
MW-3	10.48	0.76	0	0	0	0	128	17	6	14	0	128	18.42
MW-4S	12.1	0.6	7.96	0	0	0	0	0	0	0.1	0	7.96	0.96
MW-4D	26.5	4.28	0	0	0	39	6	12	20	0	0	39	9.03
MW-5	16.65	1773.9	1798.7	2730	3373	2390	NS	NS	NS	NS	1774	3373	2413
MW-6	21.8	214.18	154.2	0	1	17	14	NS	NS	NS	0	214.18	67
MW-7S	12.4	NS	0	0	0	0	0	0	0	0	0	0	0
MW-7D	27.9	NS	0.47	0	0	0	0	0	0	0	0	0.5	0.06
MW-8S	9.8	NS	0	0	0	22	11	6	0	0.4	0	22	4.9
MW-8D	25.1	NS	0	0	0	0	0	0	0	0	0	0	0
MW-9S	10.23	NS	12.01	0	0	2	396	42	9	16	0	396	60
MW-9D	23.15	NS	0	0	0	0	0	5	0	1.2	0	5	0.78

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
- WATER TABLE CONTOUR (FT., NAVD) DASHED WHERE INFERRED
- GENERALIZED DIRECTION OF GROUNDWATER FLOW
- (4.47) WATER ELEVATION (FT., NAVD) FOR SHALLOW MONITORING WELL OR STAFF GAUGE
- (4.38) GROUNDWATER HEAD ELEVATION (FT., NAVD) FOR WELLS SCREENED BELOW WATER TABLE (FROM DEEP MONITORING WELL)

FIGURE 1

WATER TABLE CONTOUR MAP
AUGUST 10, 2011

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

DATE: 10/11

PROJECT NUMBER: 138893.316

Brown AND Caldwell
ASSOCIATES
ALLENDALE, NEW JERSEY

P:\DRAFTING\NATIONAL_GRID\PATCHOGUE\QUARTERLY-GW-CONTOUR-MAP\FIGURE 1.DWG 10/17/2011 06:31:22PM 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:
Sample I.D.: MW-8S (if different from well no.)

Project: Patchogue
Personnel: TMJ CJM

Date: 8-10-11 Time: 1015
Weather: Sunny Air Temp.: 90°

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: 9.90 ft Bottom of Well: 9.9 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: 200ml/min Elapsed Time: 30 Volume Pumped: 2.5gal
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: 6.31 Meter Model: Horiba U22 Meter S/N: _____
Temperature: 17.7 Spec. Cond.: 0.75 Meter Model: Horiba U22 Meter S/N: _____
ORP: -82 DO: 0.34 Turbidity: 69.0
DUP : ☐ No ☒ Yes Name: DUP 081011
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: 8-10-11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue
Personnel: [illegible]
Purge/Sample Depth: _____
Project Number: _____
Well ID: _____
Sample ID: MW-05

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1020	6.12	20.3	-15	0.60	3.06	171	1.0	250	
1023	6.13	18.3	-40	0.68	1.35	440	"		
1026	6.24	17.9	-58	0.74	0.92	237	"		
1029	6.25	17.9	-64	0.77	0.72	114	"	250	
1032	6.29	17.8	-67	0.62	0.69	113	"		
1035	6.30	17.8	-71	0.75	0.57	105	"		
1038	6.29	17.7	-73	0.75	0.48	96.3	"		
1041	6.32	17.7	-77	0.75	0.41	78.3	"		
1044	6.31	17.7	-79	0.75	0.40	75.9	"		
1047	6.31	17.7	-80	0.75	0.37	72.0	"		
1050	6.31	17.7	-83	0.75	0.34	69.0			
1100	Sample MW-05 DUP #0810 11								

8-10-10

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue, NY
Personnel: MO CSM
Purge/Sample Depth: _____
Project Number: _____
Well ID: _____
Sample ID: MW-8D

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1108	6.32	19.9	-35	0.39	3.63	80.1		300	
1111	6.22	16.9	25	0.38	1.22	132			
1114	6.11	16.5	41	0.39	1.05	103			
1117	6.05	16.3	53	0.39	0.98	92.3			
1120	5.99	15.9	63	0.40	0.89	99.3			
1123	5.94	15.9	70	0.41	0.76	78.6			
1126	5.91	15.6	72	0.41	0.73	77.2			
1129	5.91	15.7	75	0.41	0.70	72.1			
1132	5.91	15.7	79	0.41	0.68	69.5			
1135	5.91	15.7	73	0.41	0.66	60.3			
1138	5.91	15.7	73	0.41	0.65	51.2			
1145	Sample MW-8D								

