First Quarter 2011 Groundwater Monitoring Report Patchogue Former MGP Site – Site ID No. 1-52-182 Patchogue, New York

Prepared for National Grid USA Hicksville, New York May 2011

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

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Project Number: 138893.316.010



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Section 1

Introduction

Brown and Caldwell Associates (BC) is pleased to submit this report containing the data deliverables related to the First Quarter 2011 groundwater monitoring event conducted at the Patchogue Former Manufactured Gas Plant (MGP) Site (hereinafter referred to as the "Site"). The groundwater monitoring event as well as preparation of this deliverable is part of the routine groundwater monitoring program being conducted at the Site. This report represents the first quarterly monitoring event (First Quarter 2011). This report has been prepared for submittal to the New York State Department of Environmental Conservation (NYSDEC) and includes the following:

- Brief description of the scope of the field activities;
- Table summarizing results of the water level measurements and the gauging for the presence of non-aqueous phase liquids (NAPL) (Table 1);
- Tables summarizing the analytical results of groundwater samples including a comparison to applicable groundwater quality criteria (Table 2);
- Comparison of data from this monitoring period to data from previous periods (Tables 3 and 4);
- · Brief discussion of the groundwater quality data;
- Potentiometric surface map depicting generalized direction of groundwater flow based on water level data from shallow wells and deep wells (Figure 1);
- Field Sampling Data Sheets (Appendix A);
- Laboratory Data Report (Appendix B); and
- Data Usability Summary Report (Appendix C).

1.1 Background

A total of seven groundwater monitoring events have been conducted at the Site since March 2008. These seven events include two monitoring events conducted as part of the Remedial Investigation (RI) in March 2008 and July 2008, as well as semi-annual monitoring events beginning in March 2009 and the First Quarter 2011 (January 2011) monitoring event which 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 found to be present in a limited area near the center of the Site. These 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 across the river from the Site being conducted at the wastewater treatment facility (WWTF). 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 assess this, National Grid increased the frequency of the groundwater monitoring from semi-annually to quarterly. The January 2011 monitoring event, descried herein, is the first quarterly monitoring event.



Section 2

Scope of Work

Field activities for the First Quarter 2011 groundwater monitoring event were conducted by BC on January 5 and 6, 2011. On January 5, 2011, prior to conducting groundwater sampling, depth-to-water measurements, and NAPL gauging were conducted on the 14 monitoring wells. Locations of the 14 monitoring wells are depicted on Figure 1.

Groundwater samples were collected from 12 monitoring wells on January 5 and 6, 2011. Wells MW-5 and MW-6 were not sampled this quarter due to presence of NAPL observed during the NAPL gauging activities. Groundwater sampling was conducted using low-flow purging and sampling techniques in accordance with USEPA (1996) protocol. If NAPL was observed in a well during gauging or sampling, groundwater samples were not submitted for laboratory analyses. Samples were submitted to Lancaster and analyzed for: benzene, toluene, ethylbenzene, xylene isomers (BTEX), and methyl tertiary butyl ether (MTBE) using USEPA SW-846 Method 8260B; and polycyclic aromatic hydrocarbons (PAHs) using USEPA SW-846 Method 8270C. The groundwater samples were also analyzed in the field for pH, specific conductivity, temperature, turbidity, and dissolved oxygen (see Appendix A for field data sheets).

The samples were submitted to Lancaster Laboratories, Inc. (Lancaster) located in Lancaster, Pennsylvania for analysis. Lancaster is a 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 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 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 formatted to the NYSDEC's recently required specifications is provided in Appendix D.



Section 3

Results and Findings

3.1 Water Level Data

Table 1 provides the water level data generated from the January 5, 2011 measurements. Figure 1 illustrates the elevation contours of the water table based on these data. The contours were developed using water level data from only the shallow wells at the Site (i.e., those with screens that straddle, or are just below, the water table). The water level (hydraulic head) values for the wells screened in deeper intervals are posted on Figure 1 and were not used in developing the contour lines, as the data is not representative of water table conditions. The water table is relatively shallow and is typically positioned in the fill that overlies the alluvial deposits and outwash deposits. The water table contours indicate that lateral groundwater flow is from northwest to southeast across the Site toward the Patchogue River. The upward vertical hydraulic gradient measured at the two well clusters adjacent to the river (MW-4S and D. and MW-9S and D) indicate that groundwater is discharging to the Patchogue River. Historically, a comparison of the groundwater levels in these wells and the river elevation indicates the groundwater elevations in the wells are higher than the river level thus providing further support to the conclusion that the groundwater discharges to the river. However, due to substantial snow and ice cover at the time of the monitoring event, measurements from the existing staff gauges previously installed in the river were not made. The general configuration of the water table contours (as shown on Figure 1), developed using the January 5, 2011 data, and the interpreted groundwater flow patterns, are consistent with those developed 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. Operation of this dewatering system altered groundwater flow patterns and levels at the Site.

3.2 NAPL Gauging

Table 1 presents the results of the NAPL gauging conducted during the First Quarter 2011 quarterly groundwater sampling event. NAPL was identified in the following wells during the gauging activities:

- MW-5: Viscous NAPL/tar was observed adhering to the base of an oil/water interface probe, as well as on the outside of the base of a disposable polyethylene bailer after each piece of equipment was lowered to the bottom of the well. NAPL blebs were observed on the surface of the water recovered from the well in the bailer. Strong tar-like odor was associated with the observed NAPL. A 0.62-foot thick accumulation of dense NAPL (DNAPL) was measured in MW-5.
- MW-6: Viscous NAPL/tar was observed adhering to base of an oil/water interface probe, as well as on the outside of the base of a disposable polyethylene bailer after each piece of equipment was lowered to the bottom of the well. NAPL blebs were observed on the surface of the water recovered from the well in the bailer. Strong tar-like odor was associated with the observed NAPL. A 0.02-foot thick accumulation DNAPL was measured in MW-5.

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

3.3 Groundwater Quality Data

Table 2 provides the results of the laboratory analyses of the groundwater samples collected during the First Quarter 2011 monitoring event and a comparison of the data to the New York State Class GA groundwater quality criteria (i.e., standards from the 6 NYCRR Part 703 Standards and guidance values from the Division of Water Technical and Operational Guidance Series [TOGS] 1.1.1). Tables that compare total BTEX and total PAH concentrations from this sampling event to previous sampling events are provided as Tables 5 and 6, respectively.

As described above, NAPL was identified in two (MW-5 and MW-6) of the 14 monitoring wells during water level monitoring and gauging activities conducted prior to sampling and, thus, were not sampled. Groundwater samples were collected from the remaining 12 monitoring wells and submitted for analysis. Comparison of the laboratory data with the New York State Class GA groundwater quality criteria noted the presence of naphthalene at a concentration above the Class GA groundwater quality criteria in MW-1. MW-1 is located upgradient of the former MGP operations. Dissolved-phase constituents observed at this location are not considered to be site-related. BTEX compounds, MTBE and PAH compounds were either not detected or detected at concentrations at or below the Class GA groundwater quality criteria in the other 11 monitoring wells sampled during the First Quarter 2011 (January 2011) event.



Section 4

Conclusions

The concentrations of BTEX and PAHs in the shallow groundwater, and the areal distribution of these concentrations, are similar to those from monitoring events which occurred prior to March 2010. This indicates that concentrations of chemical constituents in groundwater have decreased and have nearly re-equilibrated with the steady-state groundwater flow conditions that existed prior to the operation of the large-scale temporary construction dewatering system, as anticipated. Quarterly monitoring will continue to confirm these conditions.

References

USEPA, April 1996. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures.

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First Quarter	2011	Groundwater	Monitoring Repor	t

Tables

TABLE 1 WATER ELEVATIONS AND NAPL MONITORING DATA JANUARY 2011 PATCHOGUE FORMER MGP SITE PATCHOGUE, NEW YORK

								1/5/2011
Well ID	Top of Casing Elevation	Screened Interval	Depth to Water	Water Elevation	Depth to NAPL	Total Depth	NAPL Thickness	Remarks
	(ft., NAVD)	(ft., BGS)	(ft., BTOC)	(ft., NAVD)	(ft., BTOC)	(ft., BGS)	(feet)	
MW-1	11.23	7-12	5.92	5.31	ND	16.2		
MW-2S	8.97	5-10	4.54	4.43	ND	14.05		
MW-2D	8.23	20-25	3.89	4.34	ND	26.2		
MW-3	5.39	5-10	2.45	2.94	ND	10.48		
MW-4S	7.74	5-10	5.06	2.68	ND	12.1		
MW-4D	7.57	20-25	4.82	2.75	ND	26.5		
MW-5	7.93	5-15	4.17	3.76	16.03	16.65	0.62	Viscous NAPL/tar was observed adhering to base of oil/water interface probe and noted on outside of the base of a disposable polyethylene bailer; NAPL blebs were observed on surface of evacuated water from bailer; strong tar-like odor was associated with the observed NAPL.
MW-6	8.08	5-20	3.81	4.27	21.78	21.8	0.02	Viscous NAPL/tar was observed adhering to base of oil/water interface probe and noted on outside of the base of a disposable polyethylene bailer; NAPL blebs were observed on surface of evacuated water from bailer; strong tar-like odor was associated with the observed NAPL.
MW-7S	8.21	4-9	4.55	3.66	ND	12.4		
MW-7D	8.09	20-25	4.40	3.69	ND	27.9		
MW-8S	4.86	4-9	0.75	4.11	ND	9.8		
MW-8D	4.77	20-25	0.80	3.97	ND	25.1		
MW-9S	4.47	4-9	1.48	2.99	ND	10.23		
MW-9D	4.66	20-25	1.51	3.15	ND	23.15		
SG-1	5.23	NA	NM		ND	NA		
SG-2	5.16	NA	NM		ND	NA		

Notes:

NAVD - North American Vertical Datum BGS - Below Ground Surface

BTOC - Below Top of Casing NAPL - Non-aqueous phase liquid

NA - Not applicable



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

	Class GA Grou	ındwater Criteria								
	TOGS 1.1.1	NYS Part 703	Loc ID	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-7S
Constituent	Guidance	Standard	Units Date	1/5/2011	1/6/2011	1/6/2011	1/5/2011	1/5/2011	1/6/2011	1/6/2011
/olitile Organic Compounds										
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	0.9 J	0.8 U	0.8 l				
m&p-Xylenes	NE	5	μg/L	0.8 J	0.8 U	0.8				
o-Xylene	NE	5	μg/L	0.8 U	0.8 l					
Xylenes, Total	NE	NE	μg/L	0.8 J	0.8 U	0.8 เ				
Total BTEX	NE	NE	µg/L	1.7	ND	ND	ND	ND	ND	ND
Other VOCs										
Methyl Tertiary Butyl Ether	10	NE	μg/L	0.5 U	0.5					
Semi-Volatile Organic Compoun	ds (SVOCs)									
Polycyclic Aromatic Hydrocarbor	ıs (PAHs)									
Acenaphthene	20	NE	μg/L	2 J	1 U	1 U	4 J	1 U	1 U	1
Acenaphthylene	NE	NE	μg/L	1 U	1 U	1 U	3 J	1 U	2 J	1
Anthracene	50	NE	μg/L	1 U	1 U	1 U	2 J	1 U	1 U	1
Benzo(a)anthracene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Benzo(a)pyrene	NE	0	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Benzo(b)fluoranthene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Benzo(g,h,i)perylene	NE	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Benzo(k)fluoranthene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Chrysene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Dibenzo(a,h)anthracene	NE	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1
Fluoranthene	50	NE	μg/L	1 J	1 U	1 U	3 J	1 U	1 U	1
Fluorene	50	NE	μg/L	1 J	1 U	1 U	1 U	1 U	4 J	1
Indeno(1,2,3-cd)pyrene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1

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

	Class GA Grou	ndwater Criteria									
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-7S
Constituent	Guidance	Standard	Units	Date	1/5/2011	1/6/2011	1/6/2011	1/5/2011	1/5/2011	1/6/2011	1/6/2011
Naphthalene	10	NE	µg/L		14	1 U	1 U	1 U	1 U	1 U	1 U
Phenanthrene	50	NE	µg/L		3 J	1 U	1 U	2 J	1 U	6	1 U
Pyrene	50	NE	μg/L		1 J	1 U	1 U	3 J	1 U	1 U	1 U
Total PAHs	NE	NE	µg/L		22	ND	ND	17	ND	12	ND

