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

Prepared for National Grid USA, Hicksville, New York September 2012

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

Prepared for National Grid USA 175 East Old Country Road Hicksville, New York 11801

September 2012

Project Number: 142128.410.006



Brown and Caldwell Associates 2 Park Way, Suite 2A Upper Saddle River, New Jersey 07458

## **Table of Contents**

App	pendices	
List	of Tables	i
List	of Figures	i
	Introduction	
	1.1 Background	1-1
2.	Scope of Work	2-1
3.	Results and Findings	3-1
	3.1 Water Level Data	3-1
	3.2 NAPL Gauging	3-1
	3.3 Groundwater Quality Data	3-1
4.	Summary and Conclusions	4-1
Ref	erences	REF-1

## **Appendices**

Appendix A	Field Sampling Data Sheets
Appendix B	Laboratory Reports (CD-ROM)
Appendix C	Data Usability Summary Report
Appendix D	Electronic Data Deliverable (CD-ROM

### List of Tables

- Table 1. Water Elevation and NAPL Monitoring Data
- Table 2. Groundwater Analysis Results
- Table 3. Summary of Historical BTEX Concentrations
- Table 4. Summary of Historical PAH Concentrations

## List of Figures

Figure 1. Water Table Contour Map

#### **Section 1**

## Introduction

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

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

#### 1.1 Background

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

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



#### **Section 2**

## **Scope of Work**

Field activities for the groundwater monitoring event were conducted by BC on May 23 through May 25, 2012. On May 23, 2012, prior to conducting groundwater sampling, depth-to-water measurements and NAPL gauging were conducted on the 14 monitoring wells associated with the Site. The level of the Patchogue River was also measured at the two staff gauges. Locations of the 14 monitoring wells and staff gauges are depicted on Figure 1.

Groundwater samples were collected from 12 monitoring wells on May 23 through May 25, 2012. Wells MW-5 and MW-6 were not sampled this monitoring period due to the presence of NAPL in these wells. The presence of NAPL in these wells is consistent with observations during previous NAPL gauging activities conducted as part of the quarterly monitoring events. The standard protocol is that if NAPL is observed in a well during gauging or sampling, groundwater samples are not submitted for laboratory analyses. Groundwater sampling was conducted using low-flow purging and sampling techniques in accordance with USEPA (July 1996, Revised January 2010) protocol. Samples were submitted to an analytical laboratory and analyzed for: BTEX and methyl tertiary butyl ether (MTBE) using USEPA SW-846 Method 8260B; and PAHs, using USEPA SW-846 Method 8270C. The groundwater samples were also analyzed in the field for pH, specific conductivity, temperature, turbidity, oxidation-reduction potential (ORP), and dissolved oxygen (see Appendix A for field data sheets).

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

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

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



#### **Section 3**

## **Results and Findings**

#### 3.1 Water Level Data

Table 1 provides the water level data from the May 23, 2012 measurements. Figure 1 illustrates the elevation contours of the water table based on these data. The contours were developed using water level data only from the shallow wells at the Site (i.e., those with screens that straddle, or are just below, the water table) and the surface water staff gauges in the Patchogue River because these values are more representative of water table elevations than data from the deeper wells. However, the groundwater elevation (hydraulic head) values for the wells screened in deeper intervals are also posted on Figure 1. The water table is relatively shallow and is typically positioned in the fill that overlies the alluvial deposits and outwash deposits. The water table contours indicate that lateral groundwater flow is from northwest to southeast across the Site toward the Patchogue River. Comparisons of the groundwater levels in the Site monitoring wells to the river elevations, as measured at the staff gauge locations, demonstrate that groundwater elevations are higher than the river level, thus indicating that groundwater is discharging to 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) provides further support to the conclusion that groundwater is discharging to the Patchogue River. The general configuration of the water table contours (as shown on Figure 1), developed using the May 23, 2012 data, and the interpreted groundwater flow patterns, are consistent with those from previous rounds of water level measurements with one exception. The exception occurred during the March 2010 sampling event when the large-scale dewatering activities were being conducted on the WWTF site located east of the Site on the opposite side of the river (see discussion in Section 1.1). Operation of this dewatering system altered groundwater flow patterns and levels at the Site (see "Groundwater Monitoring Report, Second Semiannual 2010 Sampling Event" [GEI, November 2010]).

#### 3.2 NAPL Gauging

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

- MW-5: Brown-black DNAPL blebs on last 1.0 ft of threaded rod, strong tar-like odor.
- MW-6: Black NAPL blebs on bottom 0.15 ft of threaded rod, strong tar-like odor.

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

#### 3.3 Groundwater Quality Data

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

As described above, during water level monitoring and gauging activities, NAPL was identified in two of the 14 monitoring wells, MW-5 and MW-6; these two wells are located in the central part of the Site in the area of former MGP operations. Therefore, these two wells were not sampled. Groundwater samples were collected from the remaining 12 monitoring wells and submitted for analysis. In general, the analytical results were consistent with those from previous monitoring events. BTEX compounds were not detected in groundwater samples from any of these wells. At most locations, PAH compounds were either not detected or were detected at concentrations below the Class GA groundwater quality criteria. However, in samples collected from monitoring wells MW-9D, MW-9S, MW-7D, MW-3, and MW-2D 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 Second Quarter 2012 (May 2012) event.

The PAH compounds that were identified in the groundwater samples from these monitoring wells at concentrations above the Class GA groundwater quality criteria—benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene and indeno(1,2,3-cd)pyrene—have very low aqueous solubilities, are not readily mobile in groundwater, and are unlikely to have migrated from the on-site source area. The criteria that were exceeded for five of these six PAHs are unpromulgated guidance values rather than Part 703 standards, while the criteria for the sixth PAH, benzo(a)pyrene, is a Part 703 standard. The standard for benzo(a)pyrene was exceeded at concentrations below the method quantitation limit. The guidance value for the five PAHs, 0.002  $\mu$ g/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 Second Quarter 2012 (May 2012), as in previous monitoring events. Both MW-5 and MW-6 are located in the center of the Site in the area of former MGP operations. No BTEX compounds were detected during the analysis of groundwater samples collected from the twelve other monitoring wells during this monitoring event. At seven 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 monitoring wells MW-9D, MW-9S, MW-7D, MW-3, and MW-2D 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. These findings are consistent with those of previous monitoring events. At MW-9D, MW-9S, and MW-2D one of the PAH compounds exceeded Part 703 Standard while the other exceedances identified are exceedances of unpromulgated guidance values. The criteria for these compounds are extremely low, approximately two orders of magnitude below the laboratory method detection limit. The six PAH compounds that were identified at concentrations above the Class GA groundwater quality criteria have very low aqueous solubilities, are not readily mobile in groundwater, and are unlikely to have migrated from the on-site source area. This will continue to be evaluated through subsequent quarterly monitoring events.

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

Second Quarter 2012 Groundwater Monitoring Report							

## **Tables**

## TABLE 1 WATER ELEVATIONS AND NAPL MONITORING DATA MAY 2012

## PATCHOGUE FORMER MGP SITE PATCHOGUE, NEW YORK

			<u>5/23</u>	/ <u>2012</u>		
	Top of Casing	Depth to	Water	Depth to	Total Depth	
Well ID	Elevation	Water	Elevation	NAPL	of Well	Remarks
	(ft., NAVD)	(ft., BTOC)	(ft., NAVD)	(ft., BTOC)	(ft., BGS)	
MW-1	11.23	5.85	5.38	ND	16.2	
MW-2S	8.97	4.46	4.51	ND	14.05	
MW-2D	8.23	3.81	4.42	ND	26.2	
MW-3	5.39	2.47	2.92	ND	10.48	
MW-4S	7.74	5.11	2.63	ND	12.1	
MW-4D	7.57	4.86	2.71	ND	26.5	
MW-5	7.93	4.16	3.77	15.65	16.65	Brown-black NAPL Blebs on last 1.0 ft of threaded rod, strong tar-like odor.
MW-6*	8.08	6.51	1.57	21.65	21.8	Black NAPL blebs on bottom 0.15 ft of threaded rod, strong tar- like odor.  *Depth to water measurement is anomalously low compared to previous and subsequent measurements.
MW-7S	8.21	4.53	3.68	ND	12.4	
MW-7D	8.09	4.32	3.77	ND	27.9	
MW-8S	4.86	0.87	3.99	ND	9.8	
MW-8D	4.77	0.82	3.95	ND	25.1	
MW-9S	4.47	1.54	2.93	ND	10.23	
MW-9D	4.66	1.55	3.11	ND	23.15	
SG-1	5.23	4.11	1.12		NA	
SG-2	5.16	3.85	1.31		NA	

Notes:

NAVD - North American Vertical Datum

BGS - Below Ground Surface

BTOC - Below Top of Casing

NAPL - Non-aqueous phase liquid

NA - Not applicable ND - Not Detected



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

		ndwater Criteria									
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-1	MW-1 DUP	MW-2S	MW-2D	MW-3	MW-4S	MW-4D
Constituent	Guidance	Standard	Units	Date	5/23/2012	5/23/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012
<b>Volatile Organic Compounds</b>											
BTEX											
Benzene	NE	1	µg/L		0.5 U						
Toluene	NE	5	µg/L		0.7 U						
Ethylbenzene	NE	5	µg/L		0.8 U						
m&p-Xylenes	NE	5	µg/L		0.8 U						
o-Xylene	NE	5	µg/L		0.8 U						
Xylenes, Total	NE	NE	μg/L		0.8 U						
Total BTEX	NE	NE	µg/L		ND						
Other VOCs											
Methyl Tertiary Butyl Ether	10	NE	μg/L		0.5 U						
Semi-Volatile Organic Comp	ounds (SVOCs)										
Polycyclic Aromatic Hydroca	rbons (PAHs)										
Acenaphthene	20	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.2 J	0.1 U	0.3 J
Acenaphthylene	NE	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.3 J	0.1 U	2
Anthracene	50	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.4 J	0.1 U	0.2 J
Benzo(a)anthracene	0.002	NE	µg/L		0.1 U	0.1 U	0.1 U	0.1 J	0.1 J	0.1 U	0.1 U
Benzo(a)pyrene	NE	0	μg/L		0.1 U	0.1 U	0.1 U	0.1 J	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.002	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 J	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 J	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.002	NE	μg/L		0.1 U						
Chrysene	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
Dibenzo(a,h)anthracene	NE	NE	μg/L		0.1 U						
Fluoranthene	50	NE	μg/L		0.1 J	0.1 U	0.1 U	0.1 U	2	0.1 U	0.1 U
Fluorene	50	NE	μg/L		0.1 U	1					
Indeno(1,2,3-cd)pyrene	0.002	NE	μg/L		0.1 U						

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

	Class GA Groundwater Criteria										
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-1	MW-1 DUP	MW-2S	MW-2D	MW-3	MW-4S	MW-4D
Constituent	Guidance	Standard	Units	Date	5/23/2012	5/23/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012
Naphthalene	10	NE	μg/L		0.1 J	0.1 U	0.1 J	0.1 U	0.1 U	0.1 U	0.2 J
Phenanthrene	50	NE	µg/L		0.1 J	0.1 U	2				
Pyrene	50	NE	μg/L		0.1 J	0.1 J	0.1 U	0.2 J	2	0.1 U	0.1 J
Total PAHs	NE	NE	µg/L		0.4	0.1	0.1	0.7	5	ND	5.8

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

	Class GA Grou	ndwater Criteria								
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D
Constituent	Guidance	Standard	Units	Date	5/23/2012	5/24/2012	5/25/2012	5/25/2012	5/24/2012	5/26/2012
/olatile Organic Compounds	<b>;</b>									
BTEX										
Benzene	NE	1	μg/L		0.5 U	0.5				
Toluene	NE	5	μg/L		0.7 U	0.7				
Ethylbenzene	NE	5	µg/L		0.8 U	0.8 (				
m&p-Xylenes	NE	5	µg/L		0.8 U	0.8				
o-Xylene	NE	5	μg/L		0.8 U	0.8 (				
Xylenes, Total	NE	NE	µg/L		0.8 U	0.8 I				
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				
Semi-Volatile Organic Comp	ounds (SVOCs)									
Polycyclic Aromatic Hydroca	rbons (PAHs)									
Acenaphthene	20	NE	μg/L		0.1 U	0.1 U	0.7	0.1 U	3	0.1
Acenaphthylene	NE	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.5	0.1
Anthracene	50	NE	μg/L		0.1 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1
Benzo(a)anthracene	0.002	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.2 J	0.1 .
Benzo(a)pyrene	NE	0	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.2 J	0.2 .
Benzo(b)fluoranthene	0.002	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.2 J	0.3 .
Benzo(g,h,i)perylene	NE	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 J	0.2 .
Benzo(k)fluoranthene	0.002	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 J	0.2 .
Chrysene	0.002	NE	μg/L		0.1 U	0.1 J	0.1 U	0.1 U	0.2 J	0.2
Dibenzo(a,h)anthracene	NE	NE	μg/L		0.1 U	0.1				
Fluoranthene	50	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.5	0.3
Fluorene	50	NE	μg/L		0.1 U	0.1 U	0.1 J	0.1 U	0.3 J	0.1
Indeno(1,2,3-cd)pyrene	0.002	NE	μg/L		0.1 U	0.2 .				

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

	Class GA Groundwater Criteria										
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D	
Constituent	Guidance	Standard	Units	Date	5/23/2012	5/24/2012	5/25/2012	5/25/2012	5/24/2012	5/26/2012	
Naphthalene	10	NE	μg/L		0.1 U	0.1 U	0.2 J	0.1 U	0.2 J	0.1 J	
Phenanthrene	50	NE	μg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 J	0.3 J	
Pyrene	50	NE	μg/L		0.1 U	0.2 J	0.1 U	0.1 U	0.7	0.5	
Total PAHs	NE	NE	µg/L		0.1	0.3	1	ND	6	2.8	

#### Notes:

 $\ensuremath{\mathsf{NE}}$  -  $\ensuremath{\mathsf{Not}}$  established.

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

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.