1 L
8-10-A

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 NY
Personnel: MF CDM

Date: 8-10-17 Time: 1105
Weather: sunny Air Temp.: 90°F

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: 0.8 ft Bottom of Well: 300 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: 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: 5.91 Meter Model: Horiba U22 Meter S/N:
Temperature: 15.7 Spec. Cond.: 0.41 Meter Model: Horiba U22 Meter S/N:
ORP: 28 DO: 0.65 Turbidity: 5.2
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: 8-10-17

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW
Personnel: CJM / TMJ
Purge/Sample Depth: 12' BTC
Project Number: 138893
Well ID: MW-1
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
13:33	6.50	23.1	-110	1.5	3.06	91.5	-	200 mL/m	-
13:36	6.57	21.7	-104	1.7	1.90	67.0	-	-	-
13:39	6.56	21.2	-105	1.9	1.48	28.9	-	-	-
13:42	6.56	21.2	-105	1.8	1.46	16.9	-	-	-
13:45	6.56	21.2	-106	1.8	1.05	12.3	-	-	-
13:48	6.57	21.3	-106	1.8	1.03	11.0	-	-	-
13:51	6.56	21.1	-106	1.8	1.01	6.4	-	200mL/m	-
13:54	6.55	20.7	-108	1.8	0.88	5.8	-	-	-
13:57	6.55	20.7	-109	1.8	0.88	6.6	-	-	-
14:00	6.55	20.8	-109	1.8	0.86	11.9	-	-	-
14:03	6.55	20.7	-110	1.8	0.84	4.0	-	-	-
14:05	Parameters stable. Sample MW-1 collected								

CJM

8/10/22

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: Parkway GW Sampling
Personnel: CAM / TMJ

Date: 8/10/11 Time: 13:33
Weather: Sunny Air Temp.: 80s

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: 5.91 ft Bottom of Well: 16.2 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: 3gal.
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: ND
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: 20.7 Spec. Cond.: 1.8 Meter Model: Horiba U-22 Meter S/N: ____
ORP: -110 DO: 0.84 Turbidity: 4.0
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: 8/10/11

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

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: Patchogue OW
Personnel: TMJ CJM

Date: 8-10-11 Time:
Weather: Rainy Air Temp.: 90°

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: 1.91 ft Bottom of Well: 10.41 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 missing screws
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 mL/min Elapsed Time: 30m Volume Pumped: 3.5 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: 6.57 Meter Model: Horiba U22 Meter S/N:
Temperature: 19.1 Spec. Cond.: 0.83 Meter Model: Horiba U22 Meter S/N:
ORP: -139 DO: 0.59 Turbidity: 43.2
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: 8-10-11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW
Personnel: TMO CJM
Purge/Sample Depth: _____
Project Number: _____
Well ID: _____
Sample ID: MW-95

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1434	6.42	21.4	-134	0.77	2.24	5.0		300	
1437	6.55	20.1	-147	0.85	1.40	602			
1440	6.61	19.6	-150	0.85	1.09	380			
1443	6.62	19.4	-152	0.98	0.95	263			
1446	6.62	19.4	-152	0.90	0.83	193			
1449	6.54	19.3	-149	0.83	0.82	110			
1452	6.56	19.4	-133	0.83	0.83	89.3			
1455	6.58	19.1	-137	0.83	0.76	71.8			
1458	6.59	19.2	-138	0.83	0.64	66.4			
1501	6.59	19.1	-138	0.83	0.59	45.8			
1504	6.57	19.1	-139	0.83	0.59	43.2			
1505	SO	Mpk	MW-95						

MW
8-10-11

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-90
Sample I.D.: MW-90 (if different from well no.)