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

	Class GA Grou	undwater Criteria							
	TOGS 1.1.1	NYS Part 703	Loc ID	MW-7D	MW-8S	MW-8D	MW-8D DUP	MW-9S	MW-9D
Constituent	Guidance	Standard	Units Date	1/6/2011	1/6/2011	1/6/2011	1/6/2011	1/5/2011	1/5/2011
Volitile Organic Compounds									
BTEX									
Benzene	NE	1	μg/L	0.5 U	0.5 U	0.5 U	0.5 U	1 J	0.5 U
Toluene	NE	5	μg/L	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Ethylbenzene	NE	5	μg/L	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
m&p-Xylenes	NE	5	μg/L	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
o-Xylene	NE	5	µg/L	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Xylenes, Total	NE	NE	μg/L	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Total BTEX	NE	NE	µg/L	ND	ND	ND	ND	1	ND
Other VOCs									
Methyl Tertiary Butyl Ether	10	NE	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Semi-Volatile Organic Compound	ds (SVOCs)								
Polycyclic Aromatic Hydrocarbon	s (PAHs)								
Acenaphthene	20	NE	μg/L	1 U	1 J	1 U	1 U	12	1 U
Acenaphthylene	NE	NE	μg/L	1 U	1 U	1 U	1 U	8	1 U
Anthracene	50	NE	μg/L	1 U	1 U	1 U	1 U	1 J	1 U
Benzo(a)anthracene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)pyrene	NE	0	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene	NE	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(k)fluoranthene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Dibenzo(a,h)anthracene	NE	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	50	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 J
Fluorene	50	NE	μg/L	1 U	1 U	1 U	1 U	9	1 U
Indeno(1,2,3-cd)pyrene	0.002	NE	μg/L	1 U	1 U	1 U	1 U	1 U	1 U

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

	Class GA Grou	ndwater Criteria								
	TOGS 1.1.1	NYS Part 703		Loc ID	MW-7D	MW-8S	MW-8D	MW-8D DUP	MW-9S	MW-9D
Constituent	Guidance	Standard	Units	Date	1/6/2011	1/6/2011	1/6/2011	1/6/2011	1/5/2011	1/5/2011
Naphthalene	10	NE	μg/L		1 U	5 J	1 U	1 U	1 U	1 U
Phenanthrene	50	NE	μg/L		1 U	1 U	1 U	1 U	12	2 J
Pyrene	50	NE	μg/L		1 U	1 U	1 U	1 U	1 U	2 J
Total PAHs	NE	NE	μg/L		ND	6	ND	ND	42	5

Notes:

μg/L - micrograms per liter

ND - Not detected.

NE - Not established.

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

J - Estimated concentration. The result is below the quantitation limit but above the practical quantitation limit or the method detection limit.

U - The analyte was analyzed for, but was not detected.

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

					Tota		centrations (µg,	/L)			
			•				ling Date	2011			
	Total Depth	20	08	2	009	2	010	2011			
Well ID	(ft., bgs)	March	July	March	September	March	September	January	Min	Max	Mean
MW-1	16.2	0	NS	0	0	0	0	1.7	0	1.7	0.28
MW-2S	14.05	0	0	0	0	0	0	0	0	0	0
MW-2D	26.2	0	0	0	0	0	0	0	0	0	0
MW-3	10.48	0	0	0	0	0	0	0	0	0	0
MW-4S	12.1	3.4	0	0	0	0	0	0	0	3.4	0.49
MW-4D	26.5	0	0	0	0	0	0	0	0	0	0
MW-5	16.65	1016	678	975	1257	637	NS	NS	637	1257	913
MW-6	21.8	57.3	0	0	1	2	0	NS	0	57.3	10
MW-7S	12.4	NS	0	0	0	0	0	0	0	0	0
MW-7D	27.9	NS	0	1	0	9	0	0	0	9	1.7
MW-8S	9.8	NS	0	0	0	0	0	0	0	0	0
MW-8D	25.1	NS	0	0	0	0	0	0	0	0	0
MW-9S	10.23	NS	0	0	0	0	27	1	0	27	4.7
MW-9D	23.15	NS	0	0	0	0	0	0	0	0	0

Notes:

BTEX - Benzene, toluene, ethylbenzene and xylene isomers

μg/L - micrograms per liter

NS - Not sampled.

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

					Tot		centrations (µg/	′L)			
	Sampling Date										
	Total Depth	20	800	2	2009	2	010	2011			
Well ID	(ft., bgs)	March	July	March	September	March	September	January	Min	Max	Mean
MW-1	16.2	0	NS	0	0	0	0	22	0	22	3.7
MW-2S	14.05	0	0.7	0	0	0	0	0	0	0.7	0.12
MW-2D	26.2	0	0	0	0	0	0	0	0	0	0
MW-3	10.48	0.76	0	0	0	0	128	17	0	128	21
MW-4S	12.1	0.6	7.96	0	0	0	0	0	0	7.96	1.2
MW-4D	26.5	4.28	0	0	0	39	6	12	0	39	8.8
MW-5	16.65	1773.9	1798.7	2730	3373	2390	NS	NS	1773.9	3373	2413
MW-6	21.8	214.18	154.2	0	1	17	14	NS	0	214.18	67
MW-7S	12.4	NS	0	0	0	0	0	0	0	0	0
MW-7D	27.9	NS	0.47	0	0	0	0	0	0	0.47	0.078
MW-8S	9.8	NS	0	0	0	22	11	6	0	22	6.5
MW-8D	25.1	NS	0	0	0	0	0	0	0	0	0
MW-9S	10.23	NS	12.01	0	0	2	396	42	0	396	75
MW-9D	23.15	NS	0	0	0	0	0	5	0	5	0.83

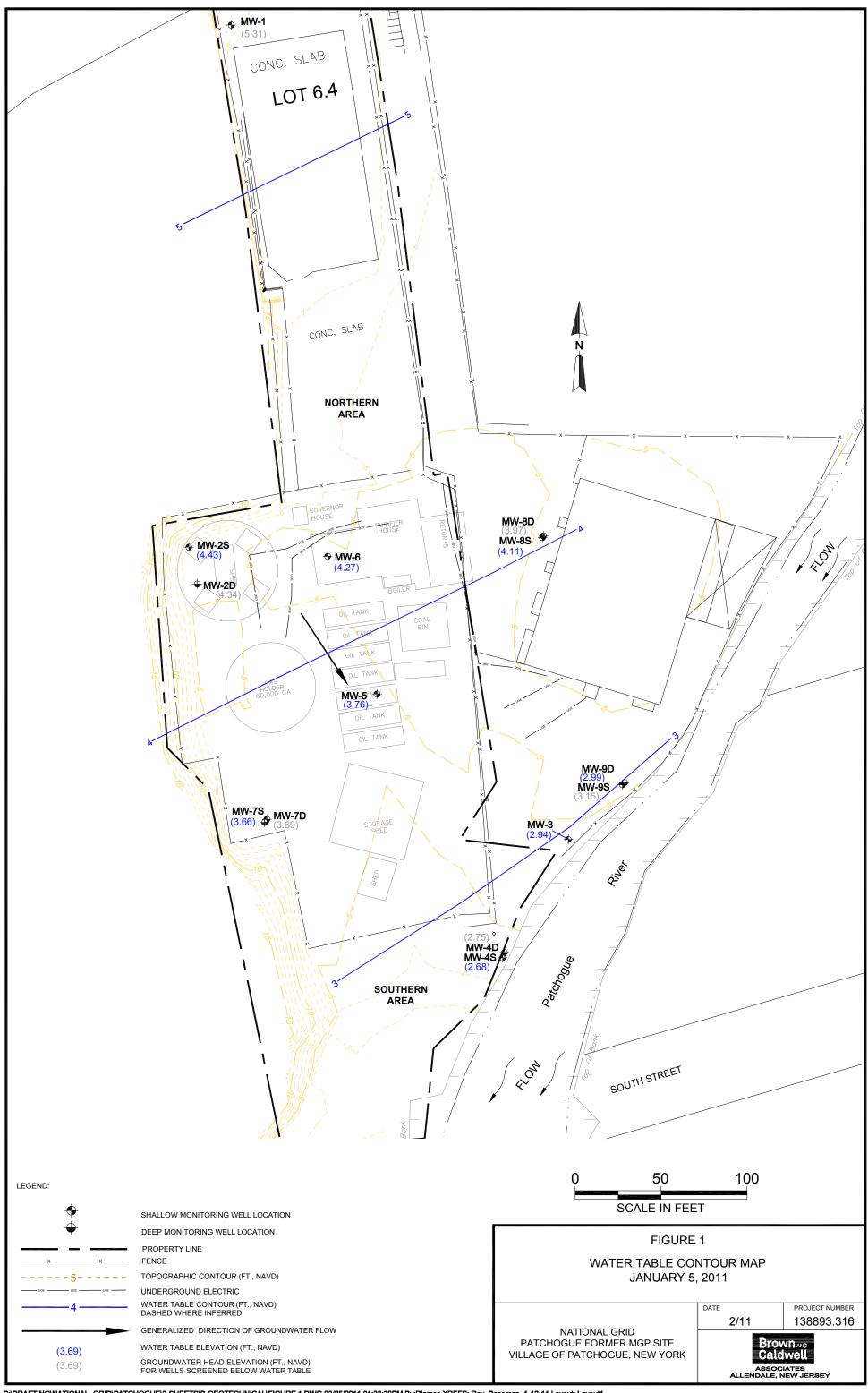
Notes:

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



First	Quarter	2011	Groundwater	Monitoring	Report
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Figures



Appendix A: Field Sampling Data Sheets

Project Name:	Patel	1 69WE	Ground water	Project N	umber:
Personnel:	JAJ,	NLL	V 20 10 200	Well ID:	MW-90
Purge/Sample I	Depth: _	22 ft		Sample ID	

Actual Time	pН	Temp (°C)	ORP (mV)	Cond (m5/m)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
11.02	6.16	10.72	IRI	0.131	3.01	103.0	1.5	300	Slight Cont ter ad
11:08	5.51	12.38	126	0.267	2.39	90.2		30n	711974
11:11	5.42	17,77	190	0,471	7.26	265		300	
11114	5.36	13.01	195	0.437	7.21	222	1.5	300	
113.17	5.31	13.18	198	0.464	7.27	163		302	
11:10	5.32	13.31	103	0.419	725	125		300	
11:13	5,29	13.31	203	0.47.1	2,23	112		300	
11:16	5,31	13.33	206	0.444	2.74	88.9	1.5	300	
11:19	5.79	13.40	206	0.453	7.74	79,6		300	
11:37	5.29	13.40	207	0,446	2.25	66.5		300	
11:35	5,29	13.46	208	0.440	2,25	58.3		300	
11 38	5.29	13.46	208	0.432	2.25	52.7		30	
									
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BROWN AND CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: NW-9D

		Allendale, NJ Office	Sample I.D.:	(if different from well no.)
Pro Per	ject: Patchaghe GW sonnel: JAT NLL		Date: 1/5/// Ti Weather: Sunny	me: Air Temp.: <u>40°</u>
Cas Inta DEI DA' CO	Rike Diameter: 2 Compared to the process of the pro	Stainless Steel Steel PN Stainless Steel Galv. Steel Stainless Steel Galv. Steel Galv. Steel Galv. Steel Galv. Steel Casing Top of Well Casing beled? Yes No Is well surface Mount in Good Cond.? (n e adequately drain well head? Intact? (not cracked or frost heav ional? Yes No NA Properly Capped and Vented? Inding in well:	DiPVC □ Teflon® □ C : 1.5 1/1t □ Other: clean to bottom? □ Ye ot bent or corroded) X2 Yes □ No ved) X1 Yes □ No Is Inner Casing Intact	Open rock es ⊠ No Yes ⊡ No
_		Size:		
Pun Wa:	TERIALS: (Pump/Bailer: 10 to 1	I v	Tubing/Rope: Volume Pumped: <u>** 3</u> mber of Well Volumes Re ite	moved:/
	MPLING DATA: THOD: □ Bailer, Size: □ □ Syringe Sampl	XBladder Pump □ 2" Su er □ Peristaltic Pump □ Inerti	bmersible Pump □ 4" Su al Lift Pump □ Other:	bmersible Pump
SAM Met APF FIEI Ten ORI DUF MS/ Field	MPLING EQUIPMENT: Talls samples field filtered? PEARANCE: LD DETERMINATIONS: Inperature: P: No Yes MSD: No Yes A Lab Results: N/A pH: Lify that this sample was collected and the	Yes No Method: Turbid Color: pH: \$19 Meter Model: Meter Model: Turbidity: Turbidity: DO: DO: DO: DO: DO: DO: DO: D	Contains Immisc	sible Liquid ter S/N: ter S/N:

Project Name:	Patchague Gu	Project Nun	nber:
Personnel:	M + HAT	Well ID:	pu-93
Purge/Sample [Depth:	Sample ID:	MW-75

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		_		l <u>.</u> .		 			
Actual	İ	Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	
Time	pН	(°C)	(mV)	(m5/4	(mg/L)	(NTU)	(ft)	(mL/min)	Comments
						JAJ NA			
12:10	6.15	9.67	36	0,345	13.69	多种	1,5	750	Rod/Iron turbed
17:13	6.15	9.67	76	0.439	12.13	281		750	Enpty Horita
12:16	6,16	10.11	14	0.504	11.65 %	231		250	- / /
12:19	6,73	10.58	- 1	0.594	10.71	184		750	
12.25	6.31	10.91	-26	0.676	10.07	140	1.5	250	
12:15	638	11.16	-39	0.637	9.19	174		750	
17:28	6.46	11.26	-54	0.629	8.66	104		250	
12:31	6.48	11.77	-58	0.616	8,52	93,1		750	
12:34	6.50	11.38	-64	0.617	6.19	69.4	1.5	250	
12:37	6.54	11.50	-72	0,583	6.04	56.7		750	
12:40	6,56	11.57	-76	0.576	5.77	40.1		750	· ·
17:45	V.V.	San	188	لوها	00 A	en			
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B R O W N A N D