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

						Total	BTEX Conce	entrations ( <sub>l</sub>	µg/L)					
Sampling Date							Monitor	ing Well						
	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-5	MW-6	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D
Mar-08	0	0	0	0	3.4	0	1016	57	NS	NS	NS	NS	NS	NS
Jul-08	NS	0	0	0	0	0	678	0	0	0	0	0	0	0
Mar-09	0	0	0	0	0	0	975	0	0	1	0	0	0	0
Sep-09	0	0	0	0	0	0	1257	1	0	0	0	0	0	0
Mar-10	0	0	0	0	0	0	637	2	0	9	0	0	0	0
Sep-10	0	0	0	0	0	0	NS	0	0	0	0	0	27	0
Jan-11	1.7	0	0	0	0	0	NS	NS	0	0	0	0	1	0
Apr-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Aug-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Nov-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Feb-12	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
May-12	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0
Min	0	0	0	0	0	0	637	0	0	0	0	0	0	0
Max	1.7	0	0	0	3.4	0	1257	57	0	9	0	0	27	0
Mean	0.2	0	0	0	0.3	0	913	10	0	0.9	0	0	2.5	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		Monitoring Well												
	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-5	MW-6	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D
Mar-08	0	0	0	0.76	0.6	4.3	1774	214	NS	NS	NS	NS	NS	NS
Jul-08	NS	0.7	0	0	8.0	0	1799	154	0	0.47	0	0	12.0	0
Mar-09	0	0	0	0	0	0	2730	0	0	0	0	0	0	0
Sep-09	0	0	0	0	0	0	3373	1	0	0	0	0	0	0
Mar-10	0	0	0	0	0	39	2390	17	0	0	22	0	2	0
Sep-10	0	0	0	128	0	6	NS	14	0	0	11	0	396	0
Jan-11	22	0	0	17	0	12	NS	NS	0	0	6	0	42	5
Apr-11	0	0	0	6	0	20	NS	NS	0	0	0	0	9	0
Aug-11	0	0	0.1	14	0.1	0	NS	NS	0	0	0.4	0	16	1.2
Nov-11	0	0	0.2	10	0.4	0	NS	NS	0	0	0.8	0.2	8	3.4
Feb-12	0.2	0	0	6	0.6	4	NS	NS	0.1	0	0.6	0	5	2.9
May-12	0.4	0.1	0.6	5	0	5.8	NS	NS	0.1	0.3	1	0	6	2.8
Min	0	0	0	0	0	0	1774	0	0	0	0	0	0	0
Max	22	0.7	0.6	128	8.0	39	3373	214	0.1	0.5	22	0.2	396	5
Mean	2.1	0.1	0	16	0.8	7.6	2413	67	0	0	3.8	0	45	1.4

#### Notes:

PAH - Polycyclic aromatic hydrocarbons

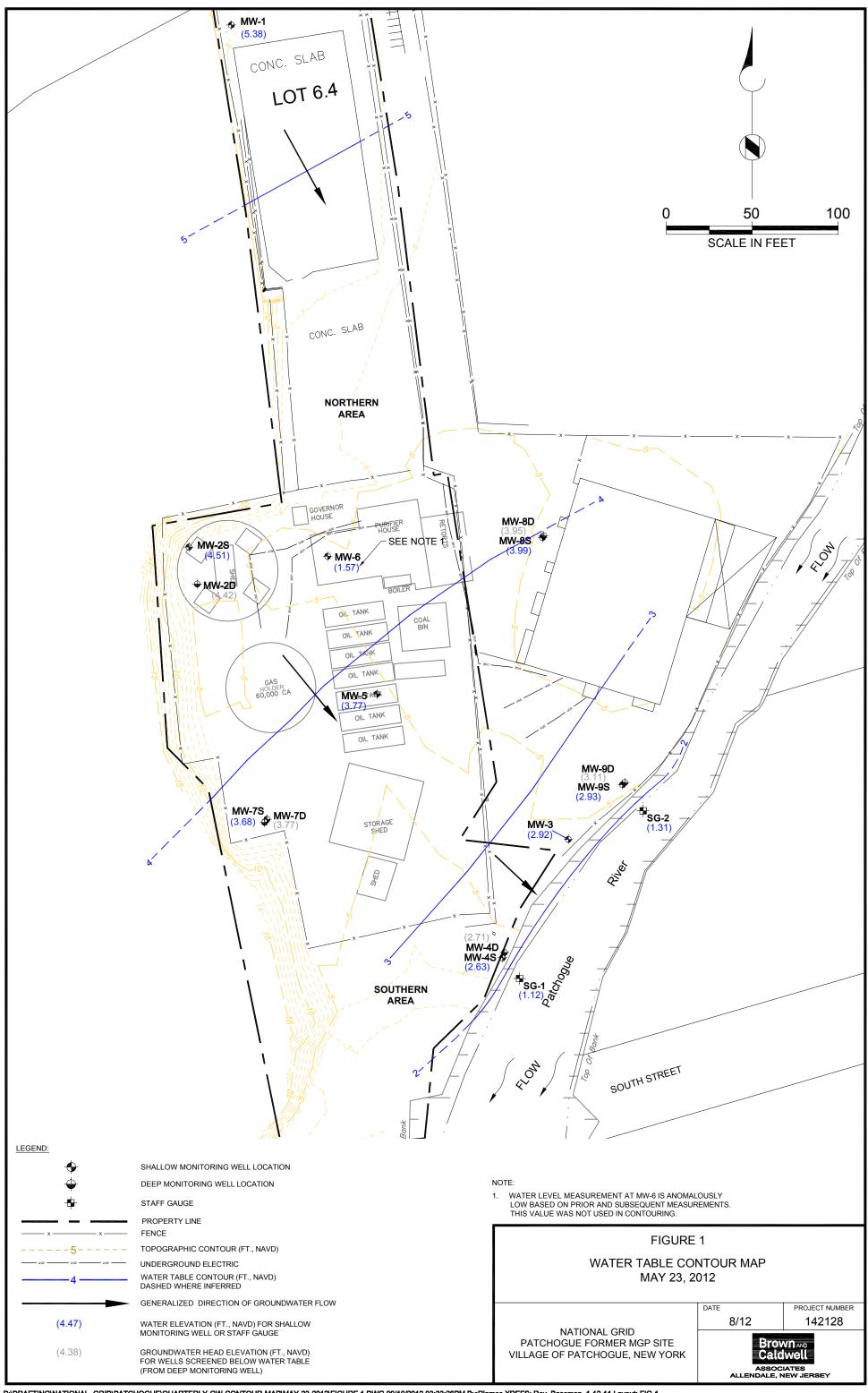
μg/L - micrograms per liter

NS - Not sampled.



Second Quarter 2012 Groundwater Monitoring Report							

## **Figures**



## **Appendix A:** Field Sampling Sheets

## BROWN AND CALDWELL

#### **LOW-FLOW GROUNDWATER** SAMPLING FIELD DATA

Well Number: Mw-55

Allendale, NJ Office	Sample I.D.:	(if different from well no.)
		Air Temp.: 75°
Casing Diameter:  Stainless Steel Steel Galv. Steel DEPTH TO: Static Water Level: / 7 ft Bottom of We DATUM: Top of Protective Casing Top of Well Casing CONDITION: Is Well clearly labeled? Yes No Is we Is Prot. Casing/Surface Mount in Good Cond.? ( Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost head Is Padlock Functional? Yes No No NA Is Inner Casing Properly Capped and Vented?	el  PVC  Teflon®  Open rociell: ft  Other: ell clean to bottom? Yes  No fnot bent or corroded) Yes   Yes  No aved) Yes  No Is Inner Casing Intact? Yes	k o No
PURGE DATA:  Bailer, Size: Bladder Pump	☐ 2" Submersible Pump ☐ 4" Su	bmersible Pump
MATERIALS: Pump/Bailer:	Tubing/Rope:	Teflon® Polyethylene Polypropylene Other:
SAMPLING DATA:  METHOD: Bailer, Size: Bladder Pump 2 2" S  Syringe Sampler Peristaltic Pump Ine	Submersible Pump □ 4" Submersik rtial Lift Pump □ Other:	ole Pump
MATERIALS: Pump/Bailer: Teflon® Stainless Steel	Tubing/Repe.	Teflon® Polyethylene
Metals samples field filtered?  APPEARANCE:  Clear  Turbid  Color:  FIELD DETERMINATIONS:  Temperature:  ORP:  No  Weter Model  Meter Model  Meter Model  Meter Model  Turbidity:  ORP:  DUP:  No  Yes  Name:  MS/MSD:  No  Yes  Name:  Field Lab Results:  NA  PH:  DO:  I certify that this sample was collected and handled in accordance with applicable  Signature:	Contains Immiscible Liq  Contains Immiscible Liq  Meter S/N:  Meter S/N:	
	Personnel: BFT 6-6  WELL DATA: Casing Diameter: Static Water Level: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: 7 ft Bottom of Wo DATUM: Top of Protective Casing Top of Well Casing CONDITION: Is Well clearly labeled? Yes No Is wells Prot. Casing/Surface Mount in Good Cond.? Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost he Is Padlock Functional? Yes No No Is No Is Inner Casing Properly Capped and Vented?  VOLUME OF WATER: Standing in well:  PURGE DATA: METHOD: Bailer, Size: Bladder Pump Peristaltic Pump MATERIALS: Pump/Bailer: Fellon® Stainless Steel PVC Other: Pumping Rate: Standing Pump Peristaltic Pump Was well Evacuated? Yes No No No PURGING EQUIPMENT: Dedicated Prepared Off  SAMPLING DATA: METHOD: Bailer, Size: Bladder Pump 12 Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Fellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Tellon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared Off  MATERIALS: Pump/Bailer: Prepared O	Project: Personnel: 8 7 6 6 Weather: Stainless Steel   Galv. Steel   PVC   Teflon®   Open roc Depth TO: Static Water Level: 7 7 ft Bottom of Well: ft DATUM: Open roc Depth TO: Static Water Level: 7 7 ft Bottom of Well: ft DATUM: Open roc Depth TO: Static Water Level: 7 7 ft Bottom of Well: ft DATUM: Open roc Depth TO: Static Water Level: 7 7 ft Bottom of Well: ft DATUM: Open roc Depth TO: Static Water Level: 7 7 ft Bottom of Well: ft DATUM: Open roc Depth TO: Static Water Level: 7 ft DATUM: Open roc Depth TO: Static Water Level: 7 ft DATUM: Is Well clearly labeled? Yes Open Roc Depth TO: Open Roc Depth To: Static Water Level: 7 ft DATUM: Is Well clearly labeled? Yes Open Roc Depth To: Open Roc Dept

Project Name: P. tzlogu MLS	Project Number:
Personnel: DFT GG	Well ID: MW-7S
Purge/Sample Depth:	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
628	6.34	16.69	-1/4	0.549	2.26	75.8	1.78	225	7 E 307A0
631	6.37	16:40	-124	0.543	2.09	52.6	Samuel Con-	and transfer to the	
634	6.39	16.14	-133	0.531	2.08	25.0	1.78	s at the control of	
637	6.41	16.02	-138	0.523	1.84	16.8	is long Store	Domizate Pad Int	
640	6.41	16.01	-138	0.521	1.83	12.4	PEY DAY	Familials President	
643	6.42	15.56	-140	0.516	1.81	0.0	and Author	DIS BUREA VEHILL	
646	6-43	15.56	-140	0.516	1.76	8-0	SPEN SHOOL	onere	FAW 30 SMILIGY
649	6.43	15.53	-141	0.516	1.75	0.0	1.79		ATAG REGILE
652	5.43	15.52	-142	6.513	1.70	0.6		To Ballet, Sia	COLUMN TO SERVICE STATE OF THE
18 55	6.44	15.52	-142	0.515	1.71	0.0		Withresto LU	
6 58	6.45	15.52	-142	0.516	1.70	0.0	ChrodaT	0	
701	Sample	Collect	1	Grank.		BMZ	Stemiate	No. of the Control of	MATERIALS / Pu
	energion						SIMIL.		
			0				- 7000	Was Asset 1	
		Seat Annual Property and		Mana cert		THE BHI	i wasanini		No. 1918 P. GREEN WAY
									STORES OF STREET
								i Al	AU DALLESIAS
	- 000		BIE IN			2 904116	de la lace	Ballor, Size	T CONTEM
					RE-HSOMSHILL	D SUME COM		seidimo eftudia	
-		N M					Control of the		A markety say
	Charles II					Land?	ShalalesO.	No. of the least o	9
	-		teal) him	1			1	0.0	SAMINAND EDUR
							- 08 L	N. S.	en zeigning alstati
			alaska P	_			District Free	THE SALE OF THE SA	はいいのははは一つが
4		THE STATE OF						E POTRE LA CONTRACTOR DE	
									Carlo
							X		List to the same
			1				>		Colombia (Colombia)
The same of			E A CALL	The late times	statement element	The state of the second	5/29	X	State of the State of
				10			-/0/	//X	Signature Commence
		W. Carlot							-

## BROWN AND

Signature:

#### LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

CALDWELL Well Number: MW- 45 (if different from well no.) Sample I.D.: Allendale, NJ Office Date: 5/24/12 Time: 14/18
Weather: 6/0004 Air Temp.: 70° Project: Paterogue MGP Personnel: BFT 6-6 WELL DATA: Casing Diameter: 4 Stainless Steel Steel PVC Teflon® Other: Open rock DEPTH TO: Static Water Level: 5-11 ft Bottom of Well: ft DATUM: Top of Protective Casing Top of Well Casing Other: CONDITION: Is Well clearly labeled? ☐ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☐ No Does Weep Hole adequately drain well head? Yes No Is Concrete Pad Intact? (not cracked or frost heaved) Yes No Is Padlock Functional? ☐ Yes ☐ No ☐ NA Is Inner Casing Intact? ☐ Yes ☐ No Is Inner Casing Properly Capped and Vented? 
☐ Yes ☐ No Standing in well: VOLUME OF WATER: To be purged: **PURGE DATA:** ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump □ Bailer, Size: METHOD: ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: Teflon® ☐ Teflon® Stainless Steel
PVC Tubing/Rope: □ Polyethylene MATERIALS: Pump/Bailer: Polypropylene Other: Other: Min Elapsed Time: 30 min Volume Pumped: ~ 3.5 sellon, Pumping Rate: 350 m/ ☐ Yes ☐ No Number of Well Volumes Removed: Was well Evacuated? PURGING EQUIPMENT: Dedicated Prepared Off-Site Field Cleaned SAMPLING DATA: ☐ Bailer, Size: ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump METHOD: □ Syringe Sampler □ Peristaltic Pump □ Inertial Lift Pump □ Other: \_\_\_\_ □ \_Teflon® Teflon® MATERIALS: (Pump/Bailer: Tubing/Rope: ☐ Stainless Steel Polyethylene SAMPLING EQUIPMENT: Dedicated Prepared Off-Site Field Cleaned