Project: Patchogue GW
Personnel: RMS CSM

Date: 8-10-11 Time: 1515
Weather: Sunny Air Temp.: 90+

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: 1.48 ft Bottom of Well: 23.5 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 Flushmount Bloton
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 needs J Plug
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: 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: 5.35 Meter Model: Horiba U22 Meter S/N: _____
Temperature: 16.4 Spec. Cond.: 0.46 Meter Model: Horiba U22 Meter S/N: _____
ORP: 143 DO: 0.68 Turbidity: 58.4
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: 8-10-11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW
Personnel: [illegible]
Purge/Sample Depth: _____
Project Number: _____
Well ID: _____
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
1515	6.06	19.6	70	0.47	5.00	302		300	
1519	5.67	17.8	95	0.46	2.30	360			
1521	6.63	17.3	102	0.43	2.03	251			
1524	5.42	17.0	102	0.47	1.52	280			
1527	5.45	16.9	122	0.47	1.75	155			
1530	5.39	16.5	129	0.46	0.96	102			
1533	5.39	16.4	132	0.46	0.85	90.2			
1536	5.38	16.4	134	0.46	0.79	82.1			
1539	5.37	16.4	139	0.46	0.73	74.5			
1542	5.36	16.4	141	0.46	0.70	61.2			
1545	5.35	16.4	143	0.46	0.68	58.9			
1550	Sample MW-9D collected								

MW 9-10-19

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patchogue GW
Personnel: TMS / CSM

Date: 8-10-11 Time: 1600
Weather: Sunny Air Temp.: 90°F

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: 2.51 ft Bottom of Well: 10.5 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

concrete & Flush mount Broken

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 mL/min Elapsed Time: 30 min 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: 6.27 Meter Model: Horiba U22 Meter S/N: _____
Temperature: 17.5 Spec. Cond.: 0.83 Meter Model: Horiba U22 Meter S/N: _____
ORP: -1 DO: .78 Turbidity: 1.0
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: 8-10-11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW
Personnel: TMT CSH
Purge/Sample Depth: _____

Project Number: _____
Well ID: _____
Sample ID: MW-3

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1600	6.14	19.7	39	0.69	3.14	58.1		300	
1603	6.20	19.8	27	0.76	1.99	49.1			
1606	6.22	18.8	18	0.81	1.45	36.2			
1609	6.23	17.9	15	0.81	1.28	31.2			
1612	6.25	17.7	10	0.82	1.11	26.6			
1615	6.28	17.6	5	0.83	.83	14.1			
1618	6.27	17.5	3	0.83	.95	3.2			
1621	6.27	17.5	2	0.83	.93	1.6			
1624	6.27	17.5	0	0.83	.83	1.5			
1627	6.27	17.5	0	0.83	.90	1.0			
1630	6.27	17.5	-1	0.83	.78	1.0			
1635	Sample MW-3 collected								

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW
Personnel: JMT CDK
Purge/Sample Depth: _____
Project Number: _____
Well ID: _____
Sample ID: AMW-2D

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1054	5.17	17.2	217	0.54	5.20	246		250	
1057	5.03	16.2	239	0.53	3.44	221			
1100	4.95	16.6	253	0.58	2.82	182			
1103	4.94	17.2	259	0.58	2.42	156			
1106	4.95	16.3	261	0.59	2.47	118			
1109	4.95	16.4	259	0.60	2.46	103			
1112	4.95	16.4	258	0.60	2.45	99.4			
1115	4.97	16.1	257	0.60	2.32	96.2			
1118	4.96	16.4	250	0.60	2.48	83.2			
1121	4.96	16.6	249	0.61	2.51	74.1			
1124	4.98	16.3	246	0.61	2.48	69.2			
1125	SAMPLE		COLLECTED						

JMT 8-11-11

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patchogue GW
Personnel: TMB CJR

Date: 8-11-11 Time: 1055
Weather: sunny Air Temp.: 85°

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: 3.85 ft Bottom of Well: 26.5 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: 4.98 Meter Model: Horiba U22 Meter S/N: _____
Temperature: 16.5 Spec. Cond.: 0.61 Meter Model: Horiba U22 Meter S/N: _____
ORP: 248 DO: 2.48 Turbidity: 69.2
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: 8-11-11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW Sampling
Personnel: [illegible]
Purge/Sample Depth: 10'