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-95

Allendale, NJ Office	Sample I.D.:	(if different from well no.)
Project: Patthogne Gusmi Personnel: Lu + 0A5	Date: 115111 Weather: Sur	Time: Air Temp.:
Intake Diameter: 2 Stainless Steel Galv	Is well clean to bottom? If and.? (not bent or corroded) ad? If ad? If No ist heaved) If NA Is Inner Casing Intacted? If Yes □ No	Open rock Yes □ No Yes □ No
PURGE DATA: METHOD: □ Bailer, Size: □ Centrifugal Pump □ Peristalt	ump 🏻 2" Submersible Pump ic Pump 🖵 Inertial Lift Pump	☐ 4" Submersible Pump ☐ Other:
Was well Evacuated? ☐ Yes ☒ No	Whing/Rope: White Volume Pumped: 2 . 3 Number of Well Volumes Red Off-Site	emoved:
SAMPLING DATA: METHOD: Bailer, Size: Syringe Sampler Peristaltic Pump	2" Submersible Pump □ 4" S Inertial Lift Pump □ Other:	Submersible Pump
MATERIALS: Pump/Bailer:	Contains Immis Model: Model: Model: Model: Model: Temperature:	

Project Name: _	Patchegul	Project Number:	
Personnel:	Mit that	Well ID: Well ID:	
Purge/Sample De	epth: 🦰 💆	Sample ID:	

	Τ			<u> </u>	<u> </u>	г	<u> </u>		
Actual		Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	
Time	рH	(°C)	(mV)	(45/1)		(NTU)	(ft)	(mL/min)	Comments
"""		()	(,	())	\g. = /	()	(11)	(Commission
1345	7.31	10.57	61	0.713	5.11	-5.0			Urery purbid
1348	7.01	10-47	60	0.35	4.74	-5.0		250	7
1357	6.108	10.46	54	0.224	3.03	916			
1354	10.53	10.97	55	0.383	7.86	583.	5.15		
1357	6-50	10.99	56	0.361	6.13	599			omated Horas
1400	6.48	11.00	58	D-359	4.02	630	5.2	260	
1403	6.46	10.83	55	0.385	3.28	504			
14 06	6.44	11.00	54 53	6.351	2.96	347		250	
1409	6.43	11.06		0.331	2.85	321			
1412	6.44	11.02	57	0.313	2.36	282	5.2		
1415	6042	11.16		0.292	2.71	243	_		
1418	6.42	11.43	49	0.273	2.64	196		250	
1421	6.42	11.47	49	0.267	2.62	104			· ·
V24	6.41	11.52	47	0.269	2.59	180			
1427	6.42	11.35	47	0.264	2.58	143			
14 30	6.47	11.38	46	0.663	1 58	171		2114.2	
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B R O W N A N D CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: Mu - 45

	Allendale, NJ Office	Sample I.D.: (if different from well no.)
	Project: Partition and GW Personnel: W + VAT	Date: 151 Time: 1345 Weather: Sunny Air Temp.: 40°
or in the contract of the cont	WELL DATA: Casing Diameter: Stainless Steel Steel Pintake Diameter: Static Water Level: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: Stainless Steel Galv. Steel DEPTH TO: Static Water Level: Stainless Steel DEPTH TO: Static Water Level: Stainless Steel DEPTH TO: Stainles	■ PPVC □ Teflon® □ Open rock :()ft □ Other: clean to bottom? □ Yes □ No not bent or corroded) □ Yes □ No
		I 2" Submersible Pump □ 4" Submersible Pump p □ Inertial Lift Pump □ Other:
P		Teflon® Polyethylene Polypropylene Other: Wolume Pumped: 43 galand Teflon® Polypropylene Other: Wolume Pumped: 43 galand Teflon® Polypropylene Other: Other: Site Field Cleaned
	SAMPLING DATA: IETHOD: □ Bailer, Size: 中間adder Pump □ 2" Su □ Syringe Sampler □ Peristaltic Pump □ Inerti	
SA M A FI TO D	Teflon® Stainless Steel	Contains Immiscible Liquid Meter S/N: Meter S/N:
10	ield Lab Rèsults: N/A pH: DO: Pertify that this sample was collected and handled in accordance with applicable regulation ignature:	Temperature:latory and project protocols. Date://.57//

Project Name: Partchoung GW	Project Number:
Personnel:	Well ID: http-, 3
Purge/Sample Depth: ~ 8	Sample ID: MU-3

Time pH (°C) (mV) (mg/L) (NTU) (ft) (mU/min) Comments 2.5.3 6.440 (0.26 22 0.328 4.73 61.0 2.45 2.50 7.5.5 6.5.1 1.2.44 31 0.373 7.09 43.1 7.00 7.5.5 6.5.2 10.93 33 0.318 2.77 33.3 7.00 7.5.2 6.29 (0.93 33 0.318 2.77 33.3 7.00 7.5.2 6.28 11.93 35 0.314 2.43 34.4 7.45 2.70 7.5.2 6.28 11.93 35 0.314 2.43 34.4 7.45 2.70 7.5.2 6.28 11.93 35 0.314 2.43 34.4 7.45 2.70 7.5.2 6.28 11.9 37 3.9 0.310 2.57 10.5 7.50 7.5.3 1.1 6.79 11.37 3.9 0.310 2.53 15.2 7.50 7.5.4 1.2 11.38 40 0.324 2.51 12.0 2.50 7.5.2 0.31.30 4.29 11.38 40 0.324 2.51 12.0 2.50 7.5.3 1.20 6.21 11.39 40 0.324 2.51 12.0 2.50 7.5.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1	Actual		Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	
2:56	Time	pН	(°C)	(mV)	(miser)	(mg/L)	(NTU)	(ft)	(mL/min)	Comments
1.57		6.40		27			61.0	2.45	250	
3:02 6.28 11.03 35 0.314 2.67 34.4 2.45 25.0 3:05 6.28 11.18 37 0.310 2.57 30.5 75.0 3:08 6.28 h. 28 38 0.308 2.55 25.5 25.0 3:11 6.29 11.35 39 0.310 2.53 15.2 25.0 3:14 6.29 11.35 39 0.30 2.51 17.4 2.45 25.0 3:20 6.29 11.38 40 0.308 2.51 12.0 3:20 6.29 11.38 40 0.308 2.52 11.1 3:20 6.29 11.39 40 0.308 2.52 11.1 3:13 6.30 11.40 40 0.308 2.61 10.4 25.0 3:130 5 4 4 5 5 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7							49.9		750	
3:05 6.28 11.18 37 0.110 2.57 30.5 250 3:08 6.28 h. 28 38 0.308 2.55 25.5 25.0 3:11 6.79 11.37 39 0.310 2.53 15.2 250 3:11 6.29 11.38 39 0.300 2.51 17.0 3:12 6.29 11.38 40 0.303 2.51 17.0 250 3:13 6.30 11.40 40 0.308 2.52 11.1 250 3:13 6.30 11.40 40 0.308 2.61 10.4 250 3:30 5apple 5aken				33				2		
3:08 6.28 h, 28 38 0.308 2.55 25.5 25.0 3:11 6.79 11.31 39 0.310 2.51 17.4 2.45 250 3:17 6.29 11.38 40 0.303 2.51 17.0 3:10 6.29 11.38 40 0.308 2.52 11.1 3:20 6.23 11.38 40 0.308 2.52 11.1 3:13 6.30 11.40 40 0.308 2.61 10.4 250 3:30 Sample Taken				32				7.95	250	
3:11 6.79 11.37 3.9 0.310 2.53 15.2 250 3:14 6.29 11.38 40 0.309 2.51 12.0 25.0 3:20 6.21 11.38 40 0.308 2.52 11.1 75.0 3:13 6.30 11.40 40 0.308 2.61 10.4 2.50 8:30	3:00						30.5			
3:14 6.29 11.35 3.5 6.310 2.51 17.4 2.45 250 3:13 6.29 11.38 40 0.303 2.51 12.0 3:20 6.23 11.38 40 0.308 2.52 11.1 3:13 6.30 11.40 40 0.308 2.61 10.4 250 3:30 Sample Taken				30	0.308		(212			
3:17 6.29 11.38 40 0.303 2.51 12.0 3:20 6.29 11.38 40 0.308 2.52 11.1 3:13 630 11.40 40 0.308 2.61 10.4 3:30 Sapple Taken					6.3/0	2.51		2.45		<u> </u>
3:20 6.29 11.38 40 0.308 2.52 11.1 750 3:13 630 11.40 40 0.308 2.61 10.4 250 3:30 Sarple Taken					0.309	2.51			250	
3:30 Sample Taken			11.38	40	0.308		11.1			
	3:13	630	11.40	40	0,308	2.61			250	
	3:30			Sar	ng le		alcen			<u>" </u>
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BROWN AND CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: $\mu \sim -3$

	Allendale, NJ Office	Sample I.D.:	(if different from well no.)
	Project: Patchosul GW Personnel: WILL + JA+	Date: 115111 Time:	1053 Air Temp.: <u>40</u> 0
	WELL DATA: Casing Diameter:	☐ PVC ☐ Teflon® ☐ Open r II: /	ock No □ No
	PURGE DATA: METHOD: □ Bailer, Size: □ Peristaltic Pump □ Centrifugal Pump □ Peristaltic Pum	☐ 2" Submersible Pump ☐ 4" : p ☐ Inertial Lift Pump ☐ Othe	Submersible Pump
	MATERIALS: Fump Bailer: Teflon® Stainless Steel PVC Other: Pumping Rate: 750 Full Elapsed Time: 30 Min Was well Evacuated? Yes No Nu PURGING EQUIPMENT: Dedicated Prepared Off-Stainless Steel	Volume Pumped: 2.5 mber of Well Volumes Removed	Other:
	SAMPLING DATA: METHOD: Bailer, Size: Peristaltic Pump Inertia	ıbmersible Pump □ 4" Submers ial Lift Pump □ Other:	sible Pump
	Metals samples field filtered? APPEARANCE:	off-Site Field Cleaned Contains Immiscible L Meter S/I Meter S/I Temperature:	N:
_	P'V'OfficeV'Fleid LabyFleid Data Sheets/Weil Info Sheet.doc		

Project Name: Patelynne	Project Number:
Personnel: WL + ORNH	Well ID: Mw-/
Purge/Sample Depth:	Sample ID: Mu-1

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Actual	ĺ	Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	
Time	рH	(°C)	(mV)	(mg/c)	(mg/L)	(NTU)	(ft)	(mL/min)	Comments
15 05		7				·			
	6.95	9.36	-5	0.445	3.54	160	6.0	750	
160 08	6.87	9.60	-13	0.499	3,33	138		250	
16 11	6.82	9.71	-28	0.583	3.34	151	,	250	
16 19	6.81	9.19	-38	0.562	3.63	132	6.0	750	
16 10	6.81	9.98	-44 -48	0.511	3.90	121	6.0	250	
16 23	6.87	10.05	-4X -51	0.484	4.37	95.1	ļ. 1	250	
1626	6.83	10.11	-54	0.464	4.60	83.1	6.0	250 250	
1629	6.84		-55	0.460	4.84	80.1	0.0	250	
16 32	6.85	9.89	-55	0.456	4.02	85.9		250	
1635	6,85	10.00	-55	0.457	4.12	82.5		750	
1640	0,00	1 4. 00		Sampl	. 7	1 L		(3)	
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B R O W N A N D C A L D W E L L

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Allendale, NJ Office

Well Number: MW-| Sample I.D.:

(if different from well no.)