Metals samples field filtered? Prepared Off-Site Field Cleaned

Metals samples field filtered? Prepared Off-Site Field Cleaned

APPEARANCE: Clear Turbid Color: Contains Immiscible Liquid FIELD DETERMINATIONS: pH: 5-79
Temperature: 14/42 Spec. Cond.: 0 3 5 6
DO: 1-96
Turbidity: 1-4 
 DUP:
 Image: No processing the processing of the processing to DUP: I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature:

Date: 5/24/12

Project Name: Patchosuc	Project Number:
Personnel: 3FT 1GG	Well ID: 48
Purge/Sample Depth: 10	Sample ID:
	N A H

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
418	3.91	16.28	129	0.450	4.79	185,1	5,11	350	out to their
421	5,94	15.20	134	0.447	2.78	177.0		The state of the s	
424	5095	14.76	143	0377	2,49	2500	b ulateuro	a stell could like	7
427	5.96	14.57	199	0,370	2009	12.7	to Jan Ste	tof bail eterpress	
130	5,96	14.54	158	0.369	9004	6.6	5.30	Special Publication	9
133	5.96	14.41	156	0.368	2,07	0.0	Arter Arter	USA GREEN TERM	
136	5,97	19.40	158	0359	2112	0.7	THEM IN 6.	Bridge Street	TANK NO SMILLION
4147	5198	14.33	158	0361	2.03	2.6			-ATEA MARGIN
145	5,99	14.40	155	01361	1,94	10.0		SIZ Yaling D	and the second
450	5,99	14.48	153	0.356	1196	1,4	5,20	HIBROTE	
150		Maril E				1.000	When I	5	•
		WHAT EL						Di nauduk	APTERIAL STATE
1		SHIROF E							
1		July 6	6-21-1		JOY - P.		I house	TO THE RESERVE OF THE PARTY OF	a contract of the contract of
1		1	) I and a sure	CY NEW TO	NOTE THAT		OH L	287 5	and the same of th
	1		United U	0 11		DINET: E		DEC L THE	THE COURT
		1	)ample		co			3.19	AND DESCRIPTIONS
	1	-	Jampie	Conc	CICO	-	Parallel San	784	AU CINITERS
			197	30 mms	E Indian		STREET, ST.	TALORDO MARION	
				24		,			NII.
			- Sugar	CHOICE STATE				A TOTAL STATE	O DESCRIPTION
				CHOP)		a tend	abalmic 12		<del></del>
				76	sizan be	o tend	nameti hatedis	A D 100	RINGS CALIFORNIA
		1000				tend ()	hatedle taY D	A DE THE	NOT DELIVED A
						Store Store Notes M	Lots dis	A DV THIS	PIRTOS CIALIANAS Introducias Politica SOMANAS POLITICAS
		1910					bate dis	A DV TABLE SERVICE SER	DAMPET SO COMME
			1				hatosin pay D blow L	IENT VIOLE INVENCES I	RINOS DIL ISTANO  SET ANIGONAL ANIAS  ADMANAS TO  ADMANAS TO CLO  ADMANAS TO C
			1					HINT VA D	STATES THE STATES
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		7					Committee of the commit	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT
	,		1			124	12	Some Signature of the state of	PRIOS GIALIAMAS  JOHANAS TE  J
	``		7			124			PARTO E DINING E DINI
						124		Henry Va a service of the control of	PRIOR DID IEURA PRIOR DID IEURA CAUPARAS Y L PRIMAS I DI CUAR CAUPARAS I DI CUAR
	``					24		A DE THE THE THE THE THE THE THE THE THE TH	PRINCE DID INTERNAL PRINCE DI PRINCE
	``					124			RIMOS DID ISTUAS  SET ANIQUES ANI EL SE  SET ANIQUES ANI  SET A
	``					124			SHOS DO ISUAS  SA ASSESSA DE LA CASTA DEL CASTA DEL CASTA DE LA CASTA DEL CASTA DE LA CASTA DEL CASTA DE LA CASTA DEL CASTA DE LA CASTA DE
	``					124			STANDARD OF THE STANDARD OF TH
						129			SALES CONTRACTOR OF THE PROPERTY OF THE PROPER
	``					124			SALAN
						24			SOMANASA MANASA

### BROWN AND CALDWELL

Signature:

#### LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-415 Allendale, NJ Office Sample I.D.: Project: Paterosa MG Date: 5/24/12 Time: 1320 Weather: Cloud Air Temp.: 70° Personnel: BFT 66 WELL DATA: Casing Diameter: Intake Diameter: DEPTH TO: Static Water Level: 4.26 ft Bottom of Well: 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 Standing in well: To be purged: VOLUME OF WATER: **PURGE DATA:** □ Bailer, Size: □ Bladder Pump □ 2" Submersible Pump □ 4" Submersible Pump METHOD: ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: ☐ Teflon®
☐ Polyethylene
☐ Polypropylene ☐ Teflon®
☐ Stainless Steel Tubing/Rope: MATERIALS: Pump/Bailer: PVC Other: Other: Elapsed Time: 4/50 and prin Volume Pumped: 550160 Pumping Rate: 30 Nr 1 ☐ Yes ☐ No Number of Well Volumes Removed: Was well Evacuated? PURGING EQUIPMENT: 

Dedicated 

Prepared Off-Site 

Field Cleaned SAMPLING DATA: Bailer, Size: \_\_\_\_ □ Bladder Pump □ 2" Submersible Pump □ 4" Submersible Pump METHOD: □ Syringe Sampler □ Peristaltic Pump □ Inertial Lift Pump □ Other: \_ ☐ Teflon® Teflon® MATERIALS: Pump/Bailer: Tubing/Rope: ☐ Stainless Steel Polyethylene SAMPLING EQUIPMENT: Dedicated Prepared Off-Site Metals samples field filtered? Yes No Method:

APPEARANCE: Clear Turbid Color: C Field Cleaned □ Contains Immiscible Liquid DO: Temperature: Field Lab Results: 

N/A pH: I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature:

Date: 5/24/12 Date:

Project Name: Patchoque MGD  Personnel: 5FT/GG  Purge/Sample Depth: 15FT/GG	Project Number:
RC)	Campic ID.

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1320	5.74	14.98	263	1.96	8.28	79,6	4.96	U50	TO HITCH
1324	5.78	14,86	255	3.77	7.93	45.0	11 11	450	NOTIONS.
B 27 330	5.70	14.83	252	1.07	7-74	24.1	la windown on	an establishment for the same	
	5.67	14.75	249	0.8	7.46	9.1	naton) Sta	ini bag siaranéh si	
333	5.67	1470	249	0.7	7.18	616	SSA. IN	B Hadinox Function	
336	5.66	14.72	250	0.6	6.66	0.0	editor And		
339.	5,66	14,70	249	0.6	C.35	0.7	Allaw aras	DUBLE STREET	MAN HO SHALLTON
347	5.66	14.69	249	0,6	6.19	0,0			ATAG BROWS
348	5.66	14.68	247	0.6	5,73	0.0		SIS talled D #	MONTH!
351	5.67	14,70	247	0,6	5.48	0.6	4.96	IraneO Li	
	5.67	1468	247	0.6	5.35	0.0	Amint	N I	
1354	1	MOS D		DRIVINE		9698	ESTRIPTION OF STREET	U naught	MATERIALS /P
	10	2012 13	/	1	/ 1		AMERICAN AND AND AND AND AND AND AND AND AND A		
		Vary )	0 (	1/20	red	SEV NO	The second		
		Sulp	6 0	11001	(0)				THE RESERVE OF THE PARTY OF THE
			BBDBBJU 9	OPT LI	SHIGHTAN)	BHEUSING A	1000	area Li telate	HUDI DEPORT
									er Stat Washin
	1	pt skaleson	dek ten	CHIE PINE	marking no	m committee	Handel H	The second of th	U DMLPHEAG
			1811	J.C. amus	The lease of	E PANA S	STRINGS TO	polonica energi o	Section 1 and
				72					
				William P.				The Committee of	The second second
					NE SA SA		A. A	TUDIO	HOS DEC MARK
					/	a est 3	267	China Million	of analysistics articles.
		- bupul s	acemal		/	Tolo3 U	DICTUTE L	Final D. D. T.	APPEARANCE
		2 1448	ataly -65	X		M releli	74-2 H	ENG)AV	MARIE DELEM
		THE WINE	1	1	1	en islione	- 9 0	THE PROPERTY	A reinieleginas
			( )	1//	X		STATE OF		
				0		1 /	-	THE PART OF THE	DIST TO THE REST
				·		61111	h	The state of the s	
			alesta from	lengar heri	15	2110		And the party live and the	timber and trade vices a
			24/42	12	stard.			THE RELEASE	Sametime
					William And				
					A				

### BROWN AND CALDWELL

Signature:

## LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-3 Allendale, NJ Office Sample I.D.: (if different from well no.) Project: Partzhog = mcp Personnel: BFT 66 WELL DATA: Casing Diameter: 6 Stainless Steel Steel PVC Teflon® Other: \_\_\_\_\_
Intake Diameter: Stainless Steel Galv. Steel PVC Teflon® Open rock DEPTH TO: Static Water Level: 2.54 ft Bottom of Well: \_\_\_\_ft DATUM: Top of Protective Casing Top of Well Casing Other: CONDITION: Is Well clearly labeled? 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 Standing in well: To be purged: VOLUME OF WATER: PURGE DATA: ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump □ Bailer, Size: \_ METHOD: ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: \_Teflon® Teflon® Stainless Steel Tubing/Rope: □ Polyethylene MATERIALS: Pump/Bailer: PVC Polypropylene Other: Other: Elapsed Time: 30 min Volume Pumped: ~ 3 gc/lon Pumping Rate: 300 m ☐ Yes ☐ No Number of Well Volumes Removed: Was well Evacuated? PURGING EQUIPMENT: Dedicated Prepared Off-Site Field Cleaned SAMPLING DATA: ☐ Bailer, Size: ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump METHOD: □ Syringe Sampler □ Peristaltic Pump □ Inertial Lift Pump □ Other: \_ Tubing/Rope: Teflon® Teflon® MATERIALS: Pump/Bailer: Stainless Steel 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: 6-3 Meter Model: Horibar Ural Meter S/N: Meter S/N: Meter S/N: DO: 6-2 Turbidity: Oral Meter S/N: Turbidity: Oral Meter S/N: Meter S/N ☐ Contains Immiscible Liquid DUP: No Yes Name: \_ MS/MSD: No Yes Name: \_

Date: S

Field Lab Results: 

ONA pH: \_\_\_\_\_ DO: \_\_\_\_ Temperature: \_\_\_\_\_

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Project Name: Patzhogue mar	Project Number:
Personnel: BFT 66	Well ID: MW-3
Purge/Sample Depth: 7'	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
	6.28	17.42	9	0.243	5.33	14.3	2.59	300	of the state of
540 6	5.32	16.00	-33	0.344	2.06	76.5	-		- Mornauco
543 6	1.33	15.64	-50	0.525	1.83	40.1		A AL-SI AL-ALAY AND	
1546 0	5.34	15.45	-49	0.267	9.46	10.0	CYTHE THE	of beginning	
1549	6.35	15.38	-45	0.242	9.45	0.0	2.59	Emanual spouter!	
	. 36	15.32	-40	0.233	7.03	0.0	agest west	US STIESU ISIAN	
	36	15.28	-36	8.232	8.50	0.0	Have the get	BERT SHE	TAKE OF SMUDEN
	1.36	15.21	-34	0-231	7.83.	0.0			ATAN SAME
	. 37	15.20	-32	0-229	7.38	0.0	9	n/8 melles o 111	
	. 36	15-20	-32	0.228	7.34	0.0	UNITED INS	MINEQ U SI	
	.38	15.18	-31	6.227	6.54	6-0	Dennik Y		
610	Smyh		N BROS	oneDX		Blest	malifiet?	The same of the sa	IN A INSTANT
		QI Pely					979		
		SHITLE IN					_ Jernio	13	
		- Kralle	2,10.1	MINUS SON	10V LLL	1 9	E-108/4/95/07	Early Law II	A Shight or married
		AND DESCRIPTION	Com Com	AST HON IN	I SALISA TO		974 72	THE LEWIS CO.	STREET OF STREET
			pensuly s	45 U	weens.	BILIDERY E	Usus	Doug of Trails	TUNE THERE
				7/2016					APT THAT I DEFA
	0.00		AR BAR	me iSt etrica	Service 10	C ATTACK	describe the	vaxi2 valanti	CARLE TO THE
The Reserve			707	Purnu 3 v	Liston	EL ACRES OF		TOTAL SALES	A ALLEGE TOTAL
	-						STATE OF STA	Control of the Contro	A DAMESTINE
	- ineligible	ula Co					dae Innel C		
							Fatality		HELDER CHAIR PRINTER
-			Control of the Contro					A Designation	DIL SENGMEN SISTEM
				23 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			CHARLES TO SERVICE STATE OF THE PARTY OF THE	10000 14	GUMANASTYA
							A		ETHNIC TO E DECLEMENT OF THE
					/		1		
-					/				100
									Harris Delicate
							1		and the Control of th
			Francis	Andreas Street					emiss off and effect.
				367 7		1		I	enteril.
								1	
				,					
					0/	24/			
					/	× 1/12			
						, ,			
							4		
							4.		

