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2017 Annual Groundwater Sampling, NAPL Monitoring/ Recovery, and Groundwater Treatment Performance Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site

Villages of Hempstead & Garden City
Nassau County, New York

Prepared for:

National Grid
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AECOM

May 2018

2017 ANNUAL GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT

HEMPSTEAD INTERSECTION STREET
FORMER MANUFACTURED GAS PLANT SITE
VILLAGES OF HEMPSTEAD AND GARDEN CITY
NASSAU COUNTY, NEW YORK 11550

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ACRONYMS AND ABBREVIATIONS

AECOM	AECOM USA, Inc.
amsl	above mean sea level
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylenes
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DTW	depth to water
DUSR	data usability summary report
ft	foot (feet)
ft/ft	feet per feet
HIMW	Hempstead Intersection (Street) monitoring well
IPR	Intersection (Street) Product Recovery well
ISS	In Situ Solidification
LNAPL	light non-aqueous phase liquid
LOCID	Location Identifier
MGP	manufactured gas plant
µg/L	micrograms per liter
mg/L	milligrams per liter
MP	monitoring points
NA	not accessible
NAPL	non-aqueous phase liquid
ND	not detected
NM	not measured
NYSDEC	New York State Department of Environmental Conservation
OSMW	Oswego Monitoring Well
PAHs	polycyclic aromatic hydrocarbons
PID	photo ionization detector
POB	Professional Office Building
ppm	parts per million
PZ	piezometer

QC	quality control
TOR	top of riser
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

This annual report provides a summary of field activities, analytical results, and data interpretations associated with groundwater sampling, gauging, and recovery of non-aqueous phase liquid (NAPL) and with the groundwater treatment systems at the Hempstead Intersection Street Former Manufactured Gas Plant (MGP) site in 2017.

Groundwater monitoring and sampling was conducted on March 6 – 13, June 19 – 29, September 20 – 29, and December 18 – 28, 2017. This included measuring the depth to groundwater and NAPL thickness in 44 to 46 wells. Groundwater samples were collected from 24 wells in the First Quarter, 29 wells in the Second Quarter, 24 wells in the Third Quarter, and 29 wells in the Fourth Quarter and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL was recovered at the one remaining product recovery well: (HIMW-021). NAPL monitoring and recovery was conducted at this well during nine events in 2017. For the First Quarter, NAPL monitoring and recovery was conducted on January 26 and 27, and monitoring only on March 6, for a total of three events. For the Second Quarter, NAPL monitoring and recovery was conducted on April 11 and June 30, and monitoring only on June 19, for a total of three events. For the Third Quarter, NAPL monitoring and recovery was conducted on September 20 for a total of one event. For the Fourth Quarter, NAPL monitoring and recovery was conducted on December 15, and monitoring only on December 18, for a total of two events.

The following results were obtained from the groundwater sampling and NAPL monitoring/recovery events:

- The general direction of groundwater flow during 2017 in shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per feet (ft/ft).
- The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100 μg/L, extends approximately 530 feet south of the site boundary in the Third Quarter and Fourth Quarter.

- Dense non-aqueous phase liquid (DNAPL) was detected and recovered from the one remaining product recovery well in 2017. The well (HIMW-021) is located along the west side of Wendell Street, south of the Intersection Street site.
- NAPL monitoring was conducted three times during the First Quarter, two times during the Second Quarter, and one time each during Third Quarter and Fourth Quarter 2017. Approximately 3.25 gallons of product was recovered during the First Quarter, 3.95 gallons during the Second Quarter, 1.6 gallons during the Third Quarter and 1.5 gallons were recovered during the Fourth Quarter. A total of 10.3 gallons of NAPL were recovered in 2017. As of December 2017, approximately 857.6 gallons of product have been recovered since product recovery began in April 2007.

The first of two oxygen delivery systems (System No. 2) started operating in October 2010 and continued to promote increased aerobic conditions in the aquifer near the system during the Third and Fourth Quarters of 2017. The second of two oxygen delivery systems (System No. 1) started operating in April 2011 and operated through June 2017 when an electric motor overheated. Following restart, the compressor malfunctioned. A series of repairs and parts replacements were not able to effectively restore compressor operation, and National Grid elected in December to replace the entire compressor (repairs were not finalized until Q1 of 2018). Oxygen levels have decreased in the aquifer near the system during the Third and Fourth Quarters of 2017, but averaged an aerobic 6.6 mg/L during both quarters.

Monthly headspace and water quality parameters were collected in 2017 from the monitoring points for System No. 1 and No. 2 by Island Pump & Tank Corporation. Both systems were monitored during three events in each of the four quarters of 2017.

1.0 INTRODUCTION

This annual report summarizes field activities, and analytical results associated with groundwater sampling, gauging, and recovery of NAPL, and the monitoring of groundwater treatment systems performed during the First, Second, Third, and Fourth Quarters of 2017 at the Hempstead Intersection Street Former MGP Site (refer to Figures 1, 2, and 3).

Quarterly groundwater monitoring and bimonthly recovery of NAPL was initiated in April 2007. Separate reports are typically provided for the first three quarters of the year and the fourth quarter data typically gets reported as part of the Annual Report. Separate reports have been issued quarterly since 2007 as listed in the References section of this report. During 2017, separate reports were issued for the First and Second Quarters. The Third and Fourth Quarter data are included in this Annual report.

AECOM USA, Inc. (AECOM) performed the following activities in 2017:

- Measured the depth to groundwater and NAPL thickness in all accessible on site and off site monitoring wells (March 6, June 19, September 20, and December 18, 2017). Depth to groundwater was gauged in 44 monitoring wells on March 6, 46 monitoring wells on June 19, 45 monitoring wells on September 20, and 46 monitoring wells on December 18. NAPL thickness was measured in 43 wells in the First Quarter, 45 wells in the Second Quarter, 44 wells in Third Quarter and 45 wells in the Fourth Quarter, see Tables 1A, 2A and 2B.

- Monitored NAPL in HIMW-021 nine times in 2017 (January 26, January 27, March 6, April 11, June 19, June 30, September 20, December 15, and December 18). Recovered NAPL from HIMW-021 during six events after gauging (January 26, January 27, April 11, June 30, September 20, and December 15); see Tables 1B and 3.

- Collected groundwater samples from 24 or 29 monitoring wells for laboratory analysis. There were 24 wells sampled on March 7 – 13; 29 wells sampled on June 20 – 29; 24 wells sampled on September 21 – 29; and 29 wells sampled on December 18 – 28, 2017, see Tables 1A and 4.

Island Pump & Tank Corporation also performed water level measurements, well headspace monitoring with a photoionization detector (PID), and dissolved oxygen (DO) measurements with a DO meter (YSI 55A) on oxygen delivery System No. 1 and No. 2. System No. 1 and No. 2 were monitored during three events in each of the First, Second, Third, and Fourth Quarters in 2017. Monitoring is conducted monthly to assess the performance of groundwater treatment System No. 1 and System No. 2. The data for the Third and Fourth Quarters are presented in Table 5.

2.0 FIELD ACTIVITIES

The field activities performed by AECOM during the First Quarter of 2017 included the measurement of the depth to groundwater in 44 monitoring wells and NAPL thickness in 43 monitoring wells, the collection of groundwater samples from 24 monitoring wells, and recovery of NAPL from one recovery well.

The field activities performed by AECOM during the Second Quarter of 2017 included the measurement of the depth to groundwater in 46 monitoring wells and NAPL thickness in 45 monitoring wells, the collection of groundwater samples from 29 monitoring wells, and recovery of NAPL from one recovery well.

The field activities performed by AECOM during the Third Quarter of 2017 included the measurement of the depth to groundwater in 45 monitoring wells and NAPL thickness in 44 monitoring wells, the collection of groundwater samples from 24 monitoring wells, and recovery of NAPL from one recovery well.

The field activities performed by AECOM during the Fourth Quarter of 2017 included the measurement of the depth to groundwater in 46 monitoring wells and NAPL thickness in 45 monitoring wells, the collection of groundwater samples from 29 monitoring wells, and recovery of NAPL from one monitoring well.

Monitoring wells and piezometers used for these activities are listed in Table 1A. A summary of NAPL gauging and recovery activities is found in Table 1B. Groundwater elevations and NAPL thickness values for Third Quarter 2017 are presented in Table 2A and for Fourth Quarter 2017 in Table 2B. NAPL levels and recovery amounts for 2017 are presented in Table 3, and the results of groundwater sampling in 2017 are presented in Table 4.

Island Pump & Tank performed measurements to monitor the performance of oxygen delivery Systems No. 1 and No. 2 monthly during 2017. Island Pump & Tank collected water level measurements with an electronic oil/water interface probe, well headspace monitoring data with a PID, and DO measurements with a YSI 55A DO meter.

Measurements for the First Quarter were collected at System No. 1 on January 30, February 28, and March 29, a total of three events; and were taken for System No. 2 on January 30, March 1, and March 28, for a total of three events.

Measurements for the Second Quarter were collected at System No. 1 on April 25, May 31, and June 30, a total of three events; and were taken for System No. 2 on April 26, May 30, and June 30, for a total of three events.

Measurements for Third Quarter were collected at System No. 1 on July 28, August 25, and September 27, a total of three events; and were taken for System No. 2 on July 26, August 25, and September 27, for a total of three events.

Measurements for Fourth Quarter 2017 were collected at System No. 1 on October 30, November 21, and December 27, a total of three events; and were taken for System No. 2 on October 31, November 20, and December 27, for a total of three events.

The data from the four quarters in 2017 are presented in Table 5.

2.1 Groundwater Depth and NAPL Thickness Measurements

An electronic oil/water interface probe was used to measure the depth to groundwater and check for the presence of light non-aqueous phase liquid (LNAPL). DNAPL thickness was measured using a weighted cotton string that absorbs oil. Depths to groundwater and NAPL thickness measurements for Third and Fourth Quarters are listed in Table 2A and 2B, respectively. NAPL thicknesses and recovery amounts for 2017 are listed in Table 3.

There were 44 monitoring wells gauged for water on March 6 during the First Quarter gauging event; 46 monitoring wells were gauged for water on June 19 during the Second Quarter gauging event; 45 monitoring wells were gauged for water on September 20 during the Third Quarter gauging event; and 46 monitoring wells were gauged for water on December 18 in the Fourth Quarter 2017 gauging event. One monitoring well (HIMW-012I) was successfully gauged for water in the First through Fourth Quarters, but an obstruction below the water table prevented gauging for NAPL and sampling. This well has not historically had NAPL detected. One monitoring well (HIMW-012D) was not successfully gauged or sampled in 2017 because of

obstructions inside the well riser. Two additional wells were not gauged during the First Quarter (HIMW-10S and 10I) because a car was blocking them on the day of the gauging event. There was one additional monitoring well not gauged in the Third Quarter (OSMW-03) because it was blocked by a car on the day of the gauging events.

2.2 NAPL Recovery

NAPL recovery occurred between 2007 and the Third Quarter of 2011 when the In Situ Solidification (ISS) remediation project began. Approximately 745 gallons of NAPL were recovered between 2007 and 2011 when NAPL recovery ended upon the start of ISS treatment. All, but one, of the recovery wells were decommissioned as part of the ISS work. NAPL recovery is limited to this one well, HIMW-021, which is located on the south of the site in the sidewalk of the Professional Office Building (POB), outside the ISS area.

NAPL levels were monitored and product recovered in well HIMW-021 during the Third Quarter during one event on September 20, 2017. During the Fourth Quarter, monitoring and recovery occurred during one gauging and recovery event on December 15 with one gauging only event on December 18. During these events, the well was gauged with a weighted cotton string to measure the DNAPL thickness. The DNAPL was recovered using a peristaltic pump. The quantity of recovered DNAPL was estimated based on gallon markings on the side of the bucket used to collect the purged liquids during recovery.

NAPL was gauged during nine events from January to December 2017. NAPL was recovered during six recovery events during the same period. The volume of NAPL recovered from HIMW-021 during a single event in 2017 ranged from 1.25 gallon to 2.7 gallons. Approximately 1.6 gallons of NAPL were recovered during the Third Quarter and approximately 1.5 gallons of NAPL were recovered during the Fourth Quarter, for a total of 10.3 gallons of NAPL recovered in 2017. A total of 857.6 gallons of NAPL have been recovered from all of the Site related recovery wells since product recovery began in April 2007 to December 2017.

Table 3 presents NAPL thicknesses and NAPL recovery amounts at HIMW-021 for 2017.

2.3 Groundwater Sampling

Low-flow groundwater sampling methods were used to sample groundwater, which included purging groundwater at a rate of between 100 and 250 milliliters per minute. The water was pumped through a flow-through cell and monitored for pH, conductivity, turbidity, DO, temperature, and oxidation-reduction potential (ORP). Purging was continued until stable conditions were achieved (defined as three consecutive stable readings [i.e. ± 10 percent] over a 15 minute period). Groundwater samples were collected afterwards and shipped under chain-of-custody procedures to Pace Analytical for analysis of BTEX (United States Environmental Protection Agency [USEPA] Method 8260C) and PAHs (USEPA Method 8270D). Purge water is stored in an onsite storage tank for subsequent offsite disposal. The Data Usability Summary Reports for Third and Fourth Quarters 2017 are presented in Appendix A.

Groundwater sampling was performed during four events in 2017. There were 24 monitoring wells sampled during the First Quarter March 7 – 13 event, 29 monitoring wells sampled during the Second Quarter June 20 – 29 event, 24 monitoring wells sampled during the Third Quarter September 21 – 29 event, and 29 monitoring wells sampled during the Fourth Quarter December 18 – 28 event. Two monitoring wells from the sampling and analysis plan (HIMW-012I and HIMW-012D) were not sampled during these quarterly events because of obstructions inside the wells risers. Analytical results from the quarterly groundwater sampling events are presented in Table 4. Figures 4 and 12 depict the analytical data for the Fourth Quarter 2017 and Figures 5 and 13 show the analytical data from the Third Quarter 2017.

2.4 Groundwater Treatment System Operation

Two oxygen delivery systems were installed to enhance the groundwater oxygen concentrations in the groundwater plume. "System No. 1" is located along Smith Street, a portion of the Long Island Railroad Right-of-Way, and a portion of Hilton Avenue and began operation in April 2011. "System No. 2" extends from Mirschel Park in the east to Kensington Court in the west and began operation in October 2010. Figure 3 shows the locations of the two systems.

The performance of System No. 1 and System No. 2 was monitored monthly by Island Pump & Tank during 2017 through the measurement of water levels, headspace gas, and water quality parameters in the groundwater, see Table 5. Island Pump & Tank performed water level

measurements with an electronic oil/water interface probe, well headspace monitoring with a PID, and DO measurements with a DO meter (YSI 55A). These measurements were collected during the First Quarter for System No. 1 on January 30, February 28, and March 29, a total of three events; and were taken for System No. 2 on January 30, March 1, and March 28, for a total of three events.

These measurements were collected during the Second Quarter for System No. 1 on April 25, May 31, and June 30, a total of three events; and were taken for System No. 2 on April 26, May 30, and June 30, for a total of three events.

These measurements were collected during the Third Quarter for System No. 1 on July 28, August 25, and September 27, a total of three events; and were taken for System No. 2 on July 26, August 25, and September 27, for a total of three events.

These measurements were also collected during the Fourth Quarter for System No. 1 on October 30, November 21, and December 27, a total of three events; and were taken for System No. 2 on October 31, November 20, and December 27, for a total of three events.

The full groundwater treatment system data from Third and Fourth Quarters are included in Appendix B. Groundwater system treatment data for the First Quarter and Second Quarter are provided in the previous quarterly reports (AECOM, 2017d and 2017e).

3.0 RESULTS

3.1 Dissolved-Phase Plume

The extent of the dissolved-phase groundwater plume boundary and the data for the Fourth Quarter 2017 (and the historical concentration ranges) are shown in Figure 4 and for the Third Quarter 2017 in Figure 5. The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100 μg/L, extended approximately 530 feet south of the site boundary in the Third Quarter and Fourth Quarter.

3.2 Potentiometric Heads and NAPL Thickness

Potentiometric heads and NAPL thickness measurements for Third Quarter and Fourth Quarter 2017 are presented in Table 2A and 2B, respectively. Potentiometric surface maps for shallow, intermediate and deep groundwater zones were developed using this data and are shown in Figures 6, 7, and 8 for the Fourth Quarter 2017 and in Figures 9, 10, and 11 for the Third Quarter. The data for the Third and Fourth Quarters 2017 indicate that the direction of groundwater flow within the well field was south at an average gradient of approximately 0.002 ft/ft for shallow, intermediate, and deep water bearing zones. These values are consistent with historical data. Potentiometric surface maps for the First Quarter and Second Quarter are provided in the previous quarterly reports (AECOM, 2017d and 2017e).

DNAPL was observed in one well during 2017 (Table 3). The well (HIMW-021) is located along the west side of Wendell Street south of the Site and Intersection Street. All wells in the parking lot of the POB were decommissioned in late June 2013 during ISS work. Wells located within the property boundary of the site were previously decommissioned in Fourth Quarter 2011 with the start of the ISS remediation project.

3.3 Groundwater Analytical Results

Groundwater analytical results for 2017 are provided in Table 4 as well as in Figures 12 through 15. Fourth Quarter and Third Quarter 2017 dissolved phase plume boundaries are illustrated on Figures 4 and 5, respectively.

A Data Usability Summary Report (DUSR) was prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10/ Technical Guidance for Site Investigation and Remediation, Appendix 2B – Guidance for the Development of Data Usability Summary Reports*, May 2010. The review included a review of holding times; completeness of all required deliverables; quality control (QC) results (blanks, instrument tunes, calibration standards, matrix spike recoveries, duplicate analyses, and laboratory control sample recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers. All sample analyses were found to be compliant with the method and validation criteria and the data is useable as reported, except where noted in the DUSR. An electronic copy of the DUSR is included as Appendix A.

3.4 NAPL Recovery Volumes

HIMW-021 is the one remaining product recovery well associated with the site. It is located south of the site in the sidewalk along the west side of Wendell Street. The volume of NAPL recovered from this well in the Fourth Quarter 2017 was approximately 1.5 gallons and in the Third Quarter 2017 it was 1.6 gallons. Six recovery events occurred in 2017: on January 26, January 27, April 11, June 30, September 20, and December 15, 2017.

A total of approximately 857.6 gallons of NAPL have been recovered from all of the recovery wells for the period of April 2007 through December 2017. Table 3 lists the amount of DNAPL gauged in HIMW-021 and the total amount of product recovered during each event.

3.5 Groundwater Treatment System Performance

Groundwater treatment system performance data for the Third Quarter and Fourth Quarter 2017, as collected and report by Island Pump & Tank, are presented in Table 5. The data for the First and Second Quarters is also included in Table 5 and was previously reported (AECOM, 2017d and 2017e).

System No. 1

System No. 1 operated through June 2017 when an electric motor overheated. Following restart, the compressor malfunctioned. A series of repairs and parts replacements were not able to effectively restore compressor operation, and National Grid elected in December to replace the entire compressor (repairs were not finalized until the First Quarter of 2018). Monthly monitoring of system monitoring points was conducted in the Third Quarter on July 28, August 25, and September 27 and in the Fourth Quarter on October 30, November 21, and December 27. Monitoring was conducted on October 30, but the data sheets are not available and the data is not included in this report.

In the Third Quarter 2017, System No. 1 DO readings reported ranged from a low of 3.55 milligrams per liter (mg/L) at MP-1-8 on September 27, 2017 to a high of 12.22 mg/L at MP-1-7 on July 28, 2017. The overall average DO reading for System No. 1 in the Third Quarter was 6.33 mg/L.

In the Fourth Quarter 2017, System No. 1 DO readings from November 21 and December 27 ranged from a low of 3.02 milligrams per liter (mg/L) at MP-1-8 on November 21, 2017 to a high of 9.23 mg/L at MP-1-1S on December 27, 2017. The overall average reading for reported DO for System No. 1 in the Fourth Quarter was 6.64 mg/L. Island Pump and Tank reported that monitoring was performed on October 30, but the data sheets were lost.

All PID headspace readings were below 1 parts per million (ppm) for System No. 1 in the Third and Fourth Quarter 2017.

Based on the data collected during the Third and Fourth Quarter, decreases in oxygen concentrations around System #1 were apparent, but aerobic conditions were maintained in the monitoring points. While a series of repairs were made during the Third and Fourth Quarters, the system was not running. Following the decision to replace the compressor, operation resumed during the First Quarter of 2018.

System No. 2

System No. 2 was operational during the four quarters of 2017. Monthly monitoring of system monitoring points was conducted in the Third Quarter on July 26, August 25, and September 27 and in the Fourth Quarter on October 31, November 20, and December 27. Monitoring was reportedly conducted on October 31, but the data sheets were lost and the data is not included in this report. If the data becomes available, it will be provided at a later date.

System No. 2 DO readings reported in the Third Quarter 2017 ranged from a low of 18.92 mg/L at MP-2-5 on July 26, 2017 to a high of 36.55 mg/L at MP-2-3S on August 25, 2017. The overall average DO reading for System No. 2 in the Third Quarter was 26.63 mg/L.