Project: Patchague Grandwater Personnel: TAT, NCL	Date: 1/5 / 11 Time: 16:05 Weather: Air Temp.: 400
DEPTH TO: Static Water Level:	
PURGE DATA: METHOD: □ Bailer, Size: □ Centrifugal Pump	☑ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump ☐ Deristaltic Pump ☐ Inertial Lift Pump ☐ Other:
MATERIALS: Jump/Bailer: Stainles PVC Other: Pumping Rate: Yes B. No	s Steel Tubing/Rope: Polyethylene Polypropylene Other: Time: 20 My Volume Pumped:
SAMPLING DATA: METHOD: □ Bailer, Size: □ Blade □ Syringe Sampler □ Perista	der Pump □ 2" Submersible Pump □ 4" Submersible Pump altic Pump □ Inertial Lift Pump □ Other:
Metals samples field filtered? APPEARANCE: Clear Turbid FIELD DETERMINATIONS: pH: 6.8. Temperature: (0.00 Spec. Cond.: 0.45 ORP: DO: 4.1 DUP: No DYes Name: MS/MSD: No DYes Name:	Prepared Off-Site Field Cleaned No Method: Color: Contains Immiscible Liquid Meter Model: Meter S/N: Turbidity: 87 5 DO: Temperature:

Project Name:	Patchogue	Ground water	Project Numb	oer: _	
Personnel:	TAT, NLL		Well ID:	WM-8D	
Purge/Sample E	Depth: <u> </u>	2 ft	Sample ID: _	MW-8D	

	Ι		Γ	· · · · · · · · · · · · · · · · · · ·	T				
Actual Time	рН	Temp (°C)	ORP (mV)	Cond (MS/(M)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
8.58	5,49	17.80	170	3.07	3.40	8516	0.8	7 4 4	
9:01	5.60	18,69	162	1.59	477	38.5	<u> </u>	700 200	
9.04	5.71	18.04	159	1.13	4.79	38.0	/	100	
9:07	5 87	18,82	151	0,90	4.57	43.9		100	
9:10	5.93	18.55	150	0,711	4.25	53.4	0-8	700	
9 13	6.00	18.24	148	0.498	4.12	513	0-0	200	
9 16	6.05	1853	145	0418	4.02	48.3		200	
9 19	6.08	18.41	141	0.379	3.94	47.6		700	
9:27	6.12	18-25	135	0.357	3.78	46.2	0.8	700	
9:25	6.18	18.27	127	0.344	3,62	44.2		200	
9:28	6.71	18.36	127	0.338	3.46	474		200	
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B R O W N A N D

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-90

Allendale, NJ Office	Sample I.D.: MW-80 (if different from well no.)
Project: futch ogge Ground vater Personnel: JAJ, NL(Date: Time: 8 .5 \$\frac{35 \circ}{F}\$ Weather: Air Temp.: 35 \circ F
WELL DATA: Casing Diameter: Stainless Steel Steel Pintake Diameter: Static Water Level: O.80 ft Bottom of Well DATUM: Top of Protective Casing Top of Well Casing CONDITION: Is Well clearly labeled? Yes No Is well seen to be weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost head is Padlock Functional? Yes No NA Is Inner Casing Properly Capped and Vented? VOLUME OF WATER: Standing in well: No NA	SPVC □ Teflon® □ Open rock II: 25 ft □ Other: □ Other: □ It clean to bottom? □ Yes ➤ No not bent or corroded) □ Yes □ No PYes □ No ved) □ Yes □ No Is Inner Casing Intact? □ Yes □ No
PURGE DATA: METHOD: □ Bailer, Size: □ Bladder Pump □ Peristaltic Pump	☐ 2" Submersible Pump ☐ 4" Submersible Pump
MATERIALS: Pump/Bailer: Stainless Steel PVC Other: Pumping Rate: Slapsed Time: Numping Rate: Ves No Numpurging Elapsed Off-Stainless Steel PVC Other: Pumping Rate: No Numping Rate: Ves No Numpurging Elapsed Time: Numping Rate: No Numping Rate:	mber of Well Volumes Removed:
SAMPLING DATA: METHOD:	al Lift Pump Other: Tubing/Rope: Teflon® Polyethylene off-Site Contains Immiscible Liquid Meter S/N:
Temperature: 18.36 Spec. Cond.: 0.338 Meter Model: ORP: 122 DO: 3.46 Turbidity: 4 DUP: D No Pyes Name: 50000610 MS/MSD: No Pyes Name: 50000610 Field Lab Results: DN/A pH: 500: 500 I certify that this sample was collected and handled in apcordance with applicable regularity Signature: 5000000000000000000000000000000000000	Meter S/N: ————————————————————————————————————

Project Name: Patchown	R	Project Number:
Personnel:	AT.	Well ID: http://www.gs
Purge/Sample Depth:	~ 0	Sample ID:

			90						
Actual Time	рН	Temp (°C)	ORP (mV)	Cond (^5/c~)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
948	6.65	13.01	68	0.339	2.53	114		1	
951	6.71	14.33	<i>€</i> 3	0.409	4.35	130	1.00	200	
954	6.98	14.93	11	0-391	4.01	531	.00	300	<u> </u>
957	7.50	16.52	-21	0.388	3.60	857		<u></u>	
1000	7.61	14.37	-32	0.374	8.31	\$37		200	ensped Ho.
1003	7.98	13.01	-43	0.362	8.70	418	1.00	200	President des
1006	7.83	9.00	-49	0.371	8.91	424	1		
009	7.84	10.84	57	0.372	8.12	389			
1012	3.8€	10.89	-55	0.377	7.26			200	ensted tois
1015	7.91	12.06	-61	0.38	2:61	357 238			Y Zalista
/0 iB	7.90	10.77	-62	0.627	-0.35	224	1.00		
1021	7.91	10.78	-64	0.407	0.00	226			
1024	7-92	10.03	-67	0.447	0.00	210		200	
1027	7.92	10.31	-68	0.427	0.00	205			
1030	7.97	11.41	-77	0.419	0.00	178			
1033	7-97	11.30	- 24	0-414	0.00	1 W			
1036	7.97	11.29	-76	0.409	0.00	143			
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B R O W N A N D C A L D W E L L

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW -85

Allendale, NJ Office	Sample I.D.: (if different from well no.)
Project: Patchogue Personnel: Lu + DOS	Date: 1/6(11 Time: 978 Weather: Sunny Air Temp.: 307
	□ Other: Il clean to bottom?
PURGE DATA: METHOD: □ Bailer, Size: □ □ Bladder Pump □ Centrifugal Pump □ Peristaltic Pump	2" Submersible Pump □ 4" Submersible Pump p □ Inertial Lift Pump □ Other:
MATERIALS: Pump/Bailer: Teflon® Stainless Steel PVC Other: Pumping Rate: Yes Yes No Num PURGING EQUIPMENT: Dedicated Prepared Off-Stainless Steel PVC Other: Prepared Off-Stainless Steel PVC Other: PVC Other: PVC Other: Prepared Off-Stainless Steel PVC Other:	Toping/Rope: Teflon® Polyethylene Polypropylene Other: White Pumped:
SAMPLING DATA: METHOD: Bailer, Size: Syringe Sampler Peristaltic Pump Inertia	al Lift Pump □ 4" Submersible Pump
MATERIALS: Pump/Bailer: Teflon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared O Metals samples field filtered? Yes No Method: APPEARANCE: Clear Turbid Color: FIELD DETERMINATIONS: pH: 747 Meter Model: Temperature: Spec. Cond.: 0.404 Meter Model: ORP: DO: 0.00 Turbidity: DUP: No Yes Name: MS/MSD: No Yes Name: MS/MSD: No Yes Name: DO: 1 certify that this sample was collected and handled in accordance with applicable regulations.	Contains Immiscible Liquid Meter S/N: Meter S/N: Temperature:
	Project: Personnel:

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	Pa	tch	oa u e	. 6	Sround wo	oten	Project Nu			
Personnel:	37	17	JNI	L			Well ID:	MW-	70	
Purge/Sample	Deptl	า: ั′	157	1.7	£+.		Sample ID:	Mu	1. 70	
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Actual		Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	
									Cammanta
Time	pН	(°C)	(mV)	(N-40)	(mg/L)	(NTU)	(ft)	(mL/min)	Comments
17:15	7.78	15,48	59	0.268	3.04	77.5	4.4	200	
15:18	6.71	15.58	77	0.757	1.67	78.6	·	200	
12.21	4.54	15.78	77	0.753	1.32	61.9		200	***************************************
12.24	1,48	16.37	89	0.266	117	66.3		200	
17:77	640	16.77	93	0.780	0.90	72.1	4.4	700	
12 30	6.36	15,46	96	0 799	0.81	73.1	1. 1	200	
17 37	4.30	15.44	99	0.790	0.78	407		700	
12:36	1 74	1572	103	0.775	0.69	58.9		200	
12:39	677	15.61	107	0.7867	0.63		34.41	706	
	~ ~ ~ ~				0.63	56.8	44		
17,47	6.16		111	0.760	0.60	50.4		701	
17:45	6.17	15.10	114	0.751	0.57	50.2		701	
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B R O W N A N D C A L D W E L L

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: 12 - 7 b

Allendale, NJ Office	Sample 1.D.: (if different from well no.)	
Project: Patchogue Personnel: M + TAT	Date: 1) 6 to Time: 10 S Weather: S Air Temp.: 30	
WELL DATA: Casing Diameter: Intake Diameter: Static Water Level: DEPTH TO: Static Water Level: DATUM: Top of Protective Casing CONDITION: Is Well clearly labeled? Is Prot. Casing/Surface Mount in Good Cond.? (n Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost heaven in Spadlock Functional? PYes NO NA Is Inner Casing Properly Capped and Vented? VOLUME OF WATER: Standing in well: A Steel PY Steel PY Bottom of Well Bottom of Well Bottom of Well Casing Properly Capped and Vented? A VOLUME OF WATER: Standing in well: A A	PVC Teffon® Open rock	
	2" Submersible Pump □ 4" Submersible Pump p □ Inertial Lift Pump □ Other:	
 Was well Evacuated? 나 Yes 뵌 No Nul	Tubing/Rope: Teflon® Polyethylene Polypropylene Other: mber of Well Volumes Removed: Prield Cleaned	
SAMPLING DATA: METHOD: Bailer, Size: Syringe Sampler Peristaltic Pump Inertia	abmersible Pump □ 4" Submersible Pump al Lift Pump □ Other:	
ORP: DO: Turbidity: 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 to accordance with applicable regul	Contains Immiscible Liquid Meter S/N: Meter S/N: Temperature:	

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	Patcheger	Project Number:
Personnel:	no non	Well ID:
Purge/Sample Depth	· _ ~ 6	Sample ID:

Actual Time	рН	Temp (°C)	ORP (mV)	Cond (NY)	DO (mg/L.)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
13.06 13.06	8.51 8.95 9.11	11.18 11.51 11.32	-95 -116 -176	1.03	0.00	17-0 121 93.8	4,5	150 150	
13.15 13.18 13.21	9.17 9.16 9.17 9.13	10.86 8.67 10.15 10.56	-137 -134 -136 -138	1.01 1.00 1.00	0.00	88.5 85.3 79.4 77.8	4.6	150 150 150	
13:24 17:27 13:38	9.13 9 .12 9.10 9.10	10.93	-138 -138 -139	1.00	0.00 0.00 0.00	76.8 66.5 74.3 67.5	4.6	150 150	
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B R O W N A N D CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Allendale NJ Office

Sample I.D.:

	Project: Patcho gul Personnel:	Date:
5)	WELL DATA: Casing Diameter:	l: 9 _ft □ Other: I clean to bottom?
	PURGE DATA: METHOD: Bailer, Size: Centrifugal Pump Peristaltic Pump	〕 2" Submersible Pump □ 4" Submersible Pump p □ Inertial Lift Pump □ Other:
	MATERIALS: Pump/Bailer: Stainless Steel PVC Other: Pumping Rate: Elapsed Time: 10 Mul PURGING EQUIPMENT: Dedicated Prepared Off-S	Tubing/Rope: Polyethylene Polypropylene Other: Other: Site Field Cleaned
	SAMPLING DATA: METHOD: □ Bailer, Size: □ Ø Bladder Pump □ 2" Su □ Syringe Sampler □ Peristaltic Pump □ Inerti	ubmersible Pump □ 4" Submersible Pump al Lift Pump □ Other:
3	MATERIALS: Rump/Bailer: Teflon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared O Metals samples field filtered? Yes No Method APPEARANCE: Clear Turbid Color: FIELD DETERMINATIONS: pH: 9// 0 Meter Model: Temperature: 10.4/ Spec. Cond.: 1.00 Meter Model: ORP: 150 No Yes Name: MS/MSD: No Yes Name: Field Lab Results: N/A pH: DO: 1 Certify that this sample was collected and handled in accordance with applicable regulations.	Contains Immiscible Liquid Meter S/N: Meter S/N: Temperature: Ilatory and project protocols

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	Patelegu	Project Number:		
Personnel:	N 082	Well ID:	MW-2D	
Purge/Sample Depth:	~ 23	Sample ID:		

	1								
Actual		Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	
Time	рН	(°C)	(mV)	(my)	(mg/L)	(NTU)	(ft)	(mL/min)	Comments
05.73	£ 14	1	11.0	<i>स</i> ी जंजा %	Ø 2 3	20 7	3.0	7 ^ 0	
13.50	6.16	17.43	145	0.370	0.33	79.7 34.9	3.9	700 700	
13.53	4.53	3.14	246	1.563	0.00	37.17	3.9	700	
13.5 6	4.27	13.10	767	0.991	G. A.A	30.7	-£	200	
13.59	4.11	1777	778	0.999	0.63	99,9		701)	
14:07	4.09	17.97	786	0.999	0.00	30.1	3.9	700	
14.05	4.09	17.77	787	0.959	0.00	36.7 35.4		20	
14:08	7 99	17.57	798 301	0,90	0.00	30.9	3.9	700	
14.14	3.96	1293	301	0.981	0.00	70.6	<u> </u>	200	
14.17	3.98	13.24	302	0.932	0.00	30.4		700	
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BROWN AND CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: / -2]