## BROWN AND CALDWELL

## LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: Mw-1

Allendale, NJ Office	Sample I.D.: (If different from well no.)
Project: P-+chosu mer Personnel: BFT	Date: <u>S/33/12</u> Time: <u>/334</u> Weather: <u>Cloud</u> 4 Air Temp.: <u>75°</u>
WELL DATA:  Casing Diameter:	Steel PVC Teflon® Open rock  f Well:ft  ing Other: s well clean to bottom? PYes No d.? (not bent or corroded) PYes No d? PYes No theaved) PYes No NA Is Inner Casing Intact? PYes No d? PYes No
	np 🗖 2" Submersible Pump 🗖 4" Submersible Pump Pump 🗖 Inertial Lift Pump 🗖 Other:
MATERIALS: Pump/Bailer: Stainless Steel PVC Other: Pumping Rate: Your / min Elapsed Time: 30 min Was well Evacuated? Yes No PURGING EQUIPMENT: Dedicated Prepared	Tubing/Rope: □ Polyethylene   □ Polypropylene □ Other:   □ Volume Pumped: □ Other:   Number of Well Volumes Removed: □ Other:
SAMPLING DATA:  METHOD:   Bailer, Size:   Syringe Sampler   Peristaltic Pump   2	2" Submersible Pump □ 4" Submersible Pump Inertial Lift Pump □ Other:
MATERIALS: Pump/Bailer: Teflon® Stainless Steel  SAMPLING EQUIPMENT: Dedicated Prepar Metals samples field filtered? Yes No Me APPEARANCE: Clear Turbid Color: FIELD DETERMINATIONS: pH:6-1-3 Meter Mo Temperature: 15-0 Spec. Cond.: 1-2-6 Meter Mo ORP: 10-6 DO: 2-0 Turbidity: DUP: No Yes Name: Do:	Temperature:

Project Name: Patchosce MGC	Project Number:	
Personnel: BFT	Well ID: MU-1	
Purge/Sample Depth: 121	Sample ID:	-

348 6. 348 6. 351 6. 357 6. 400 6. 403 6. 406 6. 409 6.	26 33 33 39 40 40 40 43	15.80 15.30 15.20 15.23 15.15 15.16 15.13 15.03 15.02 15.02 15.01 (61/e	-SS -67 -85 -85 -95 -101 -103 -105 -107 -108 cted	1.35 2.26 1.34 1.30 1.30 1.27 1.26 1.26 1.26	2.56 2.18 2.01 1.54 1.78 2.01 2.02 2.02 2.03 2.01	87.0 68.4 98.0 36.9 32.1 21.8 20.7 17.9 15.5 15.2 15.3	5.86 5.89 5.93 5.93	300 m/min	AV 10 SMUJOV ATAO BAGUS AOUTES AOUTES A SMESTAM
357 6 100 6 100 6 103 6 106 6	33 33 39 40 40 43 43 44 45	15.30 15.20 15.23 15.15 15.15 15.13 15.03 15.02 15.01	-67 -85 -85 -95 -101 -103 -105 -107 -108	2.26 1.34 1.32 1.30 1.30 1.27 1.26 1.26	2.18 2.01 1.54 1.78 1.28 2.01 2.02 2.02 2.03	78.0 36.9 32.1 21.8 20.7 17.9 15.5 15.2	5.89	Application of the control of the co	MATERIALS ATAM ATERIALS AND ATAM MATERIALS AND ATAM PURIFIED COMMENTS AND ATAM PURIFIED COMENTS AND ATAM PURIFIED COMMENTS AND ATAM PURIFIED COMMENTS AND AT
198 6. 51 6. 59 6. 100 6. 103 6. 106 6.	33 10 10 12 13 14 15	15.20 15.23 15.15 15.16 15.13 15.09 15.02 15.01	-89 -95 -101 -103 -105 -107 -108	1.34 1.30 1.30 1.27 1.26 1.26	1.54 1.78 1.18 2.01 2.02 2.02 2.03	78.0 36.9 32.1 21.8 20.7 17.9 15.5 15.2	to Jony Vis ee Y 10 Vis	300 mi/pin	AV 10 SWUJOV STAN BOGUS OCUTOS B. SIAISTTAM
5   6. 5   6. 5   6. 100   6. 103   6. 106   6. 106   6.	10 10 10 13 14 15	15.13 15.15 15.16 15.13 15.09 15.02	-95 -101 -103 -105 -107 -108	1.30 1.30 1.27 1.26 1.26	1.98 1.18 2.01 2.02 2.02 2.03	36.9 32.1 21.8 20.7 17.9 15.5 15.2	to Jony Vis ee Y 10 Vis	300 m1/m17	AW ID SWIJLOV ATACAIA CATA MATERIALS A
357 6. 100 6. 103 6. 106 6.	40 40 42 43 44	15.15 15.16 15.13 15.09 15.02	-39 -101 -103 -105 -107 -108	1.30 1.27 1.26 1.26	1.18 2.01 2.02 2.02 2.03	21.8 20.7 17.9 15.5	S. 23	300 m1/min	AW 10 SINDOW AW 10 CO CO SIND AW 10 CO
357 6. 100 6. 103 6. 106 6. 109 6.	40 42 43 44	15.16 15.13 15.09 15.02	-101 -103 -105 -107 -108	1.26	2.01	20.7 17.9 15.5 15.2	5. 2-3	300 m//min	AW 10 SWUJOY  ATAC BOOK 16  ACCUPANT  ACCUPANT
100 6.	43	15.13 15.09 15.02 15.01	-103 -105 -107 -108	1.26	2.02	17.9 15.5 15.2	Second Se	SIC TAILOR OF THE STATE OF THE	AV 10 SKUJOV ATAA DOGIJA ATAA
103 6.	43	15.09 15.02 15.01	-105 -107 -108	1.26	2.02	15.2	Standard Sta	SIS TRIBLED OF THE PROPERTY OF	ATAM DOCUMENTS AND A STREET ST
106 6.	44	15.02	-107	1.26	2.03	15.2	Standards Todayab Standards AVVC COURTS TO THE		A BIANTEN Para Control Para Con
109 1.	45	15.01	-108		2.03		Common Statement	FineS D  G  N  Telestic  D  S  S  S  S  S  S  S  S  S  S  S  S	MATCHALLS. AS A SHARE THE STATE OF THE STATE
(6) (.	·15	15.01 Colle		1.26	2.01	/3.3	Grandello Bushlello 2V3 2 (ECC) I CO (DI) COT (CC)		Pumping Hate
1112 5	-rpl	(olle	cted	Lighted D	NOV	10:000 10:00 10 10:00 10 10:00 10 10 10 10 10 10 10 10 10 10 10 10 1	AVA AVA AVA AVA AVA AVA AVA AVA		A STANSTAM  SERVICE PROPERTY OF THE SERVICE PROPERTY O
			DATE OF THE SAME O	ognor en	INV SERVICE SE	ingst on	944 - 600 Ibis		A CEST ENGINE S
			Consult of Sub-	DOMESTICATION OF THE POST OF T	HOLE SEA	enagery (	T EXTRIBITE	900 P 110	SEAT prignity  District Control  Total Control  Tot
			CA" SUB	POST ROLL IN	BURN NO.	619(015 T	CNI 15	87 F 11	TOWN DATE OF THE SERVICE OF THE SERV
			Delicator	81 10	6315 (40)	emina t	00.36	750 U 1915	THE STATE OF THE STATE OF
			dv8 "F.0		101111101	Company to	100	40.0	TOTAL PRINCIPLE
			0.41.870						
	gai		COLUMN THE COLUMN						IG DISLOSSING
				Della de dis	2 Subme	Q gmgS re	the 18 at	c Mailer Ster	CONTEM
			791	DE GRAN	BJ Ismont	D SERVING	Later L	19idates aduals o	
	-						-		Name and Park
	with its	40 0		X		- Isinto	comment.	P93	
The same of the sa			/	X			hestours	a_cDeta	SAMPLING EQUI
		•		1/		at old the	22Y U	The still the	d asigmes elected
		Integral 181	23 amini 1			3010U W	Biglia L	USDIO EI II	APPEARANGE
			Girana - Cala			1	7 1 17 17	ONLESS SERVICE	Personal Company
		- File	21000		-	12/		Man Lote Will	E TO STATE OF THE PARTY OF THE
					0/	XJXI-			OF E
									MCANCO G TH
								the state of	militaria de la
			almosto	No. of Control of Control	White out and	Marie White and	Notice of the		hamma abil tarif dibusa i
			- 11	18/5	eteQ				Sundue
						To the same			
							120000		

## B R O W N A N D CALDWELL

## LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: Mw- 2D

	Allendale, NJ Office	Sample I.D.:				
	Project: Patchague Map	Date: 5/24/12 Time: 1092				
	Personnel: BFT GG	Weather: Cloudy				
	WELL DATA:  Casing Diameter:	ell:ft  Other: ell clean to bottom?	0			
			KI PE SI TA			
	PURGE DATA:  METHOD:  □ Bailer, Size: □ □ Bladder Pump □ Centrifugal Pump □ Peristaltic Pur	□ 2" Submersible Pump □ 4" Subr mp □ Inertial Lift Pump □ Other: _	mersible Pump			
	MATERIALS: Pump/Bailer: Teflon® Stainless Steel PVC Other:	□ Pe	olyethylene olypropylene			
	Pumping Rate: October: Elapsed Time: 30m12 Was well Evacuated? Yes No N PURGING EQUIPMENT: Dedicated Prepared Off	Volume Pumped:	ther:			
***	SAMPLING DATA:					
	METHOD:   Bailer, Size:   Syringe Sampler   Peristaltic Pump   Inel	Submersible Pump □ 4" Submersible rtial Lift Pump □ Other:	Pump			
	MATERIALS: Pump/Bailer: Teflon® Stainless Steel	Tubing/Rope:	olvethylene			
	SAMPLING EQUIPMENT: Dedicated Prepared Metals samples field filtered? Yes No Methodal APPEARANCE: Clear Turbid Color: FIELD DETERMINATIONS: pH: 3 2 Meter Model Temperature: 15 6 Spec. Cond.: 0 5 7 Meter Model ORP: 27 7 DO: 2-3 Turbidity: 4 DO: MS/MSD: No Yes Name: Field Lab Results: No Yes Name: Field Lab Results: No PH: DO: Legitify that this sample was collected and handled in accordance with applicable.	Off-Site Field Cleaned od: Contains Immiscible Liquid I: Horibus Meter S/N: Meter S/N: Meter S/N: Temperature:				

Project Name: Patchocorer MGP	Project Number:
Personnel: BFT GG	Well ID: MW-2D
Purge/Sample Depth: 24'	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1045	5.49	16.21	237	0.716	2.88	284.0	3.86	200 n1/m	DT SE SHUTAGE
548	5.43	15-98	247	0.681	2.54	247.0	in the same		
1051	5.39	15.90	254	0.663	2.44	202.0	Salah Ira	a stold made and	
1054	5.35	15.84	259	0.631	2.43	160.0	8.86	Commete Fad Int	
1057	3.33	15.80	263	0.620	2.35	149.0	SEY DU SE	redomi's Hoolbert.	
1100	5.31	15.75	266	0.615	2.34	113.0	dden Aue	LINE PRIEST SERVICE	
1103	5.30	15.67	270	0.603	2.30	103.0	CIRW 10 pr	ons,8	VOLUME OF WAT
1106	5.09	15.68	273	0.574	2.32	81.6			CATAM MAGNIC
1109	5.28	15.67	275	0.584	2.38	76.4		I U bellot, Size	TOTAL TOTAL
1112	5.28	15.60	278	0.576	2.39	45.9	ginus len	inner a	
1115	5.27	15.65	279	0.591	2-37	c16.6	English		
1118	Sampl	1 (0/1	ected	predo - >-		18813	Remark T	Till reladion	MATERIALS PL
		MONE IN					3/1/17		
		A RALES		A COUNTY AND ADDRESS	1957 E 5			A CONTRACTOR	
		N. Strang		IOV RESERVE	ISING IN				Target Brighter
			DOMEST D		8116-111.7				THE STREET
	-		4.3 %	Special Parties	Name and Address of the Owner, where	-		141	AU EMELIBRAS
				TO acus	PURENCE A	Company 18	MERCHANI TO	.0346, 101166	O OUT SM
								The second secon	
1							The state of the s		No. of the state o
	-		/	V					No. of the last of
			/				and the same of th	O L STREET	MUNICIPAL SAME
		bur /	iloalmel a	/	$\times$		WORL L	18010 10 11	TOWN STREET
1		NA STATE OF		/		E 188	75-6 H	ENOR	PERSONAL PROPERTY.
		- Aller	NEST	1	1000		3 606	Brief State Fig.	LA COURSEMENT
		HERE WAS			1.25	X	C.19. OI		TEL MIN
							\	Mark - Call La	Official Child
1200								Court 4 of the	OF E CONTRACT
			physics		otelanos else				
			122	EL 73	ats/2	5	1200	_	(S) andone o
						0	128/	2	DE LA RESIDENCIA
							//		
									1

## BROWN AND CALDWELL

## LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-25

Allendale, NJ Office	Sample I.D.:	(if different from well no.)
Project: P-t2405U, NY MLP Personnel: BFT	Date: <u>584/12</u> Time: <u>0</u> Weather: <u>Cloud</u>	) 500 Air Temp.: <u>65°</u>
WELL DATA:  Casing Diameter:  Intake Diameter:  DEPTH TO: Static Water Level:  DATUM:  Top of Protective Casing  Top of Well Casing  CONDITION:  Is Well clearly labeled?  Is Prot. Casing/Surface Mount in Good Cond.? (  Does Weep Hole adequately drain well head?  Is Concrete Pad Intact? (not cracked or frost head is Padlock Functional?  VOLUME OF WATER:  Standing in well:	ell:ft  □ Other: ell clean to bottom? □ Yes □ not bent or corroded) □ Yes □ 2 Yes □ No aved) □ Yes □ No Is Inner Casing Intact? □ Yes □ No	No □ No
PURGE DATA:  METHOD:  Bailer, Size: Bladder Pump Contrifugal Pump Peristaltic Pump		
MATERIALS: Pump/Bailer: Stainless Steel PVC Other: Pumping Rate: So mi/rin Elapsed Time: So min Was well Evacuated? Yes No No PURGING EQUIPMENT: Dedicated Prepared Off-		Teflon® Polyethylene Polypropylene Other:
SAMPLING DATA:  METHOD: Bailer, Size: Peristaltic Pump 2" S  Syringe Sampler Peristaltic Pump Iner  MATERIALS: Pump/Bailer: Teflon® Stainless Steel  SAMPLING EQUIPMENT: Dedicated Prepared Prep	Submersible Pump	Teflon® Polyethylene  quid N:
MS/MSD: No Yes Name: Field Lab Results: N/A pH: DO: I certify that this sample was collected and handled in accordance with applicable of Signature:  Productive lab Lab Library Data_Sneps Weyl pho_Sneet.doc	Temperature: regulatory and project protocols. Date: S / ユ リ / /2	