In the Fourth Quarter 2017, reported System No. 2 DO readings from November 20 and December 27 ranged from a low of 16.18 mg/L at MP-2-2 on December 27, 2017 to a high of 36.29 mg/L at MP-2-3D on November 20, 2017. The overall average DO reading for System No. 2 in the Fourth Quarter was 24.49 mg/L. Island Pump and Tank reported that monitoring was performed on October 31, but the data sheets were lost.

All PID headspace readings were below 1 parts per million (ppm) for System No. 2 in the Third and Fourth Quarter 2017.

During the Third and Fourth Quarters, the system was running and routine maintenance was regularly performed. Based on the data collected during the Third and Fourth Quarters of 2017, System No. 2 performed as expected to create an aerobic environment in the aquifer.

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TABLES

Table 1A

Summary of 2017 Field Activities:
Water Level Measurements, NAPL Thickness Measurements, and Water Quality Sampling[(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter (March 6 to 13, 2017)			Second Quarter (June 19 to 29, 2017)			Third Quarter (September 20 to 29, 2017)			Fourth Quarter (December 18 to 28, 2017)		
	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality
HIMW-003S	X	X		X	X	X	X	X		X	X	X
HIMW-003I	X	X		X	X	X	X	X		X	X	X
HIMW-003D	X	X		X	X	X	X	X		X	X	X
HIMW-004S	X	X		X	X		X	X		X	X	
HIMW-004I	X	X		X	X		X	X		X	X	
HIMW-004D	X	X		X	X		X	X		X	X	
HIMW-005S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-005I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-005D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-008S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-008I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-008D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-009S	X	X		X	X		X	X		X	X	
HIMW-009I	X	X		X	X		X	X		X	X	
HIMW-009D	X	X		X	X		X	X		X	X	
HIMW-010S				X	X		X	X		X	X	
HIMW-010I				X	X		X	X		X	X	
HIMW-011S	X	X		X	X		X	X		X	X	
HIMW-011I	X	X		X	X		X	X		X	X	
HIMW-011D	X	X		X	X		X	X		X	X	
HIMW-012S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-012I	X			X			X			X		
HIMW-012D												
HIMW-013S	X	X		X	X	X	X	X		X	X	X
HIMW-013I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-013D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-014I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-014D	X	X		X	X	X	X	X		X	X	X
HIMW-015I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-015D	X	X	X	X	X	X	X	X	X	X	X	X

Table 1A

Summary of 2017 Field Activities:
Water Level Measurements, NAPL Thickness Measurements, and Water Quality Sampling [(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter (March 6 to 13, 2017)			Second Quarter (June 19 to 29, 2017)			Third Quarter (September 20 to 29, 2017)			Fourth Quarter (December 18 to 28, 2017)		
	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality
HIMW-020S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-020I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-021	X	X		X	X		X	X		X	X	
HIMW-022	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-023	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-024	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-025	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-026I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-026D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-027S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-027I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-028S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-028I	X	X	X	X	X	X	X	X	X	X	X	X
PZ-02	X	X		X	X		X	X		X	X	
PZ-03	X	X		X	X		X	X		X	X	
OSMW-02	X	X		X	X		X	X		X	X	
OSMW-03	X	X		X	X							

Notes:

1 Field marked with "X" indicates that the activity was performed.

2 Blank field indicates that the activity was not performed.

Table 1B

Summary of 2017 Field Activities:
NAPL Gauging and Product Recovery[(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID: HIMW-021

Quarter	Date	Product Gauged	Product Recovered
First Quarter 2017	1/26.17	x	x
	1/27/2017	x	x
	3/6/2017	x	x
Second Quarter 2017	4/11/17	x	x
	6/19/17	x	
	6/30/17	x	x
Third Quarter 2017	9/20/2017	x	x
Fourth Quarter 2017	12/15/2017	x	x
	12/18/2017	x	

Notes:

1 Field marked with "X" indicates that the activity was performed.

2 Blank field indicates that the activity was not performed.

Table 2A
Groundwater and NAPL Measurements
Third Quarter 2017
Hempstead Intersection Street Former MGP Site

Well ID	Date	Elevation of TOR	Depth to LNAPL	Depth to Water	Depth to DNAPL	Well Depth	Thickness of LNAPL	Thickness of DNAPL	Corrected Potentiometric Head (1)
		[ft bgs]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-003S	9/20/2017	65.00	ND	21.80	ND	34.32	0	0.00	43.20
HIMW-003I	9/20/2017	64.94	ND	21.99	ND	84.97	0	0.00	42.95
HIMW-003D	9/20/2017	65.26	ND	22.70	ND	142.18	0	0.00	42.56
HIMW-004S	9/20/2017	72.74	ND	29.99	ND	41.63	0	0.00	42.75
HIMW-004I	9/20/2017	72.78	ND	30.14	ND	90.46	0	0.00	42.64
HIMW-004D	9/20/2017	72.65	ND	30.71	ND	177.01	0	0.00	41.94
HIMW-005S	9/20/2017	67.19	ND	24.29	ND	38.93	0	0.00	42.90
HIMW-005I	9/20/2017	67.22	ND	24.49	ND	90.48	0	0.00	42.73
HIMW-005D	9/20/2017	67.22	ND	25.30	ND	135.94	0	0.00	41.92
HIMW-008S	9/20/2017	65.04	ND	22.50	ND	36.88	0	0.00	42.54
HIMW-008I	9/20/2017	65.14	ND	22.69	ND	74.78	0	0.00	42.45
HIMW-008D	9/20/2017	64.93	ND	22.54	ND	114.53	0	0.00	42.39
HIMW-009S	9/20/2017	70.03	ND	27.09	ND	39.84	0	0.00	42.94
HIMW-009I	9/20/2017	69.93	ND	27.04	ND	80.44	0	0.00	42.89
HIMW-009D	9/20/2017	69.96	ND	27.12	ND	122.97	0	0.00	42.84
HIMW-010S	9/20/2017	71.60	ND	27.77	ND	39.48	0	0.00	43.83
HIMW-010I	9/20/2017	71.47	ND	27.59	ND	89.73	0	0.00	43.88
HIMW-011S	9/20/2017	71.62	ND	28.19	ND	40.25	0.01	0.00	43.44
HIMW-011I	9/20/2017	71.43	ND	28.04	ND	93.19	0	0.00	43.39
HIMW-011D	9/20/2017	71.39	ND	28.04	ND	122.28	0	0.00	43.35
HIMW-012S	9/20/2017	61.58	ND	20.14	ND	33.11	0	0.00	41.44
HIMW-012I	9/20/2017	61.59	ND	20.00	ND	NM	0	NM	41.59
HIMW-012D	9/20/2017	61.82	NM	NM	NM	NM	NM	NM	NM
HIMW-013S	9/20/2017	72.83	ND	33.17	ND	48.58	0	0.00	39.66
HIMW-013I	9/20/2017	72.60	ND	32.95	ND	81.42	0	0.00	39.65
HIMW-013D	9/20/2017	72.53	ND	32.94	ND	122.04	0	0.00	39.59
HIMW-014I	9/20/2017	71.71	ND	32.04	ND	96.25	0	0.00	39.67
HIMW-014D	9/20/2017	71.59	ND	34.75	ND	151.85	0	0.00	36.84
HIMW-015I	9/20/2017	64.18	ND	27.29	ND	92.37	0	0.00	36.89
HIMW-015D	9/20/2017	63.96	ND	29.29	ND	152.08	0	0.00	34.67
HIMW-020S	9/20/2017	70.43	ND	28.36	ND	36.72	0	0.00	42.07
HIMW-020I	9/20/2017	70.30	ND	28.21	ND	74.65	0	0.00	42.09

Table 2A
Groundwater and NAPL Measurements
Third Quarter 2017
Hempstead Intersection Street Former MGP Site

Well ID	Date	Elevation of TOR	Depth to LNAPL	Depth to Water	Depth to DNAPL	Well Depth	Thickness of LNAPL	Thickness of DNAPL	Corrected Potentiometric Head (1)
		[ft bgs]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-021	9/20/2017	NM	ND	22.82	44.20	45.30	0	1.10	NM
HIMW-022	9/20/2017	74.07	ND	33.15	ND	64.42	0	0.00	40.92
HIMW-023	9/20/2017	74.41	ND	33.32	ND	75.18	0	0.00	41.09
HIMW-024	9/20/2017	59.83	ND	17.90	ND	54.82	0	0.00	41.93
HIMW-025	9/20/2017	62.75	ND	20.37	ND	52.08	0	0.00	42.38
HIMW-26I	9/20/2017	68.13	ND	26.25	ND	84.83	0	0.00	41.88
HIMW-26D	9/20/2017	68.02	ND	26.30	ND	137.61	0	0.00	41.72
HIMW-27S	9/20/2017	69.49	ND	27.35	ND	41.21	0	0.00	42.14
HIMW-27I	9/20/2017	68.96	ND	26.78	ND	70.07	0	0.00	42.18
HIMW-28S	9/20/2017	69.87	ND	27.71	ND	41.38	0	0.00	42.16
HIMW-28I	9/20/2017	69.56	ND	27.38	ND	71.51	0	0.00	42.18
PZ-02	9/20/2017	72.96	ND	28.96	ND	35.47	0	0.00	44.00
PZ-03	9/20/2017	64.58	ND	20.88	ND	29.88	0	0.00	43.70
OSMW-02	9/20/2017	71.59	ND	28.29	ND	45.12	0	0.00	43.30
OSMW-03	9/20/2017	71.39	NM	NM	NM	NM	NM	NM	NM

Notes:

(1) Potentiometric heads in wells containing LNAPL are corrected using a specific gravity = 0.96

TOR top of riser
LNAPL light non-aqueous phase liquid
DNAPL dense non-aqueous phase liquid
ft bgs feet below ground surface
ft amsl feet above mean sea level
ND NAPL not detected
NM not measured

Table 2B
Groundwater and NAPL Measurements
Fourth Quarter 2017
Hempstead Intersection Street Former MGP Site

Well ID	Date	Elevation of TOR	Depth to LNAPL	Depth to Water	Depth to DNAPL	Well Depth	Thickness of LNAPL	Thickness of DNAPL	Corrected Potentiometric Head (1)
		[ft bgs]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-003S	12/18/2017	65.00	ND	22.31	ND	34.26	0	0.00	42.69
HIMW-003I	12/18/2017	64.94	ND	22.38	ND	85.05	0	0.00	42.56
HIMW-003D	12/18/2017	65.26	ND	23.04	ND	141.92	0	0.00	42.22
HIMW-004S	12/18/2017	72.74	ND	30.63	ND	41.35	0	0.00	42.11
HIMW-004I	12/18/2017	72.78	ND	30.71	ND	90.46	0	0.00	42.07
HIMW-004D	12/18/2017	72.65	ND	31.12	ND	177.10	0	0.00	41.53
HIMW-005S	12/18/2017	67.19	ND	24.97	ND	38.90	0	0.00	42.22
HIMW-005I	12/18/2017	67.22	ND	25.12	ND	90.46	0	0.00	42.10
HIMW-005D	12/18/2017	67.22	ND	25.53	ND	135.90	0	0.00	41.69
HIMW-008S	12/18/2017	65.04	ND	23.18	ND	36.71	0	0.00	41.86
HIMW-008I	12/18/2017	65.14	ND	23.32	ND	74.71	0	0.00	41.82
HIMW-008D	12/18/2017	64.93	ND	23.12	ND	114.42	0	0.00	41.81
HIMW-009S	12/18/2017	70.03	ND	27.77	ND	39.63	0	0.00	42.26
HIMW-009I	12/18/2017	69.93	ND	27.72	ND	80.42	0	0.00	42.21
HIMW-009D	12/18/2017	69.96	ND	27.77	ND	122.87	0	0.00	42.19
HIMW-010S	12/18/2017	71.60	ND	28.43	ND	39.15	0	0.00	43.17
HIMW-010I	12/18/2017	71.47	ND	28.22	ND	89.78	0	0.00	43.25
HIMW-011S	12/18/2017	71.62	ND	28.89	ND	40.01	0.02	0.00	42.75
HIMW-011I	12/18/2017	71.43	ND	28.68	ND	93.22	0	0.00	42.75
HIMW-011D	12/18/2017	71.39	ND	28.67	ND	123.68	0	0.00	42.72
HIMW-012S	12/18/2017	61.58	ND	20.77	ND	33.18	0	0.00	40.81
HIMW-012I	12/18/2017	61.59	ND	20.65	ND	NM	0	NM	40.94
HIMW-012D	12/18/2017	61.82	NM	NM	NM	NM	NM	NM	NM
HIMW-013S	12/18/2017	72.83	ND	33.84	ND	48.75	0	0.00	38.99
HIMW-013I	12/18/2017	72.60	ND	33.61	ND	81.42	0	0.00	38.99
HIMW-013D	12/18/2017	72.53	ND	33.58	ND	121.88	0	0.00	38.95
HIMW-014I	12/18/2017	71.71	ND	32.73	ND	95.52	0	0.00	38.98
HIMW-014D	12/18/2017	71.59	ND	34.31	ND	151.84	0	0.00	37.28
HIMW-015I	12/18/2017	64.18	ND	27.75	ND	92.28	0	0.00	36.43
HIMW-015D	12/18/2017	63.96	ND	28.83	ND	153.20	0	0.00	35.13
HIMW-020S	12/18/2017	70.43	ND	28.98	ND	36.67	0	0.00	41.45
HIMW-020I	12/18/2017	70.30	ND	28.84	ND	74.75	0	0.00	41.46

Table 2B
Groundwater and NAPL Measurements
Fourth Quarter 2017
Hempstead Intersection Street Former MGP Site

Well ID	Date	Elevation of TOR	Depth to LNAPL	Depth to Water	Depth to DNAPL	Well Depth	Thickness of LNAPL	Thickness of DNAPL	Corrected Potentiometric Head (1)
		[ft bgs]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-021	12/18/2017	NM	23.62	23.62	45.30	45.30	sheen	blebs	NM
HIMW-022	12/18/2017	74.07	ND	33.82	ND	64.42	0	0.00	40.25
HIMW-023	12/18/2017	74.41	ND	34.01	ND	75.05	0	0.00	40.40
HIMW-024	12/18/2017	59.83	ND	18.56	ND	54.78	0	0.00	41.27
HIMW-025	12/18/2017	62.75	ND	21.03	ND	52.04	0	0.00	41.72
HIMW-26I	12/18/2017	68.13	ND	26.91	ND	85.20	0	0.00	41.22
HIMW-26D	12/18/2017	68.02	ND	26.92	ND	137.40	0	0.00	41.10
HIMW-27S	12/18/2017	69.49	ND	27.98	ND	41.04	0	0.00	41.51
HIMW-27I	12/18/2017	68.96	ND	27.42	ND	69.96	0	0.00	41.54
HIMW-28S	12/18/2017	69.87	ND	28.36	ND	41.38	0	0.00	41.51
HIMW-28I	12/18/2017	69.56	ND	28.03	ND	71.42	0	0.00	41.53
PZ-02	12/18/2017	72.96	ND	29.59	ND	35.45	0	0.00	43.37
PZ-03	12/18/2017	64.58	ND	21.49	ND	29.74	0	0.00	43.09
OSMW-02	12/18/2017	71.59	ND	28.98	ND	45.35	0	0.00	42.61
OSMW-03	12/18/2017	71.39	ND	28.80	ND	44.62	0	0.00	42.59

Notes:

(1) Potentiometric heads in wells containing LNAPL are corrected using a specific gravity = 0.96

TOR top of riser
LNAPL light non-aqueous phase liquid
DNAPL dense non-aqueous phase liquid
ft bgs feet below ground surface
ft amsl feet above mean sea level
ND NAPL not detected
NM not measured

Table 3

NAPL Gauging and Recovery

Summary of 2017

Hempstead Intersection Street Former MGP Site

Well ID: HIMW-021

Quarter	Date	Thickness of LNAPL (feet)	Thickness of DNAPL (feet)	Volume of NAPL Removed[(1)] (gallons)	Total Quarterly Product Volume Recovered (gallons)
First Quarter	January 26, 2017	ND	2.5	1.75	3.3
	January 27, 2017	ND	1.5	2	
	March 6, 2017	0.01	1.5	0	
Second Quarter	April 11, 2017	ND	1.9	1	4.0
	June 19, 2017	ND	1.8	0	
	June 30, 2017	ND	1.8	2.7	
Third Quarter	September 20, 2017	sheen	1.1	1.6	1.6
Fourth Quarter	December 15, 2017	0.01	1	1.5	1.5
	December 18, 2017	sheen	blebs	0	

Total Volume of NAPL Recovered in 2017:	**10.3**
Total Volume of NAPL Recovered from April 2007 to Fourth Quarter 2017:	**857.6**

Notes:

(1) Volume of product recovered was estimated by using the markings on a five gallon bucket.

LNAPL Light Non-Aqueous Phase Liquid

DNAPL Dense Non-Aqueous Phase Liquid

ND NAPL Not Detected

NC Not Collected

Table 4

Dissolved-Phase Concentrations of Total BTEX and Total PAH Compounds
Data Collected in 2017
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2017 March 7 to March 13, 2017		Second Quarter 2017 June 20 to 29, 2017		Third Quarter 2017 September 21 to 29, 2017		Fourth Quarter 2017 December 18 to 28, 2017	
	BTEX [ug/L]	PAH [ug/L]	BTEX [ug/L]	PAH [ug/L]	BTEX [ug/L]	PAH [ug/L]	BTEX [ug/L]	PAH [ug/L]
HIMW-003S			ND	ND			ND	ND
HIMW-003I			ND	ND			ND	ND
HIMW-003D			ND	ND			ND	ND
HIMW-004S								
HIMW-004I								
HIMW-004D								
HIMW-005S	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-005I	74	1,457	57	1,551	76	1,727	56	2,411
HIMW-005D	96	1,584	43	1,374	76	1,357	63	1,847
HIMW-008S	59	40	ND	3	1	5	28	5
HIMW-008I	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-008D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-009S								
HIMW-009I								
HIMW-009D								
HIMW-010S								
HIMW-010I								
HIMW-011S								
HIMW-011I								
HIMW-011D								
HIMW-012S	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-012I								
HIMW-012D								
HIMW-013S			ND	ND			ND	ND
HIMW-013I	ND	ND	ND	ND	2	ND	0.4	ND
HIMW-013D	2	14	2	17	1	18	1 (DUP=1)	15 (DUP=15)
HIMW-014I	4	25	3	19	2	19	2	26
HIMW-014D			ND	ND			ND	ND
HIMW-015I	2	5	3	5	4	6	4	5
HIMW-015D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-020S	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-020I	ND	ND	ND	ND	330	977	188	465
HIMW-021								
HIMW-022	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-023	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-024	7	185	1	205	ND (DUP=ND)	8 (DUP=8)	ND	ND
HIMW-025	ND	ND	ND	ND	3	ND	829	507
HIMW-026I	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-026D	14	305	39	879	93	1,355	105 (DUP=99)	2,138 (DUP=2,314)
HIMW-027S	1,084	1,165	1,322	1,677	1,967	1,884	797	1,824
HIMW-027I	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-028S	90	229	90	379	83	463	126	722
HIMW-028I	ND	ND	ND	ND	ND	ND	ND	ND
PZ-02								
PZ-03								

Notes:

BTEX
PAH
ug/L
ND
NA

Table 5
Groundwater Treatment Performance Monitoring
Second Quarter 2017
Hempstead Intersection Street Former MGP Site

System #1

	January 30, 2017			February 28, 2017			March 29, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**
MP-1-1S	30.70	0.0	25.55	30.40	0.5	27.59	30.35	0.0	18.69
MP-1-1D	30.64	0.0	29.11	30.48	0.2	29.25	30.23	0.0	24.71
MP-1-2S	25.20	0.0	22.79	25.02	0.0	25.44	24.83	0.4	25.83
MP-1-2D	25.00	0.0	38.07	24.78	0.0	31.12	24.64	0.2	33.79
MP-1-3S	23.15	0.9	19.11	22.95	0.0	29.50	22.70	0.0	24.70
MP-1-3D	23.08	2.3	25.24	22.99	0.0	30.58	22.75	0.0	27.30
MP-1-4S	25.96	0.0	20.40	25.78	0.4	31.01	25.54	0.0	25.59
MP-1-4D	25.92	0.0	26.99	25.75	0.4	30.07	25.50	0.0	29.89
MP-1-5	30.45	0.0	20.21	30.20	0.0	25.39	30.05	0.0	20.25
MP-1-6	22.75	0.2	13.45	22.53	0.0	24.11	22.20	0.0	8.06
MP-1-7	25.90	0.0	30.01	25.80	0.0	22.53	25.52	0.0	18.57
MP-1-8	27.50	0.0	3.97	27.31	0.0	7.72	27.07	0.0	6.25
System Status	On			On			Off		

System #2

	January 30, 2017			March 1, 2017			March 28, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**
MP-2-1	33.51	0.0	23.00	33.22	0.0	28.61	33.17	0.2	29.15
MP-2-2	34.83	0.0	21.49	34.57	0.2	31.58	34.51	0.0	28.12
MP-2-3S	34.65	0.1	35.51	34.45	0.0	27.11	34.36	0.0	24.77
MP-2-3D	34.83	1.3	39.38	34.57	0.2	32.34	34.43	0.0	26.00
MP-2-4	23.32	0.0	37.33	23.11	0.3	27.94	23.07	0.0	18.12
MP-2-5	21.48	0.0	28.78	21.30	0.0	30.07	21.25	0.0	16.05
System Status	On			On			On		