Allendale, NJ Office	Sample I.D.: (if different from well no.)	
Project: Patalogue Personnel: 1 + 1740	Date: Time:	•
WELL DATA: Casing Diameter: Intake Diameter: Static Water Level: DEPTH TO: Static Water Level: DATUM: Top of Protective Casing CONDITION: Is Well clearly labeled? Is Prot. Casing/Surface Mount in Good Cond.? (n 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: Volume Steel Posterior Static Water Level: James Steel Galv. Steel Bottom of Well Casing Top of Well Casing Well Casing Top of Well Casing	☐ Open rock ☐ Other: ☐ Other: ☐ I clean to bottom? ☐ Yes ☐ No not bent or corroded) ☐ Yes ☐ No Yes ☐ No ved) ☐ Yes ☐ No ☐ Is Inner Casing Intact? ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Is Inner Casing Intact? ☐ Yes ☐ No	
	2" Submersible Pump □ 4" Submersible Pump p □ Inertial Lift Pump □ Other:	
• •	Tubing/Rope: Teflon® Polyethylene Polypropylene Other: Volume Pumped: mber of Well Volumes Removed:	
SAMPLING DATA: METHOD: □ Bailer, Size: □ □ Peristaltic Pump □ 2" Surpringe Sampler □ Peristaltic Pump □ Inerti	ubmersible Pump	
Metals samples field filtered? APPEARANCE: FIELD DETERMINATIONS: PH: 3-98 Meter Model: Temperature: 13.24 Spec. Cond.: 0.982 Meter Model: ORP: 301 DO: 0.00 Turbidity: 3 DUP: P No P Yes Name: MS/MSD: 1 No P Yes Name: Field Lab Results: DN/A pH: DO: I certify that this sample was collected and handled in accordance with applicable regular.	Meter S/N: Meter S/N: Temperature: latory and project protocols	

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:F	atthorne GW	Project Numl	oer:
Personnel:	MU + JAT	Well ID:	MW-40
Purge/Sample Depth:	-tun ~22	Sample ID: _	MW-4D

Actual		Temp	ORP	Cond	DO	Turbidity	DTW	Pumping Rate	0
Time	pН	(°C)	(mV)	(myest	(mg/L)	(NTU)	(ft)	(mL/min)	Comments
initial	5.56	9,72	217	0.212	6.88 4.68	98 -53			
ist will	5.49	10.12	219	0,221	4168	_53	4.78		15
2nd war	5.39	11.82	218	0.243	2.72	0	4.81		
2 rapid	5,44	11.65	211	6.257	2.64	0	4.01		- 28
Final	5.45	11.63	209	0.251	2.83	0	4.61		1 × ×
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BROWN AND CALDWELL

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: 11.00 4 1

	Allendale, NJ Office	Sample I.D.: (if different from well no.)
Proj		Date: Time:
Pers	sonnel: MI + JAT	Weather: Sun Air Temp.: 40
WE	LL DATA:	, , , , , , , , , , , , , , , , , , ,
	ing Diameter:	PVC ☐ Teflon® ☐ Other:
	Ke Diameter: □ Stainless Steel □ Galv Stee	PLATPVC DITERIOR® D. Open rock
	THIO: Static vvater Level:ft Bottom of We	ell: 25 ft
	UM: ☐ Top of Protective Casing ☐ Prop of Well Casing NDITION: Is Well clearly labeled? ☐ Yes ☐ No Is we	Other:
	Is Prot. Casing/Surface Mount in Good Cond ? ((not bent or corroded) 💯 Vas. 🗖 No.
	Does weep hole adequately drain well head?	⊒k¥res DiNo
	Is Concrete Pad Intact? (not cracked or frost hea	aved) (42) Yes No
	Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Properly Capped and Vented? ✓	2) Yes Di No
VOL	UME OF WATER: Standing in well:	3 To be purged: 9 gal
	RGE DATA:	To so baildor.
	HOD: Bailer, Size: Baller, Size: Baller Size:	2" Submersible Pump 4" Submersible Pump
	☐ Centrifugal Pump ☐ Peristaltic Pum	np Inertial Lift Pump I Other:
	☐ Teflon®	☐ Teflon®
MAT	ERIALS: Pupip/Bailer: Stainless Stee	ing/Rope: Polyethylene
	PVC Other:	☐ Polypropylene
	ping Rate: 400 mile Elapsed Time: 400 mile	Volume Pumped: 9 900 Other:
Was	well Evacuated? ☐ Yes 💯 No Nu	umber of Well Volumes Removed:
PUR	GING EQUIPMENT: Dedicated Prepared Off-S	Site Field Cleaned
	IPLING DATA:	
METH	HOD: Bailer, Size: Bladder Pump 2" Surings Samples B	ubmersible Pump 🗆 4" Submersible Pump
	□ Syringe Sampler □ Peristaltic Pump □ Inerti	ial Lift Pump Other:
MATE	ERIALS: Æump/Bailer: ☐ Teflon®	Tubfii)g/Rope: ☐ Teflon®
SAME	CP Stainless Steel PLING EQUIPMENT: □ Dedicated □ Prepared O	Polyethylene
	PLING EQUIPMENT: Dedicated Prepared O s samples field filtered? Yes No Method:	Off-Site PField Cleaned
APPE	ARANCE: Dear Derbid Color:	Contains Immiscible Liquid
	DIDETERMINATIONS: pH: 5.45 Meter Model:	Meter S/N:
Temp	refature. Tridy Spec. Cond.: Crost Meter Model:	Meter S/N:
DUP:	No Dives Name	2
MS/M	SD: ∠ZP No □ Yes Name:	
Field L	Lab Results: □N/A pH:	Temperature:
 I certify Signal 	that this sample was collected and handled in accordance with applicable regulations.	latory and project protocols.
Promen	.ure.	Date:

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	Patelnar	Project Numb	ber:	
Personnel:	~ do~	Well ID:	Mu-25	
Purge/Sample Dept	h: ~8	Sample ID:	MW-75	

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Actual Time	рН	Temp (°C)	ORP (mV)	Cond	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
15.78	5.58	11.71	197	0.777	0.00	53.0	4.55	250	
15 31	5.47	12.56	198	0.790	0.00	65.0	7.55	250	
15.34	537	8.79	705	0.796	0.00	67 n	4.55	750	
15:37	532	7,62	708	0.299	0.26	67.5		750	
15:40	5.34	8.47	710	0.314	0.67	53.7		750	
15:43	531	9.07	711	0.372	083	442		300	
15 46	5.33	9.50	710	0.313	0.90	40.3	4.55	300	
15:49	5.34	8.48	210	0,379	1.17	35.1	·	300	
15:57	5.38	9.52	210	0.334	094	37.0		300	
15:55	5 39	935	709 209	0.334	0.96	30 3		300 300	
16-00	3 17	7.76	5 a ~	,	7	24.6		7017	
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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: Pathogr Personnel: V JO	~	Date: Time: Weather: Su u	
Intake Diameter: DEPTH TO: Static Water Level: DATUM: Top of Protective Ca CONDITION: Is Well clearly lab Is Prot. Casing/Su Does Weep Hole Is Concrete Pad II Is Padlock Function Is Inner Casing Pa	Stainless Steel Galv. Steel Bottom of Well asing Galver of Well Casing eled? Galver of Well Casing eled? Galver of Well Casing eled? Galver of No Is well with a steel of the well and the well head? Galver of the word of the well and the we	☐ Other: I clean to bottom? ☐ Yes ☐ tot bent or corroded) ☐ Yes "Yes ☐ No ved) ☐ Yes ☐ No Is Inner Casing Intact? ✓☐	No □ No
		I 2" Submersible Pump ☐ 4" p ☐ Inertial Lift Pump ☐ Othe	
Pumping Rate: 300 ML	Stainless Steel PVC Other: Elapsed Time: 30 My Nu	Volume Pumped: 7 5 grupomber of Well Volumes Removes	Polyethylene Polypropylene Other:
SAMPLING DATA: METHOD: □ Bailer, Size: _ □ Syringe Sample	2DBladder Pump 🗅 2" Su r 🗅 Peristaltic Pump 🔾 Inerti	ebmersible Pump □ 4" Submer al Lift Pump □ Other:	sible Pump
SAMPLING EQUIPMENT:	☐ Yes ⚠ No Method	ff-Site	
Temperature: 9,46 Spec. Con- ORP: 209 DUP: P No Yes Na	d.: 0 33° Meter Model: DO: 0, 97 Turbidity:	Hanh. Meter S/	N: <u>0-77</u>
I certify that this sample was collected and har Signature:	ndled in accordance with applicable regul		



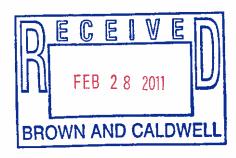
Appendix B: Laboratory Reports (CD-ROM)

Appendix C: Data Usability Summary Report



February 25, 2011

Mr. Jim Marolda Brown and Caldwell 110 Commerce Drive Allendale, New Jersey 07401



Re: Transmittal of Completed Data Usability Summary Reports for the Patchogue Site, SDGs PCH05, PCH06

Dear Mr. Marolda:

Environmental Data Services, Inc. (EDS) is pleased to submit the Data Usability Summary Reports with attached annotated Form Is for the above referenced SDGs.

Please contact me at (757) 564-0090 or via email at nweaver@env-data.com if you have any questions.

Sincerely,

Environmental Data Services, Inc.

Nancy Weaver Senior Chemist



DATA USABILITY SUMMARY REPORT PATCHOGUE, NEY YORK

Client: Brown and Caldwell, Allendale, New Jersey

SDG: PCH05

Laboratory: Lancaster Laboratories, Lancaster, Pennsylvania

Site: Patchogue, New York
Date: February 23, 2011

VOC, SVOC								
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix					
1	MW-9D	6179990	Water					
1MS	MW-9DMS	6179991MS	Water					
1MSD	MW-9DMSD	6179992MSD	Water					
2	MW-9S	6179993	Water					
3	MW-4S	6179994	Water					
4	MW-3	6179995	Water					
5	FB010511	6179996	Water					
6	MW-1	6179997	Water					
7	MW-8D	6179998	Water					
8	MW-8S	6179999	Water					
9	DUP010611	6180000	Water					
10	TRIP BLANK	6180001	Water					
11	MW-7D	6180002	Water					
12	MW-7S	6180003	Water					
13	MW-2D	6180004	Water					
14	MW-4D	6180005	Water					
15	MW-2S	6180006	Water					

A Data Usability Summary Review was performed on the analytical data for thirteen water samples, one aqueous trip blank sample, and one aqueous field blank sample collected January 5-6, 2011 by Brown and Caldwell at the Patchogue, New York Site. The samples were analyzed under Environmental Protection Agency (USEPA) "Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions".

Specific method references are as follows:

Analysis Method References

VOC (BTEX) USEPA SW-846 Method 8260B SVOC (PAH) USEPA SW-846 Method 8270C

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

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

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

Organics

The following items/criteria were reviewed:

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

Overall Usability Issues:

There were no rejections of data.

The data is acceptable for the intended purposes. There were no qualifications.

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

Data Completeness

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

Volatile Organic Compounds (BTEX)

Holding Times

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

Surrogate Spike Recoveries

• All samples exhibited acceptable surrogate %R values.

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

• The MS/MSD samples 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	-	_
FB010511	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

• No discrepancies were identified.

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-8D	DUP010611	RPD	Qualifier
_	ug/L	ug/L		
None	ND	ND	-	-

Polynuclear Aromatic Hydrocarbons (PAH)

Holding Times

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

Surrogate Spike Recoveries

• All samples exhibited acceptable surrogate %R values.

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

• The MS/MSD samples 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		
FB010511	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

No discrepancies were identified.

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.

