Second Half 2017
Semi-Annual Groundwater Monitoring Report
Patchogue Former MGP Site
NYSDEC Site No. 1-52-182
Village of Patchogue, Suffolk County, New York

Prepared for

National Grid USA

Hicksville, New York

March 2018

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Section 1

Introduction

This Semi-Annual Groundwater Monitoring Report documents the implementation and summarizes the results of the groundwater monitoring activities conducted during the second half of 2017 at the Patchogue Former Manufactured Gas Plant (MGP) Site (hereinafter referred to as the "Site"). The groundwater monitoring activities included the performance of the water level measurements, non-aqueous phase liquid (NAPL) gauging and groundwater sampling activities.

The groundwater monitoring event and the preparation of this report are part of the routine groundwater monitoring program being conducted at the Site. This report has been prepared for submittal to the New York State Department of Environmental Conservation (NYSDEC) and includes the following:

- Description of the scope of the field activities, methods and procedures;
- Table summarizing the results of the water level measurements and the gauging for the presence of NAPL in the monitoring wells and piezometers (see Table 1);
- Table summarizing the analytical results for the groundwater samples obtained during the December 2017 monitoring event including a comparison to the applicable groundwater quality criteria (see Table 2);
- Comparison of data from this monitoring period to data from historical monitoring events (Tables 3 and 4);
- Discussion of the results and findings from the groundwater monitoring data;
- A water table elevation contour map depicting the generalized direction of groundwater flow based on groundwater elevation data obtained from monitoring wells and piezometers, as well as surface water elevation data obtained from staff gauges installed in the Patchogue River (Figure 1);
- Field Sampling Data Sheets (Appendix A);
- Laboratory Data Report (Appendix B);
- Data Usability Summary Report (Appendix C); and
- Electronic Data Deliverable (Appendix D).

1.1 Background

Groundwater monitoring events have been conducted at the Site since March 2008 including two monitoring events conducted as part of the remedial investigation (RI) in March 2008 and July 2008. The groundwater monitoring event conducted in December 2017 is the subject of this report. The results of previous monitoring events have had, in general, consistent concentrations and areal distribution of constituents in groundwater. Prior to the March 2010 groundwater monitoring event, site-related dissolved phase constituents [e.g., benzene, toluene, ethylbenzene, isomers of xylene (BTEX) and polycyclic aromatic hydrocarbons (PAHs)] were detected at concentrations above the Class GA groundwater quality criteria [i.e., standards from the 6 NYCRR Part 703 Standards and guidance values from the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1] in a limited area near the center of the Site. These elevated concentrations did not extend downgradient to the wells closer to the Patchogue River. However, during the March 2010 and September 2010 monitoring events, detections of BTEX and PAH compounds were more widely distributed than during previous events. It was surmised that this change was the result of a temporary dewatering operation at a

construction project conducted by the Village of Patchogue at their wastewater treatment facility (WWTF) located directly across the river (east-southeast) from the Site. Based on the understanding of Site conditions, it was anticipated that when the dewatering operations had ceased, contaminant concentrations in groundwater would re-equilibrate with steady-state (i.e., pre-dewatering) groundwater flow conditions, and eventually return to levels similar to those prior to dewatering. To confirm this, National Grid increased the frequency of the groundwater monitoring from semi-annually to quarterly. The subsequent six quarterly monitoring events documented the return of groundwater flow and groundwater quality to conditions consistent with those prior to the dewatering operations.

Based on this finding, in a May 24, 2012 email, National Grid proposed to the NYSDEC that the frequency of groundwater sampling and analysis return to a semi-annual basis with the schedule for water level monitoring and NAPL gauging remaining on a quarterly basis. NYSDEC agreed with this proposal. Collection of NAPL gauging and water level data remained on a quarterly schedule to provide additional water level data from the piezometers that had been installed in the first half of 2012 in support of the Pre-Remedial Design Investigation. Subsequently, in an October 8, 2013 letter to the NYSDEC, National Grid proposed that that the frequency of all components of the groundwater monitoring program (i.e., water level measurements, NAPL gauging and groundwater sampling) be returned to the semi-annual schedule. This proposal was made because the data from the water level measurements and NAPL gauging, including data from the newer piezometers, continued to indicate very consistent findings from quarter to quarter and confirmed the understanding of groundwater flow conditions and NAPL occurrence at the Site. The NYSDEC concurred with this proposal in a December 9, 2013 email.

Section 2

Scope of Work

Field activities for the second half 2017 groundwater monitoring were conducted by Brown and Caldwell Associates (BC) on December 20th and 21st, 2017. The activities conducted during this monitoring event are described below. Locations of the monitoring wells, piezometers and staff gauges referenced below are depicted on Figure 1.

Prior to groundwater sampling, water level measurements and NAPL gauging was performed in the piezometers and monitoring wells associated with the Site. The level of the Patchogue River was measured at the two staff gauges. Water level measurements and NAPL gauging were conducted using an electronic oil/water interface probe; measurements were made to the nearest 0.01 foot. At the locations where NAPL was detected using the oil/water interface probe, a 3-foot long threaded rod attached to a nylon mason line was lowered into the monitoring well or piezometer to confirm the presence of the NAPL. The threaded rod was lowered to the bottom of the monitoring well to measure the approximate thickness of the NAPL accumulation.

Groundwater sampling was conducted at ten monitoring wells following the water level and NAPL gauging activities. Monitoring wells MW-5 and MW-6 were not sampled during this monitoring period due to visible indications of MGP-related impacts (i.e., NAPL or sheen) in these wells. The visible indications of MGP-related impacts in these wells is consistent with observations during previous gauging activities. The standard protocol is that if NAPL is observed in a well during gauging or sampling, groundwater samples are not submitted for laboratory analyses. No NAPL was observed in MW-6 during the December 2017 gauging activities; however, samples were not collected from this location in December due a sheen observed on the threaded rod while gauging MW-6. Based on this observation and past observations of NAPL in MW-6, a field decision was made to not purge and sample MW-6 in December. Groundwater sampling was conducted using low flow purging and sampling techniques in accordance with the United States Environmental Protection Agency (USEPA) protocol (USEPA, July 1996, Revised January 2010). Samples were submitted to Aqua Pro-Tech Laboratories (APL) located in Fairfield, New Jersey. APL is certified (Certification No. 11634) through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

The groundwater samples were analyzed for: BTEX compounds and methyl tertiary-butyl ether (MTBE) using USEPA SW-846 Method 8260B; and PAHs using USEPA SW-846 Method 8270D. The selective ion monitoring (SIM) component of the 8270 analysis was also performed on the samples to obtain lower detection limits for certain PAH compounds. The groundwater samples were also analyzed in the field for pH, specific conductivity, temperature, turbidity, oxidation-reduction potential, and dissolved oxygen (see Appendix A for field data sheets).

The laboratory report from APL is provided in Appendix B. Laboratory analytical data were provided to BC in electronic form by APL and have been incorporated into the environmental database maintained by BC for the Site.

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

from one location to provide for matrix spike/matrix spike duplicate (MS/MSD) analysis. The trip blank sample was analyzed for BTEX and MTBE only. The other QA/QC samples were analyzed for BTEX, MTBE, and PAHs.

Laboratory results for the groundwater sample analyses were forwarded to a data validator, Environmental Data Services, Inc. of Newport News, 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, prepared in accordance with NYSDEC requirements, is provided in Appendix D.

Section 3

Results and Findings

3.1 Water Level Data

Table 1 provides the water level data and calculated water elevations from the December 20, 2017 measurements. Figure 1 illustrates the elevation contours of the water table based on these data. The contours were developed using water level elevation data from the shallow monitoring wells and shallow piezometers at the Site (i.e., those with screens that straddle, or are just below, the water table) and the two surface water staff gauges in the Patchogue River. The water level elevations used for contouring are representative of water table elevations at the Site. The groundwater elevation (hydraulic head) values for the wells and piezometers screened in deeper intervals are also posted for reference on Figure 1. The water table is relatively shallow and is typically positioned in the fill that overlies the native alluvial deposits and outwash deposits. The water table contours indicate that lateral groundwater flow is from northwest to southeast across the Site toward the Patchogue River. Comparisons of the groundwater elevations in the monitoring wells to the river elevation, as measured at the staff gauges, demonstrate that groundwater elevations are higher than the river level indicating that groundwater is discharging to the Patchogue River. The upward vertical hydraulic gradient measured at well pairs adjacent to the river (well pairs MW-4S and MW-4D, and MW-9S and MW-9D) is indicative of a discharge area and provides further support to the conclusion that groundwater is discharging to the Patchogue River. The general configuration of the water table contours, developed using the December 20, 2017 data, and the interpreted groundwater flow patterns are consistent with those from previous rounds of water level measurements with one exception. The exception occurred during the March 2010 sampling event when the large-scale dewatering activities were being conducted on the WWTF site located east of the Site on the opposite side of the river (see discussion in Section 1.1). Operation of this dewatering system temporarily altered groundwater flow patterns and levels at the Site (see "Groundwater Monitoring Report, Second Semiannual 2010 Sampling Event" [GEI, November 2010]).