Abbreviations

DTW: Depth to water (feet)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
NA: Not Accessible
NM: Not Measured
ppm: parts per million
mg/L: milligrams per liter
ft: feet

Note

(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%

Table 5
Groundwater Treatment Performance Monitoring
Second Quarter 2017
Hempstead Intersection Street Former MGP Site

System #1

	April 25, 2017			May 31, 2017			June 30, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**
MP-1-1S	29.32	0.1	24.04	29.05	0.1	12.70	28.92	0.0	6.57
MP-1-1D	29.25	0.3	21.83	29.00	2.4	13.11	28.85	0.2	8.13
MP-1-2S	23.85	0.0	27.77	23.60	0.4	12.55	23.45	0.0	6.55
MP-1-2D	23.63	0.0	25.11	23.40	0.9	23.60	23.23	0.0	5.98
MP-1-3S	21.78	0.0	21.45	21.47	0.0	14.51	21.35	0.5	7.67
MP-1-3D	21.82	0.0	24.69	21.53	0.0	15.10	21.41	0.3	7.00
MP-1-4S	24.63	0.0	24.63	24.31	0.0	11.55	21.21	0.0	8.55
MP-1-4D	24.61	0.2	24.01	24.25	0.0	10.12	24.17	0.0	7.12
MP-1-5	29.03	0.0	16.57	28.80	18.0	14.72	28.66	0.0	8.14
MP-1-6	21.41	0.0	15.19	21.10	0.0	14.00	20.99	0.0	6.27
MP-1-7	24.65	0.0	28.65	23.32	0.0	19.10	24.22	0.0	13.00
MP-1-8	26.17	0.0	5.05	25.85	0.0	4.81	25.76	0.0	14.01
System Status	On			On			Off		

System #2

	April 26, 2017			May 30, 2017			June 30, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**
MP-2-1	32.17	0.0	28.00	38.85	0.0	14.02	37.70	0.7	22.54
MP-2-2	33.50	0.0	27.25	33.20	0.0	21.49	33.05	0.0	23.41
MP-2-3S	33.41	0.0	25.14	33.05	0.0	27.42	32.92	0.0	26.84
MP-2-3D	33.52	0.0	26.84	33.20	0.0	30.25	33.10	0.0	27.12
MP-2-4	22.10	0.0	21.26	21.75	0.0	19.45	19.81	1.3	18.47
MP-2-5	20.29	0.0	23.63	19.90	0.0	15.60	21.64	0.0	25.55
System Status	On			On			On		

Abbreviations

DTW: Depth to water (feet)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
NA: Not Accessible
NM: Not Measured
ppm: parts per million
mg/L: milligrams per liter
ft: feet

Note

(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%

Table 5
Groundwater Treatment Performance Monitoring
Third Quarter 2017
Hempstead Intersection Street Former MGP Site

System #1

	July 28, 2017			August 25, 2017			September 27, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**
MP-1-1S	28.96	0.0	5.11	29.50	0.0	5.08	29.26	0.4	4.90
MP-1-1D	29.06	0.3	7.12	29.40	0.2	6.66	29.23	0.3	6.02
MP-1-2S	23.57	0.0	5.45	24.00	0.0	6.02	24.49	0.0	5.56
MP-1-2D	23.44	0.0	5.87	23.91	0.0	4.57	24.27	0.0	5.59
MP-1-3S	21.50	0.3	7.27	21.91	0.2	7.12	22.38	0.0	7.10
MP-1-3D	21.54	0.2	6.95	21.98	0.2	6.44	22.49	0.0	6.21
MP-1-4S	24.33	0.1	7.11	24.77	0.0	7.01	25.26	0.0	7.03
MP-1-4D	24.29	0.0	7.14	24.75	0.0	6.37	25.23	0.0	6.54
MP-1-5	28.78	0.0	6.95	29.27	0.0	5.12	29.67	0.0	5.45
MP-1-6	21.10	0.0	7.01	21.54	0.0	5.05	22.01	0.0	7.00
MP-1-7	24.35	0.0	12.22	24.78	0.0	8.55	25.27	0.0	10.12
MP-1-8	25.91	0.0	3.84	26.30	0.0	2.75	26.81	0.0	3.55
System Status	Off			Off			Off		

System #2

	July 26, 2017			August 25, 2017			September 27, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**
MP-2-1	31.85	0.0	22.87	32.25	0.0	24.01	32.61	0.0	25.12
MP-2-2	33.16	0.0	23.88	33.57	0.0	23.51	33.82	0.0	24.55
MP-2-3S	33.04	0.0	35.42	33.47	0.0	36.55	33.71	0.0	35.00
MP-2-3D	33.20	0.0	30.38	33.60	0.0	32.12	33.84	0.0	33.51
MP-2-4	21.75	0.0	24.49	22.16	0.3	24.25	22.55	0.1	24.44
MP-2-5	19.93	0.0	18.92	20.32	0.5	19.11	20.70	0.1	21.12
System Status	On			On			On		

Abbreviations

DTW: Depth to water (feet)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
NA: Not Accessible
NM: Not Measured
ppm: parts per million
mg/L: milligrams per liter
ft: feet

Note

(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%

Table 5
Groundwater Treatment Performance Monitoring
Fourth Quarter 2017
Hempstead Intersection Street Former MGP Site

System #1

	October 30, 2017			November 21, 2017			December 27, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L)**
MP-1-1S	M	M	M	30.05	0.0	5.45	30.35	0.0	9.23
MP-1-1D	M	M	M	29.95	0.1	6.27	30.45	0.3	8.85
MP-1-2S	M	M	M	24.33	0.0	5.66	25.00	0.0	8.55
MP-1-2D	M	M	M	24.56	0.0	5.11	24.73	0.0	7.69
MP-1-3S	M	M	M	22.53	0.0	7.55	22.90	0.2	6.37
MP-1-3D	M	M	M	22.47	0.0	7.96	22.94	0.3	6.01
MP-1-4S	M	M	M	25.30	0.0	7.00	25.76	0.0	7.12
MP-1-4D	M	M	M	25.53	0.0	6.49	25.73	0.0	8.66
MP-1-5	M	M	M	29.75	0.0	4.57	30.20	0.0	8.72
MP-1-6	M	M	M	22.10	0.0	5.15	22.50	0.0	8.11
MP-1-7	M	M	M	25.35	0.0	7.99	25.77	0.0	4.57
MP-1-8	M	M	M	26.86	0.0	3.02	27.30	0.0	3.15
System Status	Off			Off			Off		

System #2

	October 31, 2017			November 20, 2017			December 27, 2017		
ID	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**	**DTW (ft)**	**PID (ppm)**	**DO[(1)] (mg/L) Bottom**
MP-2-1	M	M	M	32.81	0.0	23.45	33.30	0.0	21.12
MP-2-2	M	M	M	34.10	0.0	28.21	34.57	0.0	16.18
MP-2-3S	M	M	M	34.00	0.0	35.05	34.45	0.0	23.10
MP-2-3D	M	M	M	34.16	0.0	36.29	34.50	0.2	24.81
MP-2-4	M	M	M	22.72	0.0	24.11	23.15	0.2	20.04
MP-2-5	M	M	M	20.90	0.0	22.79	21.35	0.0	18.77
System Status	On			On			On		

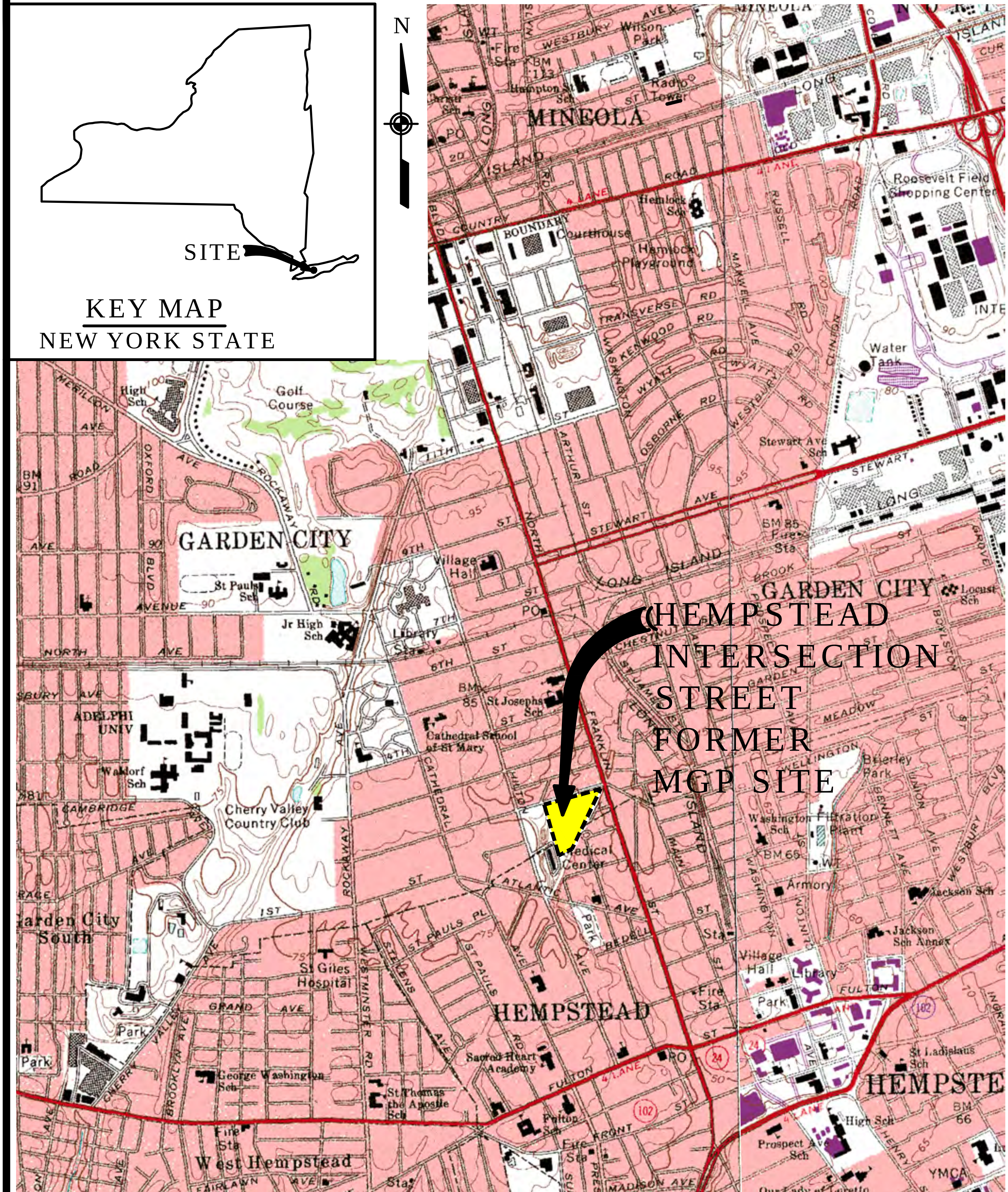
Abbreviations

DTW: Depth to water (feet)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
NA: Not Accessible
NM: Not Measured
ppm: parts per million
mg/L: milligrams per liter
ft: feet
M: missing

Note

(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%

FIGURES



NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

SOURCE:
USGS 7.5 MINUTE SERIES
TOPOGRAPHICAL QUANDRANGLES:
FREEPORT, NY (1969)
LYNBROOK, NY (1969)

2000' 0 2000'
SCALE IN FEET

AECOM

LOCATION MAP

FIGURE 1

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\3rd & 4th QUARTER 2017\FIGURE-1.dwg 1/22/18 – 1 RAL

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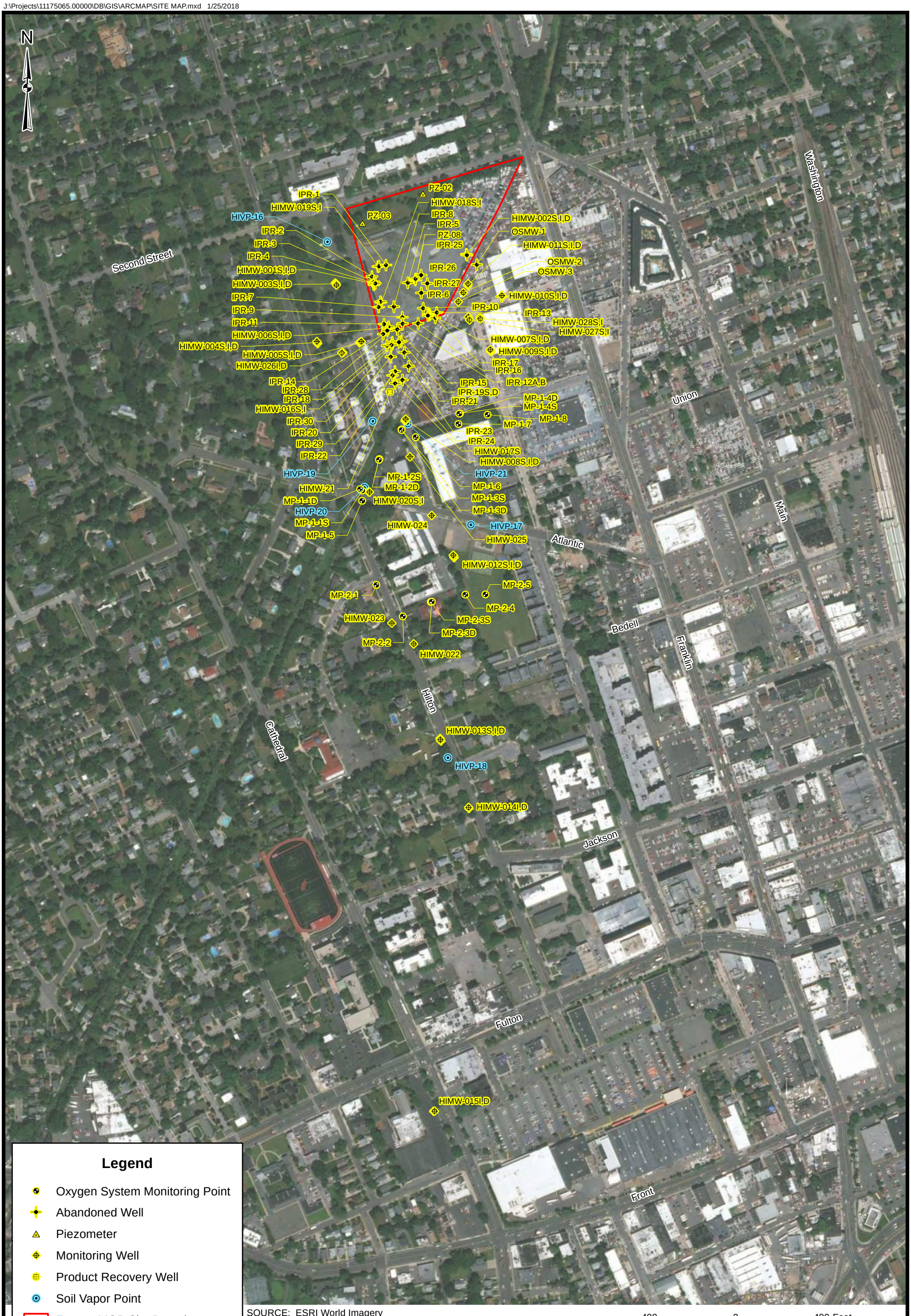


Legend

- Oxygen System Monitoring Point
- Abandoned Well
- Piezometer
- Monitoring Well
- Product Recovery Well
- Soil Vapor Point
- Former MGP Site Boundary

SOURCE: ESRI World Imagery

400 0 400 Feet

AECOM

NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY
SITE MAP

FIGURE 2

J:\Projects\11175065.00000\DB\GIS\ARCMAP\GROUNDWATER TREATMENT LOCATIONS (4th Qtr 2017).mxd 1/25/2018

N

INSET 1

HISB-114
HISB-116
MP-1-1S,1D
HIMW-020S,I
HISB-105
MP-1-5
HISB-105-2
HIGP-054
HIGP-053
0
200 Feet

INSET 2

HIGP-047
MP-1-4S,4D
HISB-103
HISB-104
MP-1-8
HIGP-051
HIMW-008S,I,D
HISB-102
HISB-102-2
HIGP-052
MP-1-7
MP-1-3S,3D
MP-1-6
HISB-101
HIMW-025
SEALEY
0
200 Feet

NATIONAL GRID
FORMER MGP SITE

HIVP-16
HIMW-003S,I,D
HIMW-010S,I,D
HIMW-028S,I
HIMW-027S,I
HIMW-009S,I,D
HIGP-050
HIMW-004S,I,D
HIMW-026I,D
HIGP-048
HIVP-19
SEE INSET 1
HISB-100
MP-1-3S
MP-1-2S,D
HISB-114
HIGP-057
MP-1-1S,D
MP-1-5
HIGP-053
HISB-106
HIGP-047
MP-1-4S,D
HISB-104
MP-1-8
MP-1-6
MP-1-7
HISB-101
HIMW-025
SEE INSET 2
HIMW-024
HIGP-055
HIVP-17
HIGP-056
HIMW-012S,I,D
HISB-107
MP-2-1
MP-2-5
MP-2-3S,D
MP-2-4
HIGP-068
HISB-115
MP-2-2
HIMW-023
HIGP-049
HIMW-022
HIGP-061
HISB-109
HISB-108
HIGP-064
HIGP-063
HIGP-067
HIGP-062
HIGP-059
HIGP-065
HIMW-013S,I,D
HIVP-18
HIGP-070
HIGP-066
HIMW-014I,D
HIGP-058
HIGP-069
HIGP-072
HIGP-071
HIMW-015I,D
Source: ESRI World Imagery
300
0
300 Feet

HAMILTON PLACE
SECOND STREET
HILTON AVENUE
BARNES LANE
MEDICAL PLACE
WENDELL STREET
L.I.R.R. R.O.W.
FRANKLIN AVENUE
OLD FRANKLIN STREET
MAIN STREET
SMITH STREET
UNION PLACE
SEALEY AVENUE
ATLANTIC AVENUE
GARDEN PLACE
SAINT PAULS PLACE
KENSINGTON COURT
RUNDLE COURT
CHELSEA PLACE
CATHEDRAL AVENUE
CATHEDRAL COURT
HILTON PLACE
RYAN COURT
TERRACE AVENUE
BEDELL STREET
NORTH FRANKLIN STREET
KELLUM PLACE
JACKSON STREET
MULFORD PLACE
FULTON AVENUE
BELL STREET

Legend

- Monitoring Well/Piezometer/Recovery Well/ Oxygen System Monitoring Point
- Vapor Monitoring Location
- Abandoned Well
- Temporary Groundwater Sample Location (Taken from RI Report, 2006)
- Temporary Groundwater Sample Location (URS, 2008-2009)
- Former MGP Site Boundary
- Planned Groundwater Treatment System
- Installed Groundwater Treatment System

Estimated Extent of Groundwater Plume:

- ≥ 100 µg/L
- ≥ 1,000 µg/L
- ≥ 5,000 µg/L
- In-Situ Solidification Area
- IRM Excavation Area

AECOM

NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NEW YORK
SOIL REMEDIATION AND GROUNDWATER TREATMENT LOCATIONS

FIGURE 3

HIMW–003S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
23–33	ND–36 (ND)	ND (ND)
80.5–90.5	ND–13 (ND)	ND (ND)
133–143	ND–8.2 (ND)	ND–30 (ND)

HIMW–008S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–8,240 (28)	ND–3,069 (5)
63–73	ND–457 (ND)	ND–251 (ND)
102–112	ND–16 (ND)	ND–46 (ND)

HIMW–011S,I		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	603–13,920	2,813–13,076
80–90	ND–49	ND–3

HIMW–014I,D		
DEPTH	TOT. BTEX	TOT. PAHs
85–95	2–273 (2)	19–288 (26)
140–150	ND–15 (ND)	ND–6 (ND)

HIMW–022		
DEPTH	TOT. BTEX	TOT. PAHs
54–64	ND–83 (ND)	ND–91 (ND)

HIMW–025		
DEPTH	TOT. BTEX	TOT. PAHs
42–52	ND–1,320 (829)	ND–573 (507)

HIMW–028S,I		
DEPTH	TOT. BTEX	TOT. PAHs
20–40	ND–213 (126)	10–738 (722)
50–70	ND (ND)	ND (ND)

HIMW–004S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
30–40	ND–4	ND–1
80–90	ND–13	ND
167–177	ND–4	ND–1

HIMW–009S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	ND–16	ND–8
70–80	ND–2	ND
113–123	ND–16	ND–10

HIMW–012S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
22–32	ND–338.8 (ND)	ND–1,391 (ND)
63–73	6–256	65–527
117–127	ND–6	ND–2

HIMW–015I,D		
DEPTH	TOT. BTEX	TOT. PAHs
80–90	1–111 (4)	ND–273 (5)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

HIMW–023		
DEPTH	TOT. BTEX	TOT. PAHs
66–76	ND–43 (ND)	ND–43 (ND)

HIMW–26I,D		
DEPTH	TOT. BTEX	TOT. PAHs
65–85	ND (ND)	ND–3(ND)
115–135	14–105 (105)	118–2,138 (2,138)