Project Number: 139893
Well ID: MW-4S
Sample ID: MW-4S

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
8:45	5.60	17.6	118	0.58	3.09	352.0	-	300 mL/m	iron
8:48	5.96	16.2	112	0.55	1.62	483.0	—	—	—
8:51	5.95	15.5	105	0.55	0.91	204.0	—	—	—
8:54	5.97	15.2	93	0.55	0.67	97.6	—	—	—
8:57	6.00	15.2	91	0.54	0.63	119.0	—	—	—
9:00	6.00	15.1	82	0.54	0.44	106.3	—	—	—
9:03	5.99	15.1	81	0.54	0.45	78.4	—	—	—
9:06	6.01	15.1	77	0.54	0.38	34.6	—	—	—
9:09	6.00	15.1	76	0.54	0.37	29.1	—	—	—
9:12	6.03	15.1	71	0.53	0.32	19.2	—	300mL/m	—
9:15	6.03	15.1	70	0.53	0.32	13.8	—	—	—
9:20	MW-4S collected								

COC
6/11/17

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patriquen GW Sampling
Personnel: CM/TMJ

Date: 8/11/11 Time: 8:45
Weather: sunny Air Temp.: 80s

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: 4.92 ft Bottom of Well 12.25 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: 300ml/min Elapsed Time: 30 m Volume Pumped: 3L NA
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: 6.03 Meter Model: Horiba U-22 Meter S/N: —
Temperature: 15.1 Spec. Cond.: 0.53 Meter Model: Horiba U-22 Meter S/N: —
ORP: 70 DO: 0.32 Turbidity: 13.8
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: 8/11/11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Pathogue GW Sampling
Project Number: 138043
Personnel: CM/TMT
Well ID: MW-25
Purge/Sample Depth: 12'
Sample ID: MW-25

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
11:40	5.68	17.8	188	0.71	10.05	670.0	–	300mL/m	–
11:43	5.89	16.4	184	0.78	6.95	472.0	–	–	–
11:46	6.00	15.5	180	0.85	5.03	280.0	–	–	–
11:49	6.05	15.3	180	0.85	5.03	219.0	–	–	–
11:52	6.06	15.2	180	0.86	5.01	293.0	–	–	–
11:55	6.08	15.4	178	0.87	4.83	168.0	–	–	–
11:58	6.07	15.2	178	0.86	4.78	136.0	–	–	–
12:01	6.08	15.3	176	0.86	4.76	113.0	–	–	–
12:04	6.10	15.3	175	0.87	4.75	109.8	–	–	–
12:07	6.11	15.2	175	0.87	4.71	93.7	–	–	–
12:10	6.11	15.2	175	0.86	4.74	97.5	–	–	–
12:15	Sample MW-25 Collected								

CM
@ [illegible]

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patchogue Low Sampling
Personnel: CAM/TMT

Date: 8/11/11 Time: 11:40
Weather: Sunny Air Temp.: 80s

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: 4.50 ft Bottom of Well: 9.08 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: 300 ml/m Elapsed Time: 30m 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: 6.11 Meter Model: Horiba U-22 Meter S/N: —
Temperature: 15.2 Spec. Cond.: 0.86 Meter Model: Horiba U-22 Meter S/N: ____
ORP: 175 DO: 4.74 Turbidity: 97.5
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: 8/11/11

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW
Personnel: TMT CJ
Purge/Sample Depth: _____
Project Number: 138893
Well ID: MW-7S
Sample ID: MW-7S

Actual Time	pH	Temp (°C)	ORP (mV)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1300	6.02	21.0	50	0.55	2.33	155.0	—	300mL/m	—
1303	6.09	18.1	33	0.56	2.57	265.0	—	—	—
1306	6.10	18.1	32	0.56	2.43	301.0	—	—	—
1309	6.12	17.7	33	0.56	1.59	166.0	—	—	—
1312	6.13	17.7	32	0.56	1.55	113.8	—	—	—
1315	6.15	17.6	32	0.56	1.33	116.8	—	—	—
1318	6.15	17.6	32	0.56	1.31	107.4	—	—	—
1321	6.18	17.5	24	0.58	1.10	22.8	—	—	—
1324	6.18	17.6	23	0.58	1.10	21.7	—	—	—
1327	6.19	17.5	18	0.57	1.11	22.3	—	—	—
1330	6.19	17.5	18	0.57	1.08	16.8	—	—	—
1335	Sample		MW-7S		collected				

8/11/11

BROWN AND CALDWELL

Allendale, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number:
Sample I.D.: MW-75 (if different from well no.)