3.2 NAPL Gauging

Table 1 presents the results of the NAPL gauging conducted in the monitoring wells and piezometers associated with the Site during the December 2017 groundwater monitoring event. NAPL was identified in MW-5 during the December 2017 gauging activities. Specifically, a black-brown viscous NAPL with a strong mothball-like odor was observed on the lower 0.4 feet of the threaded rod used to gauge the bottom of the well. NAPL has been observed in MW-5 during previous gauging events. Other visible indications of impact including sheens were observed on equipment lowered to the bottom of MW-6 and PZ-3A during the December 2017 gauging activities.

3.3 Groundwater Quality Data

Table 2 provides the results of the laboratory analyses of the groundwater samples collected during the December 2017 monitoring event and a comparison of the data to the New York State Class GA groundwater quality criteria. Comparisons of total BTEX and total PAH concentrations from this sampling event to previous sampling events are provided as Tables 3 and 4, respectively.

As previously stated, NAPL was identified in one of the 12 monitoring wells (MW-5) associated with the Site. This well is located in the central part of the Site in the area of former MGP operations (refer to Figure 1). As discussed in Section 2, because they contained visible indications of MGP-related impacts during the December 2017 NAPL gauging activities, groundwater samples were not collected from MW-5 and MW-6. Groundwater samples were collected from the remaining ten monitoring wells and submitted to the laboratory for analysis.

The constituent concentrations in groundwater samples collected during the December 2017 monitoring event were consistent with those measured during previous monitoring events. No MTBE or BTEX compounds were detected at any of the ten monitoring wells sampled during the December 2017 monitoring event.

PAH compounds were not detected at four of the ten monitoring wells that were sampled during the December 2017 monitoring event. However, in samples collected from monitoring wells MW-3, MW-4D, MW-7D, MW-8D, MW-9S, and MW-9D, PAH compounds were detected at low concentrations (i.e., slightly above the laboratory method detection limit) above the Class GA groundwater quality criteria during the December 2017 monitoring event. The PAH compounds that were identified in the groundwater samples from these sampling locations at concentrations above the Class GA groundwater quality criteria include one or more of the following four compounds: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and indeno(1,2,3-cd)pyrene. These PAH compounds have very low aqueous solubilities, are not readily mobile in groundwater, and are unlikely to have migrated from the on-site source area. The criteria that were exceeded for four of these five PAHs are unpromulgated guidance values rather than 6 NYCRR Part 703 standards. The criteria for the fifth PAH, benzo(a)pyrene, is a Part 703 standard. The standard for benzo(a)pyrene is “non-detect” and the guidance value for the other four PAHs, 0.002 µg/L, is approximately an order of magnitude below the method detection limit. Therefore, any detection of these compounds in groundwater will result in an exceedance. The detection of these constituents is likely related to the disturbance of fine or colloid sized particles during purging or sampling activities. These particles are derived from within the well or the soil adjacent to the well that become suspended into the water column of the well as a result of disturbance during purging and sampling activities. The concentrations of these constituents will be further evaluated through continued semi-annual groundwater monitoring.

Section 4

Summary and Conclusions

As noted in previous monitoring events, visible indications of MGP-related impacts were identified in monitoring wells MW-5 and MW-6 and piezometer PZ-3A during the December 2017 event. MW-5, MW-6, and PZ-3A are located in the center of the Site in the area of former MGP operations where NAPL has been identified in the soil.

No MTBE or BTEX compounds were detected in groundwater samples from the ten monitoring wells sampled during the December 2017 monitoring event.

PAH compounds were not detected at four of the ten monitoring wells sampled during the December 2017 monitoring event. At MW-3, MW-4D, MW-7D, MW-8D, MW-9S, and MW-9D, one or more PAH compounds were detected at low concentrations (i.e., slightly above the laboratory method detection limit) above the Class GA groundwater quality criteria during the December 2017 monitoring event. The detected PAH compounds have very low aqueous solubilities, are not readily mobile in groundwater and are unlikely to have migrated from the on-site source area. In addition, the criteria that were exceeded for four of the five detected PAHs are unpromulgated guidance values rather than Part 703 standards. The criteria for these compounds are extremely low, approximately an order of magnitude below the laboratory method detection limit. Therefore, any detection of these compounds in groundwater will result in an exceedance. This will continue to be evaluated through subsequent semi-annual groundwater monitoring.

Section 5

References

Brown and Caldwell Associates, December 2012, Construction Completion Report Utility Corridor Work Plan Implementation, Patchogue Former MGP Site, Village of Patchogue, Suffolk County, New York, Site ID No. 1-52-182.

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

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

Tables

TABLE 1
WATER ELEVATIONS AND NAPL MONITORING DATA
SECOND HALF 2017 SEMI-ANNUAL GROUNDWATER MONITORING EVENT
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

		12/20/2017				
Location ID	Top of Casing Elevation [(a)] (ft., NAVD)	Depth to Water (ft., BTOC)	Water Elevation (ft., NAVD)	Depth to NAPL (ft., BTOC)	Total Depth of Well (ft., BTOC)	Remarks
MW-1	11.47	6.01	5.46	NI	15.20	
MW-3	5.56	2.52	3.04	NI	10.40	
MW-4S	7.97	5.25	2.72	NI	12.25	
MW-4D	7.79	5.03	2.76	NI	26.65	Mothball-like odor observed on oil/water interface probe.
MW-5	8.66	4.87	3.79	16.12	16.52	Black-brown viscous NAPL with a strong mothball-like odor on the lower 0.4 feet of the threaded rod.
MW-6	5.03	0.62	4.41	NI	18.45	Slight sheen and mothball-like odor observed on threaded rod.
MW-7S	8.45	4.68	3.77	NI	12.42	
MW-7D	8.31	4.54	3.77	NI	28.14	
MW-8S	5.08	1.01	4.07	NI	9.90	
MW-8D	4.98	0.94	4.04	NI	25.10	
MW-9S	4.47	1.75	2.72	NI	10.24	
MW-9D	4.66	1.61	3.05	NI	22.95	
PZ-1A	8.05	3.65	4.40	NI	10.00	
PZ-1B	8.91	4.78	4.13	NI	22.45	
PZ-2A	8.77	4.70	4.07	NI	8.05	
PZ-2B	8.29	4.13	4.16	NI	18.00	Mothball-like odor observed on oil/water interface probe.
PZ-3A	8.78	5.15	3.63	NI	8.95	Sheen observed on oil/water interface probe.
PZ-3B	8.90	5.38	3.52	NI	21.23	
PZ-4A	4.79	1.90	2.89	NI	4.90	
SG-1	5.23	4.23	1.00	NI	NA	
SG-2	5.17	3.98	1.19	NI	NA	

Notes:
NAVD - North American Vertical Datum 1988
ft. - Feet
ppm - parts per million
BGS - Below Ground Surface
BTOC - Below Top of Casing
NAPL - Non-Aqueous Phase Liquid
PID - Photoionization Detector
PVC - Polyvinyl chloride
NA - Not Applicable
NI - NAPL not Indicated by Oil/Water Interface Probe
MW - monitoring well
PZ - piezometer
SG - staff gauge
(a) - Monitoring wells resurveyed on 7/3/12 following utility corridor construction activities. See "Construction Completion Report, Utility Corridor Work Plan Implementation" (Brown and Caldwell, December 2012). Above ground casing at MW-5 was lowered during utility corridor construction activities

TABLE 2
GROUNDWATER ANALYSIS RESULTS
SECOND HALF 2017 SEMI-ANNUAL GROUNDWATER MONITORING EVENT
PATCHOGUE FORMER MGP SITE
PATCHOGUE, NEW YORK