OSMW–02		
DEPTH	TOT. BTEX	TOT. PAHs
30–40	2,604	3,517

HIMW–005S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
27–37	ND–232 (ND)	ND–765 (ND)
80–90	50–439 (56)	891–5,337 (2,411)
130–140	ND–359 (63)	ND–2,698 (1,847)

HIMW–010S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	ND–33	1–150
80.5–90.5	ND–13	ND
112.5–132.5	ND–16	ND

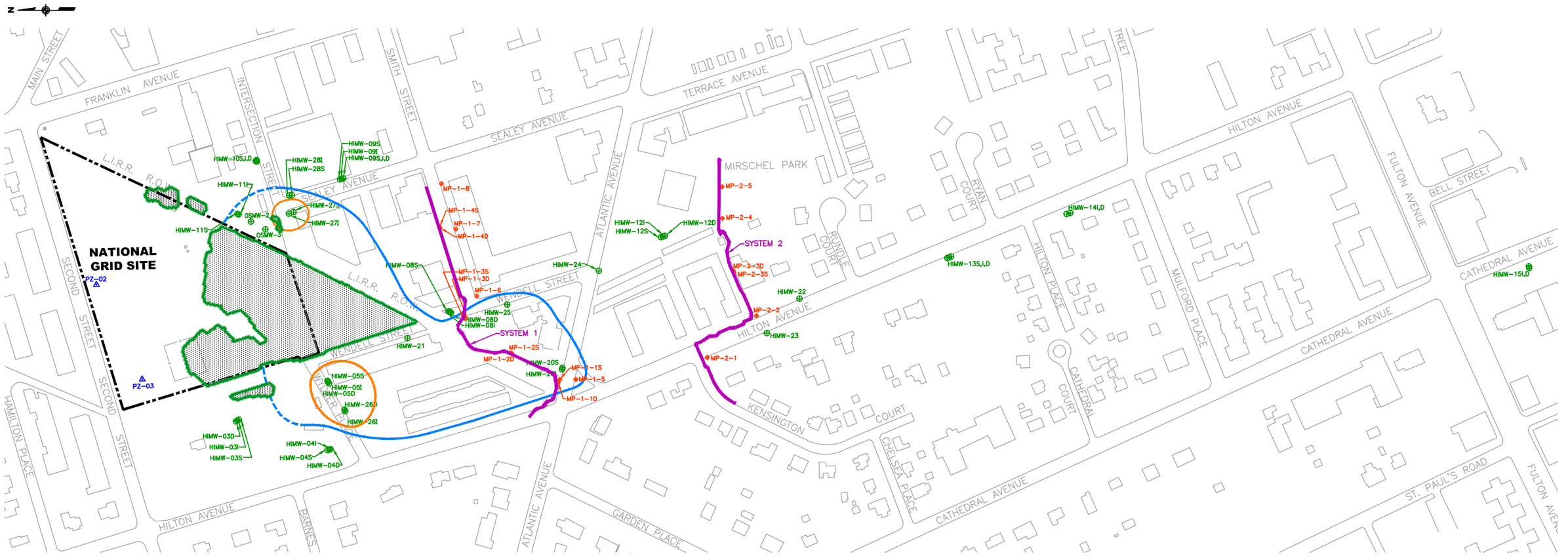
HIMW–013S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
38–48	ND–11 (ND)	ND (ND)
70–80	ND–313 (0.4)	ND–156 (ND)
110–120	1–30 (1)	ND–28 (15)

HIMW–020S,I		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–3 (ND)	ND–5 (ND)
63–73	ND–474 (188)	ND–3,968 (465)

HIMW–024		
DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	ND–900 (ND)	ND–1,024 (ND)

HIMW–027S,I		
DEPTH	TOT. BTEX	TOT. PAHs
20–40	447–1,967 (797)	695–1,884 (1,824)
50–70	ND–2 (ND)	ND–17 (ND)

OSMW–03		
DEPTH	TOT. BTEX	TOT. PAHs
29–39	4,301	2,911



HIMW–13 ⊕ MONITORING WELL
PZ–02 △ PIEZOMETER
MP–2–1 ⊕ OXYGEN SYSTEM MONITORING WELL
NA NOT ANALYZED
ND NOT DETECTED

LOCATION ID → HIMW–024
DEPTH (ft bgs) →

DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	ND–900 (ND)	ND–1,024 (ND)

← CONCENTRATION UNITS ARE ug/L (December 2017 CONCENTRATION)

* SOME LOCATIONS ON SITE AND ADJACENT TO SITE ARE NOT SHOWN FOR FIGURE CLARITY.

LEGEND:

- EXISTING HOUSE OR BUILDING
- NATIONAL GRID PROPERTY BOUNDARY
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 1,000 ug/L
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 100 ug/L
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS. DASHED LINES REPRESENT CONTAMINATION CONCENTRATIONS THAT ARE LIKELY INFLUENCED BY THIRD PARTY SOURCES.
- INSTALLED GROUNDWATER TREATMENT SYSTEM
- LIMIT OF MGP SOURCE MATERIAL TREATMENT

150' 0 150'
SCALE IN FEET

AECOM

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

4Q17 EXTENT OF DISSOLVED-PHASE PLUME AND GROUNDWATER ANALYTICAL RESULTS - DECEMBER 2017

FIGURE 4

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\3rd & 4th QUARTER 2017\FIGURE 4.dwg 2/20/18 - 5 RAL

HIMW–003S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
23–33	ND–36	ND
80.5–90.5	ND–13	ND
133–143	ND–8.2	ND–30

HIMW–008S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–8,240 (1)	ND–3,069 (5)
63–73	ND–457 (ND)	ND–251 (ND)
102–112	ND–16 (ND)	ND–46 (ND)

HIMW–011S,I		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	603–13,920	2,813–13,076
80–90	ND–49	ND–3

HIMW–014I,D		
DEPTH	TOT. BTEX	TOT. PAHs
85–95	2–273 (2)	19–288 (19)
140–150	ND–15	ND–6

HIMW–022		
DEPTH	TOT. BTEX	TOT. PAHs
54–64	ND–83 (ND)	ND–91 (ND)

HIMW–025		
DEPTH	TOT. BTEX	TOT. PAHs
42–52	ND–1,320 (3)	ND–573 (ND)

HIMW–028S,I		
DEPTH	TOT. BTEX	TOT. PAHs
20–40	ND–213 (83)	10–738 (463)
50–70	ND (ND)	ND (ND)

HIMW–004S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
30–40	ND–4	ND–1
80–90	ND–13	ND
167–177	ND–4	ND–1

HIMW–009S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	ND–16	ND–8
70–80	ND–2	ND
113–123	ND–16	ND–10

HIMW–012S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
22–32	ND–338.8 (ND)	ND–1,391 (ND)
63–73	6–256	65–527
117–127	ND–6	ND–2

HIMW–015I,D		
DEPTH	TOT. BTEX	TOT. PAHs
80–90	1–111 (4)	ND–273 (6)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

HIMW–023		
DEPTH	TOT. BTEX	TOT. PAHs
66–76	ND–43 (ND)	ND–43 (ND)

HIMW–26I,D		
DEPTH	TOT. BTEX	TOT. PAHs
65–85	ND (ND)	ND–3 (ND)
115–135	14–93 (93)	118–1,749 (1,355)

OSMW–02		
DEPTH	TOT. BTEX	TOT. PAHs
30–40	2,604	3,517

HIMW–005S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
27–37	ND–232 (ND)	ND–765 (ND)
80–90	50–439 (76)	891–5,337 (1,727)
130–140	ND–359 (76)	ND–2,698 (1,357)

HIMW–010S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	ND–33	1–150
80.5–90.5	ND–13	ND
112.5–132.5	ND–16	ND

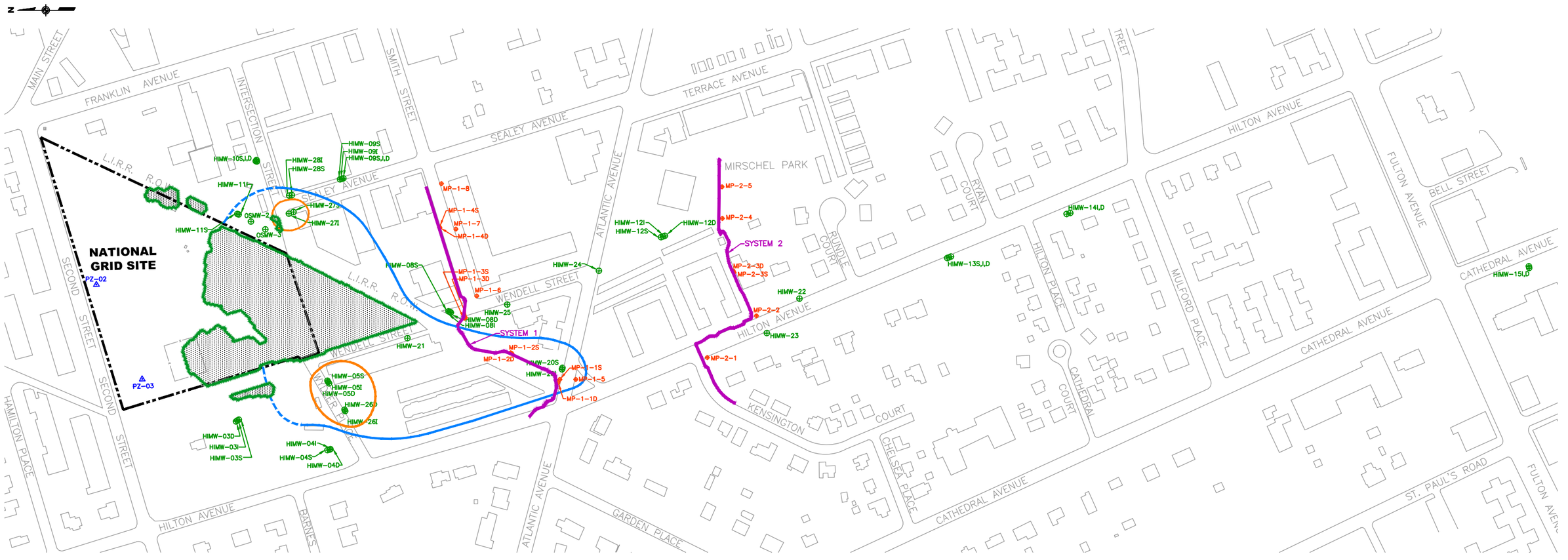
HIMW–013S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
38–48	ND–11	ND
70–80	ND–313 (2)	ND–156 (ND)
110–120	1–30 (1)	ND–28 (18)

HIMW–020S,I		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–3 (ND)	ND–5 (ND)
63–73	ND–474 (330)	ND–3,968 (977)

HIMW–024		
DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	ND–900 (ND)	ND–1,024 (8)

HIMW–027S,I		
DEPTH	TOT. BTEX	TOT. PAHs
20–40	447–1,967 (1,967)	695–1,884 (1,884)
50–70	ND–2 (ND)	ND–17 (ND)

OSMW–03		
DEPTH	TOT. BTEX	TOT. PAHs
29–39	4,301	2,911



HIMW–13 ⊕ MONITORING WELL
PZ–02 △ PIEZOMETER
MP–2–1 ⊕ OXYGEN SYSTEM MONITORING WELL
NA NOT ANALYZED
ND NOT DETECTED

LOCATION ID → HIMW–024
DEPTH (ft bgs) →

DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	ND–900 (ND)	ND–1,024 (8)

← CONCENTRATION UNITS ARE ug/L (September 2017 CONCENTRATION)

* SOME LOCATIONS ON SITE AND ADJACENT TO SITE ARE NOT SHOWN FOR FIGURE CLARITY.

LEGEND:

- EXISTING HOUSE OR BUILDING
- NATIONAL GRID PROPERTY BOUNDARY
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 1,000 ug/L
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 100 ug/L
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS. DASHED LINES REPRESENT CONTAMINATION CONCENTRATIONS THAT ARE LIKELY INFLUENCED BY THIRD PARTY SOURCES.
- INSTALLED GROUNDWATER TREATMENT SYSTEM
- LIMIT OF MGP SOURCE MATERIAL TREATMENT

150' 0 150'
SCALE IN FEET

AECOM

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

3Q17 EXTENT OF DISSOLVED-PHASE PLUME AND GROUNDWATER ANALYTICAL RESULTS - SEPTEMBER 2017

FIGURE 5

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\3rd & 4th QUARTER 2017\FIGURE 5.dwg 1/29/18 - 5 RAL

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2017\FIGURE 6.dwg 1/24/18 - 1 RAL

N

PZ-02, 43.37

NATIONAL GRID
FORMER MGP SITE

PZ-03, 43.09

HIMW-03S, 42.69

HIMW-05S, 42.22

HIMW-04S, 42.11

HIMW-27S, 41.51

HIMW-11S, 42.73

OSMW-3, 42.59

HIMW-10S, 43.17

OSMW-2, 42.61

HIMW-28S, 41.51

HIMW-09S, 42.26

HIMW-8S, 41.86

HIMW-20S, 41.45

HIMW-12S, 40.81

HIMW-13S, 38.99

43.0

42.5

42.0

41.5

41.0

40.5

40.0

39.5

39.0

L.I.R.R. R.O.W.

MAIN STREET
SECOND STREET
FRANKLIN AVENUE
MEADOW PLACE
STOWE PLACE
SAMMIS PLACE
OLD FRANKLIN STREET
HILTON AVENUE
BARNES LANE
WYDLER PLACE
WENDELL STREET
INTERSECTION STREET
SEALEY AVENUE
MILLER PLACE
UNION PLACE
SMITH STREET
ATLANTIC AVENUE
GARDEN PLACE
KELLUM PLACE
KENSINGTON COURT
CATHEDRAL AVENUE
CHELSEA PLACE
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
NORTH FRANKLIN STREET
WEST COLUMBIA ST
RUNDLE COURT
RYAN COURT
CATHEDRAL COURT
HILTON PLACE
JACKSON STREET
MULFORD PLACE
FULTON AVENUE
BELL STREET
ST. PAUL'S

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
△	PIEZOMETER
→	GROUNDWATER FLOW DIRECTION
43.0	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-8S, 41.86	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'

SCALE IN FEET

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
4Q17 POTENTIOMETRIC SURFACE MAP FOR SHALLOW GROUNDWATER, DECEMBER 18, 2017

FIGURE 6

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2017\FIGURE 7.dwg 1/24/18 - 3 RAL

N

NATIONAL GRID
FORMER MGP SITE

L.I.R.R. R.O.W.

HIMW-11I, 42.75
HIMW-27I, 41.54
HIMW-03I, 42.56
HIMW-05I, 42.10
HIMW-10I, 43.25
HIMW-28I, 41.53
HIMW-04I, 42.07
HIMW-09I, 42.21
HIMW-26I, 41.22
HIMW-08I, 41.82
HIMW-25, 41.72
HIMW-20I, 41.46
HIMW-24, 41.27
HIMW-12I, 40.94
HIMW-23, 40.40
HIMW-22, 40.25
HIMW-13I, 38.99
HIMW-14I, 38.98
HIMW-15I, 36.43

43.0
42.5
42.0
41.5
41.0
40.5
40.0
39.5
39.0
38.5
38.0
37.5
37.0
36.5

SECOND STREET
HILTON AVENUE
BARNES LANE
WOLLER PLACE
WENDELL STREET
SEALEY AVENUE
FRANKLIN AVENUE
OLD FRANKLIN STREET
MAIN STREET
STOWE PLACE
SAMMIS PLACE
MILLER PLACE
UNION PLACE
SMITH STREET
ATLANTIC AVENUE
GARDEN PLACE
KELLUM PLACE
MARGARET COURT
TERRACE AVENUE
MIRSCHEL PARK
BEDELL STREET
NORTH FRANKLIN STREET
WEST COLUMBIA STREET
KENSINGTON COURT
CHELSEA PLACE
CATHEDRAL AVENUE
RUNDLE COURT
RYAN COURT
CATHEDRAL COURT
HILTON PLACE
JACKSON STREET
MULFORD PLACE
FULTON AVENUE
BELL STREET
ST. PAUL'S

LEGEND:

- MONITORING WELL
- IPR WELL
- GROUNDWATER FLOW DIRECTION
- 41.0 POTENTIOMETRIC SURFACE CONTOUR
- FORMER MGP SITE BOUNDARY
- HIMW-08I, 41.82 LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
- NM NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
4Q17 POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE GROUNDWATER, DECEMBER 18, 2017

FIGURE 7

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2017\FIGURE 8.dwg 1/24/18 - 2 RAL

N

NATIONAL GRID
FORMER MGP SITE

L.I.R.R. R.O.W.

HIMW-11D, 42.72

HIMW-03D, 42.22

HIMW-05D, 41.69

HIMW-04D, 41.53

HIMW-09D, 42.19

HIMW-26D, 41.10

HIMW-08D, 41.81

HIMW-12D, NM

HIMW-13D, 38.95

HIMW-14D, 37.28

HIMW-15D, 35.13

42.5
42.0
41.5
41.0
40.5
40.0
39.5
39.0
38.5
38.0
37.5
37.0
36.5
36.0
35.5

SECOND STREET
HILTON AVENUE
BARNES LANE
WYDLER PLACE
WENDELL STREET
INTERSECTION STREET
SEALEY AVENUE
FRANKLIN AVENUE
MAIN STREET
OLD FRANKLIN STREET
MEADOW PLACE
STOWE PLACE
SAMMIS PLACE
MILLER PLACE
UNION PLACE
SMITH STREET
ATLANTIC AVENUE
KELLUM PLACE
GARDEN PLACE
KENSINGTON COURT
CATHEDRAL AVENUE
CHELSEA PLACE
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
NORTH FRANKLIN STREET
WEST COLUMBIA ST
RUNDLE COURT
RYAN COURT
CATHEDRAL COURT
HILTON PLACE
JACKSON STREET
MULFORD PLACE
FULTON AVENUE
BELL STREET
ST. PAUL'S

LEGEND:

⊕	MONITORING WELL
→	GROUNDWATER FLOW DIRECTION
41.0	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-14D, 37.28	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
4Q17 POTENTIOMETRIC SURFACE MAP FOR DEEP GROUNDWATER, DECEMBER 18, 2017

FIGURE 8

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2017\FIGURE 9.dwg 1/24/18 - 1 RAL

N

NATIONAL GRID
FORMER MGP SITE

PZ-02, 44.00
PZ-03, 43.70
HIMW-03S, 43.20
HIMW-04S, 42.75
HIMW-05S, 42.90
HIMW-20S, 42.07
HIMW-8S, 42.54
HIMW-27S, 42.14
HIMW-28S, 42.16
HIMW-09S, 42.94
OSMW-3, NM
HIMW-11S, 43.44
HIMW-10S, 43.83
OSMW-2, 43.30
HIMW-12S, 41.44
HIMW-13S, 39.66

44.0
43.5
43.0
42.5
42.0
41.5
41.0
40.5
40.0

L.I.R.R. R.O.W.