		РАН		
Compound	MW-8D	DUP010611	RPD	Qualifier
	ug/L	ug/L		
None	ND	ND	-	

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

Signed:

Nancy Weaver Dated: 2/25/11

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 I of 1

Sample Description: MW-9D Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179990 LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/05/2011 11:40

by JAJ

Brown & Caldwell

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14 110 Commerce Drive Allendale NJ 07401

MW9D- SDG#: PCH05-01BKG

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
10963	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.	1	1
07805	Acenaphthylene	208-96-a	N.D.	1	1
07305	Anthracene	120-12-7	N.D.	1	1
07805	Beczo(a) anthracene	56-55-3	N.D.	1	1
07805	Benzo(a) pyrene	50-32-8	N.D.	1	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.	1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	1	1
37805	Benzo(k) fluoranthene	207-08-9	N.D.	1	1
07805	Chrysene	218-01-9	N.D.	1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	1	1
07805	Fluoranthene	206-44-0	1 J	1	1
07505	Fluorene	86-73-7	N.D.	1	1
07505	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
07805	Naphthaleae	91-20-3	N.D.	1	1
07805	Phenanthrene	85-01-8	2 Ј	1	1
07805	Pyrene	129-00-0	2 J	1	1

General Sample Comments

State of New York Certification No. 10670

<u>pli</u> OC 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#	Batchi	Analysis Date and Time	Analyst	Dilution Factor			
No. 10903 01163 07805 07507	UST VOCS 8260 (Water) GC/MS VOA Water Prep PAHs in Water by GC/MS BNA Water Extraction	SW-846 8260B SW-846 5030B SW-846 8270C SW-846 35100	1	W110121AA W110121AA 11008WAC026 11008WAC026	01/12/2011 12:58 01/12/2011 12:58 01/11/2011 12:26 01/10/2011 09:15	Emily R Styer Matthew S Woods	1 1 2 1			

PCH85 8010





Sample Description: MW-9S Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179993

LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/05/2011 12:45

Brown & Caldwell by JAJ

Submitted: 01/07/2011 17:57

110 Commerce Drive Allendale NJ 07401

Reported: 01/14/2011 11:14

SDG#: PCH05-02 MW9S-

CAT No.	Analysis Name	CAS Humber	As Receiv Result	rad	As Received Method Detection Limit	Dilution Factor
C/MS	Volatiles SW-846	8260B	ug/l		ug/1	
10903	Benzene	71-43-2	1 8	ī	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	198-88-3	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	ī
C/MS	Semivolatiles SW-846	8270C	ug/l		ug/l	
07805	Acenaphthene	83-32-9	12		1	1
07805	Acenaphthylene	208-96-8	8		1	ı
07805	Anthracene	120-12-7	1 3	Ţ	1	1
07805	Benzo(a)anchracene	56-55-3	N.D.		1	1
07805	Benzo(a) pyrene	50-32-B	N.D.		1	1
07805	Benzo(b) fluorantheae	205-99-2	N.D.		1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		1	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.		2	1
07805	Chrysene	218-01-9	N.D.		1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		1	<u>.</u>
07805	Fluoranthena	206-44-0	N.D.		1	1
07805	Fluorene	86-73-7	9		1	¥'
07505	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		1	1
07805	Naphthalens	91-20-3	N.D.		1	1
07805	Phenanthrene	85-01-E	12		1	1
07805	Pyrene	129-00-0	N.D.		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
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			_	_			
CAT No.	Analysis Name	Method	Trial#	Batch	Analysis Date and Time	Analyst	Dilution Factor
	UST VOCs 8260 (Water)	SW-546 8260P	1	W110121AA	01/12/2011 14:06	Emily R Styer	1
	GC/MS VOA Water Prep	SW-646 5030B	1	W110121AA	01/12/2011 14:08	Emily R Styer	1
	PAHs in Water by GC/MS	SW-846 8270C	1	11008WACC26	01/11/2011 14:27	Matthew S Woods	1
	BNA Water Extraction	SW-846 3510C	1	11008WAC026	01/10/2011 09:15	Denise L Trimby	1

FCN95 9013





Sample Description: MW-4S Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179994

LLI Group # 1228338 # 09286 Account

Project Name: Patchogue, NY

Collected: 01/05/2011 14:35

by JAJ

Brown & Caldwell

110 Commerce Drive Allendale NJ 07401

Submitted: 01/07/2011 17:57

Reported: 01/14/2011 11:14

MW4S- SDG#: PCH05-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
cc/MS	Volatiles SW-846	8260B	ug/1	ug/1	
	Benzene	71-43-2	N.D.	0.5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Bther	1634-04-4	N.D.	0.5	1
10903	Toluene	108-86-3	N.D.	0.7	1
10903		179601-23-1	N.D.	0.8	1
10903	m+p-Xylene	95-47-6	N.D.	0.6	1
10903	o-Kylene Xylene (Total)	1330-20-7	N.D.	0.8	1
10903	Ayrene (Tocal)				
CC /MG	Semivolatiles SW-846	8270C	ug/l	vg/1	
	Acenaphthene	53-32-9	N.D.	1	1
07805	Acenaphchelene	208-96-5	N.D.	1	i
07805	Anthracene	120-12-7	N.D.	1	1
07805	Benzo(a) anthracene	56-55-3	N.D.	1	1
07205	Benzo(a) pyrene	50-32-6	N.D.	1	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.	1	1
07605	Benzo(g, h, i) perylene	191-24-2	N.D.	1	1
07805	Benzo(k) fluoranthene	207-09-9	N.D.	1	1
07805		218-01-9	N.D.	1	1
07805	Chrysene	53-70-3	N.D.	1	i
07805	Dibenz(a,h)amthracene	206-44-0	N.D.	1	1
07805	Fluoranthene	86-73-7	N.D.	1	1
07805	Fluorene	193-39-5	N.D.	<u>:</u>	1
07805	Indeno(1,2,3-cd)pyrene	91-20-3	K.D.	1	1
07805	Naphthalene	85-01-8	N.C.	1	1
37805	Phenanchrene	129-00-0	N.D.	1	1
07805	Pyrene	129-00-0			

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 Date and Time	Analyst	Dilution Factor
01163 07805	UST VOCs 8260 (Water) GC/MS VOA Water Prep PAHs in Water by GC/MS BNA Water Extraction	SW-846 8260B SW-846 5030B SW-846 8270C SW-846 3510C	1	W110121AA W110121AA 11008WAC026 11008WAC026	01/12/2011 14:31 01/12/2011 14:31 01/11/2011 15:07 01/10/2011 09:15	Matchew S Woods	1 1 1

PCH85 8814

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

2216 Rev. 3/27/06





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Page 1 of 1

Sample Description: MW-3 Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179995 LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/05/2011 15:30

by JAJ

Brown & Caldwell 110 Commerce Drive

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14

Allendale NJ 07401

-MW3- SDG#: PCH05-04

CAT No.	Analysis Mame	CAS Number	As Rec Result	ceived t		As Received Method Detection Limit	Dilution Factor
3C/MS	Volatiles SW-846	8260B	ug/1			ug/1	
10903	Bénzene	71-43-2	N.D.			0.5	1 .
10903	Ethylbenzene	100-41-4	N.D.			0.6	-
10963	Methyl Tertiary Butyl Ether	1634-04-4	N.D.			0.5	ī
10903	Toluene	109-69-3	N.D.			0.7	1
10903	m+p-Xylene	179601-23-1	N.D.			0.8	ī
10903	o-Xylene	95-47-6	N.D.			0.8	ī
10903	Xylene (Total)	1330-20-7	N.D.			0.8	1
C/MS	Semivolatiles SW-846	8270C	ug/1			ug/l	
07505	Acenaphthene	83-32-9	4	J		1	1
07805	Acenaphthylene	208-9€-8	3	J		1	1
07805	Anthracene	120-12-7	2	J		1	1
07805	Benzo(a) anthracene	56-55-3	N.D.			1	-
07805	Benze(a) pyrene	50-32-B	N.D.			1	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.			ī	1
07805	Benze(g,h,i)perylene	191-24-2	N.D.				i
07805	Benzo(k) fluoranthene	207-08-9	N.D.			ī	ī
07805	Chrysene	218-01-9	N.D.			1	Ĩ
07805	Dibenz(a,h)anthracene	53-70-3	N.D.			1	- 1
07805	Fluoranthene	206-44-0	3	J		1	ī
7505	Fluorene	96-73-7	N.D.			1	1
27805	Indezo(1,2,3-cd)pyrene	193-39-5	N.D.			ī	î
7205	Naphthalene	91-20-3	N.D.			3	7
7805	Phenanthrene	85-01-8	2	J	*	ī.	ī
7805	Pyrene	129-00-0	3	រា		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
01163	GC/MS VOA Water Prep	SW-846 8260P SW-646 5030B	1	W110121AA W110121AA	01/12/2011 14:55 01/12/2011 14:55		1
07905 07807	PAHs it Water by GC/MS BNA Water Extraction	SW-846 82700 SW-846 35100	-	11008WAC026 11008WAC026	01/11/2011 15:48 01/10/2011 09:15		1

PCH85 :8015





Sample Description: FB010511 Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179996

LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/05/2011 16:15

by JAJ Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14

FB105 SDG#: PCH05-05FB

CAT No.	Analysis Name	CAS Humber	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	3
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-89-3	N.D.	0.7	1
16903	m+p-Xylene	179601-23-1	N.D.	D.8	2
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Kylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/1	
07805	Acenaphthene	63-32-9	N.D.	1	1
07805	Acenaphthylene	208-96-8	N.D.	1	1
07805	Anchracene	120-12-7	N.D.	1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	1	1
07805	Benzo(a) pyrene	50-32-8	N.D.	1	1
27805	Benzo(b) fluoranthene	205-99-2	N.D.	1	1
27805	Benzo(g,h,i)perylene	191-24-2	N.D.	1	1
97805	Benzo(k) fluoranthene	207-08-9	N.D.	1	1
07805	Chrysene	218-01-9	N.D.	1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	1	1
07805	Fluoranthene	206-44-0	N.D.	1	1
07805	fluorene	86-73-7	N.D.	1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
07805	Naphthalene	91-20-3	N.D.	1	1
07805	Phenanthrene	85-01-8	N.D.	1	1
07805	Pyrene	129-00-0	N.D.	1	1

General Sample Comments

State of New York Certification No. 10670

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

Laboratory	Sample	Analysis	Record
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CAT No.	Analysis Name	Mathod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Pactor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	W110121AA	01/12/2011 15:16	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W110121AA	01/12/2011 15:18	Emily R Styer	1
07805		SW-846 8270C	1	11008WAC026	01/11/2011 16:28	Matthew 5 Woods	1
07807	ENA Water Extraction	SW-846 3510C	1	11008WAC026	01/10/2011 09:15	Derise L Trimby	1

PCH85 0816



Analysis Report





Page 1 of 1

Sample Description: MW-1 Grab Water

COC# 253492 Patchogue, NY

LLI Sample # WW 6179997 LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/05/2011 16:40

by JAJ

Brown & Caldwell

110 Commerce Drive Allendale NJ 07401

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14

-MW1- SDG#: PCH05-06

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	Веплепе	71-43-2	N.D.		0.5	1
10903	Ethylbenzene	100-41-4	0.9	J	0.8	2
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-Kylene	179601-23-1	0.8	J	0.8	1
10903	o-Xylene	95-47-6	N.D.		0.8	i
10903	Kylene (Total)	1330-20-7	0.8	3	0.8	1
GC/MS	Semivolatiles SN-846	8270C	ug/l		ug/1	
37805	Acenaphthene	83-32-9	2	J	1	1
97805	Acenaphthylene	208-96-8	N.D.		1	1
27605	Anthracene	120-12-7	N.D.		1	1
07805	Benzo(a) anthracene	56-55-3	N.D.		1	1
07805	Benzo(a) pyrene	50-32-8	N.D.		1	1
27805	Benzo(b) fluoranthene	205-99-2	N.D.		1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		1	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.		1	1
57805	Chrysene	218-01-9	N.D.		1	1
07805	Dibenz (a, h) anthracene	53-70-3	N.D.		1	1
07805	Fluoranthene	206-44-0	1	J	1	1
07805	Fluorene	86-73-7	1	J	1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		1	1
27805	Naphthalene	91-20-3	14		1	1
07805	Phenanthrene	85-01-6	3	J	1	1
07805	Pyrene	129-00-0	1	J	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
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			_				
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
	UST VOCs 8260 (Water)	SW-846 8260B	1	W110121AA	01/12/2011 15:42	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030E	1	W110121AA	01/12/2011 15:42	Emily R Styer	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	11008WAC026	01/11/2011 17:09	Matthew S Woods	2
07807	BNA Water Extraction	SW-846 3510C	1	11008WAC026	01/10/2011 09:15	Denise L Trimby	1

PCH05 8617

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



2216 Rev. 3/27/06



Sample Description: MW-8D Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179998 LLI Group # 1228338

Account

09286

Project Name: Patchogue, NY

Collected: 01/06/2011 09:30

by JAJ

Brown & Caldwell 110 Commerce Drive Allendale NJ 07401

Submitted: 01/07/2011 17:57

Reported: 01/14/2011 11:14

MW-8D SDG#: PCH05-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0_5	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Methyl Tertiary Butyl Sther	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.	0.6	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
20903	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.	1	1
07505	Acenaphthylene	208-96-6	N.D.	1	1
07805	Anchracene	120-12-7	N.D.	1	1
07805	Benzo(a) anthracene	56-55-3	N.D.	1	1
07805	Benzo(a) pyrene	50-32-8	N.D.	1	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.	1	1
07805	Benzo(g, h, i) perylene	191-24-2	N.D.	<u> </u>	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.	1	1
07805	Chrysene	218-01-9	N.D.	1	1
07605	Dipenz(a,h)anthracene	53-70-3	N.D.	1	1
07805	Fluoranthene	206-44-0	N.D.	1	1
07805	Fluorene	86-73-7	N.D.	1	1
07805	Indenc(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
07805	Naphthalene	91-20-3	N.D.	1	31
07805	Phenanthrene	85-01-6	N.D.	1	1
07805	Pyrene	129-00-0	N.D.	1	2

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.