Constituent	Class GA Groundwater Criteria TOGS 1.1.1 Guidance	NYS Part 703 Standard	Units	Loc ID Date	MW-1 12/20/2017	MW-3 12/21/2017	MW-3 DUP 12/21/2017	MW-4S 12/21/2017	MW-4D 12/21/2017	MW-7S 12/20/2017	MW-7D 12/20/2017	MW-8S 12/20/2017	MW-8D 12/20/2017	MW-9S 12/21/2017	MW-9D 12/21/2017
Volatile Organic Compounds (VOCs)															
BTEX Compounds															
Benzene	NE	1	µg/L		0.129 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U
Toluene	NE	5	µg/L		0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U
Ethylbenzene	NE	5	µg/L		0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U
m&p-Xylenes	NE	5	µg/L		0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U	0.461 U
o-Xylene	NE	5	µg/L		0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U	0.244 U
Xylenes, Total	NE	NE	µg/L		0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U
Total BTEX[a]	NE	NE	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other VOCs															
Methyl Tertiary Butyl Ether	10	NE	µg/L		0.596 U	0.596 U	0.596 U	0.596 U	0.596 U	0.596 U	0.596 U	0.596 U	0.596 U	0.596 U	0.596 U
Semi-Volatile Organic Compounds (SVOCs)															
Polycyclic Aromatic Hydrocarbons (PAHs)															
Acenaphthene	20	NE	µg/L		0.1 U	0.1 U	0.1 U	0.108 U	0.1 U	0.101 U	0.1 U	0.1 U	0.1 U	0.967 J	0.1 U
Acenaphthylene	NE	NE	µg/L		0.14 U	0.14 U	0.14 U	0.151 U	0.14 U	0.141 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Anthracene	50	NE	µg/L		0.121 U	0.121 U	0.121 U	0.13 U	0.121 U	0.122 U	0.121 U	0.121 U	0.121 U	0.121 U	0.121 U
Benzo(a)anthracene	0.002	NE	µg/L		0.0165 U	**0.0281**	**0.0283**	0.0177 U	**0.018 J**	0.0167 U	**0.0257**	0.0165 U	**0.0167 J**	**0.595**	**0.0292**
Benzo(a)pyrene	NE	0	µg/L		0.0124 U	0.0124 U	0.0124 U	0.0133 U	**0.0129 J**	0.0125 U	**0.0243**	0.0124 U	0.0124 U	**0.499**	**0.0303**
Benzo(b)fluoranthene	0.002	NE	µg/L		0.0177 U	0.0177 U	0.0177 U	0.019 U	0.0177 U	0.0179 U	**0.0305**	0.0177 U	0.0177 U	**0.431**	**0.0396**
Benzo(g,h,i)perylene	NE	NE	µg/L		0.0652 U	0.0652 U	0.0652 U	0.0701 U	0.0652 U	0.0659 U	0.0652 U	0.0652 U	0.0652 U	0.0652 U	0.0652 U
Benzo(k)fluoranthene	0.002	NE	µg/L		0.0071 U	0.0071 U	0.0071 U	0.00763 U	0.0071 U	0.00717 U	**0.0123 J**	0.0071 U	0.0071 U	**0.202**	**0.0181 J**
Chrysene	0.002	NE	µg/L		0.129 U	0.129 U	0.129 U	0.139 U	0.129 U	0.13 U	0.129 U	0.129 U	0.129 U	0.129 U	0.129 U
Dibenzo(a,h)anthracene	NE	NE	µg/L		0.016 U	0.016 U	0.016 U	0.0172 U	0.016 U	0.0162 U	0.016 U	0.016 U	0.016 U	0.0533	0.016 U
Fluoranthene	50	NE	µg/L		0.129 U	0.502 J	0.59 J	0.139 U	0.129 U	0.13 U	0.129 U	0.129 U	0.129 U	1.28 J	0.129 U
Fluorene	50	NE	µg/L		0.109 U	0.109 U	0.109 U	0.117 U	0.109 U	0.11 U	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U
Indeno(1,2,3-cd)pyrene	0.002	NE	µg/L		0.0131 U	0.0131 U	0.0131 U	0.0141 U	0.0131 U	0.0132 U	**0.0147 J**	0.0131 U	0.0131 U	**0.215**	**0.0184 J**
Naphthalene	10	NE	µg/L		0.0607 U	0.0607 U	0.0607 U	0.0653 U	0.0607 U	0.06 U	0.0607 U	0.0607 U	0.0607 U	0.0607 U	0.0607 U
Phenanthrene	50	NE	µg/L		0.0725 U	0.0725 U	0.0725 U	0.078 U	0.0725 U	0.0732 U	0.0725 U	0.0725 U	0.0725 U	0.0725 U	0.0725 U
Pyrene	50	NE	µg/L		0.115 U	0.115 U	0.509 J	0.124 U	0.115 U	0.116 U	0.115 U	0.115 U	0.115 U	1.72 J	0.115 U
Total PAHs[b]	NE	NE	µg/L		ND	0.530 J	1.13 J	ND	0.0309 J	ND	0.108 J	ND	0.0167 J	5.96 J	0.136 J

Notes:
BTEX - benzene, toluene, ethylbenzene and isomers of xylene.
U - The analyte was analyzed for, but was not detected above the sample reporting limit. Value shown is representative of method detection limit for the analyzed constituent.
J - Estimated concentration. The result is below the reporting limit but above the method detection limit.
UJ - The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
µg/L - micrograms per liter
ND - Not detected.
NE - Not established.
(a) - To calculate total BTEX concentration, a value of zero is used for non-detect values.
(b) - To calculate total PAH concentration, a value of zero is used for non-detect values.

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

Sampling Date	Total BTEX Concentrations (µg/L) [a]														
	Monitoring Well/Piezometer														
	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-5	MW-6	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D	PZ-4A
Mar-08	0	0	0	0	3.4	0	1016	57	NS	NS	NS	NS	NS	NS	NI
Jul-08	NS	0	0	0	0	0	678	0	0	0	0	0	0	0	NI
Mar-09	0	0	0	0	0	0	975	0	0	1	0	0	0	0	NI
Sep-09	0	0	0	0	0	0	1257	1	0	0	0	0	0	0	NI
Mar-10	0	0	0	0	0	0	637	2	0	9	0	0	0	0	NI
Sep-10	0	0	0	0	0	0	NS	0	0	0	0	0	27	0	NI
Jan-11	1.7	0	0	0	0	0	NS	NS	0	0	0	0	1	0	NI
Apr-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0	NI
Aug-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0	NI
Nov-11	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0	NI
Feb-12	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0	NI
May-12	0	0	0	0	0	0	NS	NS	0	0	0	0	0	0	NI
Nov-12	0	-- [b]	-- [a]	0	12	0	NS	NS	1	0	0	0	NS	NS	NI
Jun-13	0	-- [b]	-- [b]	0	0.8	0	NS	NS	0.7	0	0	0	0	NS	NI
Dec-13	0	-- [b]	-- [b]	NS	0	0	NS	NS	0.8	0	0	0	NS	NS	NI
Jun-14	0	-- [b]	-- [b]	0	0	0	NS	NS	0.8	0	0	0	NS	NS	0
Dec-14	0	-- [b]	-- [b]	0	0	0	NS	NS	1.3	0	0	0	0	0	NS
Jun-15	0	-- [b]	-- [b]	0	0	0	NS	NS	0	0	0	0	0	0	NS
Dec-15	0	-- [b]	-- [b]	0	0	0	NS	NS	0.5	0	0	0	0	0	NS
Jun-16	0	-- [b]	-- [b]	0	0	0	NS	NS	0	0	0	0	0	0	NS
Dec-16	0	-- [b]	-- [b]	0	0	0	NS	NS	0	0	0	0	0	0	NS
Jun-17	0	-- [b]	-- [b]	0	0	0	NS	NS	0	0	0	0	0	0	NS
Dec-17	0	-- [b]	-- [b]	0	0	0	NS	NS	0	0	0	0	0	0	NS
Minimum	0	0	0	0	0	0	637	0	0	0	0	0	0	0	0
Maximum	1.7	0	0	0	12	0	1257	57	1.3	9	0	0	27	0	0
Mean	0.1	0	0	0	0.7	0	913	10	0.2	0.5	0	0	1	0	0

Notes:
BTEX - Benzene, toluene, ethylbenzene and isomers of xylene
µg/L - micrograms per liter
NS - Not sampled.
NI - Piezometer not installed at time of sampling.
(a) - To calculate total BTEX concentration, a value of zero is used for non-detect values.
(b) - Monitoring well was decommissioned on 6/4/12 as part of the Utility Corridor Construction activities. See "Construction Completion Report, Utility Corridor Work Plan Implementation" (Brown and Caldwell, December 2012).