SECOND STREET
HAMILTON AVENUE
HILTON AVENUE
BARNES LANE
WYDLER PLACE
ATLANTIC AVENUE
GARDEN PLACE
KENSINGTON COURT
CATHEDRAL AVENUE
CHELSEA PLACE
CATHEDRAL COURT
HILTON PLACE
MULFORD PLACE
ST. PAUL'S
FULTON AVENUE
BELL STREET
CATHEDRAL AVEN
WENDELL STREET
SEALEY AVENUE
SMITH STREET
INTERSECTION STREET
FRANKLIN AVENUE
MAIN STREET
MEADOW PLACE
STOWE PLACE
SAMMIS PLACE
OLD FRANKLIN STREET
MILLER PLACE
UNION PLACE
KELLUM PLACE
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
NORTH FRANKLIN STREET
WEST COLUMBIA S
RUNDLE COURT
RYAN COURT
JACKSON STREET

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
△	PIEZOMETER
→	GROUNDWATER FLOW DIRECTION
41.0	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-8S, 42.54	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
3Q17 POTENTIOMETRIC SURFACE MAP FOR SHALLOW GROUNDWATER, SEPTEMBER 20, 2017

FIGURE 9

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2017\FIGURE 10.dwg 1/24/18 - 3 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-11I, 43.39
HIMW-27I, 42.18
HIMW-03I, 42.95
HIMW-10I, 43.88
HIMW-05I, 42.73
HIMW-28I, 42.18
HIMW-04I, 42.64
HIMW-09I, 42.89
HIMW-26I, 41.88
HIMW-08I, 42.45
HIMW-25, 42.38
HIMW-20I, 42.09
HIMW-24, 41.93
HIMW-12I, 41.59
HIMW-23, 41.09
HIMW-22, 40.92
HIMW-13I, 39.65
HIMW-14I, 39.67
HIMW-15I, 36.89

43.5
43.0
42.5
42.0
41.5
41.0
40.5
40.0
39.5
39.0
38.5
38.0
37.5
37.0

SECOND STREET
HILTON AVENUE
BARNES LANE
WYDELL PLACE
WENDELL STREET
L.I.R.R. R.O.W.
FRANKLIN AVENUE
OLD FRANKLIN STREET
STOWE PLACE
SAMMIS PLACE
MAIN STREET
MILLER PLACE
UNION PLACE
INTERSECTION STREET
SEALEY AVENUE
SMITH STREET
ATLANTIC AVENUE
GARDEN PLACE
KELLUM PLACE
MARGARET COURT
TERRACE AVENUE
MIRSCHEL PARK
BEDELL STREET
KENSINGTON COURT
CHELSEA PLACE
CATHEDRAL AVENUE
RUNDLE COURT
RYAN COURT
NORTH FRANKLIN STREET
WEST COLUMBIA ST
HILTON PLACE
CATHEDRAL COURT
JACKSON STREET
MULFORD PLACE
FULTON AVENUE
BELL STREET
ST. PAUL'S

LEGEND:

- MONITORING WELL
- IPR WELL
- GROUNDWATER FLOW DIRECTION
- 43.0 POTENTIOMETRIC SURFACE CONTOUR
- FORMER MGP SITE BOUNDARY
- HIMW-08I, 42.45 LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
- NM NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
3Q17 POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE GROUNDWATER, SEPTEMBER 20, 2017

FIGURE 10

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2017\FIGURE 11.dwg 1/24/18 - 2 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-03D, 42.56
HIMW-05D, 41.92
HIMW-04D, 41.94
HIMW-26D, 41.72
HIMW-11D, 43.35
HIMW-09D, 42.84
HIMW-08D, 42.39
HIMW-12D, NM
HIMW-13D, 39.59
HIMW-14D, 36.84
HIMW-15D, 34.67

43.0
42.5
42.0
41.5
41.0
40.5
40.0
39.5
39.0
38.5
38.0
37.5
37.0
36.5
36.0
35.5
35.0

SECOND STREET
HILTON AVENUE
BARNES LANE
WYDLER PLACE
WENDELL STREET
L.I.R.R. R.O.W.
INTERSECTION STREET
SEALEY AVENUE
FRANKLIN AVENUE
MAIN STREET
MEADOW PLACE
STOWE PLACE
SAMMIS PLACE
OLD FRANKLIN STREET
MILLER PLACE
UNION PLACE
SMITH STREET
ATLANTIC AVENUE
GARDEN PLACE
KENSINGTON COURT
CHELSEA PLACE
CATHEDRAL AVENUE
CATHEDRAL COURT
HILTON PLACE
MULFORD PLACE
KELLUM PLACE
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
RUNDLE COURT
RYAN COURT
JACKSON STREET
NORTH FRANKLIN STREET
WEST COLUMBIA
FULTON AVENUE
BELL STREET
ST. PAUL'S

LEGEND:

⊕	MONITORING WELL
→	GROUNDWATER FLOW DIRECTION
43	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-14D, 36.84	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

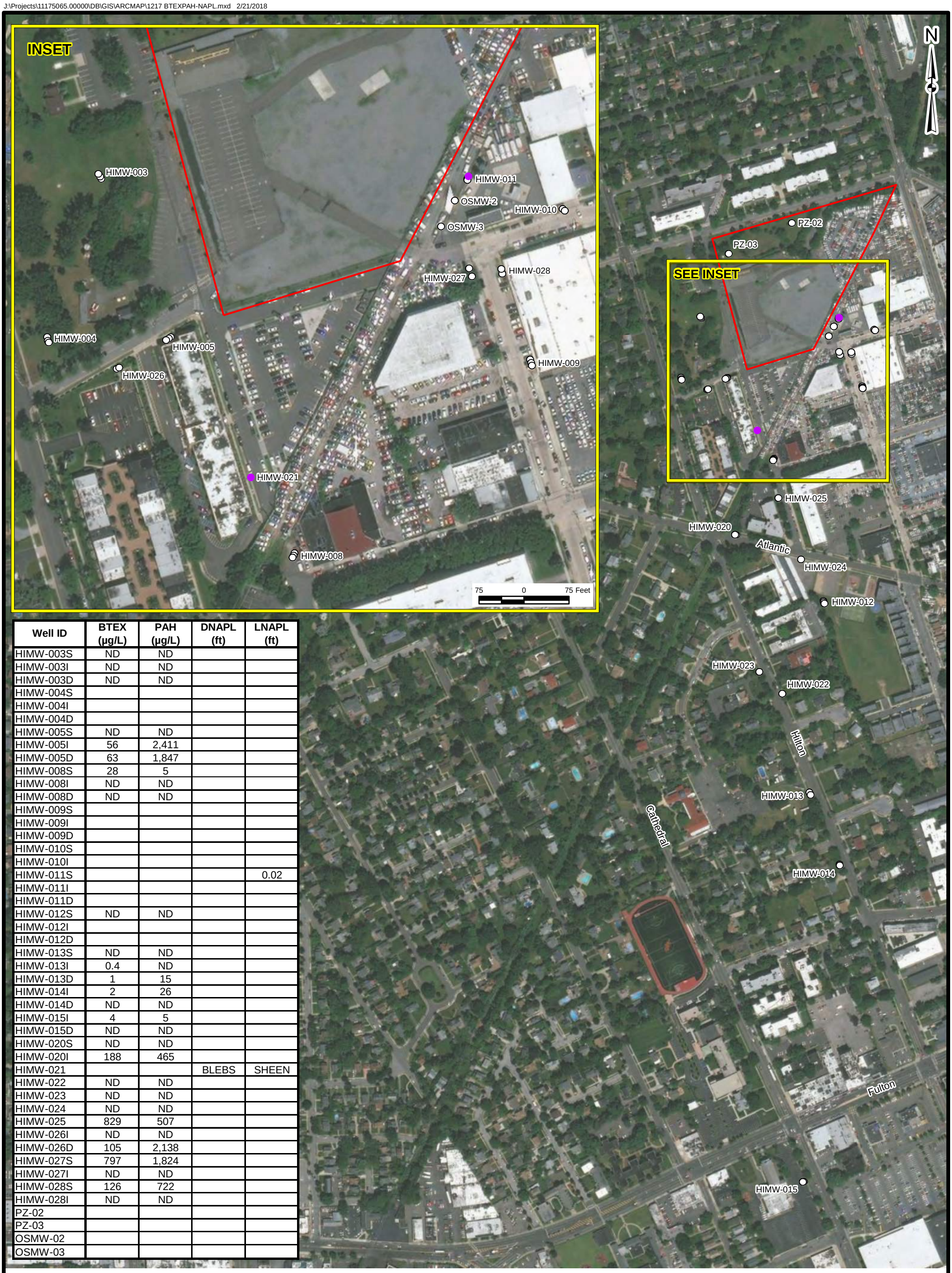
NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
3Q17 POTENTIOMETRIC SURFACE MAP FOR DEEP GROUNDWATER, SEPTEMBER 20, 2017

FIGURE 11

J:\Projects\11175065.00000\DB\GIS\ARCMAP\1217 BTEXPAH-NAPL.mxd 2/21/2018



Well ID	BTEX (µg/L)	PAH (µg/L)	DNAPL (ft)	LNAPL (ft)
HIMW-003S	ND	ND		
HIMW-003I	ND	ND		
HIMW-003D	ND	ND		
HIMW-004S				
HIMW-004I				
HIMW-004D				
HIMW-005S	ND	ND		
HIMW-005I	56	2,411		
HIMW-005D	63	1,847		
HIMW-008S	28	5		
HIMW-008I	ND	ND		
HIMW-008D	ND	ND		
HIMW-009S				
HIMW-009I				
HIMW-009D				
HIMW-010S				
HIMW-010I				
HIMW-011S				0.02
HIMW-011I				
HIMW-011D				
HIMW-012S	ND	ND		
HIMW-012I				
HIMW-012D				
HIMW-013S	ND	ND		
HIMW-013I	0.4	ND		
HIMW-013D	1	15		
HIMW-014I	2	26		
HIMW-014D	ND	ND		
HIMW-015I	4	5		
HIMW-015D	ND	ND		
HIMW-020S	ND	ND		
HIMW-020I	188	465		
HIMW-021			BLEBS	SHEEN
HIMW-022	ND	ND		
HIMW-023	ND	ND		
HIMW-024	ND	ND		
HIMW-025	829	507		
HIMW-026I	ND	ND		
HIMW-026D	105	2,138		
HIMW-027S	797	1,824		
HIMW-027I	ND	ND		
HIMW-028S	126	722		
HIMW-028I	ND	ND		
PZ-02				
PZ-03				
OSMW-02				
OSMW-03				

Legend

- Monitoring Well - Product Detected
- Monitoring Well - Product Not Detected
- Former MGP Site Boundary

Notes:

LOCID - Location Identifier
BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes
PAH - Polynuclear Aromatic Hydrocarbons
DNAPL - Dense Non-Aqueous Phase Liquid
LNAPL - Light Non-Aqueous Phase Liquid
µg/L - Micrograms per Liter
ft - Feet of Product Thickness
ND - Non Detect

Source: ESRI World Imagery

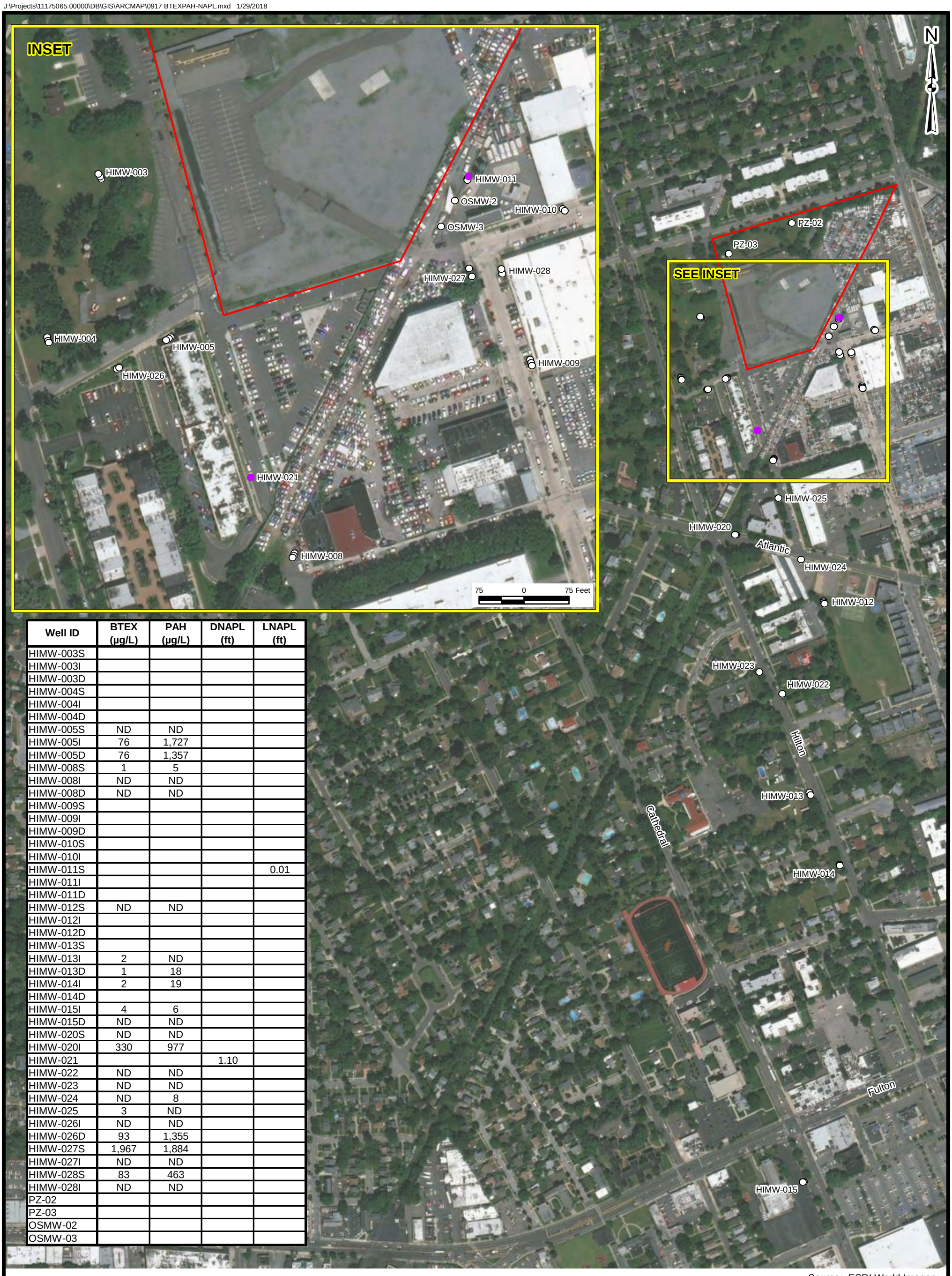
400 0 400 Feet

AECOM

HEMPSTEAD/GARDEN CITY, NY
TOTAL DISSOLVED-PHASE BTEX/PAH CONCENTRATIONS
FOURTH QUARTER 2017

FIGURE 12

J:\Projects\11175065.00000\DB\GIS\ARCMAP\0917 BTEXPAH-NAPL.mxd 1/29/2018



Well ID	BTEX (µg/L)	PAH (µg/L)	DNAPL (ft)	LNAPL (ft)
HIMW-003S				
HIMW-003I				
HIMW-003D				
HIMW-004S				
HIMW-004I				
HIMW-004D				
HIMW-005S	ND	ND		
HIMW-005I	76	1,727		
HIMW-005D	76	1,357		
HIMW-008S	1	5		
HIMW-008I	ND	ND		
HIMW-008D	ND	ND		
HIMW-009S				
HIMW-009I				
HIMW-009D				
HIMW-010S				
HIMW-010I				
HIMW-011S				0.01
HIMW-011I				
HIMW-011D				
HIMW-012S	ND	ND		
HIMW-012I				
HIMW-012D				
HIMW-013S				
HIMW-013I	2	ND		
HIMW-013D	1	18		
HIMW-014I	2	19		
HIMW-014D				
HIMW-015I	4	6		
HIMW-015D	ND	ND		
HIMW-020S	ND	ND		
HIMW-020I	330	977		
HIMW-021			1.10	
HIMW-022	ND	ND		
HIMW-023	ND	ND		
HIMW-024	ND	8		
HIMW-025	3	ND		
HIMW-026I	ND	ND		
HIMW-026D	93	1,355		
HIMW-027S	1,967	1,884		
HIMW-027I	ND	ND		
HIMW-028S	83	463		
HIMW-028I	ND	ND		
PZ-02				
PZ-03				
OSMW-02				
OSMW-03				

Legend

- Monitoring Well - Product Detected
- Monitoring Well - Product Not Detected
- Former MGP Site Boundary

Notes:
LOCID - Location Identifier
BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes
PAH - Polynuclear Aromatic Hydrocarbons
DNAPL - Dense Non-Aqueous Phase Liquid
LNAPL - Light Non-Aqueous Phase Liquid
µg/L - Micrograms per Liter
ft - Feet of Product Thickness
ND - Non Detect

Source: ESRI World Imagery

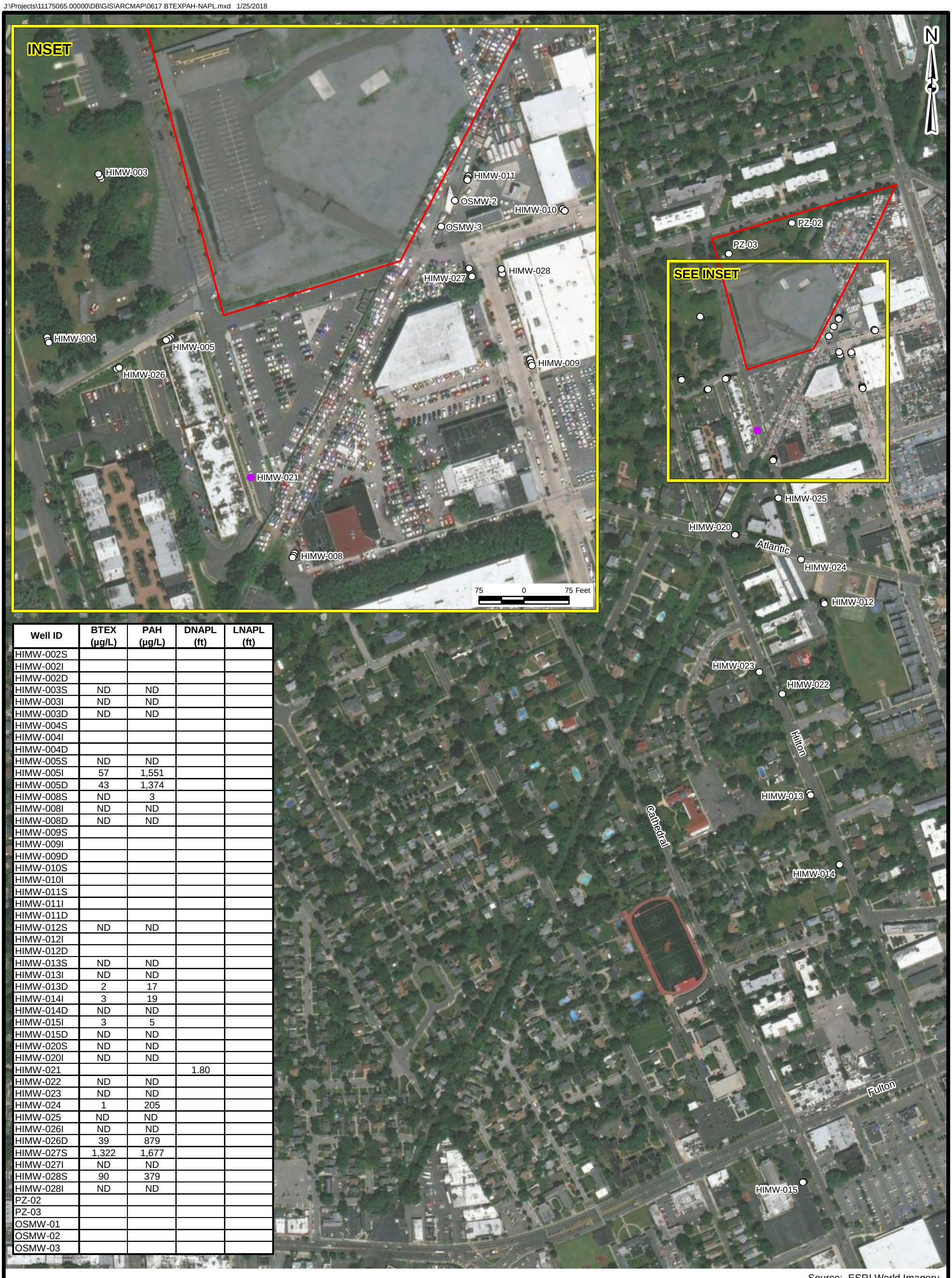
400 0 400 Feet

AECOM

HEMPSTEAD/GARDEN CITY, NY
TOTAL DISSOLVED-PHASE BTEX/PAH CONCENTRATIONS
THIRD QUARTER 2017

FIGURE 13

J:\Projects\11175065.00000\DB\GIS\ARCMAP\0617 BTEXPAH-NAPL.mxd 1/25/2018



Well ID	BTEX (µg/L)	PAH (µg/L)	DNAPL (ft)	LNAPL (ft)
HIMW-002S				
HIMW-002I				
HIMW-002D				
HIMW-003S	ND	ND		
HIMW-003I	ND	ND		
HIMW-003D	ND	ND		
HIMW-004S				
HIMW-004I				
HIMW-004D				
HIMW-005S	ND	ND		
HIMW-005I	57	1,551		
HIMW-005D	43	1,374		
HIMW-008S	ND	3		
HIMW-008I	ND	ND		
HIMW-008D	ND	ND		
HIMW-009S				
HIMW-009I				
HIMW-009D				
HIMW-010S				
HIMW-010I				
HIMW-011S				
HIMW-011I				
HIMW-011D				
HIMW-012S	ND	ND		
HIMW-012I				
HIMW-012D				
HIMW-013S	ND	ND		
HIMW-013I	ND	ND		
HIMW-013D	2	17		
HIMW-014I	3	19		
HIMW-014D	ND	ND		
HIMW-015I	3	5		
HIMW-015D	ND	ND		
HIMW-020S	ND	ND		
HIMW-020I	ND	ND		
HIMW-021			1.80	
HIMW-022	ND	ND		
HIMW-023	ND	ND		
HIMW-024	1	205		
HIMW-025	ND	ND		
HIMW-026I	ND	ND		
HIMW-026D	39	879		
HIMW-027S	1,322	1,677		
HIMW-027I	ND	ND		
HIMW-028S	90	379		
HIMW-028I	ND	ND		
PZ-02				
PZ-03				
OSMW-01				
OSMW-02				
OSMW-03				

Legend

- Monitoring Well - Product Detected
- Monitoring Well - Product Not Detected
- Former MGP Site Boundary

Notes:

LOCID - Location Identifier
BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes
PAH - Polynuclear Aromatic Hydrocarbons
DNAPL - Dense Non-Aqueous Phase Liquid
LNAPL - Light Non-Aqueous Phase Liquid
µg/L - Micrograms per Liter
ft - Feet of Product Thickness
ND - Non Detect