Project Name: Patchage MLP	Project Number:
Personnel: BFT	Well ID: MW-25
Purge/Sample Depth: 2	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond (ms/cn)	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
2003	6.08	15.13	153	0.345	8.70	4166.0	4.52	300 m1/nin	T E SKUTAL
0706	6.02	14.92	158	0.362	7.71	301.0	to call to use		
1905	6.06	14.84	161	0.369	7.65	228.0	n vistsons	s sint nakti kee	
07/2	6.06	14.92	164	0.375	7.20	140.0	to some Cha	inf baff sterongb is	
05/5	6.09	14.79	165	0.376	7.15	101.0	eay to the	tottonu i skoteniji d	
0518	6.11	14.81	166	0.378	7.23	63.4	dilan Alies	one government	
921	6.13	14.74	167	0.379	7.23	48.5	4.57	Office Site	AW 30 SMILIOV
524	6.13	14.71	169	0.381	7.22	17.8			ATAM BANKIS
0527	6.13	14.65	169	0.380	6.88	14.9		18 19 19 19 19 19 19 19 19 19 19 19 19 19	govern
130	6.13	14-60	171	0.382	6.53	0.1	. 1 4 1	animo Pi	
0733	6-13	14.55	172	0.382	6.40	0.0	4.61		
0936	Sample	Cillesso	- Bdc	CAROLID.		Jean	Staintess.	Z Tells like	MATERIALE: CE
1	E- HE YCIO'R	Marie 12					UNITED STATES	he control of	
				STATE OF STATE	NO.		I Company		A STATE PROPERTY.
		2000	HITTER COLD	UDV HOW 30	Turch lluxy		941	207 LJ 713	Industry of the second
			Definer. d	84 30	5060-HI 2 I	Intellement of	139.11		THIS CHICAG
									ALL PROPERTY.
			Victoria de la	man of salation	manufactive Val	Er man el en	in the same	2844 2	EL EFELI TRANS
	NAME OF TAXABLE PARTY.		AND YOU		A DESTROY				CONT. DATE
	-						The sales		COMPANIES.
						Name of the last o			A VANCE OF DESIGNATION OF
		- Page	/	1	heath	1		Charadital	di panganan sebah
		- the Light of				1	BOUT L	TERROR TO THE	-POISATE AND GOVE
		Sitt			/	1	E You at	COLUMN TO SHOULD VE	DANETHOUGH UNDER
		SINCE	6/30/		X	9 38 E A		Daniel December	7 CHURS (BC) (18)
								BIO.	
						7		THE PART OF THE	CHANGE TO THE
							1	Bill Oil by State	
			None la	market have	escut span alth			The last transmission	leman aire kasi silenan
		V 11 10 10 10 10 10 10 10 10 10 10 10 10	21/16	1/2	dell		X	MI	Signalure:
						1/0	1		
					0	120	1/		
							-		
								PERMITTED THE	

# BROWN AND CALDWELL

## LOW-FLOW GROUNDWATER **SAMPLING FIELD DATA**

Well Number: MW-7 D

Allendale, NJ Office Sample I.D.: (if different from well no.) Project: P- +24054 MEP Date: 5/2/12 Time: 0803 Personnel: Weather: 6600d 4 Air Temp.: 650 WELL DATA: Casing Diameter: \_ 4 " DEPTH TO: Static Water Level: 4/4/ft Bottom of Well: ft DATUM: Top of Protective Casing Top of Well Casing Other: CONDITION: Is Well clearly labeled? ☐ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) Yes No Does Weep Hole adequately drain well head? ☐ Yes ☐ No Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☐ No Is Padlock Functional? ☐ Yes ☐ No ☐ NA ☐ Is Inner Casing Intact? ☐ Yes ☐ No Is Inner Casing Properly Capped and Vented? Yes No VOLUME OF WATER: Standing in well: \_\_\_\_\_ To be purged: **PURGE DATA:** ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump □ Bailer, Size: METHOD: ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: \_ Teflon®
Stainless Steel
PVC Teflon® MATERIALS: Pump/Bailer: Cubing/Rope: Polyethylene Polypropylene Other: Elapsed Time: 30 min Volume Pumped: 3.5 callon)

Ves No Number of Well Volumes Removed: Pumping Rate: 350 ml/min Was well Evacuated? PURGING EQUIPMENT: 

Dedicated 
Prepared Off-Site 
Field Cleaned SAMPLING DATA: □ Bailer, Size: \_\_\_\_ 
□ Bladder Pump □ 2" Submersible Pump □ 4" Submersible Pump □ Syringe Sampler □ Peristaltic Pump □ Inertial Lift Pump □ Other: \_ MATERIALS: Pump/Bailer: Teflon® Stainless Steel Teflon® Zubing/Rope: Polyethylene SAMPLING EQUIPMENT: Dedicated Prepared Off-Site Field Cleaned

Metals samples field filtered? Prepared Off-Site Field Cleaned

Metals samples field filtered? Prepared Off-Site Field Cleaned

APPEARANCE: Clear Turbid Color: Contains Immiscible Liquid Meter S/N: DUP: No Yes Name: MS/MSD: No Yes Name: Field Lab Results: DO: \_\_\_\_\_\_Temperature: \_\_\_ I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols. Date: 5/24//2 Signature:

# LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: P. totogu map	Project Number:
Personnel:	Well ID: MW-7D
Purge/Sample Depth: 25'	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
0806	6.26	14.39	46	0.657	2.22	688.0	4.41	350 01/00	OF SHOTH
0805	6.17	14.34	44	0.557	2.46	383.0	10,0		The second secon
0812	6.12	14.29	44	0.510	2.42	254.0	leviere and	in sin'il depth sen	
0815	6.12	14.30	46	0.503	2.44	251.0	4.43	denaters Paging	
818	6.14	14.29	49	0.489	2.43	263.0	es Prof Th	notoriu i itoohilifi i	
1680	6.16	14.33	81	0.468	2.44	180.0	THE SYSS	DIS WHAS J 15/88 P	
124	6.16	14.36	83	0.464	2.44	153.0	diske ni tr	smalls Will	FAIN TO THE LOT
1827	6.18	14.41	54	0.460	2.44	1411.0			ATAM SOCIE
0830	6.19	14.39	56		2.43	120.0	2	C Pallet, Sta	POLIT DE
0833	6.20	14.38	58	0.4416	2.43	101.0	cmuff les	Aumso C	
08,36	6.21	14.40	55	0.442		94.7	- Weight T	6 41	
0839	Sam	h Colle		mildon.		Least 2	Stainlass	TO THE STATE OF	MALERIALS PO
		Well E					PAC	0	
		STEEL D					THE SECOND	LO VER	
		7 6 1 8 2 S		and the same	May	513452 - 30	E basquille	(2.3/14/6)	A BEN THEFT
		- OSV	PREVIOUS	TOA HOAR ST	กอนกามห		023	997 L	NEW YORK DYSTUGA
			DETRAIL	NE THE	Stigned	BOHOUTY 4	- 4816		LIGHTS SHOWN IN
							E STORY	100	ACCOUNT PRINTER
	000		AND TELE	time? eleit	remous "S	E ALTHURY	Decliff of	lasier Bizel	CONTRA
3 -				Do gmust	tid telment	El grassia	states c	telome2 sonate	
1									
							SUPPLIES TO SERVICE STATE OF THE SERVICE STATE OF T	KIN TO BUILDING	SCA WARRIED PAR
-				1	MO NO.		Landaria	a e. T/36	AND PART HAT PERSON
1			1		No.	not the	ERY T	Spenedil t	ed selemes alctel
		banil e			*		bohu : 1	met) D	50MAPIASE V
1		- IAR	shabit	-		An annual and	14034	estical.	MWASTED GUE
		1 1/4/2	edal#	1			-	Draw spec, wand	VII. BUILDING
						10	/		
						10	24	/	ON 19 Jan
						×	17	5	USI ED STORY
			- A C. C.	75	Laborate at a	Name of Street	1		en de avi
The state of		- Water 100				Decision of the			and the state of the state of
							-		
			1/						1

# BROWN AND CALDWELL

# LOW-FLOW GROUNDWATER **SAMPLING FIELD DATA**

Well Number: Mw-75

Alleridale, NJ Office	Sample I.D.: (if different from well no.)	er unervise les
Project: Patrosuc MCP	Date: _5/23/12 Time: 15 2?	s Riedy
Personnel: BFT NB	Weather:Cloud -/ Air Temp.:	700
WELL DATA: Casing Diameter: Intake Diameter: DEPTH TO: Static Water Level: DATUM: CONDITION: Is Well clearly labeled? Is Prot. Casing/Surface Mount in Good Cond.? Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost head)	PVC Teflon® Other:eel PVC Teflon® Open rock Vell:ft  G Other: vell clean to bottom? PYes No (not bent or corroded) PYes No PYes No Peaved) PYes No Is Inner Casing Intact? PYes No	fetual Time Time 12.2 2.2 2.12 2.12
PURGE DATA:  METHOD:  □ Bailer, Size: □ Bladder Pump □ Centrifugal Pump □ Peristaltic Pu	☐ 2" Submersible Pump ☐ 4" Submersible Pump ump ☐ Inertial Lift Pump ☐ Other:	52
MATERIALS: Pump/Bailer: Teflon® Stainless Steel PVC Other: Pumping Rate: 380 Al Min Elapsed Time: 36 Min	Teflon® Polyethylene Polypropylene Other:  Volume Pumped: 3 gulb Number of Well Volumes Removed:	50
SAMPLING DATA:  METHOD: Bailer, Size: Bladder Pump 2"  Syringe Sampler Peristaltic Pump Ine  MATERIALS: Pump/Bailer: Teflon® Stainless Steel  SAMPLING EQUIPMENT: Dedicated Prepared  Metals samples field filtered? Yes No Meth APPEARANCE: Clear Turbid Color:  FIELD DETERMINATIONS: pH: 6.50 Meter Mode Temperature: 13.32 Spec. Cond.: 5.387 Meter Mode ORP: 88 DO: 5.76 Turbidity: 1  DUP: No Yes Name: MS/MSD: No Wes Name: DO: 1  MS/MSD: No Wes Name: DO: 1  I certify that this sample was collected and handled in accordance with applicable	Submersible Pump	
Signature:	Date	

# LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Pathogu mor	Project Number:
Personnel: BFT NB	Well ID: MW-75
Purge/Sample Depth:	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
530	6.63	14.14	-55	0.430	6.75	165.0	4.71	300	THE MITTER
533	6.56	13.52	-66	0.427	7.26	75.7	terial as	La Communication and the	
536	6.52	13.37	-69	0.444	6.57	56.2	4.73	In each caseWater	
5 39	6.50	13.40	-70	0.386	6.71	38.8	pi tom) Sta	ta (Concrete Fed Fra	
5 47	6.51	13-36	-74	0.382	6.42	26.5	RBY LL TH	Hamilton Function	
545	6.51	13.32	- 77	0.383	6.41	20.4	विविधान संप्रक	that Gusten result it	
5 48	6.52	13.34	-80	0.389	6.10	12.9	SHOW HI DI	IONEC THE	ANY SO BRADJOY
551	6.52	13-42	-84	0.385	6.20	16.6			ATAN TARNG
554	6.53	13.35	-85	0.387	5.94	13.5	4.71	S C Baller Sta	houses
557	6.54	13.36	-86	0.387	5.89	19.3	grown lag	nione 2 Li Centina	
600	6.54	13.32	-88	0.387	5.76	18-1	Shortel	0	
1603	Sample	Collector	tedas	ledal 5		lesig	Statistics:	W solic Olde	MATERIALS
	enelynou	gisq Q					079		
		STORE LI	-				Terrory		
		- West	3	BARRIUM BIO	HOY CI	Caros Jeu	1 12500513		SHIP BURLEY
		- Law	A HEAL EQUIT	IND V DIBUV IL	BROWNS		CHO N	Ser. L. L.	BLUMEY SHIPS SEVY
1			DECKOLL	DIT TELL	SHEET THE	olego i - 1	Geo. E	DOLL TO THE PARTY	TATION CONDITION
								1A 1A	SAMPLING D.
	DIM DIM	A skileto		sible Purrel	3" Submor	D GRIMSTON	phalified .	manifer, State of	METHOD
						le Pung	aleno4 L	a symmet sampler	
		a la	7				-	n dis	NO. 100 100 100 100 100 100 100 100 100 10
	Anetherle	Class Cl		1		I teamer		No.	3
		- he	nest Disage	1/4	1.		Indicate	n e make	MOS CIALISMAS
					XX		26Y G	Constitute 12	Autores sercioles fi
		Expute	disellation) s	DESIREO - L	X	10100 D	alcount to		SONASAUG9
		WE	erekt - E	041		/	1	SAKE IN	III SIE I BO GJENE
		William	10 mg/s			\$/-	23/	12	67 GIBISHORRES
						X	//		AN THO
								Balla Ke / La	OH WAR
Heren						4		THE REPORT OF THE PARTY OF THE	etcon O de la ble la
				The state of the s	teriminate and	Marso aller gre		accident habather has a	severe plat acids of these
			23/12	2	sied				Signature
A STATE OF THE STATE OF									
							The same of		
			100						
	75.00								