Project: Patchogue CW
Personnel: TRS CSW

Date: 8-11-21 Time: 1300
Weather: Sunny Air Temp.: 85°

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: 4.44 ft Bottom of Well: 12.41 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 ml/min 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: 6.19 Meter Model: Horiba U-22 Meter S/N: —
Temperature: 17.5 Spec. Cond.: 0.57 Meter Model: Horiba U-22 Meter S/N: —
ORP: 18 DO: 1.08 Turbidity: 16.8
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: 8/11/21

BROWN AND CALDWELL

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue GW Sampling
Personnel: CM/MM
Purge/Sample Depth: 25'

Project Number: 138993
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
13:37	6.19	18.1	68	0.53	5.68	-5.0	[redacted]	300mL/m	-
13:40	5.92	16.6	71	0.63	2.32	885.0	—	—	-
13:43	5.90	16.6	67	0.66	2.13	746.0	—	—	-
13:46	5.92	16.2	65	0.67	2.07	615.0	—	—	-
13:49	5.95	15.9	69	0.66	2.55	908.0	—	—	empty flowline
13:52	5.95	15.8	69	0.66	2.36	382.0	—	—	—
13:55	5.94	15.6	70	0.66	2.18	370.0	—	—	—
13:58	5.91	15.9	77	0.65	1.93	271.0	—	—	—
14:01	5.91	15.8	77	0.65	1.83	225.0	—	—	—
14:04	5.90	15.6	85	0.65	1.71	144.0	—	—	—
14:07	5.89	15.7	85	0.65	1.69	123.0	—	—	—
14:10	5.87	15.8	88	0.65	1.67	122.0	—	—	—
14:13	5.87	15.7	91	0.65	1.66	95.6	—	—	—
14:15	Sample	MW-7D	collect.						

CM
8/11/11

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 GW Sampling
Personnel: COM/TMJ

Date: 8/11/11 Time: 13:32
Weather: Sunny Air Temp.: 80°

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: 4.36 ft Bottom of Well: 28.09 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: 300 ml/m Elapsed Time: 36 m Volume Pumped: 3g
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: 5.97 Meter Model: Hydrolab U-2 Meter S/N: —
Temperature: 15.7 Spec. Cond.: 0.65 Meter Model: Hydrolab U-2 Meter S/N: —
ORP: 91 DO: 1.66 Turbidity: 95.6
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: 8/11/11

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

Appendix B: Laboratory Reports (CD-ROM)

Appendix C: Data Usability Summary Report

ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
PATCHOGUE, NEY YORK

Client: Brown and Caldwell, Allendale, New Jersey
SDG: PCH08
Laboratory: Lancaster Laboratories, Lancaster, Pennsylvania
Site: Patchogue, New York
Date: September 27, 2011

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-8S	6375021	Water
2	DUP081011	6375022	Water
3	MW-8D	6375023	Water
3MS	MW-8DMS	6375024MS	Water
3MSD	MW-8DMSD	6375025MSD	Water
4	MW-1	6375026	Water
5	MW-9S	6375027	Water
6	MW-9D	6375028	Water
7	FB081011	6375029	Water
8	MW-3	6375030	Water
9	MW-4S	6375031	Water
10	MW-4D	6375032	Water
11*	TB081211	6375033	Water
12	MW-2D	6375034	Water
13	MW-2S	6375035	Water
14	MW-7S	6375036	Water
15	MW-7D	6375037	Water

* - Analyzed for VOCs only

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 August 10-11, 2011 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)	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 not qualified.

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)

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
FB081011	None- ND	-	-	-	-
TB081211	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-8S ug/L	DUP081011 ug/L	RPD	Qualifier
Methyl tertiary butyl ether	0.5	0.5	0%	None

Polynuclear Aromatic Hydrocarbons (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
FB081011	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. For a high RPD >50% for water samples, results are considered estimated and qualified (J). A high %RPD may indicate a potential bias due to poor laboratory instrument precision.

PAH				
Compound	MW-8S ug/L	DUP081011 ug/L	RPD	Qualifier
Acenaphthene	0.5	0.6	18%	None
Fluorene	0.2	0.2	0%	None
Naphthalene	0.2	0.1	67%	None

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

Signed: Nancy Weaver Dated: 9/30/11

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.