Source: ESRI World Imagery

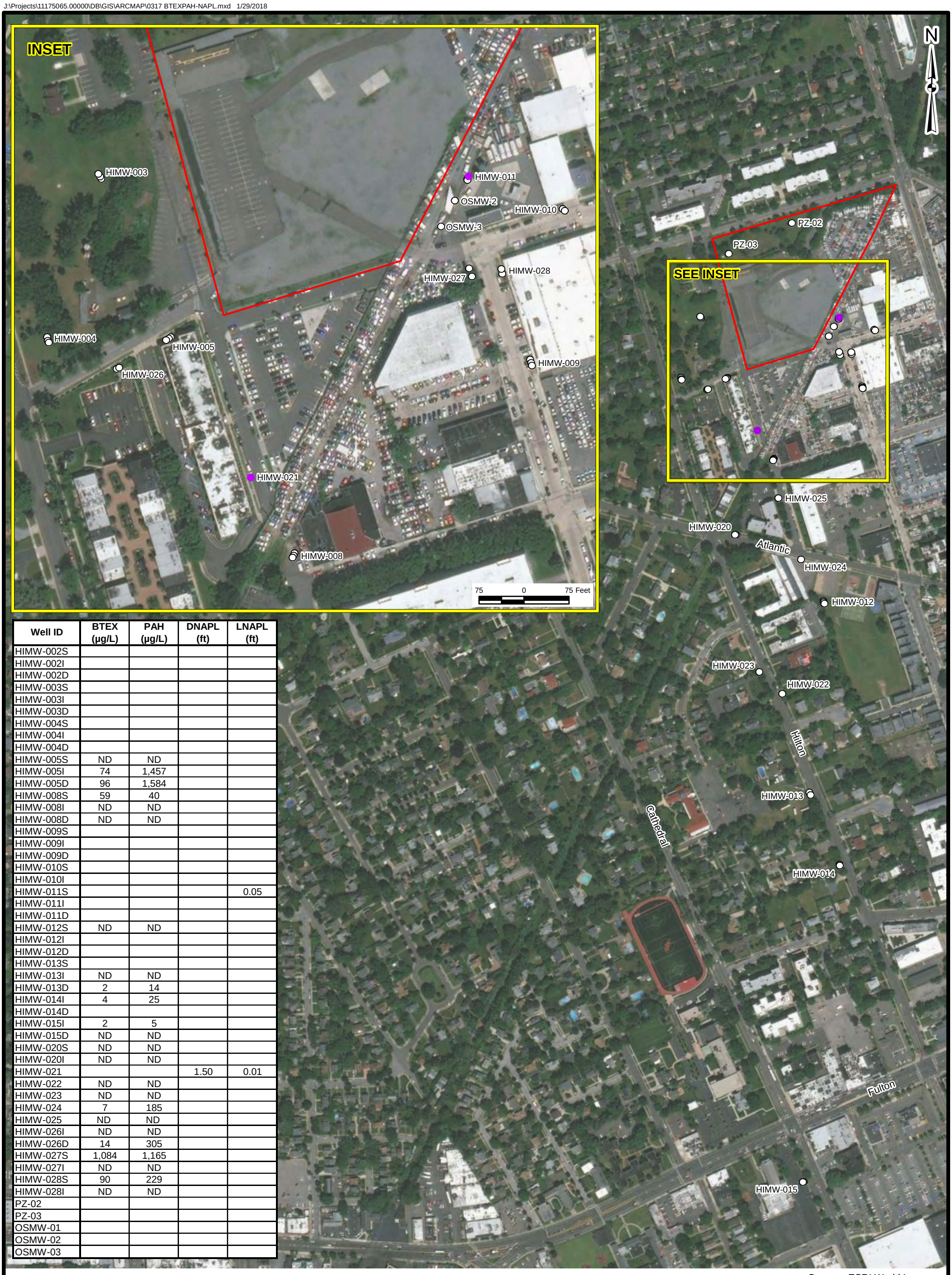
400 0 400 Feet

AECOM

HEMPSTEAD/GARDEN CITY, NY
TOTAL DISSOLVED-PHASE BTEX/PAH CONCENTRATIONS
SECOND QUARTER 2017

FIGURE 14

J:\Projects\11175065.00000\DB\GIS\ARCMAP\0317 BTEXPAH-NAPL.mxd 1/29/2018



Well ID	BTEX (µg/L)	PAH (µg/L)	DNAPL (ft)	LNAPL (ft)
HIMW-002S				
HIMW-002I				
HIMW-002D				
HIMW-003S				
HIMW-003I				
HIMW-003D				
HIMW-004S				
HIMW-004I				
HIMW-004D				
HIMW-005S	ND	ND		
HIMW-005I	74	1,457		
HIMW-005D	96	1,584		
HIMW-008S	59	40		
HIMW-008I	ND	ND		
HIMW-008D	ND	ND		
HIMW-009S				
HIMW-009I				
HIMW-009D				
HIMW-010S				
HIMW-010I				
HIMW-011S				0.05
HIMW-011I				
HIMW-011D				
HIMW-012S	ND	ND		
HIMW-012I				
HIMW-012D				
HIMW-013S				
HIMW-013I	ND	ND		
HIMW-013D	2	14		
HIMW-014I	4	25		
HIMW-014D				
HIMW-015I	2	5		
HIMW-015D	ND	ND		
HIMW-020S	ND	ND		
HIMW-020I	ND	ND		
HIMW-021			1.50	0.01
HIMW-022	ND	ND		
HIMW-023	ND	ND		
HIMW-024	7	185		
HIMW-025	ND	ND		
HIMW-026I	ND	ND		
HIMW-026D	14	305		
HIMW-027S	1,084	1,165		
HIMW-027I	ND	ND		
HIMW-028S	90	229		
HIMW-028I	ND	ND		
PZ-02				
PZ-03				
OSMW-01				
OSMW-02				
OSMW-03				

Legend

- Monitoring Well - Product Detected
- Monitoring Well - Product Not Detected
- Former MGP Site Boundary

Notes:
LOCID - Location Identifier
BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes
PAH - Polynuclear Aromatic Hydrocarbons
DNAPL - Dense Non-Aqueous Phase Liquid
LNAPL - Light Non-Aqueous Phase Liquid
µg/L - Micrograms per Liter
ft - Feet of Product Thickness
ND - Non Detect

Source: ESRI World Imagery

400 0 400 Feet

AECOM

HEMPSTEAD/GARDEN CITY, NY
TOTAL DISSOLVED-PHASE BTEX/PAH CONCENTRATIONS
FIRST QUARTER 2017

FIGURE 15

APPENDIX A

DATA USABILITY SUMMARY REPORTS,

THIRD AND FOURTH QUARTERS 2017

(Provided in Electronic Format Only)

APPENDIX A
DATA USABILITY SUMMARY REPORT
THIRD QUARTER 2017

HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
VILLAGES OF GARDEN CITY AND HEMPSTEAD
LONG ISLAND, NEW YORK

Analyses Performed by:
PACE ANALYTICAL

Prepared For:

NATIONAL GRID
175 EAST OLD COUNTRY RD.
HICKSVILLE, NY 11801

Prepared by:

URS CORPORATION
257 WEST GENESEE STREET, SUITE 400
BUFFALO, NY 14202-2657

December 2017

TABLE OF CONTENTS

TABLES
(Following Text)

APPENDICES
(Following Tables)

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and Development of Data Usability Summary Reports*, May 2010.

This DUSR discusses the usability of the analytical data for twenty-four (24) groundwater samples, one (1) field duplicate, one (1) matrix spike/matrix spike duplicate (MS/MSD) pair, one (1) field blank, and four (4) trip blanks collected by URS personnel on September 21-29, 2017. The groundwater samples were collected as part of the 2017 3rd quarter groundwater monitoring event at the Hempstead Intersection Street Former MGP Site.

II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION

The samples were analyzed by Pace Analytical for the following parameters:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) – USEPA Method SW8260C and
- Polynuclear aromatic hydrocarbons (PAHs) – USEPA Method SW8270D.

A limited data validation was performed on the samples in accordance with the guidelines presented in the following USEPA Region II documents:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Rev. 4*, October 2014 and

- *Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22, Rev. 4,* August 2008.

The limited data validation included a review of completeness of all required deliverables; holding times; quality control (QC) results (instrument tunes, calibration standards, blanks, matrix spike recoveries, field duplicate analyses, laboratory control sample (LCS) recoveries, and surrogate/internal standard

recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

The validated analytical results are presented in Tables A-1 and A-2. Copies of the validated laboratory results (i.e., Form 1's) are presented in Attachment A. Copies of the chain-of-custodies, case narratives, and documentation supporting the qualification of data are presented in Attachment B. Only problems affecting data usability are discussed in this report.

III. DATA DELIVERABLE COMPLETENESS

Full deliverable data packages (i.e., NYSDEC ASP Category B or equivalent) were provided by the laboratory, and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

IV. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC). All samples were analyzed within the required holding times.

V. NON-CONFORMANCES

The percent differences (%D) between the ICAL average RRFs and the RRFs in the continuing calibration (CCAL) standards were greater than 20% for the following SVOC: benzo(g,h,i)perylene. The non-detect results for this compound in the affected samples were qualified 'UJ'.

VI. SAMPLE RESULTS AND REPORTING

All sample results were reported in accordance with method requirements and were adjusted for sample size and dilution factors. Results detected below the quantitation limits were qualified 'J' by the laboratory, while results reported from secondary dilution analyses were qualified 'D'.

A field duplicates was collected from monitoring well location HIMW-024, which exhibited good field and analytical precision.

VII. SUMMARY

All sample analyses were found to be compliant with the method and validation criteria, and the data are usable as reported. Those results qualified 'UJ' (estimated quantitation limit) during the data review are considered conditionally usable. URS does not recommend the re-collection of any samples at this time.

Prepared By: _____ **Date:** 12/13/17
Peter R. Fairbanks, Senior Chemist

Reviewed By: _____ **Date:** 12/13/17
George E. Kisluk, Senior Chemist

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

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 reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The sample results are reported from a separate secondary dilution analysis.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-005D	HIMW-005I	HIMW-005S	HIMW-008D	HIMW-008I
Sample ID			HIMW-05D	HIMW-05I	HIMW-05S	HIMW-8D	HIMW-8I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/29/17	09/29/17	09/28/17	09/26/17	09/26/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	6.1	1.4	1.0 U	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	3.4	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	66.8	75.0	2.0 U	2.0 U	2.0 U
Total BTEX	UG/L	100	76.3	76.4	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	169 D	241 D	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	-	5.0 U	12.5	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	65.6	242 D	5.0 U	5.0 U	5.0 U
Anthracene	UG/L	-	5.0 U	2.3 J	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	12.6	29.6	5.0 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	1,110 D	1,180 D	5.0 U	5.0 U	5.0 U
Phenanthrene	UG/L	-	5.0 U	19.7	5.0 U	5.0 U	5.0 U
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	1,357.2	1,727.1	ND	ND	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. ND - Not Detected.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By_PRF 12/07/17_; Checked By_AMK 12/07/17_

Detection Limits shown are PQL

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[LOGDATE] >= #9/21/2017# AND [MATRIX] = 'WG

TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-008S	HIMW-012S	HIMW-013D	HIMW-013I	HIMW-014I
Sample ID			HIMW-8S	HIMW-12S	HIMW-13D	HIMW-13I	HIMW-14I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/26/17	09/27/17	09/21/17	09/21/17	09/21/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	0.64 J	1.0 U	1.4	1.8	2.2
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total BTEX	UG/L	100	0.64	ND	1.4	1.8	2.2
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	-	5.0 U	5.0 U	5.5	5.0 U	5.6
Acenaphthylene	UG/L	-	1.5 J	5.0 U	12.4	5.0 U	8.0
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	2.6 J
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	UG/L	-	3.1 J	5.0 U	5.0 U	5.0 U	3.0 J
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	4.6	ND	17.9	ND	19.2

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. ND - Not Detected.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By_PRF 12/07/17_; Checked By_AMK 12/07/17_

Detection Limits shown are PQL

TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-015D	HIMW-015I	HIMW-020I	HIMW-020S	HIMW-022
Sample ID			HIMW-15D	HIMW-15I	HIMW-20I	HIMW-20S	HIMW-22
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/22/17	09/22/17	09/22/17	09/22/17	09/25/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	4.3	3.7	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	34.4	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	15.1	1.0 U	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	277	2.0 U	2.0 U
Total BTEX	UG/L	100	ND	4.3	330.2	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	141 D	5.0 U	5.0 U
Acenaphthene	UG/L	-	5.0 U	5.0 U	7.7	5.0 U	5.0 U
Acenaphthylene	UG/L	-	5.0 U	5.9	135 D	5.0 U	5.0 U
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	7.4	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	685 D	5.0 U	5.0 U
Phenanthrene	UG/L	-	5.0 U	5.0 U	1.1 J	5.0 U	5.0 U
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	5.9	977.2	ND	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. ND - Not Detected.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By_PRF 12/07/17_; Checked By_AMK 12/07/17_

Detection Limits shown are PQL

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[LOGDATE] >= #9/21/2017# AND [MATRIX] = 'WG

TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-023	HIMW-024	HIMW-024	HIMW-025	HIMW-026D
Sample ID			HIMW-23	DUP092617	HIMW-24	HIMW-25	HIMW-26D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/25/17	09/26/17	09/26/17	09/25/17	09/27/17
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	2.6	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.4
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	6.4
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	85.3
Total BTEX	UG/L	100	ND	ND	ND	2.6	93.1
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	144 D
Acenaphthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	3.9 J
Acenaphthylene	UG/L	-	5.0 U	5.9	5.8	5.0 U	67.1
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	2.1 J	2.1 J	5.0 U	10.4
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	1,120 D
Phenanthrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	9.4
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	8	7.9	ND	1,354.8

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. ND - Not Detected.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By_PRF 12/07/17_; Checked By_AMK 12/07/17_

Detection Limits shown are PQL

TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-026I	HIMW-027I	HIMW-027S	HIMW-028I	HIMW-028S
Sample ID			HIMW-26I	HIMW-27I	HIMW-27S	HIMW-28I	HIMW-28S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/27/17	09/28/17	09/27/17	09/28/17	09/28/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	23.1	1.0 U	2.6
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1,060 D	1.0 U	72.0
Toluene	UG/L	-	1.0 U	1.0 U	9.7	1.0 U	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	874 D	2.0 U	8.1
Total BTEX	UG/L	100	ND	ND	1,966.8	ND	82.7
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	291 D	5.0 U	54.8
Acenaphthene	UG/L	-	5.0 U	5.0 U	117 DJ	5.0 U	34.0
Acenaphthylene	UG/L	-	5.0 U	5.0 U	6.5	5.0 U	5.0 U
Anthracene	UG/L	-	5.0 U	5.0 U	10.6	5.0 U	4.6 J
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	3.0 J	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	47.5	5.0 U	21.4
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	1,350 D	5.0 U	322 D
Phenanthrene	UG/L	-	5.0 U	5.0 U	54.5	5.0 U	25.8
Pyrene	UG/L	-	5.0 U	5.0 U	3.5 J	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	1,883.6	ND	462.6

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. ND - Not Detected.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By_PRF 12/07/17_; Checked By_AMK 12/07/17_

Detection Limits shown are PQL

TABLE A-2
VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB20170922	TB092617	TB092817	FB20170929	TB20170930
Matrix			Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/21/17	09/26/17	09/28/17	09/29/17	09/29/17
Parameter	**Units**	**Criteria***	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total BTEX	UG/L	100	ND	ND	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	NA	NA	NA	5.0 U	NA
Acenaphthene	UG/L	-	NA	NA	NA	5.0 U	NA
Acenaphthylene	UG/L	-	NA	NA	NA	5.0 U	NA
Anthracene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(a)anthracene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(a)pyrene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(b)fluoranthene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(g,h,i)perylene	UG/L	-	NA	NA	NA	5.0 UJ	NA
Benzo(k)fluoranthene	UG/L	-	NA	NA	NA	5.0 U	NA
Chrysene	UG/L	-	NA	NA	NA	5.0 U	NA
Dibenz(a,h)anthracene	UG/L	-	NA	NA	NA	5.0 U	NA
Fluoranthene	UG/L	-	NA	NA	NA	5.0 U	NA
Fluorene	UG/L	-	NA	NA	NA	5.0 U	NA
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	NA	5.0 U	NA
Naphthalene	UG/L	-	NA	NA	NA	5.0 U	NA
Phenanthrene	UG/L	-	NA	NA	NA	5.0 U	NA
Pyrene	UG/L	-	NA	NA	NA	5.0 U	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	NA	ND	NA

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

ND - Not detected.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By_PRF 12/07/17_; Checked By_AMK 12/07/17_

Detection Limits shown are PQL

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[LOGDATE] >= #9/21/2017# AND [MATRIX] = 'WQ

ATTACHMENT A

VALIDATED FORM 1'S

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: HIMW-05S **Lab ID: 7030842009** Collected: 09/28/17 08:30 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:14	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	88	%.	35-114	1	10/03/17 09:32	10/06/17 02:14	4165-60-0	
2-Fluorobiphenyl (S)	88	%.	43-116	1	10/03/17 09:32	10/06/17 02:14	321-60-8	
p-Terphenyl-d14 (S)	40	%.	33-141	1	10/03/17 09:32	10/06/17 02:14	1718-51-0	
Phenol-d5 (S)	28	%.	10-110	1	10/03/17 09:32	10/06/17 02:14	4165-62-2	
2-Fluorophenol (S)	62	%.	21-110	1	10/03/17 09:32	10/06/17 02:14	367-12-4	
2,4,6-Tribromophenol (S)	104	%.	10-123	1	10/03/17 09:32	10/06/17 02:14	118-79-6	
2-Chlorophenol-d4 (S)	78	%.	33-110	1	10/03/17 09:32	10/06/17 02:14	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	81	%.	16-110	1	10/03/17 09:32	10/06/17 02:14	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 17:22	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/04/17 17:22	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 17:22	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/04/17 17:22	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	86	%.	68-153	1		10/04/17 17:22	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		10/04/17 17:22	460-00-4	
Toluene-d8 (S)	98	%.	69-124	1		10/04/17 17:22	2037-26-5	

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: HIMW-26D **Lab ID: 7030842014** Collected: 09/27/17 10:25 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**3.9J**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	83-32-9	
Acenaphthylene	**67.1**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	208-96-8	
Anthracene	**<6.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	56-55-3	
Benzo(a)pyrene	**<6.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	50-32-8	
Benzo(b)fluoranthene	**<6.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	205-99-2	
Benzo(g,h,i)perylene	**<6.0** UJ	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	207-08-9	
Chrysene	**<6.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	53-70-3	
Fluoranthene	**<6.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	206-44-0	
Fluorene	**10.4**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	193-39-5	
2-Methylnaphthalene	**144** D	ug/L	100	20	10/02/17 09:08	10/09/17 17:29	91-57-6	
Naphthalene	**1120** D	ug/L	100	20	10/02/17 09:08	10/09/17 17:29	91-20-3	
Phenanthrene	**9.4**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 20:42	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	91	%.	35-114	1	10/02/17 09:08	10/06/17 20:42	4165-60-0	
2-Fluorobiphenyl (S)	86	%.	43-116	1	10/02/17 09:08	10/06/17 20:42	321-60-8	
p-Terphenyl-d14 (S)	56	%.	33-141	1	10/02/17 09:08	10/06/17 20:42	1718-51-0	
Phenol-d5 (S)	33	%.	10-110	1	10/02/17 09:08	10/06/17 20:42	4165-62-2	
2-Fluorophenol (S)	56	%.	21-110	1	10/02/17 09:08	10/06/17 20:42	367-12-4	
2,4,6-Tribromophenol (S)	100	%.	10-123	1	10/02/17 09:08	10/06/17 20:42	118-79-6	
2-Chlorophenol-d4 (S)	80	%.	33-110	1	10/02/17 09:08	10/06/17 20:42	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	79	%.	16-110	1	10/02/17 09:08	10/06/17 20:42	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 16:10	71-43-2	
Ethylbenzene	**1.4**	ug/L	1.0	1		10/04/17 16:10	100-41-4	
Toluene	**6.4**	ug/L	1.0	1		10/04/17 16:10	108-88-3	
Xylene (Total)	**86.3**	ug/L	2.0	1		10/04/17 16:10	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		10/04/17 16:10	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		10/04/17 16:10	460-00-4	
Toluene-d8 (S)	96	%.	69-124	1		10/04/17 16:10	2037-26-5	