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

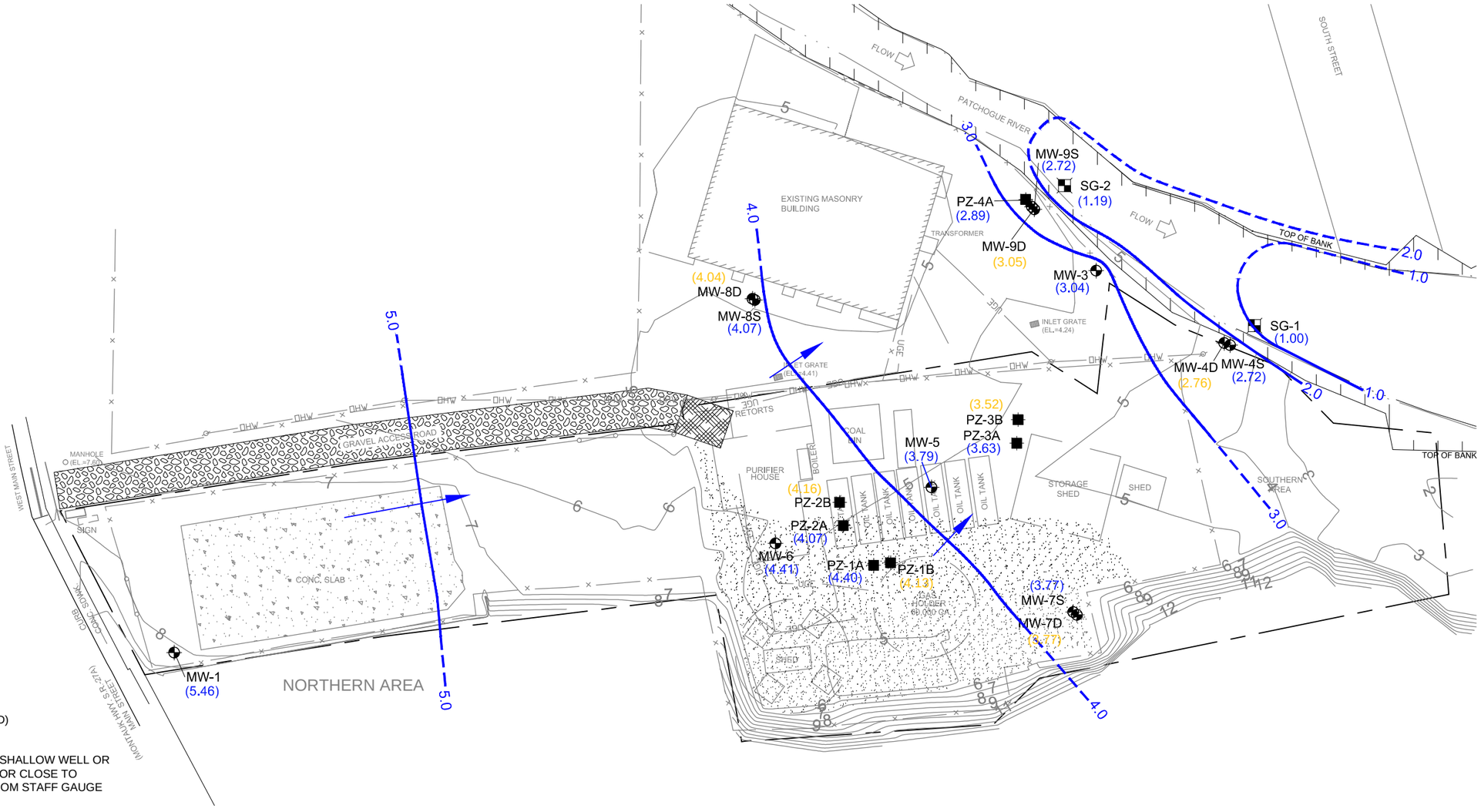
Sampling Date	Total PAH Concentrations (µg/L) [a]														
	Monitoring Well/Piezometer														
	MW-1	MW-2S	MW-2D	MW-3	MW-4S	MW-4D	MW-5	MW-6	MW-7S	MW-7D	MW-8S	MW-8D	MW-9S	MW-9D	PZ-4A
Mar-08	0	0	0	0.76	0.6	4.3	1774	214	NS	NS	NS	NS	NS	NS	NI
Jul-08	NS	0.7	0	0	8	0	1799	154	0	0.47	0	0	12	0	NI
Mar-09	0	0	0	0	0	0	2730	0	0	0	0	0	0	0	NI
Sep-09	0	0	0	0	0	0	3373	1	0	0	0	0	0	0	NI
Mar-10	0	0	0	0	0	39	2390	17	0	0	22	0	2	0	NI
Sep-10	0	0	0	128	0	6	NS	14	0	0	11	0	396	0	NI
Jan-11	22	0	0	17	0	12	NS	NS	0	0	6	0	42	5	NI
Apr-11	0	0	0	6	0	20	NS	NS	0	0	0	0	9	0	NI
Aug-11	0	0	0.1	14	0.1	0	NS	NS	0	0	0.4	0	16	1.2	NI
Nov-11	0	0	0.2	10	0.4	0	NS	NS	0	0	0.8	0.2	8	3.4	NI
Feb-12	0.2	0	0	6	0.6	4	NS	NS	0.1	0	0.6	0	5	2.9	NI
May-12	0.4	0.1	0.6	5	0	5.8	NS	NS	0.1	0.3	1	0	6	2.8	NI
Nov-12	0.1	-- [b]	-- [b]	5.6	0.4	11.7	NS	NS	2.5	2.6	0.8	1.2	NS	NS	NI
Jun-13	0.8	-- [b]	-- [b]	NS	0.3	3.7	NS	NS	1.3	0.4	0.4	0.6	2	NS	NI
Dec-13	0	-- [b]	-- [b]	NS	0	2.5	NS	NS	0.8	0.4	0.3	0	NS	NS	NI
Jun-14	0	-- [b]	-- [b]	2.2	0.9	0	NS	NS	0.8	0.3	0.2	0	NS	NS	0.3
Dec-14	0.1	-- [b]	-- [b]	1.2	0.4	0	NS	NS	3	0	0.1	0	21.4	0.3	NS
Jun-15	0	-- [b]	-- [b]	1.1	0.9	0	NS	NS	0.9	0	0.3	0	10.4	0.3	NS
Dec-15	0	-- [b]	-- [b]	0	0	0	NS	NS	0.9	0	0	0	3.9	0	NS
Jun-16	0	-- [b]	-- [b]	1.9	0.8	0	NS	NS	2.5	0	0	0	5.9	0	NS
Dec-16	0	-- [b]	-- [b]	0.02	0	0.1	NS	NS	0	0	0	0	5.5	0.07	NS
Jun-17	0	-- [b]	-- [b]	2.0	0.5	0	NS	NS	1	0	0	0	3.2	0	NS
Dec-17	0	-- [b]	-- [b]	0.53	0	0.031	NS	NS	0	0.11	0	0.017	5.96	0.14	NS
Min	0	0	0	0	0	0	1774	0	0	0	0	0	0	0	0.3
Max	22	0.7	0.6	128	8	39	3373	214	3	2.6	22	1.2	396	5	0.3
Mean	1.1	0.1	0.1	10	0.6	5	2413	67	0.6	0.2	2.0	0.1	29	0.9	0.3

Notes:
PAH - Polycyclic aromatic hydrocarbons
µg/L - micrograms per liter
NS - Not sampled.
NI - Piezometer not installed at time of sampling.
(a) - To calculate total PAH concentration, a value of zero is used for non-detect values.
(b) - Monitoring well was decommissioned on 6/4/12 as part of the Utility Corridor Construction activities. See "Construction Completion Report, Utility Corridor Work Plan Implementation" (Brown and Caldwell, December 2012).

Figures

0 60 120

SCALE IN FEET



LEGEND:

- PROPERTY LINE
- FENCE
- TOPOGRAPHIC CONTOUR
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- STAFF GAUGE LOCATION
- 4 — WATER TABLE CONTOUR (FT., NAVD) DASHED WHERE INFERRED
- (5.46) — GROUNDWATER ELEVATION FROM SHALLOW WELL OR PIEZOMETER (SCREENED ACROSS OR CLOSE TO WATER TABLE) OR RIVER LEVEL FROM STAFF GAUGE (FT., NAVD88)
- (4.04) — GROUNDWATER ELEVATION (FT., NAVD 88) FROM DEEP MONITORING WELL OR PIEZOMETER (SCREENED BELOW WATER TABLE)
- (NM) — NOT MEASURED
- GENERALIZED DIRECTION OF GROUNDWATER FLOW

NOTES:

1. BASE MAP INFORMATION OBTAINED FROM TETRA TECH EC, INC. DRAWING ENTITLED "CONCEPTUAL SITE MODEL", DATED DECEMBER 17, 2008.

Brown AND Caldwell

SCALE: 1" = 60'

149322

DATE: February 27, 2018

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

WATER TABLE ELEVATION CONTOUR MAP DECEMBER 20, 2017

FIGURE

1

Appendix A: Field Sampling Data Sheets

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-1
Sample I.D.: MW-1-20171220 (if different from well no.)