Analysis Report

Lancaster Laboratories

Sample Description: MW-8S Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375021
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 11:00 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW-8S SDG#: PCH08-01

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	**0.5**	J	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**		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	**0.2**	J	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.09	1
07805	**Naphthalene**	91-20-3	**0.2**	J	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	T112281AA	08/16/2011 11:43	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 11:43	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 15:28	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 8810

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

NW
9/27/11

Analysis Report

Lancaster Laboratories

2

Sample Description: DUP081011 Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375022
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

FD810 SDG#: PCH08-02FD

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	**0.5**	**J**	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	**0.6**		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	**0.2**	**J**	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.09	1
07805	**Naphthalene**	91-20-3	**0.1**	**J**	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	T112281AA	08/16/2011 12:07	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 12:07	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 15:50	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0811

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

MW 9/27/11

Analysis Report

Lancaster Laboratories

3

Sample Description: MW-8D Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375023
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 11:45 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW8D- SDG#: PCH08-03BKG

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	N.D.	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	T112281AA	08/16/2011 12:30	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 12:30	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 10:21	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0812

Lancaster Laboratories, Inc.
2425 New Holland Pike
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MW 9/27/11

Analysis Report

Lancaster Laboratories

4

Sample Description: MW-1 Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375026
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 14:05 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW--1 SDG#: PCH08-04

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	N.D.	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	T112281AA	08/16/2011 14:04	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 14:04	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 16:12	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0815

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

MW 9/27/11

Analysis Report

Lancaster Laboratories

5

Sample Description: MW-9S Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375027
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 15:05 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW9S- SDG#: PCH08-05

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	**4**		0.09	1
07805	**Acenaphthylene**	208-96-8	**2**		0.09	1
07805	**Anthracene**	120-12-7	**0.4**	**J**	0.09	1
07805	**Benzo(a)anthracene**	56-55-3	**0.7**		0.09	1
07805	**Benzo(a)pyrene**	50-32-8	**0.8**		0.09	1
07805	**Benzo(b)fluoranthene**	205-99-2	**0.7**		0.09	1
07805	**Benzo(g,h,i)perylene**	191-24-2	**0.5**	**J**	0.09	1
07805	**Benzo(k)fluoranthene**	207-08-9	**0.3**	**J**	0.09	1
07805	**Chrysene**	218-01-9	**0.7**		0.09	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.09	1
07805	**Fluoranthene**	206-44-0	**1**		0.09	1
07805	**Fluorene**	86-73-7	**1**		0.09	1
07805	**Indeno(1,2,3-cd)pyrene**	193-39-5	**0.3**	**J**	0.09	1
07805	**Naphthalene**	91-20-3	**0.3**	**J**	0.09	1
07805	**Phenanthrene**	85-01-8	**2**		0.09	1
07805	**Pyrene**	129-00-0	**1**		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	T112281AA	08/16/2011 14:28	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 14:28	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 16:34	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0816

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MW 9/27/11

Analysis Report

Lancaster Laboratories

6

Sample Description: MW-9D Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375028
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 15:50 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW9D- SDG#: PCH08-06

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	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	**0.1**	J	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	**0.1**	J	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	**Fluoranthene**	206-44-0	**0.3**	J	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	N.D.		0.1	1
07805	**Phenanthrene**	85-01-8	**0.3**	J	0.1	1
07805	**Pyrene**	129-00-0	**0.4**	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	T112281AA	08/16/2011 14:51	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 14:51	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 16:56	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0017

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MW 9/27/11

Analysis Report

Lancaster Laboratories

7

Sample Description: FB081011 Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375029
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 16:15 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

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FB810 SDG#: PCH08-07FB

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	N.D.	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	T112281AA	08/16/2011 09:45	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 09:45	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 17:18	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0813

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MW 9/27/11

Analysis Report

Lancaster Laboratories

Sample Description: MW-3 Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375030
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/10/2011 16:35 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

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MW-3- SDG#: PCH08-08

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	**2**		0.1	1
07805	**Acenaphthylene**	208-96-8	**2**		0.1	1
07805	**Anthracene**	120-12-7	**1**		0.1	1
07805	**Benzo(a)anthracene**	56-55-3	**0.1**	**J**	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	**4**		0.1	1
07805	**Fluorene**	86-73-7	**0.2**	**J**	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	Naphthalene	91-20-3	N.D.		0.1	1
07805	**Phenanthrene**	85-01-8	**0.4**	**J**	0.1	1
07805	**Pyrene**	129-00-0	**4**		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	T112281AA	08/16/2011 15:15	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 15:15	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11225WAF026	08/29/2011 17:40	Joseph M Gambler	1
07807	BNA Water Extraction	SW-846 3510C	1	11225WAF026	08/15/2011 09:15	Catherine R Wiker	1