		Labora	tory Sa	ample Analys	is Record		
CAT	Analysis Name	Nethod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163 07805	UST VOCS 8260 (Water) GC/MS VOA Water Prep PAHS in Water by GC/MS BNA Water Extraction	SW-846 8260B SW-846 5030B SM-846 8270C SW-846 3310C	1 1 1	W110121AA W110121AA 11008WAC026 11008WAC026	01/12/2011 16:05 01/12/2011 16:05 01/11/2011 17:51 01/10/2011 09:15	Emily R Styer Emily R Styer Matthew S Woods Denise L Trimby	1 1 1

PCH85 8810







Sample Description: MM-8S Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6179999 LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011 10:40

by JAJ

Brown & Caldwell 110 Commerce Drive

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14 Allendale NJ 07401

MW-8S SDG#: PCH05-08

CAT No.	Analysis Name	CAS Humber	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	ı
10903	Toluene	108-88-3	N.D.	♦.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
CC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	
07805	Acenaphthene	63-32-9	1 J	1	1
		208-96-8	N.D.	1	1
07805	Acenaphthylene	120-12-7	N.D.	i	1
07605	Anthracene	56-55-3	N.D.	ī	1
07805	Benzo (a) anthracene	50-32-8	N.D.		1
07605	Benzo(a) pyrene	205-99-2	N.D.	1	1
07805	Benzo(b) fluoranthene	191-24-2	N.D.	ī	1
07805	Benze(g, h, i) perylene	207-08-9	N.D.	ī	1
07805	Benzo(k) fluoranthene	218-01-9	N.D.		1
07805	Chrysene	53-70-3	N.D.	<u>-</u>	1
C7805	Dibenz (a, h) anthracene	206-44-0	M.D.	1	1
07805	Fluoranthene	86-73-7	N.D.	ī	ī
C7805	Fluorene	193-39-5	N.D.	ī	1
07605	Endeno(1,2,3-cd)pyrene	91-20-3	5 J	ī	1
97805	Naphthalene		•	-	1
07805	Phonanthrene	85-01-8	N.D.	1 1	i
07805	Pyrene	129-00-0	N.D.	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	Nethod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor	
01163	UST VOCS 8260 (Water) GC/MS VOA Water Prep PAHs in Water by GC/MS	SW-846 8260B SW-846 5030B SW-846 B270C	1 1 1	W110121AA W110121AA 11008WACG26	01/12/2011 16:29 01/12/2011 16:29 01/11/2011 18:31	Emily R Styer Emily R Styer Matthew S Woods	1 2 2	
	RNA Water Excraction	SW-846 3510C	1	11008WAC026	01/10/2011 09:15	Denise L Trimby	-	

PCH85 8019





Sample Description: DUP010611 Grab Water

COC# 253492 Patchogue, NY LLI Sample # WW 6180000 LLI Group # 1228338

Account

09286

Project Name: Patchogue, NY

Collected: 01/06/2011

by JAJ

Brown & Caldwell

110 Commerce Drive

Submitted: 01/07/2011 17:57

Reported: 01/14/2011 11:14

Allendale NJ 07401

FD106 SDG#: PCH05-09FD

CAT	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
aa Ma	Volatiles SW-846	8260B	eg/1	ug/1	
	,424,42	71-43-2	N.D.	0.5	1
10903	Benzene	100-41-4	N.D.	0.8	1
10903	Ethylbenzene	1634-04-4	N.D.	0.5	1
10903	Methyl Tertiary Butyl Ether	108-88-3	ĸ.D.	0.7	1
10903	Toluene	179601-23-1	N.D.	0.8	1
10903	m+p-Xylene	95-47-6	N.D.	0.0	1
10903	o-Xylene	1330-20-7	N.D.	0.0	1
10903	Xylene (Total)	1550-20			
aa lwe	Semivolatiles SW-846	8270C	vg/l	ug/1	
GC/MS	g.,	83-32-9	N.D.	1	1
07805	Acenaphthene	208-96-8	N.D.	1	1
07805	Acecaphthylene	120-12-7	N.D.	<u>1</u>	1
97805	Anthracene	56-55-3	N.D.	1	1
07805	Benzo(a) anthracene	50-32-8	N.D.	1	1
07605	Benzo (a) pyrene	205-99-2	N.D.	1	1
07605	Benzo(b) fluoranthene	191-24-2	N.D.	1	1
07805	Benzo(g,h,i)perylene	207-08-9	N.D.	1	1
07805	Benzo(k)fluoranthene	218-01-9	N.D.	1	1
07805	Chrysene	218-G1-9 53-70-3	N.D.	ī	1
07805	Dibenz(a,h)anthracene		N.D.	ī	1
07805	Fluoranthene	206-44-0	N.D.	ī	1
07805	Fluorene	86-73-7	N.D.	ī	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5		1	1
07805	Naphthalene	91-20-3	N.D.	i	1
07805	Phenanthrens	85-01-8	N.D.	•	1
07505	Pyrené	129-00-0	N.D.	ė.	-

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	
ď	Trial# Batch#	Analysis Date and Time	Analyst

CAT	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163 07605	UST VOCs 8260 (Water) GC/MS VOA Water Prep PAHs in Water by GC/MS BNA Water Extraction	SW-646 5260P SW-646 5030P SW-846 8270C SW-846 3510C	1	W110121AA W110121AA 11008WAC026 11008WAC026	01/12/2011 16:53 01/12/2011 16:53 01/11/2011 19:12 01/16/2011 09:15	Emily R Styer Matthew S Woods	1 1 1

PCH85 8828







Sample Description: Trip Blank Water

COC# 253492 Patchogue, NY LLI Sample # WW 6180001 LLI Group # 1228338

LLI Group # 1228338
Account # 09286

Project Name: Patchogue, NY

Collected: 01/05/2011

Brown & Caldwell 110 Commerce Drive

Submitted: 01/07/2011 17:57

Reported: 01/14/2011 11:14

Allendale NJ 07401

TB15- SDG#: PCH05-10TB

CAT Ho.	Analysis Name	CAS Mumber	As Received Result	As Received Nethod 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 Buryl Ether	1634-04-4	N.D.	0.5	1
10903	Toluene	108-88-3	N.D.	0.7	ī
10903	m+p-Xylene	179601-23-1	N.D.	B . O	I
10903	o-Xylene	95-47-6	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7	N.D.	0.8	1

General Sample Comments

State of New York Certification No. 10670

All OC 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
	UST VOCs 8260 (Water) GC/MS VOA Water Prep	SW-846 8260B SW-846 5030B	_	W110121AA W110121AA	01/12/2011 12:34 01/12/2011 12:34	Emily R Styer Emily R Styer	1

PCH05 8821

lu 21



Sample Description: MW-7D Grab Water

COC# 253496 Patchogue, NY LLI Sample # WW 6180002 LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011 12:50

by JAJ

Brown & Caldwell

110 Commerce Drive

Submitted: 01/07/2011 17:57

Reported: 01/14/2011 11:14

Allendale NJ 07401

MW-7D SDG#: PCH05-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Nothod 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	108-88-3	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.	1	1
07805	Acenaphthylene	208-96-B	N.D.	1	1
07505	Anthracene	120-12-7	N.D.	1	1
07805	Benzo(a) anchracene	56-55-3	N.D.	ĭ	1
C7505	Benzo(a) pyrene	50-32-8	N.D.	1	1
07805	Benzo(b) fluoranthene	205-99-2	N.D.	<u> </u>	1
07605	Benzo(g,h,i)peryiene	191-24-2	N.D.	1	1
07805	Benzo(k) fluorantheme	207-08-9	N.D.	1	1
07605	Chrysene	218-01-9	N.D.	<u> 1</u>	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	1	1
07805	Fluoranthene	206-44-0	N.D.	1	1
07505	Fluorene	86-73-7	N.D.	1	1
07505	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
07805	Naphthalene	91-20-3	N.D.	ì	1
07805	Phenanthrene	85-Q1-8	N.D.	1	1
07805	Pyrene	129-00-0	N.D.	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
THEOLEGIA	24111714	WHOTABLE	VECCIA

CAT	Analysis Name	Hethod	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Ti	D-6		Factor
	UST VOCs 8260 (Water)	SW-846 82603	1	W110121AA	01/12/2011	17:16	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	ĭ	W110121AA	01/12/2011	17:16	Emily R Styer	1
C7805	PAHs in Water by GC/MS	SW-846 8270C	3	11008WAC026	01/11/2011	19:53	Matthew & Woods	1
07807	BNA Water Extraction	SW-846 3510C	1	11008WAC026	01/10/2011	09:15	Denise L Trimby	1

PCH85 8822

Lancaster Laboratories, Inc. 2425 New Holland Pike PO Box 12425 Lancaster, PA 17605-2425 717-656-2300 Fax: 717-656-2681 2/23/11

2216 Rev. 3/27/06



Page 1 of I

Sample Description: MW-78 Grab Water

COC# 253496 Patchogue, NY LLI Sample # WW 6180003 LLI Group # 1228338

09286 Account

Project Name: Patchogue, NY

Collected: 01/06/2011 13:40

by JAJ

Brown & Caldwell 110 Commerce Drive Allendale NJ 07401

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14

MW-78 SDG#: PCH05-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Pactor
aa lwa	Volatiles SW-846	9260B	ug/1	ug/l	
		71-43-2	N.D.	0.5	1
10903	Benzene	100-41-4	N.D.	0.8	1
10903	Ethylbenzene	1634-04-4	N.D.	0.5	1
10903	Methyl Tertiary Butyl Ether	108-88-3	N.D.	0.7	1
10903	Toluene	179601-23-1	N.D.	0.8	1
10903	m+p-Xylene	95-47-6	N.D.	0.8	1
10903	o-Xylene	1330-20-7	N.D.	0.8	1
10903	Xylene (Total)	1330-20-7			
GC/MS	Semivolatiles SW-846	8270C	ug/l	ug/l	
•	Acenaphthene	83-32-9	N.D.	1	1
07805 07805	Acenaphthylene	205-96-8	N.D.	1	1
	Anthracene	120-12-7	N.D.	1	1
07805	Benzo(a) anthracene	56-55-3	N.D.	I	1
07505	Benzo(a) pyrene	50-32-8	N.D.	1	1
07805	Benzo(a) pylede Benzo(b) fluoranthene	205-99-2	N.D.	1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	1	1
07805	Benzo(g, n, 1) peryzene Benzo(k) fluoranthene	207-08-9	N.D.	1	1
07805		218-01-9	N.D.	1	1
07805	Chrysens Dibenz(a,h)anthracens	53-70-3	N.D.	1	1
07605	Fluoranthene	206-44-0	N.D.	1	1
07805		86-73-7	N.D.	2	1
07805	Fluorene	193-39-5	N.D.	1	<u> 1</u>
07805	Indenc(1,2,3-cd)pyrene	91-20-3	N.D.	1	ī
07505	Naphthalene	65-01-0	N.D.	ı	1
07505	Phenanthrene	129-00-0	N.D.	•	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 OC performance data and associated samples.

	<u> </u>	Labora	tory Sa	ample Analys	is Record		
CAT	Analysis Hame	Hethod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
	UST VOCS \$260 (Water) GC/MS VOA Water Prep PAHs in Water by GC/MS BNA Water Extraction	SW-846 8260B SW-846 50305 SW-646 8270C SW-846 3510C	1 1 1	W110121AA W110121AA 11008WAC02£ 11008WAC02£	01/12/2011 17:40 01/12/2011 17:40 01/11/2011 20:33 01/10/2011 09:15	Emily R Styer Matthew S Woods	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

PCH05 8623

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

2216 Rev. 3/27/06



Page I of 1

Sample Description: MW-2D Grab Water

COC# 253496 Patchogue, NY LLI Sample # WW 6180004 LLI Group # 1228338

Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011 14:20

by JAJ

Brown & Caldwell

110 Commerce Drive

Submitted: 01/07/2011 17:57

Allendale NJ 07401

Reported: 01/14/2011 11:14

MW2D- SDG#: PCH05-13

CAT No.	Analysis Name	CAS Mumber	As Received Result	As Received Method Detection Limit	Dilution Factor
C/MS	Volatiles SW-846	8250B	ug/l	ug/l	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	Erhylbenzene	100-41-4	N.D.	0.8	ī
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-Kylene	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	u g/1	ug/l	
7905	Acenaphthene	83-32-9	N.D.	1	1
7805	Acenaphthylene	208-96-5	N.D.	ī	1
7805	Anthracene	120-12-7	N.D.	1	1
7805	Benzo(a) anthracene	56-55-3	N.D.	1	- 1
7805	Benzo(a) pyrene	50-32-8	N.D.	1	ī
7805	Benzo(b) fluoranthene	205-99-2	N.D.	ī	1
7805	Benzo(g,h,i)perylene	191-24-2	Ñ.Ď.	1	-
7805	Benzo(k) fluoranthene	207-08-9	N.D.	1	1
7805	Chrysene	218-01-9	N.D.	1	1
7805	Dibenz(a,h)anthracene	53-70-3	N.D.	1	ī
7805	Fluoranthene	206-44-0	N.D.	ī	ī
7805	Fluorene	86-73-7	N.D.	1	<u>-</u> 1
7805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
	Naphthalene	91-20-3	N.D.	1	1
7805	Phenanthrene	85-01-8	N.D.	1	- 1
7805	Pyrene	129-00-0	N.D.	ī	ī