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/20/17 Time: 1216
Weather: Cloudy Air Temp.: 40°

WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: ____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 10.0 ft Bottom of Well: ____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

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

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

Pumping Rate: 2.25 L/min Elapsed Time: 30 min Volume Pumped: 2.25 G
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: ____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: ____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: ____
MS/MSD : ☐ No ☑ Yes Name: MW-1-20171220-MS/MSD

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

Signature: [signature] Date: 12/20/17

Brown AND Caldwell
2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	Patchogue Former MGP Site	Project Number:	149322
Client:	National Grid	Date:	12/20/17
Personnel:	REH/TMB	Well ID:	MW-1
Purge/Sample Depth:	~12'	Sample ID:	MW-1-20171220

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1216	6.76	14.49	1.51	9.41	138	-41	6.10	225	
1219	7.01	14.53	1.72	3.38	215	-66	6.13		
1222	7.04	14.48	1.84	2.57	217	-74	6.15		emptied Horiba
1225	7.12	14.410	1.92	2.07	187	-78	6.15		
1228	7.13	14.42	1.95	1.28	169	-80	6.16		
1231	7.11	14.34	1.96	1.03	136	-89	6.17		
1234	7.29	14.33	1.97	1.01	97.1	-94	6.17		
1237	7.18	14.36	1.96	0.91	92.6	-95	6.16		
1240	7.19	14.44	1.95	0.81	88.7	-95	6.13		
1243	7.16	14.42	1.94	0.80	87.1	-96	6.11		
1246	7.16	14.42	1.92	0.77	79.0	-98	6.10		
1249	Sample MW-1-20171220 for MS/MSD								

TMB
12/20/17

Certified Sample Information:
Time of Sample: 1249 Analyst Signature: TMB

Instrument Data:
Manufacturer/Model: _____
Serial No. Unit: _____ Serial No. Handheld: _____
Calibration Date/Time: _____

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-7S
Sample I.D.: MW-7S-20171220 (If different from well no.)

Project: Patchogue
Personnel: REH/TMB

Date: 12/20/17 Time: [redacted] 1329
Weather: Overcast Air Temp.: 40°

WELL DATA:

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

PURGE DATA:

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

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

Pumping Rate: 250 ml/min Elapsed Time: 90 min Volume Pumped: 2.5 gal
Was well Evacuated? ☐ Yes ☐ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☒ Dedicated ☒ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☒ Prepared Off-Site ☐ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☐ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____

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

Signature: Rachel Hosnecki Date: 12/20/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue former MGP Site
Client: National Grid
Personnel: RCH/TMB
Purge/Sample Depth:

Project Number: 149327
Date: 12/20/17
Well ID: MW-7S
Sample ID: MW-7S-20171220

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)				
1329	7.13	11.65	0.672	4.68	181	-125	4.83	250	
1332	7.24	11.55	0.665	2.17	195	-128	4.83		
1335	7.23	11.58	0.660	1.83	222	-130	4.82		
1338	7.20	11.60	0.656	1.18	245	-131	4.81		
1341	7.26	11.71	0.653	0.98	239	-137	4.81		
1344	7.26	11.75	0.650	0.87	201	-135	4.81		
1347	7.25	11.76	0.649	0.84	184	-139	4.81		
1350	7.34	11.81	0.648	0.77	137	-138	4.82		
1353	7.35	11.87	0.647	0.72	125	-142	4.83		
1356	7.33	11.92	0.646	0.68	105	-141	4.83		
1359	7.38	11.92	0.646	0.66	103	-145	4.82		
1402	7.38	11.96	0646	0.64	89.5	-144	4.81		
1405	7.38	11.97	0.645	0.63	77.2	-147	4.81		
1408	7.40	11.97	0.644	0.62	59.7	-147	4.82		
1411	Collect Sample								

12/20/17

Certified Sample Information:
Time of Sample: 1411
Analyst Signature: Rachel Hranchi

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWB0ULO
Serial No. Handheld: PLYF909B
Calibration Date/Time: 12/19/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/20/17 Time: 1423
Weather: clouds Air Temp.: 45°

WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☐ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☐ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 4.53 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☐ Yes ☐ No
Does Weep Hole adequately drain well head? ☐ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

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

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

Pumping Rate: 200 ml/min Elapsed Time: 40 min Volume Pumped: 35 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

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

Signature: _____ Date: 12/20/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth: ~24'

Project Number: 149322
Date: 12/20/17
Well ID: MW-7D
Sample ID: MW-7D-20171220

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1425	7.03	12.98	0.502	14.39	50.8	-21	4.53	300	
1426	6.94	13.18	0.503	7.47	55.8	-13	4.54		
1429	6.60	13.55	0.512	4.73	83.4	20	4.55		
1432	6.47	13.62	0.524	3.76	106	31	4.55		emptied horiba
1435	6.45	13.51	0.545	3.82	145	51	4.54		
1438	6.26	13.56	0.561	2.60	149	60	4.54		
1441	6.21	13.40	0.558	2.37	129	73	4.55		
1444	6.21	13.26	0.553	2.19	120	83	4.55		
1447	6.32	12.92	0.554	2.38	113	90	4.56		
1450	6.21	12.67	0.557	2.00	107	72	4.56		
1453	6.18	12.58	0.558	1.94	101	100	4.56		
1456	6.19	12.46	0.559	1.89	96.8	105	4.55		
1459	6.19	12.41	0.560	1.88	94.7	108	4.56		
1502	6.19	12.35	0.561	1.81	91.1	114	4.56		
1505	Sample MW-7D-2017 1220								

12/20/17

Certified Sample Information:
Time of Sample: 1505
Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWB0ULO
Serial No. Handheld: PLF909B
Calibration Date/Time: 12/18/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-8S
Sample I.D.: MW-8S-20171220 (if different from well no.)

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/20/17 Time: 1536
Weather: Sunny Air Temp.: 38

WELL DATA:

Casing Diameter: 8" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 1.01 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☒ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☒ Yes ☐ No
Does Weep Hole adequately drain well head? ☒ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☒ Yes ☐ No
Is Padlock Functional? ☒ Yes ☐ No ☐ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☒ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

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

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

Pumping Rate: 225 mL/min Elapsed Time: 30 min Volume Pumped: 2.25 G
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____

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

Signature: Rachel Hojnacki Date: 12/20/17

Brown AND Caldwell
2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth:

Project Number: 149322
Date: 12/20/17
Well ID: MW-8S
Sample ID: MW-8S-20171220

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1536	6.80	11.87	0.662	15.17	288	23	1.06	225	
1539	6.75	13.43	0.675	1.48	256	-27	1.06		
1542	6.76	13.29	0.676	1.32	184	-26	1.06		
1545	6.80	13.43	0.688	1.11	143	-31	1.05		
1548	6.80	13.69	0.700	0.76	95.1	-37	1.05		
1551	6.85	13.85	0.705	0.74	67.8	-43	1.05		
1554	6.85	1402	0.710	0.68	60.9	-46	1.04		
1557	6.85	14.12	0.708	0.65	49.8	-49	1.04		
1600	6.93	14.24	0.714	0.64	32.6	-51	1.03		
1603	6.85	14.33	0.713	0.52	28.1	-53	1.03		
1606	6.88	14.35	0.714	0.53	27.7	-52	1.03		
1609	collect sample								

12/21/17

Certified Sample Information:
Time of Sample: 1609
Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWBOULO
Serial No. Handheld: PLYF909B
Calibration Date/Time: 12/18/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/20/17 Time: 1610
Weather: cloudy Air Temp.: 41°

WELL DATA:

Casing Diameter: 8" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 0.94 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

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

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

Pumping Rate: 150 ml/min Elapsed Time: 60 min Volume Pumped: 1.5 gal
Was well Evacuated? ☐ Yes ☐ No Number of Well Volumes Removed: NA
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

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

Signature: _____ Date: 12/20/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth: ~ 22'

Project Number: 149322
Date: 12/20/17
Well ID: MW-8D
Sample ID: MW-8D-20171220

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1616	7.24	12.99	0.251	6.66	55.7	-61	0.94	150	
1619	7.19	13.07	0.253	3.61	53.8	-44	0.94		
1622	7.01	13.23	0.253	2.02	42.1	-18	0.95		
1625	6.78	13.40	0.247	1.69	37.2	0	0.95		
1628	6.79	13.77	0.243	1.41	31.7	10	0.96		
1631	6.90	13.80	0.225	1.43	46.7	8	0.97		
1634	6.79	14.40	0.207	1.50	45.8	4	0.96		
1637	6.90	14.75	0.209	0.89	39.2	~~-5~~ 5	0.96		
1640	6.99	14.80	0.210	0.78	56.7	~~-19~~ 9	0.95		
1643	7.02	14.83	0.221	0.76	57.8	~~-12~~ 11	0.95		
1646	6.97	14.84	0.227	0.79	60.9	14	0.95	↓	
1649	Sample MW-8D-20171220								

12/20/17

Certified Sample Information:
Time of Sample: 1649

Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WFWBOULO
Serial No. Handheld: PLYF909B
Calibration Date/Time: 12/18/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

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

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/21/17 Time: 0809
Weather: Sun Air Temp.: 30°

WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 5.46 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☑ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: N/A To be purged: NA

PURGE DATA:

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

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

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

SAMPLING DATA:

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

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☐ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

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

Signature: [signature] Date: 12/21/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth: ~10'

Project Number: 149322
Date: 12/21/17
Well ID: MW-45
Sample ID: MW-45-20171221

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
0809	6.97	10.61	0.565	6.75	373	-46	5.46	200	
0812	7.05	10.95	0.584	2.87	420	-75	5.46		
0815	7.18	11.22	0.586	2.08	266	-89	5.46		
0818	7.28	11.48	0.591	1.56	152	-98	5.46		
0821	7.29	11.68	0.591	1.39	133	-104	5.46		
0824	7.31	11.64	0.589	1.12	149	-109	5.46		
0827	7.29	11.58	0.601	2.24	71.3	-92	5.46		emptied Horiba
0830	7.25	11.61	0.602	0.98	49.3	-106	5.46		
0833	7.33	11.51	0.606	0.82	41.2	-113	5.44		
0836	7.34	11.45	0.608	0.79	37.0	-114	5.46		
0839	7.35	11.58	0.609	0.73	32.2	-117	5.45		
0842	Sample MW-45-20171221								

MTK 12/21/17

Certified Sample Information:
Time of Sample: 0842

Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWBOULO
Calibration Date/Time: 12/21/17
Serial No. Handheld: PLYF909B

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-4D
Sample I.D.: MW-4D-20171221 (if different from well no.)

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/21/17 Time: 0920
Weather: Sunny Air Temp.: 34°

WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 5.07 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☒ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☒ Yes ☐ No
Does Weep Hole adequately drain well head? ☐ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☒ Yes ☐ No
Is Padlock Functional? ☒ Yes ☐ No ☐ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☒ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

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

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

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

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____

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

Signature: Rachel Reinach Date: 12/21/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth:

Project Number: 149322
Date: 12/21/17
Well ID: MW-4D
Sample ID: MW-4D-20171221

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
0920	6.89	7.75	0.584	8.57	53.4	24	5.10	200	
0923	6.41	9.25	0.589	1.83	45.0	56	5.08		
0926	6.28	10.04	0.605	1.13	44.8	76	5.08		
0929	6.19	10.76	0.621	0.89	45.5	88	5.07		
0932	6.17	11.07	0.624	0.80	31.3	100	5.06		
0935	6.19	11.08	0.626	0.71	33.9	101	5.06		
0938	6.15	11.21	0.625	0.67	31.5	111	5.05		
0941	6.22	11.39	0.628	0.73	27.6	119	5.04		
0944	6.17	11.53	0.631	0.62	17.9	119	5.04		
0947	6.15	11.49	0.634	0.60	15.7	121	5.06		
0950	6.14	11.49	0.637	0.58	14.2	125	5.06		
0953	Collect sample								

12/21/17

Certified Sample Information:
Time of Sample: 0953

Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWBOULO
Serial No. Handheld: PLYF909B
Calibration Date/Time: 12/21/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-3
Sample I.D.: MW-3-20171221 (if different from well no.)

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/21/17 Time: 1010
Weather: Sun Air Temp.: 30°

WELL DATA:

Casing Diameter: 8" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 2.56 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

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

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

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

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☐ No ☑ Yes Name: Dup-20171221
MS/MSD : ☑ No ☐ Yes Name: _____

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

Signature: _____ Date: 12/21/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth: ~8'

Project Number: 149322
Date: 12/21/17
Well ID: MW-3
Sample ID: MW-3-20171221

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1010	6.82	11.04	0.965	1.32	10.3	90	2.56	200	
1013	6.99	11.69	0.957	2.64	7.1	80	2.58		
1016	6.99	12.11	0.945	1.63	5.0	71	2.60		
1019	7.04	12.51	0.929	0.94	3.5	67	2.60		
1022	7.05	12.66	0.925	0.80	3.1	62	2.61		
1025	7.04	12.81	0.917	0.68	2.8	60	2.61		
1028	7.06	12.85	0.914	0.63	2.5	62	2.61		
1031	7.06	12.96	0.913	0.56	1.9	55	2.62		
1034	7.05	13.01	0.908	0.54	1.8	53	2.62		
1037	7.04	13.02	0.908	0.53	1.6	55	2.63		
1040	7.02	13.04	0.906	0.56	1.5	51	2.63		
1043	Sample MW-3-20171221 + Dup-20171221								

12/21/17

Certified Sample Information:
Time of Sample: 1043

Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWB0ULO
Serial No. Handheld: PLYF7093
Calibration Date/Time: 12/21/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-9D
Sample I.D.: MW-9D 20171221 (If different from well no.)

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/21/17 Time: 1101
Weather: Sunny Air Temp.: 34°

WELL DATA:

Casing Diameter: 8" ☐ Stainless Steel ☒ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 1.62 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☒ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☑ Yes ☐ No Is well clean to bottom? ☐ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☒ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ No ☒ NA Is Inner Casing Intact? ☒ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☒ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

PURGE DATA:

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

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

Pumping Rate: 200 ml/min Elapsed Time: 30 min Volume Pumped: ~6 gal
Was well Evacuated? ☐ Yes ☒ No Number of Well Volumes Removed: N/A
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned

SAMPLING DATA:

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

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

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☒ Field Cleaned
Metals samples field filtered? ☐ Yes ☒ No Method: _____
APPEARANCE: ☒ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☒ No ☐ Yes Name: _____
MS/MSD : ☒ No ☐ Yes Name: _____

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

Signature: Rachel Heinrich Date: 12/21/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth:

Project Number: 149322
Date: 12/21/17
Well ID: MW-9D
Sample ID: MW-9D-20171221

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1101	7.05	11.40	0.498	7.30	25.3	65	1.68	150	
1104	6.37	11.76	0.494	3.86	23.4	126	1.69		
1107	5.75	12.36	0.504	2.02	28.7	171	1.70		
1110	5.69	12.46	0.505	1.58	25.0	182	1.72		
1113	5.57	12.65	0.506	1.20	22.6	200	1.73		
1116	5.44	13.25	0.507	0.89	16.6	220	1.73		
1119	5.43	13.41	0.506	0.80	14.2	224	1.71		
1122	5.39	13.51	0.506	1.41	13.7	232	1.70		
1125	5.44	13.53	0.505	0.72	14.9	236	1.70		
1128	5.44	13.65	0.505	0.63	13.5	241	1.70		
1131	5.42	13.73	0.503	0.60	13.0	245	1.70		
1134	Collect Sample								

12/21/17

Certified Sample Information:
Time of Sample: 1134
Analyst Signature: Rachel Ghizzoli

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWB00LO
Serial No. Handheld: PLYF909B
Calibration Date/Time: 12/21/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-9S
Sample I.D.: MW-9S-20171221 (If different from well no.)

Project: Patchogue Former MGP Site
Personnel: REH/TMB

Date: 12/21/17 Time: 1143
Weather: Sun Air Temp.: 30°

WELL DATA:

Casing Diameter: 8" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 7" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 17.74 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: NA To be purged: NA

PURGE DATA:

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

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

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

SAMPLING DATA:

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

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

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

Signature: _____ Date: 12/21/17

Brown AND Caldwell

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

NJ FIELD LAB ID# 02023
LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: Patchogue Former MGP Site
Client: National Grid
Personnel: REH/TMB
Purge/Sample Depth: ~8'

Project Number: 149322
Date: 12/21/17
Well ID: MW-9S
Sample ID: MW-9S-20171221

Actual Time	Certified Parameters					ORP (mV)	DTW (ft)	Pumping Rate (mL/min)	Comments
	pH	Temp (°C)	Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)				
1143	6.15	11.68	0.604	26.48	0.0"	14	1.54	200	
1146	6.64	12.18	0.619	7.22	~~826~~	-42	1.62		
1149	6.91	12.87	0.609	5.36	747	-76	1.74		emptied Horiba
1152	6.91	13.04	0.605	2.02	239	-78	1.80		
1155	7.05	13.14	0.601	1.05	151	-92	1.80		
1158	7.14	13.27	0.599	0.90	111	-99	1.80		
1201	7.12	13.28	0.600	0.92	99.1	-98	1.81		
1204	7.13	13.38	0.598	0.95	78.9	-100	1.83		
1207	7.12	13.44	0.598	0.88	70.6	-101	1.85		
1210	7.13	13.42	0.599	0.87	66.4	-102	1.86		
1213	7.13	13.48	0.598	0.85	60.2	-101	1.86		
1216	Sample MW-9S-20171221								

12/21/17

Certified Sample Information:
Time of Sample: 1216

Analyst Signature:

Instrument Data:
Manufacturer/Model: Horiba U-52
Serial No. Unit: WEWBOULD
Serial No. Handheld: PLYF9091B
Calibration Date/Time: 12/21/17

Are low-flow parameters subject to field lab certification? ☐ Yes ☒ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Appendix B: Laboratory Reports (CD-ROM)