PCH08 0019

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LW 9/27/11

Analysis Report

Lancaster Laboratories

9

Sample Description: MW-4S Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375031
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/11/2011 09:20 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

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MW4S- SDG#: PCH08-09

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	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	N.D.		0.1	1
07805	Phenanthrene	85-01-8	N.D.		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	T112281AA	08/16/2011 15:38	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 15:38	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11227WAA026	08/27/2011 21:55	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	11227WAA026	08/15/2011 17:30	Nicholas W Shroyer	1

PCH08 0828

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9/27/11

Analysis Report

Lancaster Laboratories

10

Sample Description: MW-4D Grab Water
COC: 267972
Patchogue, NY

LLI Sample # WW 6375032
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/11/2011 10:30 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

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Allendale NJ 07401

MW4D- SDG#: PCH08-10

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	N.D.	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	T112281AA	08/16/2011 16:01	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 16:01	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11227WAA026	08/27/2011 22:17	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	11227WAA026	08/15/2011 17:30	Nicholas W Shroyer	1

PCH08 0021

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MW 9/27/11

Analysis Report

Lancaster Laboratories

11

Sample Description: TB081211 Water
COC: 267976
Patchogue, NY

LLI Sample # WW 6375033
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/12/2011

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

TB812 SDG#: PCH08-11TB

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	T112281AA	08/16/2011 10:08	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 10:08	Linda C Pape	1

PCH08 0822

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MW 9/27/11

Analysis Report

Lancaster Laboratories

12

Sample Description: MW-2D Grab Water
COC: 267976
Patchogue, NY

LLI Sample # WW 6375034
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/11/2011 11:25 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
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Allendale NJ 07401

MW2D- SDG#: PCH08-12

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	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	**0.1**	**J**	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	N.D.		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	T112281AA	08/16/2011 16:25	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 16:25	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11227WAA026	08/27/2011 22:40	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	11227WAA026	08/15/2011 17:30	Nicholas W Shroyer	1

PCH08 0823

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lw 9/27/11

Analysis Report

Lancaster Laboratories

13

Sample Description: MW-2S Grab Water
COC: 267976
Patchogue, NY

LLI Sample # WW 6375035
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/11/2011 12:15 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW2S- SDG#: PCH08-13

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	N.D.	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	T112281AA	08/16/2011 16:48	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 16:48	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11227WAA026	08/27/2011 23:02	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	11227WAA026	08/15/2011 17:30	Nicholas W Shroyer	1

PCH08 0824

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MW 9/27/11

Analysis Report

Lancaster Laboratories

14

Sample Description: MW-7S Grab Water
COC: 267976
Patchogue, NY

LLI Sample # WW 6375036
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/11/2011 13:35 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW7S- SDG#: PCH08-14

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.	0.1	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	N.D.	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	T112281AA	08/16/2011 17:12	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 17:12	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11227WAA026	08/27/2011 23:24	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	11227WAA026	08/15/2011 17:30	Nicholas W Shroyer	1

PCH08 8025

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2425 New Holland Pike
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9/27/11

Analysis Report

Lancaster Laboratories

15

Sample Description: MW-7D Grab Water
COC: 267976
Patchogue, NY

LLI Sample # WW 6375037
LLI Group # 1261514
Account # 09286

Project Name: Patchogue, NY

Collected: 08/11/2011 14:15 by CM

Submitted: 08/12/2011 19:58
Reported: 08/30/2011 21:37

Brown & Caldwell
110 Commerce Drive
Allendale NJ 07401

MW7D- SDG#: PCH08-15*

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	N.D.	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	T112281AA	08/16/2011 17:35	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T112281AA	08/16/2011 17:35	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11227WAA026	08/27/2011 23:46	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	11227WAA026	08/15/2011 17:30	Nicholas W Shroyer	1

PCH08 0026

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MW 9/27/11

Appendix D: Electronic Data Deliverable (CD-ROM)