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	Hethod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	W110121AA	01/12/2011 18:03	Emily R Stver	1
	GC/MS VOA Water Prep	SW-845 5030B	1	W110121AA	01/12/2011 18:03	Emily R Styer	1
07805	PAHs in Water by GC/MS	SW-646 6270C	1	11008WAC026	01/11/2011 21:14	Matthew S Woods	1
C7807	BNA Water Extraction	SW-846 3510C	<u> </u>	11008WAC026	01/10/2011 09:15	Denise L Trimby	i

PCH85 8824





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Sample Description: MW-4D Grab Water

COC# 253496 Patchogue, NY LLI Sample # WW 6180005

LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011 15:15

by JAJ

Brown & Caldwell

110 Commerce Drive

Allendale NJ 07401

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14

MW-4D SDG#: PCH05-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
C/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.	0.9	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	3
10903	Toluene	108-88-3	N.D.	0.7	ī
10903	m+p-Xylene	179601-23-1	N.D.	0.8	ī
10903	o-Xylene	95-47-6	N.D.	0 . 6	1
10903	Kylene (Total)	1330-20-7	N.D.	0.8	1
C/MS	Semivolatiles SW-846	8270C	ug/l	u g /1	
7805	Acenaphthene	83-32-9	N.D.	1	1
7805	Acenaphthylene	208-96-8	2 ј	:	1
7205	Anthracene	120-12-7	N.D.	1	1
7805	Benzo(a) anthracene	56-55-3	N.D.	1	1
7805	Benzo(a) pyrene	50-32-8	N.D.	1	1
7805	Benzo(b) fluoranthene	205-99-2	N.D.	1	1
7805	Benzo(q, h, i) perylene	191-24-2	N.D.	I	1
7805	Benzo(k)fluoranthene	207-08-9	N.D.	1	1
7805	Chrysene	218-01-9	N.D.	1	1
7805	Dibenz(a,h)anthracene	53-70-3	N.D.	1	1
7805	Fluoranthene	206-44-0	N.D.	1	1
7805	Fluorene	86-73-7	4 J	1	1
7805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
7805	Naphthalene	91-20-3	N.D.	1	1
7805	Phenanthrene	85-01-8	6	1	1
07805	Pyrene	129-00-0	N.D.	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
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CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10903	UST VOCs 8260 (Water)	SW-846 8260B	1	W110121AA	01/12/2011 18:	27 Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W110121AA	01/12/2011 15:	27 Emily R Styer	1
07805	PAHs in Water by GC/MS	SW-846 8270C	7	11008WAC026	01/12/2011 03:	35 Linca M Hartenstine	1
-07807	BNA Water Extraction	SW-846 3510C	1	11008WAC026	01/10/2011 09:	15 Denise L Trimby	1

PCH05 8025





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Page 1 of 1

Sample Description: MW-29 Grab Water

COC# 253496 Patchogue, NY LLI Sample # WW 6180006 LLI Group # 1228338 Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011 16:00

by JAJ

Brown & Caldwell

110 Commerce Drive Allendale NJ 07401

Submitted: 01/07/2011 17:57 Reported: 01/14/2011 11:14

MW-2S SDG#: PCH05-15*

CAT No.	Analysis Name	CAS Rumber	As Received Result	As Received Method Detection Limit	Dilution Pactor
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	106-88-3	N.D.	0.7	1
10903	m+p-Xylene	179601-23-1	N.D.	8.0	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	Acenapht hene	83-32-9	N.D.	1	1
07805	Acenaphthylene	208-96-8	N.D.	1	1
07805	Anthracene	120-12-7	N.D.	1	1
07805	Benzo(a) anthracene	56-55-3	N.D.	1	1 4
C7805	Benzo (a) pyrene	50-32-8	N.D.	1.1	1
G7805	Benzo(b) fluoranthene	205-99-2	N.D.	1	1
07805	Benzo(a, h, i) perylene	191-24-2	N.D.	1	1
07805	Benzo(k) fluoranthene	207-08-9	N.D.	1	1
07805	Chrysene	218-01-9	N.D.	1	1
C7805	Dibenz (a,h) anthracene	53-70-3	n.D.	1	1
07805	Fluoranthene	206-44-0	N.D.	1	1
07505	Fluorene	86-75-7	N.D.	1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	1	1
07805	Naphthalene	91-20-3	N.D.	1	1
07805	Phenanthrene	85-91-8	N.D.	1	1
07805	Pyrene	129-00-0	N.D.	1	1

General Sample Comments

State of New York Certification No. 10670

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

Laboratory Sample Analysis Record								
CAT No.	Anulysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ı .	Analyst	Dilution Factor
	DST VOCs 8260 (Water)	SW-846 82	260B 1	W110121AA	01/12/2011	18:50	Emily R Styer	1
	GC/MS VOA Water Prep	SW-846 50	030B 1	W110121AA	01/12/2011	18:50	Erily R Styer	2 <u>2</u>
	PAEs in Water by GC/MS	SW-846 82	2700 1	11008WAC026	01/12/2011	04:15	Linda M Hartenstine	9 <u>1</u> 0
07807	RNA Water Extraction	SW-846 35	510C 1	11008WAC026	01/10/2011	09:15	Denise L Trimby	1

PCH85 #8026





DATA USABILITY SUMMARY REPORT PATCHOGUE, NEY YORK

Client: Brown and Caldwell, Allendale, New Jersey

SDG: PCH06

Laboratory: Lancaster Laboratories, Lancaster, Pennsylvania

Site: Patchogue, New York
Date: February 23, 2011

	VOC, SVOC						
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix				
1	WC-010611	6180011	Water				
2	TRIP BLANK	6180014	Water				

A Data Usability Summary Review was performed on the analytical data for one water samples and one aqueous trip blank sample collected January 6, 2011 by Brown and Caldwell at the Patchogue, New York Site. The samples were analyzed under Environmental Protection Agency (USEPA) "Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions".

Specific method references are as follows:

<u>Analysis</u> <u>Method References</u>

VOC (BTEX) USEPA SW-846 Method 8260B

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.

Organics

The following items/criteria were reviewed:

- Data Completeness
- Holding times and sample preservation
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Duplicate (LCS/LCSD) recoveries

- · Method blank and field blank contamination
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning
- Initial and continuing calibration summaries
- Compound Quantitation
- Internal standard area and retention time summary forms
- Field Duplicate sample precision

Overall Usability Issues:

There were no rejections of data.

The data is acceptable for the intended purposes. There were no qualifications.

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

Data Completeness

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

Volatile Organic Compounds (BTEX)

Holding Times

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

Surrogate Spike Recoveries

All samples exhibited acceptable surrogate %R values.

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

A MS/MSD sample was not analyzed.

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		
FB010511	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

• EDS sample ID #1 was analyzed at a 50X dilution due to sample matrix interference.

Internal Standard (IS) Area Performance

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

Field Duplicate Sample Precision

Field duplicate samples were not analyzed.

Polynuclear Aromatic Hydrocarbons (PAH)

Holding Times

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

Surrogate Spike Recoveries

• The following table presents surrogate percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J).

Sample ID	Surrogate	%R	Qualifier
1	Terphenyl-d14	"36D"	None due to dilution
	2-Fluorobiphenyl	"119D"	

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

A MS/MSD sample was not analyzed.

Laboratory Control Samples

The LCS sample exhibited acceptable %R values.

Method Blank

• The method blanks were free of contamination.

Field Blanks

The following table summarizes field blank contamination.

Blank ID	Compound	Conc. ug/L	Action Level ug/L	Qualifier	Affected Samples
FB010511	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

• EDS sample ID #1 was analyzed at a 10X dilution due to sample matrix interference.

Internal Standard (IS) Area Performance

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

Field Duplicate Sample Precision

Field duplicate samples were not analyzed.

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

Signed:

Nancy Weaver

auf Daver Dated: 2/25/11

Data Qualifiers

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was analyzed for, but was not detected above the sample reporting limit.
- R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.



Sample Description: WC-010611 Grab Water Sample

COC #255677 Patchogue, NY LLI Sample # WW 6180011 LLI Group # 1228341 Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011 14:55

by JAJ

Brown & Caldwell

Submitted: 01/07/2011 17:57

110 Commerce Drive Allendale NJ 07401

Reported: 01/25/2011 13:58

WC16- SDG#: PCH06-01

Analysis Name	CAS Number	As Received Result	As Received Method Detaction Limit	Dilution Pactor
Volatiles	SW-846 8260B	ug/1	ug/1	
Benzene	71-43-2	и.D.	25	50
Ethylbenzene	100-41-4	N.D.	40	50
Methyl Tertiary Buty		N.D.	25	50
Toluene	108-89-3	N.D.	35	50
m+p-Xylene	179601-23-1	N.D.	40	50
o-Xylene	95-47-6	N.D.	40	50
Tylene (Total)	1330-20-7	N.D.	40	50
	were not met. The vial :	submitted for		
es - analysis did nor	have a $nH < 2$ at the time	of analysis. Due		
- welstile marure of	the analytes, it is DOC a	ippropriate for the		
arow to adjust the	pH at the time of sample 1	receipt. The pH of		
sample was pH = 7.				
ting limits were rai	sed due to sample foaming			
	SW-846 8270C	ug/l	ug/1	
D	83-32-9	N.D.	50	10
Acenaphthene	208-96-8	N.D.	50	10
Acenaphthylene Anthracene	120-12-7	N.D.	50	10
Benzo(a)anthracene	56-55-3	N.D.	50	10
Benzo(a) pyrene	50-32-8	N.D.	50	10
Benzo(b) fluoranthene	11111444	N.D.	50	10
Benzo(g,h,i)perylene	·	N.D.	50	10
Benzo(k) fluoranthene		N.D.	50	10
Chrysene	218-01-9	N.D.	50	10
Dibenz (a, h) anthracer	e 53-70-3	N.D.	50	10
Flucranthene	206-44-0	N.D.	50	10 10
Fluorene	86-73-7	N.D.	50	10
Indeno(1,2,3-cd)pyre	ne 193-39-5	N.D.	50	10
2-Methylnaphthalene	91-57-6	N.D.	50	10
Naphthalene	91-20-3	1 1 0 J	50	
Phenanthrene	85-01-8	N.D.	50	10
2	129-00-0	N.D.	50	10
ring limits were rai	sed due to interference f	rom the sample matrix:		
ides/PCBs	SW-846 8082	ug/l	ug/1	
	12674-11-2	N.D.	0.20	1
PCB-1016 PCB-1221	11104-28-2	N.D.	0.20	1
PCB-1221 PCB-1232	11141-16-5	N.D.	0.40	1
PCB-1242	53469-21-9	N.D.	0.20	1
PCB-1248	12672-29-6	N.D.	0.20	1
PCB-1254	11097-69-1	N.D.	0.20	1
DOT 1060	11096-82-5	N.D.	0.20	1
cting limits were rai	sed due to interference f	rom the sample matrix.		
aurrogace data is out	side the QC limits due to			PCH86 6889
Lems evident in the s		()	ng/1	
		•		1
	7439-92-1	N.D.	6.9	•
surroga lems ev	ce data is out	te data is outside the QC limits due to ident in the sample chromatogram. SW-846 6010B	ce data is outside the QC limits due to unresolvable matrix ident in the sample chromatogram. SW-846 6010B ug/1 7439-92-1 N.D.	ce data is outside the QC limits due to unresolvable matrix ident in the sample chromatogram. SW-846 6010B ug/l ug/l 6.9

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

UW 2/23/11

2216 Rev. 3/27/06



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Sample Description: Trip Blank Water Sample

COC #255677

Patchogue, NY

LLI Sample # WW 6180014

LLI Group # 1228341 Account # 09286

Project Name: Patchogue, NY

Collected: 01/06/2011

Brown & Caldwell

110 Commerce Drive Allendale NJ 07401

Submitted: 01/07/2011 17:57 Reported: 01/25/2011 13:58

SDG#: PCH06-04TB*

SLX#: PCHU5-U41B* CAT No. Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	71-43-2 100-41-4 1634-04-4 108-88-3 179601-23-1 95-47-6 1330-20-7	N.D. N.D. N.D. N.D. N.D. N.D. N.D.	ug/1 0.5 0.8 0.5 0.7 0.8 0.8	1 1 1 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 Date and Time	Aralyst	Dilution Pactor	
	UST VOCs 8260 (Water) GC/MS VOA Water Prep	SW-846 8260B SW-846 5030B	1	L110181AA L110181AA	01/18/2011 12:15 01/18/2011 12:15	Linda C Pape Linda C Pape	1	

PCK86 8611

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Appendix D: Electronic Data Deliverable (CD-ROM)