Appendix C: Data Usability Summary Report

ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
NATIONAL GRID, PATCHOGUE, NEW YORK

Client: Brown and Caldwell, Upper Saddle River, New Jersey
SDG: 7120696
Laboratory: Aqua Pro-Tech Laboratories, Fairfield, New Jersey
Site: National Grid, Patchogue, New York
Date: February 5, 2018

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-1-20171220	7120696-01	Water
1MS†	MW-1-20171220MS	7120696-01MS	Water
1MSD†	MW-1-20171220MSD	7120696-01MSD	Water
2	MW-7S-20171220	7120696-02	Water
3	MW-7D-20171220	7120696-03	Water
4	MW-8S-20171220	7120696-04	Water
5	MW-8D-20171220	7120696-05	Water
6	MW-4S-20171221	7120696-06	Water
7	MW-4D-20171221	7120696-07	Water
8	MW-3-20171221	7120696-08	Water
9	DUP-20171221	7120696-09	Water
10	FB-20171221	7120696-10	Water
11	MW-9D-20171221	7120696-11	Water
12	MW-9S-20171221	7120696-12	Water
13*	TRIP BLANK-20171221	7120696-13	Water

* - VOC only † - VOC and PAH only

A Data Usability Summary Review was performed on the analytical data for eleven water samples, on aqueous equipment blank sample, and one aqueous trip blank sample collected on December 20-21, 2017 by Brown and Caldwell at the National Grid, 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 & MTBE)	USEPA SW-846 Method 8260B
SVOC (PAH)	USEPA SW-846 Method 8270D
SVOC SIM	USEPA SW-846 Method 8270D SIM

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 4, September 2014: Validating Volatile Organic Compounds by SW-846 Method 8260B & 8260C;
- SOP Number HW-22, Revision 4, August 2008: Validating Semivolatile Organic Compounds by SW-846 Method 8270D;
- and the reviewer's professional judgment.

The following items/criteria were reviewed:

Organics

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

Data Usability Assessment

There were no rejections of data.

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

Data Completeness

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

Volatile Organic Compounds (BTEX & MTBE)

Holding Times

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

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Method Blank

- The method blanks were free of contamination.

Field Blank

- The following table summarizes field blank contamination.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
FB-20171221	None - ND	-	-	-
TRIP BLANK-20171221	None - ND	-	-	-

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and average RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Compound Quantitation

- All criteria were met.

Internal Standard (IS) Area Performance

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

Field Duplicate Sample Precision

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

VOC				
Compound	MW-3-20171221 ug/L	DUP-20171221 ug/L	RPD	Qualifier
None	ND	ND	-	-

Polynuclear Aromatic Hydrocarbons (PAH) and SIM

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 RPD values.

Laboratory Control Samples

- The LCS samples 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
FB-20171221	None - ND	-	-	-	-

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Compound Quantitation

- All criteria were met.

Internal Standard (IS) Area Performance

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

Field Duplicate Sample Precision

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

PAH				
Compound	MW-3-20171221 ug/L	DUP-20171221 ug/L	RPD	Qualifier
Fluoranthene	0.502	0.590	16%	None
Pyrene	ND	0.509	NC	
Benzo(a)anthracene	0.0281	0.0283	1%	

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

Signed: Nancy Weaver Dated: 2/7/18

Nancy Weaver
Senior Chemist

Data Qualifiers

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

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

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

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

ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-1 20171220
Lab Sample ID: 7120696-01
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 12:49	Prep Date:	12/29/17 16:06	File ID:	6V16353.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B8A0226	Analyzed:	12/29/17 16:06
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0303
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

NW 2/5/18

2

ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-7S 20171220
Lab Sample ID: 7120696-02
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 14:11	Prep Date:	12/26/17 22:40	File ID:	6V16325.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/26/17 22:40
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

F-I

3

ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-7D 20171220
Lab Sample ID: 7120696-03
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 15:05	Prep Date:	12/26/17 23:06	File ID:	6V16326.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/26/17 23:06
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

F-I

4

ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-8S 20171220
Lab Sample ID: 7120696-04
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 16:09	Prep Date:	12/26/17 23:32	File ID:	6V16327.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/26/17 23:32
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

F-I

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-8D 20171220
Lab Sample ID: 7120696-05
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 16:49	Prep Date:	12/26/17 23:58	File ID:	6V16328.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/26/17 23:58
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

F-I

NW 215.8

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-4S 20171221
Lab Sample ID: 7120696-06
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 08:42	Prep Date:	12/27/17 00:23	File ID:	6V16329.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 00:23
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

F4

NW2151.8

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-4D 20171221
Lab Sample ID: 7120696-07
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 09:53	Prep Date:	12/27/17 00:49	File ID:	6V16330.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 00:49
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

FM

NW 2/5/18

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-3 20171221
Lab Sample ID: 7120696-08
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 10:43	Prep Date:	12/27/17 01:14	File ID:	6V16331.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 01:14
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: DUP-20171221
Lab Sample ID: 7120696-09
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/27/17 01:40	File ID:	6V16332.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 01:40
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard
D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

F-I

10

ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: FB-20171221
Lab Sample ID: 7120696-10
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 11:01	Prep Date:	12/27/17 02:06	File ID:	6V16333.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 02:06
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10

10.2

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-9D 20171221
Lab Sample ID: 7120696-11
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 11:34	Prep Date:	12/27/17 02:31	File ID:	6V16334.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 02:31
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: MW-9S 20171221
Lab Sample ID: 7120696-12
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/27/17 02:57	File ID:	6V16335.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 02:57
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Volatile Organics - GC/MS - SW 846 8260B

Client: Brown and Caldwell USR
Client Sample ID: Trip Blank-20171221
Lab Sample ID: 7120696-13
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/27/17 03:23	File ID:	6V16336.D
Init/Final Vol:	5 mL / 5 mL	Prep Batch:	B7L2718	Analyzed:	12/27/17 03:23
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2804
		Prep Method:	PURGE & TRAP 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
71-43-2	Benzene	ND	0.129	1.00	U
100-41-4	EthylBenzene	ND	0.244	1.00	U
179601-23-1	m+p-Xylenes	ND	0.461	2.00	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.596	1.00	U
95-47-6	o-Xylene	ND	0.244	1.00	U
108-88-3	Toluene	ND	0.205	1.00	U
1330-20-7	Total Xylenes	ND	0.705	1.00	U

10.2.

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-1 20171220
Lab Sample ID: 7120696-01
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 12:49	Prep Date:	12/22/17 09:16	File ID:	AS03574.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/22/17 22:57
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2811
		Prep Method:	Sep Funnel MS 8000		

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-7S 20171220
Lab Sample ID: 7120696-02
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 14:11	Prep Date:	12/22/17 09:16	File ID:	AS03575.D
Init/Final Vol:	990 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/22/17 23:21
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2811
		Prep Method:	Sep Funnel MS 8000		

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.101	2.02	U
208-96-8	Acenaphthylene	ND	0.141	2.02	U
120-12-7	Anthracene	ND	0.122	2.02	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0659	2.02	U
218-01-9	Chrysene	ND	0.130	2.02	U
206-44-0	Fluoranthene	ND	0.130	2.02	U
86-73-7	Fluorene	ND	0.110	2.02	U
91-20-3	Naphthalene	ND	0.0613	2.02	U
85-01-8	Phenanthrene	ND	0.0732	2.02	U
129-00-0	Pyrene	ND	0.116	2.02	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-7D 20171220
Lab Sample ID: 7120696-03
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 15:05	Prep Date:	12/22/17 09:16	File ID:	AS03576.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/22/17 23:44
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2811
		Prep Method:	Sep Funnel MS 8000		

8

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CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard
D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-8S 20171220
Lab Sample ID: 7120696-04
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 16:09	Prep Date:	12/22/17 09:16	File ID:	AS03577.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 00:08
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2811
		Prep Method:	Sep Funnel MS 8000		

8

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard
D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-8D 20171220
Lab Sample ID: 7120696-05
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 16:49	Prep Date:	12/22/17 09:16	File ID:	AS03578.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 00:31
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2811
		Prep Method:	Sep Funnel MS 8000		

82

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-4S 20171221
Lab Sample ID: 7120696-06
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 08:42	Prep Date:	12/26/17 10:00	File ID:	AS03600.D
Init/Final Vol:	930 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/26/17 21:52
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

8

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.108	2.15	U
208-96-8	Acenaphthylene	ND	0.151	2.15	U
120-12-7	Anthracene	ND	0.130	2.15	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0701	2.15	U
218-01-9	Chrysene	ND	0.139	2.15	U
206-44-0	Fluoranthene	ND	0.139	2.15	U
86-73-7	Fluorene	ND	0.117	2.15	U
91-20-3	Naphthalene	ND	0.0653	2.15	U
85-01-8	Phenanthrene	ND	0.0780	2.15	U
129-00-0	Pyrene	ND	0.124	2.15	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard
D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-4D 20171221
Lab Sample ID: 7120696-07
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 09:53	Prep Date:	12/26/17 10:00	File ID:	AS03601.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/26/17 22:16
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard
D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-3 20171221
Lab Sample ID: 7120696-08
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 10:43	Prep Date:	12/26/17 10:00	File ID:	AS03602.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/26/17 22:39
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	0.502	0.129	2.00	J
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard
D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: DUP-20171221
Lab Sample ID: 7120696-09
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/26/17 10:00	File ID:	AS03603.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/26/17 23:02
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	0.590	0.129	2.00	J
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	0.509	0.115	2.00	J

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: FB-20171221
Lab Sample ID: 7120696-10
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 11:01	Prep Date:	12/26/17 10:00	File ID:	AS03604.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/26/17 23:25
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

8

8.2.