12/5/17

REPORT OF LABORATORY ANALYSIS

Pace Analytical
www.pacelabs.com

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: HIMW-27S **Lab ID: 7030842016** Collected: 09/27/17 13:55 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**117J** D	ug/L	125	25	10/02/17 09:08	10/09/17 17:58	83-32-9	
Acenaphthylene	**6.5**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	208-96-8	
Anthracene	**10.6**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	205-99-2	
Benzo(g,h,i)perylene	**<5.0** UJ	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	53-70-3	
Fluoranthene	**3.0J**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	206-44-0	
Fluorene	**47.5**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	193-39-5	
2-Methylnaphthalene	**291** D	ug/L	125	25	10/02/17 09:08	10/09/17 17:58	91-57-6	
Naphthalene	**1350** D	ug/L	125	25	10/02/17 09:08	10/09/17 17:58	91-20-3	
Phenanthrene	**54.5**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	85-01-8	
Pyrene	**3.5J**	ug/L	5.0	1	10/02/17 09:08	10/06/17 21:40	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	78	%.	35-114	1	10/02/17 09:08	10/06/17 21:40	4165-60-0	
2-Fluorobiphenyl (S)	85	%.	43-116	1	10/02/17 09:08	10/06/17 21:40	321-60-8	
p-Terphenyl-d14 (S)	77	%.	33-141	1	10/02/17 09:08	10/06/17 21:40	1718-51-0	
Phenol-d5 (S)	34	%.	10-110	1	10/02/17 09:08	10/06/17 21:40	4165-62-2	
2-Fluorophenol (S)	65	%.	21-110	1	10/02/17 09:08	10/06/17 21:40	367-12-4	
2,4,6-Tribromophenol (S)	110	%.	10-123	1	10/02/17 09:08	10/06/17 21:40	118-79-6	
2-Chlorophenol-d4 (S)	87	%.	33-110	1	10/02/17 09:08	10/06/17 21:40	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	81	%.	16-110	1	10/02/17 09:08	10/06/17 21:40	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**23.1**	ug/L	1.0	1		10/04/17 15:34	71-43-2	
Ethylbenzene	**1060** D	ug/L	10.0	10		10/06/17 11:18	100-41-4	
Toluene	**9.7**	ug/L	1.0	1		10/04/17 15:34	108-88-3	
Xylene (Total)	**874** D	ug/L	20.0	10		10/06/17 11:18	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	68-153	1		10/04/17 15:34	17060-07-0	
4-Bromofluorobenzene (S)	105	%.	79-124	1		10/04/17 15:34	460-00-4	
Toluene-d8 (S)	94	%.	69-124	1		10/04/17 15:34	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: HIMW-27I **Lab ID: 7030842012** Collected: 09/28/17 13:00 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	205-99-2	
Benzo(g,h,i)perylene	**<5.0** UJ	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 12:08	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	74	%.	35-114	1	10/03/17 09:32	10/09/17 12:08	4165-60-0	
2-Fluorobiphenyl (S)	79	%.	43-116	1	10/03/17 09:32	10/09/17 12:08	321-60-8	
p-Terphenyl-d14 (S)	56	%.	33-141	1	10/03/17 09:32	10/09/17 12:08	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	10/03/17 09:32	10/09/17 12:08	4165-62-2	
2-Fluorophenol (S)	48	%.	21-110	1	10/03/17 09:32	10/09/17 12:08	367-12-4	
2,4,6-Tribromophenol (S)	137	%.	10-123	1	10/03/17 09:32	10/09/17 12:08	118-79-6	S3
2-Chlorophenol-d4 (S)	75	%.	33-110	1	10/03/17 09:32	10/09/17 12:08	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	74	%.	16-110	1	10/03/17 09:32	10/09/17 12:08	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 16:46	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/04/17 16:46	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 16:46	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/04/17 16:46	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		10/04/17 16:46	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		10/04/17 16:46	460-00-4	
Toluene-d8 (S)	96	%.	69-124	1		10/04/17 16:46	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: HIMW-28S **Lab ID: 7030842011** Collected: 09/28/17 11:45 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**34.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	208-96-8	
Anthracene	**4.6J**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	205-99-2	
Benzo(g,h,i)perylene	**<5.0** UJ	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	206-44-0	
Fluorene	**21.4**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	193-39-5	
2-Methylnaphthalene	**54.8**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	91-57-6	
Naphthalene	**322** D	ug/L	50.0	10	10/03/17 09:32	10/09/17 13:58	91-20-3	
Phenanthrene	**25.8**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/09/17 11:41	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	73	%.	35-114	1	10/03/17 09:32	10/09/17 11:41	4165-60-0	
2-Fluorobiphenyl (S)	86	%.	43-116	1	10/03/17 09:32	10/09/17 11:41	321-60-8	
p-Terphenyl-d14 (S)	61	%.	33-141	1	10/03/17 09:32	10/09/17 11:41	1718-51-0	
Phenol-d5 (S)	31	%.	10-110	1	10/03/17 09:32	10/09/17 11:41	4165-62-2	
2-Fluorophenol (S)	47	%.	21-110	1	10/03/17 09:32	10/09/17 11:41	367-12-4	
2,4,6-Tribromophenol (S)	147	%.	10-123	1	10/03/17 09:32	10/09/17 11:41	118-79-6	S0
2-Chlorophenol-d4 (S)	80	%.	33-110	1	10/03/17 09:32	10/09/17 11:41	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	80	%.	16-110	1	10/03/17 09:32	10/09/17 11:41	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**2.6**	ug/L	1.0	1		10/04/17 17:04	71-43-2	
Ethylbenzene	**72.0**	ug/L	1.0	1		10/04/17 17:04	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 17:04	108-88-3	
Xylene (Total)	**8.1**	ug/L	2.0	1		10/04/17 17:04	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		10/04/17 17:04	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		10/04/17 17:04	460-00-4	
Toluene-d8 (S)	94	%.	69-124	1		10/04/17 17:04	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: HIMW-28I **Lab ID: 7030842010** Collected: 09/28/17 09:55 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	205-99-2	
Benzo(g,h,i)perylene	**<5.0** U5	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	191-24-2	CH
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	10/03/17 09:32	10/06/17 02:44	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	89	%.	35-114	1	10/03/17 09:32	10/06/17 02:44	4165-60-0	
2-Fluorobiphenyl (S)	83	%.	43-116	1	10/03/17 09:32	10/06/17 02:44	321-60-8	
p-Terphenyl-d14 (S)	51	%.	33-141	1	10/03/17 09:32	10/06/17 02:44	1718-51-0	
Phenol-d5 (S)	33	%.	10-110	1	10/03/17 09:32	10/06/17 02:44	4165-62-2	
2-Fluorophenol (S)	59	%.	21-110	1	10/03/17 09:32	10/06/17 02:44	367-12-4	
2,4,6-Tribromophenol (S)	100	%.	10-123	1	10/03/17 09:32	10/06/17 02:44	118-79-6	
2-Chlorophenol-d4 (S)	77	%.	33-110	1	10/03/17 09:32	10/06/17 02:44	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	77	%.	16-110	1	10/03/17 09:32	10/06/17 02:44	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 18:34	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/04/17 18:34	100-41-4	M1
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 18:34	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/04/17 18:34	1330-20-7	MS
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		10/04/17 18:34	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		10/04/17 18:34	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		10/04/17 18:34	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: TB20170922 **Lab ID: 7030842008** Collected: 09/21/17 14:15 Received: 09/22/17 15:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		09/24/17 18:49	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		09/24/17 18:49	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		09/24/17 18:49	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		09/24/17 18:49	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%.	68-153	1		09/24/17 18:49	17060-07-0	
4-Bromofluorobenzene (S)	95	%.	79-124	1		09/24/17 18:49	460-00-4	
Toluene-d8 (S)	103	%.	69-124	1		09/24/17 18:49	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD
Pace Project No.: 7031079

Sample: TB092617 **Lab ID: 7031079009** Collected: 09/26/17 14:05 Received: 09/26/17 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/03/17 14:17	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/03/17 14:17	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/03/17 14:17	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/03/17 14:17	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	73	%.	68-153	1		10/03/17 14:17	17060-07-0	
4-Bromofluorobenzene (S)	111	%.	79-124	1		10/03/17 14:17	460-00-4	
Toluene-d8 (S)	106	%.	69-124	1		10/03/17 14:17	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Sample: TB092817 **Lab ID: 7030842017** Collected: 09/28/17 13:00 Received: 09/28/17 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 15:16	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/04/17 15:16	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 15:16	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/04/17 15:16	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	68-153	1		10/04/17 15:16	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		10/04/17 15:16	460-00-4	
Toluene-d8 (S)	95	%.	69-124	1		10/04/17 15:16	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD
Pace Project No.: 7031079

Sample: FB20170929 **Lab ID: 7031079012** Collected: 09/29/17 12:35 Received: 09/29/17 14:13 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	205-99-2	
Benzo(g,h,l)perylene	**<5.0** UJ	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	191-24-2	CH
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	10/04/17 09:15	10/06/17 18:34	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	74	%.	35-114	1	10/04/17 09:15	10/06/17 18:34	4165-60-0	
2-Fluorobiphenyl (S)	75	%.	43-116	1	10/04/17 09:15	10/06/17 18:34	321-60-8	
p-Terphenyl-d14 (S)	58	%.	33-141	1	10/04/17 09:15	10/06/17 18:34	1718-51-0	
Phenol-d5 (S)	33	%.	10-110	1	10/04/17 09:15	10/06/17 18:34	4165-62-2	
2-Fluorophenol (S)	49	%.	21-110	1	10/04/17 09:15	10/06/17 18:34	367-12-4	
2,4,6-Tribromophenol (S)	129	%.	10-123	1	10/04/17 09:15	10/06/17 18:34	118-79-6	S3
2-Chlorophenol-d4 (S)	73	%.	33-110	1	10/04/17 09:15	10/06/17 18:34	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	71	%.	16-110	1	10/04/17 09:15	10/06/17 18:34	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 18:16	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/04/17 18:16	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 18:16	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/04/17 18:16	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	86	%.	68-153	1		10/04/17 18:16	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		10/04/17 18:16	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		10/04/17 18:16	2037-26-5	

12/6/17

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD
Pace Project No.: 7031079

Sample: TB20170930 **Lab ID: 7031079013** Collected: 09/29/17 12:35 Received: 09/29/17 14:13 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		10/04/17 19:28	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		10/04/17 19:28	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		10/04/17 19:28	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		10/04/17 19:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		10/04/17 19:28	17060-07-0	
4-Bromofluorobenzene (S)	114	%.	79-124	1		10/04/17 19:28	460-00-4	
Toluene-d8 (S)	106	%.	69-124	1		10/04/17 19:28	2037-26-5	

ATTACHMENT B

SUPPORT DOCUMENTATION

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Do

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must

WO#: 7030842

7030842

Section A — Required Client Information:		Section B — Required Project Information:		Section C — Invoice Information:	
Company	AECOM	Report To	~~Dascoli Megan~~ Peter Fairbanks	Attention:	
Address	257 West Genesee Street	Copy To	Ian Sundquist	Company Name:	
Suite 400 Buffalo NY 14202				Address	
Email		Purchase Order #		Pace Quote	
Phone	NONE Fax	Project Name	National Grid Hempstead Site	Pace Project Manager	jennifer arecri@pacelabs com.
Requested Due Date	standard	Project #	60441920	Pace Profile #	5407

Regulatory Agency
NYSDEC
State / Location
NY

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

Requested Analysis Filtered (Y/N): 8260 BTEX N; 8270 PAH N; Trip BLANK N

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	8260 BTEX	8270 PAH	Trip BLANK	Residual Chlorine (Y/N)	
1	HIMW-14I	WT	G			9/21/17	1115	16	4	2			2						X	X			-001
2	HIMW-13I	WT	G			9/21/17	1315	16	4	2			2						X	X			-002
3	HIMW-13D	WT	G			9/21/17	1500	17	4	2			2						X	X			-003
4	HIMW-15I	WT	G			9/22/17	825	16	4	2			2						X	X			-004
5	HIMW-15D	WT	G			9/22/17	945	18	4	2			2						X	X			-005
6	HIMW-20S	WT	G			9/22/17	1215	16	4	2			2						X	X			-006
7	HIMW-20I	WT	G			9/22/17	1415	16	4	2			2						X	X			-007
8																							
9	TB20170922	WT	G			9/22/17	1415		2				2								X		-008
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Megan Dascoli / AECOM	9/22/17	1505	Tim [illegible]	9/22/17	1505	5.1	Y	Y	Y
	[illegible]	1/23/17	1540				4.3			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Megan Dascoli

SIGNATURE of SAMPLER: Megan Dascoli

DATE Signed: 9/21/17

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CHAIN-OF-CUSTODY / Analytical Reques

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WO#: 7030842

7030842

Section A Required Client Information:

Company:	AECOM CORP.
Address:	257 W. GENESSE ST. BUFFALO, NY 14202
Email To:	JON.SUNDQUIST@AECOM.COM
Phone:	Fax:
Requested Due Date/TAT:	STANDARD

Section B Required Project Information:

Report To:	PETER FAIRBANKS
Copy To:	JON SUNDQUIST
Purchase Order No.:	
Project Name:	NATIONAL GRID HEMPSTEAD
Project Number:	60411920

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	JENNIFER.ARACHE@PACELABS.COM
Pace Profile #:	5[illegible]407

REGULATORY AGENCY

NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER NYSDEC

Site Location STATE: NY

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 BTEX	8270 PAH	TRIP BLANK	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-05S	WT	G			9/28/17	8:30		4	2			2					X	X			009
2	HIMW-28I	WT	G				9:50		4	2			2					X	X			010
3	HIMW-28I MS	WT	G				9:55		4	2			2					X	X			↓
4	HIMW-28I MSD	WT	G				9:55		4	2			2					X	X			011
5	HIMW-28S	WT	G				11:45		4	2			2					X	X			012
6	HIMW-27I	WT	G				13:00		4	2			2					X	X			013
7	TB092817	WT	G			↓	13:00		2				2							X		014
8	HIMW-26I	WT	G			9/27/16	8:50		4	2			2					X	X			015
9	HIMW-26D	WT	G				10:25		4	2			2					X	X			016
10	HIMW-12S	WT	G				12:28		4	2			2					X	X			
11	HIMW-27S	WT	G			↓	13:55		4	2			2					X	X			
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	John Crespo	9/28/17	13:50		9/28/17	1350	
		9/28/17	1440		9/28/17	1440	

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: John Crespo

SIGNATURE of SAMPLER: John Crespo

DATE Signed (MM/DD/YY): 09/28/17

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

2155210

Section A Required Client Information:

Company: AECOM CORP.
Address: 257 W. GENESEE ST.
BUFFALO, NY 14202
Email To: JON.SUNDQUIST@AECOM.COM
Phone: Fax: —
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: PETER FAIRBANKS
Copy To: JON SUNDQUIST
Purchase Order No:
Project Name: NATIONAL GRID HEMPSTEAD SITE
Project Number: 60411920

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: JOHN.FER,ARACRI@PACELABS.COM
Pace Profile #: 5407

REGULATORY AGENCY

NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER NYSDEC

Site Location STATE: NY

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 BTEX	8270 PAH	TRIP BLANK	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-05 I					9/29/17	9:15		4	2			2					X	X			001
2	HIMW-05 D					9/29/17	12:00		4	2			2					X	X			002
3	FB 20170929					9/29/17	12:30		4	2			2					X	X			003
4	TB 20170929					9/29/17	12:35		2											X		004
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

WO#: 7031079

PM: JSA Due Date: 10/10/17

CLIENT: AECOM-B

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	J. Crespo / AECOM	9/29/17	13:15							
		9/29/17	14:13		9/29/17	14:13	3.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JOHN CRESPO

SIGNATURE of SAMPLER: J. Crespo DATE Signed (MM/DD/YY): 09/29/17

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for [illegible] not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

WO#:7031079

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Doc

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must b

7031079

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: AECOM		Report To: ~~Darcee Mugan~~ Peter Fairbanks		Attention:	
Address: 257 West Genesee Street		Copy To: Jon Sundquist		Company Name:	
Suite 405, Buffalo, NY 14202				Address:	
Email:		Purchase Order #		Pace Quote	Regulatory Agency: NYSDEC
Phone: NONE	Fax:	Project Name: National Grid Hempstead Site		Pace Project Manager: jennifer.aracri@pacelabs.com	State / Location: NY
Requested Due Date:		Project #: 60411920		Pace Profile #: 5407	

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test: Y/N	8260 BTEX	8270 PAH	Trip BLANK	Residual Chlorine (Y/N)	
1	HIMW-23	WT	G			9/25/17	1025	17	4	2			2					N	X	X			01
2	HIMW-22	WT	G				1143		4	2			2					N	X	X			2
6	HIMW-25						1448		4	2			2					N	X	X			3
4	HIMW-8D					9/26/17	950		4	2			2					N	X	X			4
6	HIMW-8I						1135		4	2			2					N	X	X			5
6	HIMW-8S						1250		4	2			2					N	X	X			
7	HIMW-24						1405		4	2			2					N	X	X			7
6	DUP092617						1200		4	2			2					N	X	X			8
6	TB092617						1405		2				2					N			X		9
10																							
11																							
12																							7

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Megan Dascoli / AECOM	9/26/17	1255		9/26/17	1255				
		9/26/17	1545		9/26/17	1545	1.7 2.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Megan Dascoli

SIGNATURE of SAMPLER: Megan Dascoli DATE Signed: 9/26/17

Pace Analytical
www.pacelabs.com

Pace Analyticel Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Method: EPA 8260C/5030C
Description: 8260C Volatile Organics
Client: AECOM
Date: October 17, 2017

General Information:
17 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.
LCS (Lab ID: 184532) xylene

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 41653

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7030842010

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 195463)
  - Ethylbenzene and xylene
- MSD (Lab ID: 195464)
  - Ethylbenzene and xylene

12/5/17 ap

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: October 17, 2017

General Information:
15 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 41441

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- HIMW-28I (Lab ID: 7030842010)
  - Benzo(g,h,i)perylene
- LCS (Lab ID: 192986)
  - Benzo(g,h,I)perylene
- MS (Lab ID: 194225)
  - Benzo(g,h,i)perylene
- MSD (Lab ID: 194226)
  - Benzo(g,h,i)perylene

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 40547

S0: Surrogate recovery outside laboratory control limits.

- HIMW-13D (Lab ID: 7030842003)
  - 2,4,6-Tribromophenol (S)
- HIMW-14I (Lab ID: 7030842001)
  - 2,4,6-Tribromophenol (S)
- HIMW-15I (Lab ID: 7030842004)
  - 2,4,6-Tribromophenol (S)
- HIMW-20I (Lab ID: 7030842007)
  - 2,4,6-Tribromophenol (S)
- LCS (Lab ID: 188717)
  - 2,4,6-Tribromophenol (S)

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7030842

Method: EPA 8270D
Description: 8270 MSSV
Client: AECOM
Date: October 17, 2017

QC Batch: 40547

S0: Surrogate recovery outside laboratory control limits.
- MS (Lab ID: 189798)
  - 2,4,6-Tribromophenol (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- DUP (Lab ID: 189799)
  - 2,4,6-Tribromophenol (S)
- HIMW-13I (Lab ID: 7030842002)
  - 2,4,6-Tribromophenol (S)
- HIMW-15D (Lab ID: 7030842005)
  - 2,4,6-Tribromophenol (S)

QC Batch: 41441

S0: Surrogate recovery outside laboratory control limits.
- HIMW-28S (Lab ID: 7030842011)
  - 2,4,6-Tribromophenol (S)
- MS (Lab ID: 194225)
  - 2,4,6-Tribromophenol (S)
- MSD (Lab ID: 194226)
  - 2,4,6-Tribromophenol (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- HIMW-27I (Lab ID: 7030842012)
  - 2,4,6-Tribromophenol (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

MSSV Full Scan - FORM V SVOA-1

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York SDG No.: 7030842 Contract: National Grid Hempstead Site

Lab File ID: 8270-100517.B\N86605.D DFTPP Injection Date: 10/05/2017

Instrument ID: 70MSS2 DFTPP Injection Time: 16:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	32.77	
68	Less than 2.00% of mass 69	0.00	(0.00)[1]
69	Base Peak, 100.00% relative abundance	38.00	
70	Less than 2.00% of mass 69	0.16	(0.42)[1]
127	40.00 - 60.00% of mass 198	46.46	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.84	
275	10.00 - 30.00% of mass 198	28.53	
365	1.00 - 100.00% of mass 198	4.25	
441	0.10 - 100.00% of mass 443	13.05	
442	40.00 - 110.00% of mass 198	88.63	
443	17.00 - 23.00% of mass 442	17.25	(19.46)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
9403336CCV	9403336CCV	8270-100517.B\N86606.D	10/05/2017	17:01
192985BLANK	192985BLANK	8270-100517.B\N86607.D	10/05/2017	17:30
192986LCS	192986LCS	8270-100517.B\N86608.D	10/05/2017	17:59
HIMW-05S	7030842009	8270-100517.B\N86625.D	10/06/2017	02:14
HIMW-28I	7030842010	8270-100517.B\N86626.D	10/06/2017	02:44

SAMPLE NO.