# BROWN AND CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW - 8 D

Allendale, NJ Office	Sample I.D.: (if different from well no.)
Project: Patzbosa MGP Personnel: BGT GG	Date: S/25/12 Time: 08/3 Weather: Coudy (Mist Air Temp.: 60
Intake Diameter: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: Ft Bottom of WDATUM: Top of Protective Casing Top of Well Casing CONDITION: Is Well clearly labeled? Yes No Is VIs Prot. Casing/Surface Mount in Good Cond.? Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost head)	veii:t q
PURGE DATA:  METHOD:  Bailer, Size: Bladder Pump	□ 2" Submersible Pump □ 4" Submersible Pump ump □ Inertial Lift Pump □ Other:
MATERIALS: Pump/Bailer: Stainless Steel PVC Other: Pumping Rate: 400 m / m Elapsed Time: 45 m PURGING EQUIPMENT: Dedicated Prepared Of	Polypropylene Other:  Volume Pumped:  Number of Well Volumes Removed:
SAMPLING DATA:  METHOD:   Bailer, Size:   Syringe Sampler   Peristaltic Pump   Indian	Submersible Pump □ 4" Submersible Pump ertial Lift Pump □ Other:
MATERIALS: Pump/Bailer: Teflon® Stainless Steel  SAMPLING EQUIPMENT: Dedicated Prepared Metals samples field filtered? Yes No Meth APPEARANCE: Clear Turbid Color: FIELD DETERMINATIONS: pH: 5.77 Meter Mode ORP: /// DO: 8.93 Meter Mode ORP: /// DUP: No Yes Name: MS/MSD: No Yes Name: MS/MSD: No Yes Name: Field Lab Results: ZN/A pH: DO: I certify that this sample was collected and handled in accordance with applicable Signature:	Temperature:e regulatory and project protocols

# LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchaga Map  Personnel: BFT GG	Project Number: Well ID: MAR- 8 ()
Purge/Sample Depth: 23'	Sample ID:

Actual Time	pН	Temp (°C)	ORP (mV)	Cond ( )	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
0813	5.73	15.54	128	0.638	10.14	~S.0"	0.9	400 m 1/m.	ar a went
0816	5.78	15.35	119	0.663	5.86	"-5.0"	1 22 1		
08/5	5.74	15.29	109	0.532	9.73	125.01	the state of the state of	es placi contAl des	
\$ 22	5 Clean	ed out	Horis	4	These sent	ruit to bests	a forti Sto	day be Signatural	
125	5.82	15.30	106	0.406	2.73	-5.0"	sey LV Yb	Hadlack Function	
2628	5.77	15.36	99	0.375	2.22	818	0.8	GAS BUIERO JELLIN	
0(31	5.75	15.34	99	0.393	1.96	601	MEW M B	ibnets in	THE STATE OF THE S
134	5.75	15.35	55	0.395	1.57	552			ATAM ROBIN
\$ 37	5.75	15.35	100	0.357	1.52	4/4/8	9	ALS WIRE STA	TOTALTOLS
08 40	5.76	15.38	101	0.394	1.52	380.0	orgon les	Amina C L	
0843	-100	d out	Haris				Brioffal	0 11	
0846	5.78	15.43	109	0.386	10.33	256.0	resinlation	Tel melicina	Do Dungred - fte
1845	5.77	15.36	105	0.388	5.77	214.0	SAN SA		Cleaningout
0852	5.77	15.36	109	0.386	9.45	174.0	0.7		Horis - Astra
0855	5.77	15.36	110	0.385	9.16	168.0	L (58808)		Madin is mor
0858	5.77	15.36	111	0.386	8.53	167.0	an a		1: buly to se anon
0901	Sampl	a Colle	fer		- Constitution	STANDARD TO	L-LOYA.		1.90
	,							:83	AC OWNER
	em	M Blotters	GA SUM	americal district	amore x	D grauf w	CORE TO SERVICE SERVIC	2621S 18149M	g doman
			ALLEY STEP	C EL BINUN	ILJ IBIO (BIS)	L2 spotter as	MARKET L	resignase spanings	
		- 19	200,000	-60-			Daniel V	C	NAME OF TAXABLE PARTY.
						land.	a-siriat2	Pro-	3
			neal bisi	76	62300 has	energ ()	hoterili		SHIOS DIN ISMAE
					pane	M 0M 3	A 28Y L	PROFESSION AND ADDRESS OF THE PARTY OF THE P	
		Daniel o		BESTERON A	111	Edwalds.	A P P N	2500	CHARLEST AND LINE
		I MIX			2017 10000	NA Telesia	US 5 7 10	ENDLY STREET BILL	A Substitution
		/				×	-		111 790
		-			1				on totuta
			/						The Source
_			/	-			1		Jelly and Mr. I Mora
-					/	1		N Y T	planta e di tentaliano I
- North Control				Sal Li		/ X	/		
							X	1	
						-	5 - 7		
						0/	25/	12	
						1	/		
			1						

# BROWN AND

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Allendale, NJ Office	Well Number: MW-85 Sample I.D.: (If different from well no.)
Project: P-tzhosca m CP Personnel: BFT GG	Date: <u>S/25/12</u> Time: <u>09/3</u> Weather: <u>Claudy Misk</u> Air Temp.: <u>65"</u>
WELL DATA:  Casing Diameter:  Intake Diameter:  DEPTH TO: Static Water Level:  DATUM:  Top of Protective Casing  Top of Well Casing  CONDITION:  Is Well clearly labeled?  Yes  No Is wells Prot. Casing/Surface Mount in Good Cond.? (  Does Weep Hole adequately drain well head?  Is Concrete Pad Intact? (not cracked or frost head is Padlock Functional?  YOLUME OF WATER:  Standing in well:	el
PURGE DATA:	□ 2" Submersible Pump □ 4" Submersible Pump
MATERIALS: Pump/Bailer: Stainless Steel  PVC Other:  Pumping Rate: Doo mi/pi? Elapsed Time: 35m;7  Was well Evacuated? Yes No Nu PURGING EQUIPMENT: Dedicated Prepared Off-	Polypropylene Other: Volume Pumped: 294/04)  umber of Well Volumes Removed:
SAMPLING DATA:  METHOD: Bailer, Size: Bladder Pump 2" S  Syringe Sampler Peristaltic Pump Iner	ubmersible Pump
MATERIALS: Pump/Bailer: Stainless Steel  SAMPLING EQUIPMENT: Dedicated Prepared Compared Compared Color:  Metals samples field filtered? Yes No Method Color:  FIELD DETERMINATIONS: pH: 6-15 Meter Model:  Temperature: 16-27 Spec. Cond.: 0-512 Meter Model:  ORP: 7-64 Turbidity: 9  DUP: No Yes Name:  MS/MSD: No Yes Name:  Field Lab Results: N/A pH: DO:  I certify that this sample was collected and handled in accordance with applicable of Signature:  P. WOMCOWFIELD Lata Shepts West Into Sheet.doc	Off-Site

# LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Paters gu nog Personnel: BFT 66	Project Number: Well ID: Mw - 85
Purge/Sample Depth: 7	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ( )	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
0513	5.50	16.51	-13	0.415	8.82	193	0.8	200	HOLDOWO .
0916	5.53	17.00	-26	0.418	8.66	175	Incord to an a		
05/5	5.58	17.10	-39	0.443	8.50	177	li segre apè	is abit casiV and i	
0922	6.01	17.13	-45	0.452	8.37	213	routing The	United seasonally is	
0125	6.05	17.11	-52	0.465	1.26	236.0	0.8	malosuri risolosti u	
0928	6.07	17.14	-58	0.478	8.15	214.0	dilan she	COLA POSSEC TEMBER	
0931	6.08	17.18	-62	0.487	8.08	193.0	male ut B	Olare 12.3	AM 40 BMELION
0934	6.10	17.17	-65	0.0194	8.00	180.0			ATAG POSITIO
05 37	6.12	17.07	-69	0.495	7.53	175.0	2	ESS TRIBITED IN	- POPULTON
05 40	6.13	17-02	-7/	0.499	7.86	162.0	HEIRIT IS	manus M	
0943	6.14	16.97	-72	0.500	7.77	154.0	(Leifolier)		
0941	6-14	16.58	-75	0-5/2	7.62	87.8	ROMBER	nelisaviru.	MATERIALS FR
0548	6.15		-75	0.5/2	7.64	50.0	49636	W 21	
0551	Sampl	Colles	1	animal na sara	BOW FO	A 7. 7. 100			NAME OF TAXABLE PARTY.
			III II A BEST	IU III III III	128.013.29				THE COURSE OF THE PERSON NAMED IN
			DEATH OF STATE	617 LJ	SUBADORES A	SERVICE T	12000	Noso o della	THE COURT
-									ANT COLD TOWNS
			WALCH PROPERTY	Section of Administration	1 6 70 U.S. 10	er months	blacist ca	2002 10101	THE BYEIGHT STREET
	40		161	D D amus	the surset	EJ DANS S	Steam - C	I some of somewide	, Marie I ale
				E CONTRACT Y			- Charles		
	- Calebra	VSAS 11			Del Barrier		The same of the sa	a a Turke	ILIOT OWNERAL
					A CONTRACTOR	M old T	noV E	Photosid the	of agreence Merch
	-			1		TOTAL E	Diame I	SESSE CHESE	HE LARAS PHE
		3/45	(	THE PER			22.07	BRUID	VINNE LEGISTE
		11788			X			PIKE SHE HE	of Sulfamount
					0		-		
						X	/	a man and man	ADIADA
						9	X2s	1	William Decimen
			alouse	va Palme Ivia	against man aga	name dina no	V	D	electrica aleb hode species
			(1)	1 Star	disc				C andanes
50								lj.	

# BROWN AND CALDWELL

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

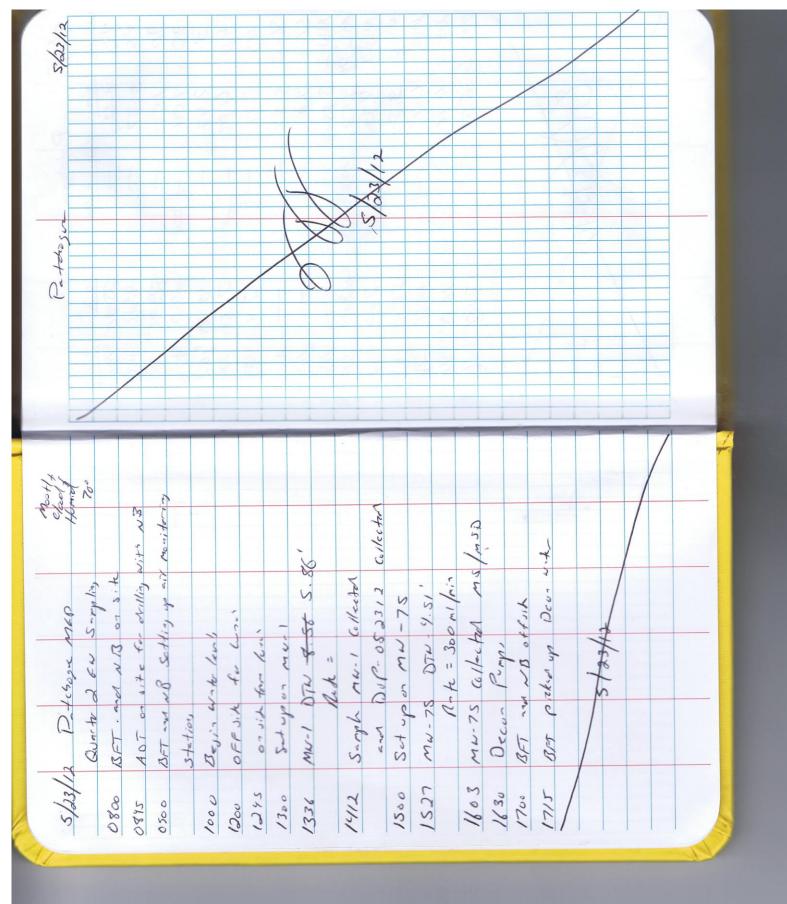
Allendale, NJ Office  Sample I.D.:  (if different from well no.)
Project: Date: 41 SOUNT Time: 1/11 Personnel: BET G C Weather: Cloudy   Dizel Air Temp.: 70°
WELL DATA:  Casing Diameter:
VOLUME OF WATER: Standing in well: To be purged:
PURGE DATA:  METHOD:  Bailer, Size:
MATERIALS: Pump/Bailer: Stainless Steel Fubing/Rope: Polyethylene Polypropylene Other: Other: Other: Value Was well Evacuated? Yes No Number of Well Volumes Removed: PURGING EQUIPMENT: Dedicated Prepared Off-Site Field Cleaned
SAMPLING DATA:  METHOD:   Bailer, Size:   Syringe Sampler   Peristaltic Pump  Inertial Lift Pump  Other:   Other:
MATERIALS: Pump/Bailer:

# BROWN AND CALDWELL

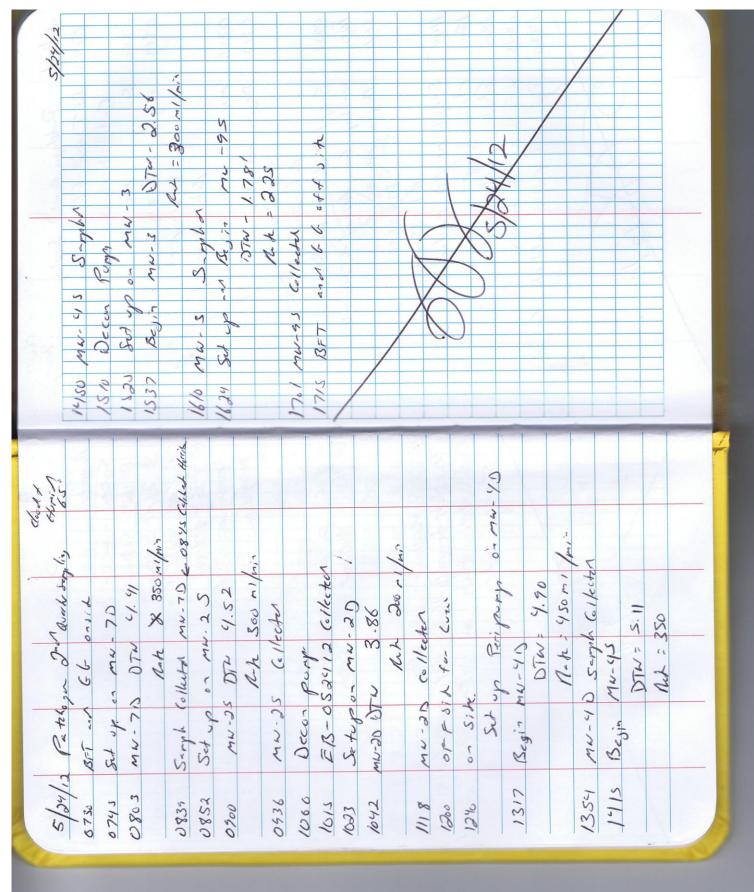
# LOW-FLOW GROUNDWATER FIELD DATA SHEET

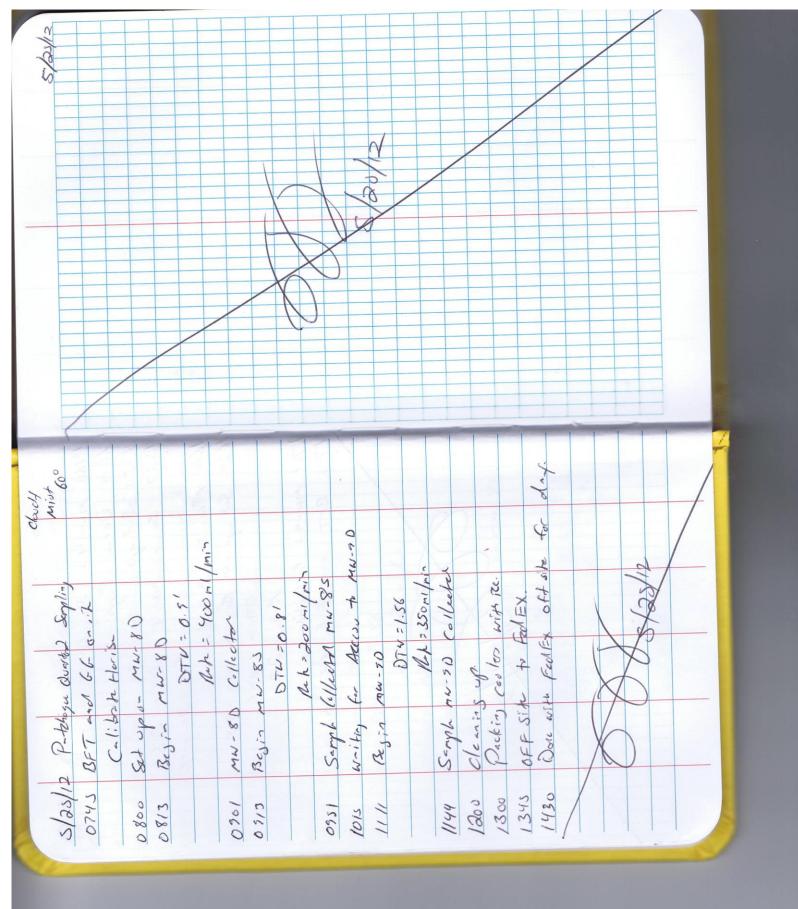
Project Name: P- 12/030 Map	Project Number:
Personnel: BFT G-G-	Well ID: MW- 51)
Purge/Sample Depth:	Sample ID:

Actual Time	pН	Temp (°C)	ORP (mV)	Cond ( )	DO ( mg/L )	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1///	5.54	16.84	83	0.171	10.03	"S.o"	1.56	350	THE MUTTER
11/4	5.70	16.01	84	0.287	9.41	713.0	ton unliferance	the filter of the filt of	
1.17	5.49	15.78	98	0.294	8.57	406.0	h vintarios	an alsi I mestili sen	
120	5.43	15.66	108	1-226	8.80	263.0	ia ian) Sta	In the 9 statement of	
123	5.37	15.62	118	0-257	8.57	136.0	1.56	homer Freibalt H	
126	5.35	15.61	124	0-297	9.43		CHES AND	OTT BEINE VETUILS	
25	5.32	15.63	136	0.301	7.54	78.0	CHARLE BY BY	mies de la	ANY NO EMPLIEV
132	5.32	15.63	137	0.301	7.55	72.1			PUROS DATA
135	5-32	15.63	137	0.301	7.51	68.0		ale a Ballet, Sian	CHO HYDIA
138	5.31	15.61	140	0.301	7.71	65.7	1.56	mile) U	
1-11	5.31	15-62	142	0-302	7.53	60-6	(Anoile)	D	
1144	Sampl	Colles	1	sales 5		levill	Tightight.	Telestly fi	MATERIALS. M
	enely for	Mod D					SPAN .		9
	-	ana D							
		10-11-12		BOKIN TON	IPV	MLUS OFF	T PERSONAL PROPERTY.	Aught Hale	Ship gallerida
			retirer / exert	HOY HOUSE.	HOS/HINZE		UV!	201 W 111	SEMPLE OF SERVICE
1			Description of	April 189	SHE-RILLE	But to Carolinia	Distri		
							1	387	O DHU SHAS
	qm		D4 Sub	व्याप्य क्षेत्र	2° Subme	o must e	phale b	D Balar, Size	понтам
					TUTICINEN	O complete	STEPPER	religious Saulting C	
							-		No. of the same of the
	anahula	ALLE D				Tools	poolnist2	No.	0
		1	/	1			battarit	or retre	SAMPLING EQUI
						M OM T	seY C	Chavell 1	Metaln samples fie
		DHIDT/18	Coamal					19917 15	HOMANAB99A
		17/2°	resent		X	W totald	民经生	ENGINO	ellerici Distrentia
		Enc	eleavi			,		Janes Sage gha	77 Giftereduler
						5/2/			- The state of the
					· ·	125/		Offices 633 M	The real party of
								data Antibies	column Com I Family
			Marine	A Real role has	and the same of the	There are a		Street box framelor day	inches outstant children
			21/18	12	oteG				- autensi?
									NATURE OF THE PARTY OF THE PART
							122		
							* 4		



P-+0400 m	ton!		- 8:41 Section - fait tentile odd on grille.		are Marin		9 98' Bolings + Jast Batter			ten blubs drownish that	Stem odo.			
		1	8101		12.4 1631	2/01/	15.17 1106		26,9 1/26	16,55 1149			1	
s/21/21 P teson	1 STE		hs! 56	3 2.47 (4 Fb )	45 5.11	SK-2 3.85 -		MW-70 4.32	MW-20 3.81	MW-25 4.96	MW-6 6.51	Z Z	0000	





# **Appendix B:** Laboratory Reports (CD-ROM)

# Appendix C: Data Usability Summary Report



# DATA USABILITY SUMMARY REPORT PATCHOGUE, NEW YORK

Client:

Brown and Caldwell, Allendale, New Jersey

SDG:

PCH11

Laboratory:

Lancaster Laboratories, Lancaster, Pennsylvania

Site:

Patchogue, New York

Date:

July 25, 2012

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-1	6669303	Water
2	DUP-052312	6669304	Water
3	MW-7S	6669305	Water
3MS	MW-7SMS	6669306MS	Water
3MSD	MW-7SMSD	6669307MSD	Water
4	MW-7D	6669308	Water
5	MW-2S	6669309	Water
6	MW-2D	6669310	Water
7	EB-052412	6669311	Water
8	MW-4D	6669312	Water
9 -	MW-4S	6669313	Water
10	MW-9S	6669314	Water
11	MW-3	6669315	Water
12	MW-8D	6669316	Water
13	MW-8S	6669317	Water
14	MW-9D	6669318	Water
15*	TRIP BLANK	6669319	Water

<sup>\* -</sup> VOC 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 May 23-24, 2012 by Brown and Caldwell at the Patchogue, New York Site. The samples were analyzed under Environmental Protection Agency (USEPA) "Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions".

Specific method references are as follows:

<u>Analysis</u>

Method References

VOC (BTEX and MTBE) SVOC (PAH) USEPA SW-846 Method 8260B 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.

The following items/criteria were reviewed:

# **Organics**

- Data Completeness
- Holding times and sample preservation
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) 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. There were no qualifications.

## **Data Completeness**

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

#### **Volatile Organic Compounds (BTEX and MTBE)**

## **Holding Times**

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

## **Surrogate Spike Recoveries**

All samples exhibited acceptable surrogate %R values.

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

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

## **Laboratory Control Samples**

• The LCS sample exhibited acceptable %R values.

## Method Blank

• The method blanks were free of contamination.

#### Field Blank

• The following table summarizes field blank contamination.

Blank ID	Compound	Conc.	Action Level	Qualifier	Affected Samples
		ug/L	ug/L		_
EB-052412	None- ND	-	-	-	-
TRIP BLANK	None- ND	-	-	-	-

# **GC/MS Tuning**

• All criteria were met.

## **Initial Calibration**

All %RSD and average RRF criteria were met.

# **Continuing Calibration**

• All %D and RRF criteria were met.

# **Compound Quantitation**

All criteria were met.

# Internal Standard (IS) Area Performance

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

# Field Duplicate Sample Precision

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

		VOC		
Compound	MW-1	DUP-052312	RPD	Qualifier
	ug/L	ug/L		
None	ND	ND	-	-

# Semivolatile Organics Compounds (PAH)

# **Holding Times**

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

# **Surrogate Spike Recoveries**

• All samples exhibited acceptable surrogate %R values.

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

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

# **Laboratory Control Samples**

• The LCS sample exhibited acceptable %R values.

#### Method Blank

• The method blanks were free of contamination.

## Field Blanks

• The following table summarizes field blank contamination.

Blank ID	Compound	Conc.	Action Level	Qualifier	Affected Samples
		ug/L	ug/L		
EB-052412	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.

		PAH		
Compound	MW-1	DUP-052312	RPD	Qualifier
	ug/L	ug/L		
Fluoranthene	0.1	ND	NC	None
Naphthalene	0.1	ND	NC	
Phenanthrene	0.1	ND	NC	
Pyrene	0.1	0.1	0%	

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

Signed:

Mancy Weaver Dated: 7/27/12

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.

Page 1 of 1

Sample Description: MW-1 Grab Water

COC: 306535 Patchogue, NY

LLI Sample # WW 6669303 LLI Group # 1311918

Account

# 09286

Project Name: Patchogue, NY

Collected: 05/23/2012 14:12

by BFT

Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

PATM1 SDG#: PCH11-01

CAT No.	Analysis Name	CAS Number	As Receive Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/1	ug/1	
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	0.1 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	0.1 J	0.1	1
07805	Phenanthrene	85-01-8	0.1 J	0.1	1
07805	Pyrene	129-00-0	0.1 J	0.1	1

General Sample Comments

State of New York Certification No. 10670

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

			_
Laboratory	Sample	Analysis	Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012 14	28 Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012 14:	28 Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/30/2012 23	07 Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1.	12150WAE026	05/30/2012 09	45 Cynthia J	1
						Salvatori	

PCHIL DELE

Page 1 of 1

Sample Description: DUP-052312 Grab Water

COC: 306535 Patchogue, NY LLI Sample # WW 6669304 LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/23/2012

by BFT

Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

PATFD SDG#: PCH11-02FD

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

#### 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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012 1	14:49	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012 1	14:49	Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/30/2012 2	23:31	Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012 0	09:45	Cynthia J Salvatori	1

POHEL BOLS

NW 7/25/12

3

Page 1 of 1

Sample Description: MW-7S Grab Water

COC: 306535 Patchogue, NY LLI Sample # WW 6669305 LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/23/2012 16:03

by BFT

Brown & Caldwell 110 Commerce Drive Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

PAT7S SDG#: PCH11-03BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
C/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
C/MS	Semivolatiles SW-846	8270C	ug/l	ug/1	
7805	Acenaphthene	83-32-9	N.D.	0.1	1
7805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	0.1 J	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	. 1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
7805	Naphthalene ·	91-20-3	N.D.	0.1	· 1
7805	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	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution				
No.					Date and Time		<b>Pactor</b>				
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012 11:28	Jason M Long	1				
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012 11:28	Jason M Long	1				
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/30/2012 21:53	Holly Berry	1				
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012 09:45	Cynthia J	1				

PCHIL SHIS

Salvatori

Page 1 of 1

Sample Description: MW-7D Grab Water

COC: 306535 Patchogue, NY LLI Sample # WW 6669308 LLI Group # 1311918

Account # 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 08:39 by BFT

Brown & Caldwell

110 Commerce Drive

Submitted: 05/26/2012 09:45

Allendale NJ 07401

Reported: 06/05/2012 19:51

PAT7D SDG#: PCH11-04

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.	8.0	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.09	1
07805	Acenaphthylene	208-96-8	N.D.	0.09	1
07805	Anthracene	120-12-7	N.D.	0.09	1
07805	Benzo(a) anthracene	56-55-3	N.D.	0.09	1
07805	Benzo(a) pyrene	50-32-8	N.D.	0.09	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.09	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	. 0.09	1
07805	Chrysene	218-01-9	0.1 J	0.09	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.09	1
07805	Fluoranthene	206-44-0	N.D.	0.09	1
07805	Fluorene	86-73-7	N.D.	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.09	1
07805	Naphthalene	91-20-3	N.D.	0.09	1
07805	Phenanthrene	85-01-8	N.D.	0.09	1
07805	Pyrene	129-00-0	0.2 J	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	E121571AA	06/05/2012 15:	9 Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012 15:	9 Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/30/2012 23:	55 Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012 09:	5 Cynthia J	1
						Salvatori	

PCHIL BOIS



Page 1 of 1

Sample Description: MW-2S Grab Water

COC: 306535 Patchogue, NY LLI Sample # WW 6669309

LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 09:36

by BFT

Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 05/26/2012 09:45 Reported: 06/05/2012 19:51