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-9D 20171221
Lab Sample ID: 7120696-11
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 11:34	Prep Date:	12/26/17 09:26	File ID:	AS03608.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2608	Analyzed:	12/27/17 00:58
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	ND	0.100	2.00	U
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	ND	0.129	2.00	U
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	ND	0.115	2.00	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-9S 20171221
Lab Sample ID: 7120696-12
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/26/17 09:26	File ID:	AS03609.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2608	Analyzed:	12/27/17 01:22
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2902
		Prep Method:	Sep Funnel MS 8000		

8.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
83-32-9	Acenaphthene	0.967	0.100	2.00	J
208-96-8	Acenaphthylene	ND	0.140	2.00	U
120-12-7	Anthracene	ND	0.121	2.00	U
191-24-2	Benzo(g,h,i)perylene	ND	0.0652	2.00	U
218-01-9	Chrysene	ND	0.129	2.00	U
206-44-0	Fluoranthene	1.28	0.129	2.00	J
86-73-7	Fluorene	ND	0.109	2.00	U
91-20-3	Naphthalene	ND	0.0607	2.00	U
85-01-8	Phenanthrene	ND	0.0725	2.00	U
129-00-0	Pyrene	1.72	0.115	2.00	J

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client:	**Brown and Caldwell USR**
Client Sample ID:	**MW-1 20171220**
Lab Sample ID:	**7120696-01**
Project:	**Patchogue**
Work Order:	**7120696**

Date Sampled:	12/20/17 12:49	Prep Date:	12/22/17 09:16	File ID:	BM12751.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 01:09
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2809
		Prep Method:	Sep Funnel MS 8000		

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	ND	0.0165	0.0200	U
50-32-8	Benzo(a)pyrene	ND	0.0124	0.0200	U
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-7S 20171220
Lab Sample ID: 7120696-02
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 14:11	Prep Date:	12/22/17 09:16	File ID:	BM12752.D
Init/Final Vol:	990 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 01:35
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2809
		Prep Method:	Sep Funnel MS 8000		

6

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	ND	0.0167	0.0202	U
50-32-8	Benzo(a)pyrene	ND	0.0125	0.0202	U
205-99-2	Benzo(b)fluoranthene	ND	0.0179	0.0202	U
207-08-9	Benzo(k)fluoranthene	ND	0.00717	0.0202	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0162	0.0202	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0132	0.0202	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-7D 20171220
Lab Sample ID: 7120696-03
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 15:05	Prep Date:	12/22/17 09:16	File ID:	BM12753.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 02:02
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2809
		Prep Method:	Sep Funnel MS 8000		

6

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.0257	0.0165	0.0200	
50-32-8	Benzo(a)pyrene	0.0243	0.0124	0.0200	
205-99-2	Benzo(b)fluoranthene	0.0305	0.0177	0.0200	
207-08-9	Benzo(k)fluoranthene	0.0123	0.00710	0.0200	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0147	0.0131	0.0200	J

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-8S 20171220
Lab Sample ID: 7120696-04
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 16:09	Prep Date:	12/22/17 09:16	File ID:	BM12754.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 02:29
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2809
		Prep Method:	Sep Funnel MS 8000		

9.2.

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	ND	0.0165	0.0200	U
50-32-8	Benzo(a)pyrene	ND	0.0124	0.0200	U
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-8D 20171220
Lab Sample ID: 7120696-05
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/20/17 16:49	Prep Date:	12/22/17 09:16	File ID:	BM12755.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/23/17 02:56
Dilution:	1	Matrix:	Ground Water	Sequence:	S7L2809
		Prep Method:	Sep Funnel MS 8000		

6

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.0167	0.0165	0.0200	J
50-32-8	Benzo(a)pyrene	ND	0.0124	0.0200	U
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-4S 20171221
Lab Sample ID: 7120696-06
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 08:42	Prep Date:	12/26/17 10:00	File ID:	BM12794.D
Init/Final Vol:	930 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/28/17 20:44
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

6

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	ND	0.0177	0.0215	U
50-32-8	Benzo(a)pyrene	ND	0.0133	0.0215	U
205-99-2	Benzo(b)fluoranthene	ND	0.0190	0.0215	U
207-08-9	Benzo(k)fluoranthene	ND	0.00763	0.0215	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0172	0.0215	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0141	0.0215	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-4D 20171221
Lab Sample ID: 7120696-07
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 09:53	Prep Date:	12/26/17 10:00	File ID:	BM12795.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/28/17 21:11
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

6

9.2.

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.0180	0.0165	0.0200	J
50-32-8	Benzo(a)pyrene	0.0129	0.0124	0.0200	J
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-3 20171221
Lab Sample ID: 7120696-08
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 10:43	Prep Date:	12/26/17 10:00	File ID:	BM12796.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/28/17 21:38
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

9.2.

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.0281	0.0165	0.0200	
50-32-8	Benzo(a)pyrene	ND	0.0124	0.0200	U
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: DUP-20171221
Lab Sample ID: 7120696-09
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/26/17 10:00	File ID:	BM12797.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/28/17 22:04
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

6

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.0283	0.0165	0.0200	
50-32-8	Benzo(a)pyrene	ND	0.0124	0.0200	U
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client:	**Brown and Caldwell USR**
Client Sample ID:	**FB-20171221**
Lab Sample ID:	**7120696-10**
Project:	**Patchogue**
Work Order:	**7120696**

Date Sampled:	12/21/17 11:01	Prep Date:	12/26/17 10:00	File ID:	BM12798.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2204	Analyzed:	12/28/17 22:31
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

9.2.

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	ND	0.0165	0.0200	U
50-32-8	Benzo(a)pyrene	ND	0.0124	0.0200	U
205-99-2	Benzo(b)fluoranthene	ND	0.0177	0.0200	U
207-08-9	Benzo(k)fluoranthene	ND	0.00710	0.0200	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0131	0.0200	U

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-9D 20171221
Lab Sample ID: 7120696-11
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 11:34	Prep Date:	12/26/17 09:26	File ID:	BM12799.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2608	Analyzed:	12/28/17 22:58
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.0292	0.0165	0.0200	
50-32-8	Benzo(a)pyrene	0.0303	0.0124	0.0200	
205-99-2	Benzo(b)fluoranthene	0.0396	0.0177	0.0200	
207-08-9	Benzo(k)fluoranthene	0.0181	0.00710	0.0200	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.0160	0.0200	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0184	0.0131	0.0200	J

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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ANALYSIS DATA SHEET

Semivolatile Organics - GC/MS - SIM - SW 846 8270D

Client: Brown and Caldwell USR
Client Sample ID: MW-9S 20171221
Lab Sample ID: 7120696-12
Project: Patchogue
Work Order: 7120696

Date Sampled:	12/21/17 00:00	Prep Date:	12/26/17 09:26	File ID:	BM12800.D
Init/Final Vol:	1000 mL / 1 mL	Prep Batch:	B7L2608	Analyzed:	12/28/17 23:25
Dilution:	1	Matrix:	Ground Water	Sequence:	S8A0213
		Prep Method:	Sep Funnel MS 8000		

9.2

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
56-55-3	Benzo(a)anthracene	0.595	0.0165	0.0200	
50-32-8	Benzo(a)pyrene	0.499	0.0124	0.0200	
205-99-2	Benzo(b)fluoranthene	0.431	0.0177	0.0200	
207-08-9	Benzo(k)fluoranthene	0.202	0.00710	0.0200	
53-70-3	Dibenzo(a,h)anthracene	0.0533	0.0160	0.0200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.215	0.0131	0.0200	

ND - Indicates compound analyzed for but not detected
J - Indicates estimated value
B - Indicates compound found in associated blank
E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution
P - Greater than 25% diff. between 2 GC columns.
MDL - Minimum detection limit
RL - Reporting limit

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Appendix D: Electronic Data Deliverable (CD-ROM)