PAT2S SDG#: PCH11-05

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/1	
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	108-86-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.09	1
07805	Acenaphthylene	208-96-8	N.D.	0.09	1
07805	Anthracene	120-12-7	N.D.	0.09	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.09	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.09	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.	0.09	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.09	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.	0.09	1
07805	Chrysene	218-01-9	N.D.	0.09	1 .
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.09	1
07805	Fluoranthene	206-44-0	N.D.	0.09	1
07805	Fluorene	86-73-7	N.D.	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.09	1
07805	Naphthalene	91-20-3	0.1 Ј	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	5	Sample	•	Analysis	Re	COL	ì	
	_	_		_		_		

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tir	me	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	15:29	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	15:29	Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	00:19	Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J Salvatori	1
							Salvaculi	

PCHII BRIS

nw 7/25/12



Page 1 of 1

Sample Description: MW-2D Grab Water

COC: 306535
Patchogue, NY

LLI Sample # WW 6669310 LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 11:18

by BFT

Brown & Caldwell 110 Commerce Drive Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

PAT2D SDG#: PCH11-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/1	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	
07805	Acenaphthene	83-32-9	N.D.	0.09	1
07805	Acenaphthylene	208-96-8	N.D.	0.09	1
07805	Anthracene	120-12-7	N.D.	0.09	1
07805	Benzo(a) anthracene	56-55-3	0.1 Ј	0.09	1
07805	Benzo(a)pyrene	50-32-8	0.1 J	0.09	1
07805	Benzo(b) fluoranthene	205-99-2	0.1 J	0.09	1
07805	Benzo(g,h,i)perylene	191-24-2	0.1 J	0.09	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.	0.09	1
07805	Chrysene	218-01-9	0.1 Ј	0.09	ī
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.09	1
07805	Fluoranthene	206-44-0	N.D.	0.09	1
07805	Fluorene	86-73-7	N.D.	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.09	1
07805	Naphthalene	91-20-3	N.D.	0.09	1
07805	Phenanthrene	85-01-8	N.D.	0.09	1
07805	Pyrene	129-00-0	0.2 Ј	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	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution		
No.					Date and Ti	me		<b>Factor</b>		
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	15:49	Jason M Long	1		
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	15:49	Jason M Long	1		
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE02€	05/31/2012	00:43	Holly Berry	1		
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J	1		
							Salvatori	ee ee		

7

Page 1 of 1

Sample Description: EB-052412 Grab Water

COC: 306535
Patchogue, NY

LLI Sample # WW 6669311 LLI Group # 1311918

Account

# 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 10:15

by BFT

Brown & Caldwell

110 Commerce Drive

Submitted: 05/26/2012 09:45

Allendale NJ 07401

Reported: 06/05/2012 19:51

PATEB SDG#: PCH11-07EB

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/1	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.

naboratory 5	ашрте	Maryste	Kecora	
Trial#	Batch	#	Analysis	Anal

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 B260B	1	E121571AA	06/05/2012 12:28	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012 12:28	Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012 01:08	Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012 09:45	Cynthia J Salvatori	1

PCHIL BEZI

Page 1 of 1

Sample Description: MW-4D Grab Water

Laboratories

COC: 306535 Patchogue, NY LLI Group # 1311918

LLI Sample # WW 6669312

Account

# 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 13:54

by BFT

Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 05/26/2012 09:45 Reported: 06/05/2012 19:51

PAT4D SDG#: PCH11-08

CAT No.	Analysis Name	CAS Number	As Rec Result		As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l		ug/l	
10903	Benzene	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	N.D.		0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene	108-88-3	N.D.		0.7	1
10903	m+p-Xylene	179601-23-1	N.D.		0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	1
10903	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS	Semivolatiles SW-846	8270C	ug/l		ug/l	
07805	Acenaphthene	83-32-9	0.3	J	0.09	1
07805	Acenaphthylene	208-96-8	2		0.09	1
07805	Anthracene	120-12-7	0.2	J	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	1		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	2		0.09	1
		129-00-0			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 Ti	mė	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012		Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	16:08	Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	01:32	Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J	1
							Salvarori T	2622

9

Page 1 of 1

Sample Description: MW-4S Grab Water

COC: 306535 Patchogue, NY LLI Sample # WW 6669313 LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 14:50

by BFT

Brown & Caldwell

110 Commerce Drive

Submitted: 05/26/2012 09:45 Reported: 06/05/2012 19:51 Allendale NJ 07401

PAT4S SDG#: PCH11-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
C/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
C/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
7805	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 <b>-</b> 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

717-656-2300 Fax: 717-656-2681

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

	• .	Lal	boratory Sa	mple Analys	is Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	16:28	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	16:28	Jason M. Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	01:56	Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J Salvatori	1

POHIT MEZZ

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425

Page 1 of 1

Sample Description: MW-9S Water

COC: 306535 Patchogue, NY LLI Sample # WW 6669314 LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/24/2012 17:01

by BFT

Brown & Caldwell

110 Commerce Drive

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

Allendale NJ 07401

PAT9S	SDG#:	PCH11-10

CAT No.	Analysis Name		CAS Number	As Rec Result	eived	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 Bu	tyl Ether	1634-04-4	N.D.		0.5	1
10903	Toluene		108-88-3	N.D.		0.7	1
10903	m+p-Xylene		179601-23-1	N.D.		0.8	1
10903	o-Xylene	•	95-47-6	N.D.		0.8	1
10903	Xylene (Total)		1330-20-7	N.D.		0.8	1
GC/MS	Semivolatiles	SW-846	8270C	ug/l		ug/l	
07805	Acenaphthene		83-32-9	3		0.1	1
07805	Acenaphthylene		208-96-8	0.5		0.1	1
07805	Anthracene		120-12-7	N.D.		0.1	1
07805	Benzo(a)anthrace	ne	56-55-3	0.2	J	0.1	1
07805	Benzo(a)pyrene		50-32-8	0.2	J	0.1	1
07805	Benzo(b)fluorant	hene	205-99-2	0.2	J	0.1	1
07805	Benzo(g,h,i)pery	lene	191-24-2	0.1	J	0.1	1
07805	Benzo(k)fluorant	hene	207-08-9	0.1	J	0.1	1
07805	Chrysene		218-01-9	0.2	J	0.1	1
07805	Dibenz(a,h)anthrac	ene	53-70-3	N.D.		0.1	1
07805	Fluoranthene		206-44-0	0.5	•	0.1	1
07805	Fluorene		86-73-7	0.3	J	0.1	1
07805	Indeno(1,2,3-cd)py	rene	193-39-5	N.D.		0.1	1
07805	Naphthalene		91-20-3	0.2	J	0.1	1
07805	Phenanthrene		85-01-8	0.1	J	0.1	1
07805	Pyrene		129-00-0	0.7		0.1	1

#### General Sample Comments

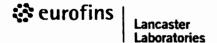
State of New York Certification No. 10670

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	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.	•				Date and Tir	ne		Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	16:47	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	16:47	Jason M Long	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	02:20	Holly Berry	1
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Salvatori	5524

NW 7/25/12



Page 1 of 1

Sample Description: MW-3 Water

COC: 306536

Patchogue, NY

LLI Sample # WW 6669315

LLI Group # 1311918

# 09286 Account

Project Name: Patchogue, NY

Collected: 05/24/2012 16:10

by BFT

Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

PAT-3 SDG#: PCH11-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/1	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/1	
07805	Acenaphthene	83-32-9	0.2 ј	0.09	1
07805	Acenaphthylene	208-96-8	0.3 J	0.09	1
07805	Anthracene	120-12-7	0.4 J	0.09	1
07805	Benzo(a) anthracene	56-55-3	0.1 J	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	2	0.09	1
07805	Fluorene	86-73-7	N.D.	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.09	1
07805	Naphthalene	91-20-3	N.D.	0.09	1
07805	Phenanthrene	85-01-8	N.D.	0.09	1
07805	Pyrene	129-00-0	2	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	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution	
No.					Date and Ti	me		Factor	
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	17:07	Jason M Long	1	
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	17:07	Jason M Long	1	
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	02:44	Holly Berry	1	
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J	1	
							Salvarori I		

Page 1 of 1

Sample Description: MW-8D Grab Water

COC: 306536 Patchogue, NY LLI Sample # WW 6669316 LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/25/2012 09:01

by BFT

Brown & Caldwell 110 Commerce Drive Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

orted: 06/05/2012 19:

PAT8D SDG#: PCH11-12

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	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	$\mathtt{Sample}$	Analysis	Record
------------	-------------------	----------	--------

Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
				Date and Tir	me		Factor
UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	17:26	Jason M Long	1
GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	17:26	Jason M Long	1
PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	03:09	Holly Berry	1
BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J	1
						Salvatori	
	UST VOCs 8260 (Water) GC/MS VOA Water Prep PAHs in Water by GC/MS	UST VOCs 8260 (Water) SW-846 8260B GC/MS VOA Water Prep SW-846 5030B PAHs in Water by GC/MS SW-846 8270C	UST VOCs 8260 (Water) SW-846 8260B 1 GC/MS VOA Water Prep SW-846 5030B 1 PAHs in Water by GC/MS SW-846 8270C 1	UST VOCs 8260 (Water) SW-846 8260B 1 E121571AA GC/MS VOA Water Prep SW-846 5030B 1 E121571AA PAHs in Water by GC/MS SW-846 8270C 1 12150WAE026	UST VOCs 8260 (Water) SW-846 8260B 1 E121571AA 06/05/2012 GC/MS VOA Water Prep SW-846 5030B 1 E121571AA 06/05/2012 PAHs in Water by GC/MS SW-846 8270C 1 12150WAE026 05/31/2012	UST VOCs 8260 (Water) SW-846 8260B 1 E121571AA 06/05/2012 17:26 GC/MS VOA Water Prep SW-846 5030B 1 E121571AA 06/05/2012 17:26 PAHs in Water by GC/MS SW-846 8270C 1 12150WAE026 05/31/2012 03:09	UST VOCs 8260 (Water) SW-846 8260B 1 E121571AA 06/05/2012 17:26 Jason M Long GC/MS VOA Water Prep SW-846 5030B 1 E121571AA 06/05/2012 17:26 Jason M Long PAHs in Water by GC/MS SW-846 8270C 1 12150WAE026 05/31/2012 03:09 Holly Berry BNA Water Extraction SW-846 3510C 1 12150WAE026 05/30/2012 09:45 Cynthia J

PCH11 BBZ6

Page 1 of 1

Sample Description: MW-8S Grab Water

COC: 306536 Patchogue, NY LLI Sample # WW 6669317 LLI Group # 1311918

Account # 09286

Project Name: Patchogue, NY

Collected: 05/25/2012 09:51

by BFT

Brown & Caldwell

110 Commerce Drive Allendale NJ 07401

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

PAT8S SDG#: PCH11-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/1	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	
07805	Acenaphthene	83-32-9	0.7	0.1	1
<b>07805</b>	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	0.1 J	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	Naphthalene	91-20-3	0.2 Ј	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	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution	
No.					Date and Ti	me		<b>Pactor</b>	
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	17:46	Jason M Long	1	
01163	GC/MS VOA Water Prep	SW-846 5030B	ı	E121571AA	06/05/2012	17:46	Jason M Long	1	
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	03:33	Holly Berry	1	
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia J	1	
							Salvatori		

NW 7/25/12

2427

POHIL



Page 1 of 1

Sample Description: MW-9D Grab Water

COC: 306536
Patchogue, NY

LLI Sample # WW 6669318 LLI Group # 1311918

LLI Group # 1311918 Account # 09286

Project Name: Patchogue, NY

Collected: 05/25/2012 11:44

by BFT

Brown & Caldwell

110 Commerce Drive

Submitted: 05/26/2012 09:45

Reported: 06/05/2012 19:51

Allendale NJ 07401

PAT9D SDG#: PCH11-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-84	16 8260B	ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	ı
10903	Methyl Tertiary Butyl Ethe	r 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-84	16 8270C	ug/l	ug/1	
07905	Acenaphthene	83-32-9	N.D.	0.09	1
07805	Acenaphthylene	208-96-8	N.D.	0.09	1
07805	Anthracene	120-12-7	N.D.	0.09	1
07805	Benzo(a)anthracene	56-55-3	0.1 J	0.09	1
07805	Benzo(a)pyrene	50-32-8	0.2 Ј	0.09	1
07805	Benzo(b) fluoranthene	205-99-2	0.3 J	0.09	1
07805	Benzo(g,h,i)perylene	191-24-2	0.2 Ј	0.09	1
07805	Benzo(k) fluoranthene	207-08-9	0.2 J	0.09	1
07805	Chrysene	218-01-9	0.2 ј	0.09	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.09	1
07805	Pluoranthene	206-44-0	0.3 J	. 0.09	1
07805	Fluorene	86-73-7	N.D.	0.09	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	0.2 ј	0.09	1
07805	Naphthalene	91-20-3	0.1 J	0.09	1
07805	Phenanthrene	85-01-8	0.3 J	0.09	1
07805	Pyrene	129-00-0	0.5	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	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution		
No.					Date and Ti	me		Factor		
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012	18:05	Jason M Long	· 1		
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012	18:05	Jason M Long	1		
07805	PAHs in Water by GC/MS	SW-846 8270C	1	12150WAE026	05/31/2012	03:57	Holly Berry	1		
07807	BNA Water Extraction	SW-846 3510C	1	12150WAE026	05/30/2012	09:45	Cynthia I.	ehzs		

Page 1 of 1

Sample Description: Trip Blank Water

coc:

Patchogue, NY

LLI Sample # WW 6669319

LLI Group # 1311918

Account # 09286

Project Name: Patchogue, NY

Collected: 05/23/2012

Brown & Caldwell

110 Commerce Drive

Submitted: 05/26/2012 09:45

Allendale NJ 07401

Reported: 06/05/2012 19:51

PATTB SDG#: PCH11-15TB\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1 .
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1
10903 10903	m+p-Xylene o-Xylene	179601-23-1 95-47-6	N.D. N.D.	0.8 0.8	1 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	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution		
No.					Date and Time		<b>Factor</b>		
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	E121571AA	06/05/2012 12:48	Jason M Long	1		
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E121571AA	06/05/2012 12:48	Jason M Long	1		

POHIL

# **Appendix D:** Electronic Data Deliverable (CD-ROM)