9403336CCV

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York
Calibration Date: 10/05/2017 Time: 17:01

Instrument ID: 70MSS2 GC Column: Col 1
Init. Calib. Date(s): 07/25/2017 07/25/2017

Lab File ID: 8270-100517.B\N86606.D
Init. Calib. Time(s): 11:02 15:37

SDG No.: 7030842

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.05470	1.00925	0.9000	-4.3097	20.0000
Acenaphthylene	Averaged	1.46682	1.44352	0.9000	-1.5887	20.0000
Anthracene	Averaged	0.98568	1.00532	0.7000	1.9930	20.0000
Benzo(a)anthracene	Averaged	1.11103	1.21965	0.8000	9.7767	20.0000
Benzo(a)pyrene	Averaged	1.03107	1.11935	0.7000	8.5627	20.0000
Benzo(b)fluoranthene	Averaged	1.20465	1.23687	0.7000	2.6748	20.0000
Benzo(g,h,i)perylene	Averaged	0.86220	1.07214	0.5000	24.3502	20.0000
Benzo(k)fluoranthene	Averaged	1.09764	1.14110	0.7000	3.9589	20.0000
Chrysene	Averaged	1.01244	1.04613	0.7000	3.3274	20.0000
Dibenz(a,h)anthracene	Averaged	0.93306	1.05367	0.4000	12.9262	20.0000
Fluoranthene	Averaged	1.12695	1.16261	0.6000	3.1641	20.0000
Fluorene	Averaged	1.18890	1.28527	0.9000	8.1054	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.10621	1.09272	0.5000	-1.2196	20.0000
2-Methylnaphthalene	Averaged	0.66858	0.74290	0.4000	11.1156	20.0000
Naphthalene	Averaged	0.90267	0.94696	0.7000	4.9061	20.0000
Phenanthrene	Averaged	0.97725	1.03406	0.7000	5.8136	20.0000
Pyrene	Averaged	1.13608	1.11925	0.6000	-1.4812	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.33396	1.36120	0.0100	2.0416	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.91963	0.94851	0.0100	3.1401	20.0000
2-Fluorobiphenyl (S)	Averaged	1.27434	1.29732	0.0100	1.8036	20.0000
2-Fluorophenol (S)	Averaged	0.99073	1.24727	0.0100	25.8936	20.0000
Nitrobenzene-d5 (S)	Averaged	0.35427	0.36965	0.0100	4.3421	20.0000
Phenol-d5 (S)	Averaged	1.44255	1.33503	0.0100	-7.4531	20.0000
p-Terphenyl-d14 (S)	Averaged	0.86842	0.89446	0.0100	2.9985	20.0000
2,4,6-Tribromophenol (S)	Linear	25	27.8446	0.0100	11.3784	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV Full Scan - FORM V SVOA-1

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York SDG No.: 7030842 Contract: National Grid Hempstead Site

Lab File ID: 8270-100617.B\N86627.D DFTPP Injection Date: 10/06/2017

Instrument ID: 70MSS2 DFTPP Injection Time: 11:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	32.83	
68	Less than 2.00% of mass 69	0.00	(0.00)[1]
69	Base Peak, 100.00% relative abundance	38.99	
70	Less than 2.00% of mass 69	0.25	(0.64)[1]
127	40.00 - 60.00% of mass 198	44.93	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.50	
275	10.00 - 30.00% of mass 198	28.14	
365	1.00 - 100.00% of mass 198	3.96	
441	0.10 - 100.00% of mass 443	12.42	
442	40.00 - 110.00% of mass 198	81.76	
443	17.00 - 23.00% of mass 442	16.42	(20.08)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
9404251CCV	9404251CCV	8270-100617.B\N86628.D	10/06/2017	11:21
192006BLANK	192006BLANK	8270-100617.B\N86629.D	10/06/2017	12:25
192007LCS	192007LCS	8270-100617.B\N86630.D	10/06/2017	12:54
HIMW-26I	7030842013	8270-100617.B\N86645.D	10/06/2017	20:13
HIMW-26D	7030842014	8270-100617.B\N86646.D	10/06/2017	20:42
HIMW-12S	7030842015	8270-100617.B\N86647.D	10/06/2017	21:11
HIMW-27S	7030842016	8270-100617.B\N86648.D	10/06/2017	21:40

SAMPLE NO.

9404251CCV

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York Calibration Date: 10/06/2017 Time: 11:21

Instrument ID: 70MSS2 GC Column: Col 1 Init. Calib. Date(s): 07/25/2017 07/25/2017

Lab File ID: 8270-100617.B\N86628.D Init. Calib. Time(s): 11:02 15:37

SDG No.: 7030842

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.05470	1.02032	0.5000	-3.2596	20.0000
Acenaphthylene	Averaged	1.46682	1.46315	0.9000	-0.2498	20.0000
Anthracene	Averaged	0.98568	1.02420	0.7000	3.9084	20.0000
Benzo(a)anthracene	Averaged	1.11103	1.22968	0.5000	10.6797	20.0000
Benzo(a)pyrene	Averaged	1.03107	1.08117	0.7000	4.8592	20.0000
Benzo(b)fluoranthene	Averaged	1.20465	1.19429	0.7000	-0.8598	20.0000
Benzo(g,h,i)perylene	Averaged	0.86220	1.07047	0.5000	24.1562	20.0000
Benzo(k)fluoranthene	Averaged	1.09764	1.13220	0.7000	3.1488	20.0000
Chrysene	Averaged	1.01244	1.04834	0.7000	3.5463	20.0000
Dibenz(a,h)anthracene	Averaged	0.93306	1.03591	0.4000	11.0226	20.0000
Fluoranthene	Averaged	1.12695	1.17303	0.5000	4.0888	20.0000
Fluorene	Averaged	1.18890	1.31789	0.5000	10.8494	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.10621	1.27223	0.5000	15.0078	20.0000
2-Methylnaphthalene	Averaged	0.66858	0.73140	0.4000	9.3960	20.0000
Naphthalene	Averaged	0.90267	0.92349	0.7000	2.3056	20.0000
Phenanthrene	Averaged	0.97725	1.03384	0.7000	5.7912	20.0000
Pyrene	Averaged	1.13608	1.09423	0.5000	-3.6834	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.33396	1.34214	0.0100	0.6100	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.91963	0.98552	0.0100	7.1642	20.0000
2-Fluorobiphenyl (S)	Averaged	1.27434	1.29832	0.0100	1.8819	20.0000
2-Fluorophenol (S)	Averaged	0.99073	1.28156	0.0100	29.3547	20.0000
Nitrobenzene-d5 (S)	Averaged	0.35427	0.35859	0.0100	1.2184	20.0000
Phenol-d5 (S)	Averaged	1.44255	1.31156	0.0100	-9.0802	20.0000
p-Terphenyl-d14 (S)	Averaged	0.86842	0.89628	0.0100	3.2082	20.0000
2,4,6-Tribromophenol (S)	Linear	25	28.87406	0.0100	15.4962	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

11/07/2017 11:48

MSSV Full Scan - FORM V SVOA-1

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York SDG No.: 7030842 Contract: National Grid Hempstead Site

Lab File ID: 8270-100917.B\R41527.D DFTPP Injection Date: 10/09/2017

Instrument ID: 70MSS3 DFTPP Injection Time: 09:33

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	46.32	
68	Less than 2.00% of mass 69	0.73	(1.52)[1]
69	Base Peak, 100.00% relative abundance	48.28	
70	Less than 2.00% of mass 69	0.23	(0.48)[1]
127	40.00 - 60.00% of mass 198	55.43	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	7.13	
275	10.00 - 30.00% of mass 198	25.01	
365	1.00 - 100.00% of mass 198	3.75	
441	0.10 - 100.00% of mass 443	12.80	
442	40.00 - 110.00% of mass 198	82.50	
443	17.00 - 23.00% of mass 442	16.43	(19.91)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
9404684CCV	9404684CCV	8270-100917.B\R41528.D	10/09/2017	09:51
194225MS	194225MS	8270-100917.B\R41530.D	10/09/2017	10:46
194226MSD	194226MSD	8270-100917.B\R41531.D	10/09/2017	11:13
HIMW-28S	7030842011	8270-100917.B\R41532.D	10/09/2017	11:41
HIMW-27I	7030842012	8270-100917.B\R41533.D	10/09/2017	12:08
HIMW-28S	7030842011	8270-100917.B\R41537.D	10/09/2017	13:58

SAMPLE NO.

9404684CCV

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York
Calibration Date: 10/09/2017 Time: 09:51

Instrument ID: 70MSS3 GC Column: Col 1
Init. Calib. Date(s): 09/13/2017 09/13/2017

Lab File ID: 8270-100917.B\R41528.D
Init. Calib. Time(s): 11:13 13:56

SDG No.: 7030842

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.10103	1.11410	0.9000	1.1870	20.0000
Acenaphthylene	Averaged	1.61101	1.63836	0.9000	1.6978	20.0000
Anthracene	Averaged	1.02294	1.05731	0.7000	3.3598	20.0000
Benzo(a)anthracene	Averaged	1.21491	1.10705	0.8000	-8.8784	20.0000
Benzo(a)pyrene	Averaged	1.16199	1.08108	0.7000	-6.9636	20.0000
Benzo(b)fluoranthene	Averaged	1.39864	1.27827	0.7000	-8.6065	20.0000
Benzo(g,h,i)perylene	Averaged	0.74204	0.90904	0.5000	22.5058	20.0000
Benzo(k)fluoranthene	Averaged	1.17557	1.05436	0.7000	-10.3110	20.0000
Chrysene	Averaged	1.04724	0.95552	0.7000	-8.7586	20.0000
Dibenz(a,h)anthracene	Averaged	0.82217	0.93192	0.4000	13.3491	20.0000
Fluoranthene	Averaged	1.16516	1.16233	0.6000	-0.2428	20.0000
Fluorene	Averaged	1.25149	1.22804	0.9000	-1.8735	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	0.82812	0.96207	0.5000	16.1748	20.0000
2-Methylnaphthalene	Averaged	0.73112	0.71188	0.4000	-2.6313	20.0000
Naphthalene	Averaged	0.99135	0.96818	0.7000	-2.3370	20.0000
Phenanthrene	Averaged	0.98139	1.01657	0.7000	3.5848	20.0000
Pyrene	Averaged	1.21890	1.23120	0.6000	1.0092	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.39494	1.30068	0.0100	-6.7578	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.96849	0.93251	0.0100	-3.7155	20.0000
2-Fluorobiphenyl (S)	Averaged	1.34831	1.36119	0.0100	0.9555	20.0000
2-Fluorophenol (S)	Averaged	1.44015	1.28623	0.0100	-10.6874	20.0000
Nitrobenzene-d5 (S)	Averaged	0.46168	0.42879	0.0100	-7.1241	20.0000
Phenol-d5 (S)	Averaged	1.87444	1.65187	0.0100	-11.8737	20.0000
p-Terphenyl-d14 (S)	Averaged	0.91707	0.93513	0.0100	1.9691	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.14731	0.22009	0.0100	49.4095	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

11/07/2017 11:48

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD
Pace Project No.: 7031079

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: October 17, 2017

General Information:
11 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 41633

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- FB20170929 (Lab ID: 7031079012)
  - Benzo(g,h,i)perylene
- LCS (Lab ID: 193976)
  - Benzo(g,h,i)perylene
- MS (Lab ID: 194007)
  - Benzo(g,h,I)perylene

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 41633

S0: Surrogate recovery outside laboratory control limits.
- LCS (Lab ID: 193976)
  - 2,4,6-Tribromophenol (S)
- LCS (Lab ID: 193994)
  - 2,4,6-Tribromophenol (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- BLANK (Lab ID: 193975)
  - 2,4,6-Tribromophenol (S)
- DUP (Lab ID: 194008)
  - 2,4,6-Tribromophenol (S)
- FB20170929 (Lab ID: 7031079012)
  - 2,4,6-Tribromophenol (S)

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD
Pace Project No.: 7031079

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: October 17, 2017

QC Batch: 41633

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- HIMW-05D (Lab ID: 7031079011)
  - 2,4,6-Tribromophenol (S)
- HIMW-05I (Lab ID: 7031079010)
  - 2,4,6-Tribromophenol (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD
Pace Project No.: 7031079

Method: EPA 8260C/5030C
Description: 8260C Volatile Organics
Client: AECOM
Date: October 17, 2017

General Information:
13 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 41653

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7030842010

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 195463)
  - Ethylbenzene and xylene
- MSD (Lab ID: 195464)
  - Ethylbenzene and xylene

12/6/17 PP

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York SDG No.: 7031079 Contract: NATIONAL GRID HEMPSTEAD
Lab File ID: 8270-100617.B\N86627.D DFTPP Injection Date: 10/06/2017
Instrument ID: 70MSS2 DFTPP Injection Time: 11:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	32.83	
68	Less than 2.00% of mass 69	0.00	(0.00)[1]
69	Base Peak, 100.00% relative abundance	38.99	
70	Less than 2.00% of mass 69	0.25	(0.64)[1]
127	40.00 - 60.00% of mass 198	44.93	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.50	
275	10.00 - 30.00% of mass 198	28.14	
365	1.00 - 100.00% of mass 198	3.96	
441	0.10 - 100.00% of mass 443	12.42	
442	40.00 - 110.00% of mass 198	81.76	
443	17.00 - 23.00% of mass 442	16.42	(20.08)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
9404251CCV	9404251CCV	8270-100617.B\N86628.D	10/06/2017	11:21
192006BLANK	192006BLANK	8270-100617.B\N86629.D	10/06/2017	12:25
192007LCS	192007LCS	8270-100617.B\N86630.D	10/06/2017	12:54
HIMW-23	7031079001	8270-100617.B\N86631.D	10/06/2017	13:23
HIMW-22	7031079002	8270-100617.B\N86632.D	10/06/2017	13:52
HIMW-25	7031079003	8270-100617.B\N86633.D	10/06/2017	14:22
HIMW-8D	7031079004	8270-100617.B\N86634.D	10/06/2017	14:51
HIMW-8I	7031079005	8270-100617.B\N86635.D	10/06/2017	15:20
HIMW-8S	7031079006	8270-100617.B\N86636.D	10/06/2017	15:50
HIMW-24	7031079007	8270-100617.B\N86637.D	10/06/2017	16:20
DUP092617	7031079008	8270-100617.B\N86638.D	10/06/2017	16:49

SAMPLE NO.

9404251CCV

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York
Calibration Date: 10/06/2017 Time: 11:21

Instrument ID: 70MSS2 GC Column: Col 1
Init. Calib. Date(s): 07/25/2017 07/25/2017

Lab File ID: 8270-100617.B\N86628.D
Init. Calib. Time(s): 11:02 15:37

SDG No.: 7031079

COMPOUND	CURVE	$\overline{RRF}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.05470	1.02032	0.9000	-3.2596	20.0000
Acenaphthylene	Averaged	1.46682	1.46315	0.9000	-0.2498	20.0000
Anthracene	Averaged	0.98568	1.02420	0.7000	3.9084	20.0000
Benzo(a)anthracene	Averaged	1.11103	1.22968	0.8000	10.6797	20.0000
Benzo(a)pyrene	Averaged	1.03107	1.08117	0.7000	4.8592	20.0000
Benzo(b)fluoranthene	Averaged	1.20465	1.19429	0.7000	-0.8598	20.0000
Benzo(g,h,i)perylene	Averaged	0.86220	1.07047	0.5000	24.1562	20.0000
Benzo(k)fluoranthene	Averaged	1.09764	1.13220	0.7000	3.1488	20.0000
Chrysene	Averaged	1.01244	1.04834	0.7000	3.5463	20.0000
Dibenz(a,h)anthracene	Averaged	0.93306	1.03591	0.4000	11.0226	20.0000
Fluoranthene	Averaged	1.12695	1.17303	0.6000	4.0888	20.0000
Fluorene	Averaged	1.18890	1.31789	0.9000	10.8494	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.10621	1.27223	0.5000	15.0078	20.0000
2-Methylnaphthalene	Averaged	0.66858	0.73140	0.4000	9.3960	20.0000
Naphthalene	Averaged	0.90267	0.92349	0.7000	2.3056	20.0000
Phenanthrene	Averaged	0.97725	1.03384	0.7000	5.7912	20.0000
Pyrene	Averaged	1.13608	1.09423	0.6000	-3.6834	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.33396	1.34214	0.0100	0.6130	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.91963	0.98552	0.0100	7.1642	20.0000
2-Fluorobiphenyl (S)	Averaged	1.27434	1.29832	0.0100	1.8819	20.0000
2-Fluorophenol (S)	Averaged	0.99073	1.28156	0.0100	29.3547	20.0000
Nitrobenzene-d5 (S)	Averaged	0.35427	0.35859	0.0100	1.2184	20.0000
Phenol-d5 (S)	Averaged	1.44255	1.31156	0.0100	-9.0802	20.0000
p-Terphenyl-d14 (S)	Averaged	0.86842	0.89628	0.0100	3.2082	20.0000
2,4,6-Tribromophenol (S)	Linear	25	28.87406	0.0100	15.4962	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York SDG No.: 7031079 Contract: NATIONAL GRID HEMPSTEAD
Lab File ID: 8270-100617A.B\R41495.D DFTPP Injection Date: 10/06/2017
Instrument ID: 70MSS3 DFTPP Injection Time: 15:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	40.02	
68	Less than 2.00% of mass 69	0.00	(0.00)[1]
69	Base Peak, 100.00% relative abundance	44.29	
70	Less than 2.00% of mass 69	0.19	(0.43)[1]
127	40.00 - 60.00% of mass 198	54.20	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	7.07	
275	10.00 - 30.00% of mass 198	26.25	
365	1.00 - 100.00% of mass 198	3.94	
441	0.10 - 100.00% of mass 443	14.26	
442	40.00 - 110.00% of mass 198	86.60	
443	17.00 - 23.00% of mass 442	17.07	(19.71)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
9401477CCV	9401477CCV	8270-100617A.B\R41496.D	10/06/2017	15:22
9401478CCV	9401478CCV	8270-100617A.B\R41497.D	10/06/2017	15:50
193975BLANK	193975BLANK	8270-100617A.B\R41498.D	10/06/2017	16:17
193976LCS	193976LCS	8270-100617A.B\R41499.D	10/06/2017	16:45
193994LCS	193994LCS	8270-100617A.B\R41500.D	10/06/2017	17:12
FB20170929	7031079012	8270-100617A.B\R41503.D	10/06/2017	18:34
HIMW-05I	7031079010	8270-100617A.B\R41512.D	10/06/2017	22:39
HIMW-05D	7031079011	8270-100617A.B\R41513.D	10/06/2017	23:07
194007MS	194007MS	8270-100617A.B\R41521.D	10/07/2017	02:45

SAMPLE NO.

9401477CCV

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York Calibration Date: 10/06/2017 Time: 15:22

Instrument ID: 70MSS3 GC Column: Col 1 Init. Calib. Date(s): 09/13/2017 09/13/2017

Lab File ID: 8270-100617A.B\R41496.D Init. Calib. Time(s): 11:13 13:56

SDG No.: 7031079

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.10103	1.09521	0.9000	-0.5288	20.0000
Acenaphthylene	Averaged	1.61101	1.58041	0.9000	-1.8996	20.0000
Anthracene	Averaged	1.02294	1.09770	0.7000	7.3088	20.0000
Benzo(a)anthracene	Averaged	1.21491	1.13482	0.8000	-6.5922	20.0000
Benzo(a)pyrene	Averaged	1.16199	1.08441	0.7000	-6.6769	20.0000
Benzo(b)fluoranthene	Averaged	1.39864	1.13797	0.7000	-18.6379	20.0000
Benzo(g,h,i)perylene	Averaged	0.74204	0.98314	0.5000	32.4919	20.0000
Benzo(k)fluoranthene	Averaged	1.17557	1.02786	0.7000	-12.5648	20.0000
Chrysene	Averaged	1.04724	1.00366	0.7000	-4.1621	20.0000
Dibenz(a,h)anthracene	Averaged	0.82217	0.93972	0.4000	14.2975	20.0000
Fluoranthene	Averaged	1.16516	1.19875	0.6000	2.8835	20.0000
Fluorene	Averaged	1.25149	1.18427	0.9000	-5.3713	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	0.82812	0.95472	0.5000	15.2876	20.0000
2-Methylnaphthalene	Averaged	0.73112	0.70169	0.4000	-4.0256	20.0000
Naphthalene	Averaged	0.99135	0.94867	0.7000	-4.3055	20.0000
Phenanthrene	Averaged	0.98139	1.03007	0.7000	4.9604	20.0000
Pyrene	Averaged	1.21890	1.25746	0.6000	3.1636	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.39494	1.28394	0.0100	-7.9577	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.96849	0.90666	0.0100	-6.3843	20.0000
2-Fluorobiphenyl (S)	Averaged	1.34831	1.29058	0.0100	-4.2814	20.0000
2-Fluorophenol (S)	Averaged	1.44015	1.34247	0.0100	-6.7829	20.0000
Nitrobenzene-d5 (S)	Averaged	0.46168	0.43944	0.0100	-4.8175	20.0000
Phenol-d5 (S)	Averaged	1.87444	1.59723	0.0100	-14.7890	20.0000
p-Terphenyl-d14 (S)	Averaged	0.91707	0.94316	0.0100	2.8445	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.14731	0.21951	0.0100	49.0107	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

APPENDIX A
DATA USABILITY SUMMARY REPORT
FOURTH QUARTER 2017

HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
VILLAGES OF GARDEN CITY AND HEMPSTEAD
LONG ISLAND, NEW YORK

Analyses Performed by:
PACE ANALYTICAL

Prepared For:

NATIONAL GRID
175 EAST OLD COUNTRY RD.
HICKSVILLE, NY 11801

Prepared by:

URS CORPORATION
257 WEST GENESEE STREET, SUITE 400
BUFFALO, NY 14202-2657

February 2018

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TABLES
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APPENDICES
(Following Tables)

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and Development of Data Usability Summary Reports*, May 2010.

This DUSR discusses the usability of the analytical data for twenty-nine (29) groundwater samples, two (2) field duplicates, one (1) matrix spike/matrix spike duplicate (MS/MSD) pair, one (1) field blank, and five (5) trip blanks collected by URS personnel on December 18-28, 2017. The groundwater samples were collected as part of the 2017 4th quarter groundwater monitoring event at the Hempstead Intersection Street Former MGP Site.

II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION

The samples were analyzed by Pace Analytical for the following parameters:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) – USEPA Method SW8260C and
- Polynuclear aromatic hydrocarbons (PAHs) – USEPA Method SW8270D.

A limited data validation was performed on the samples in accordance with the guidelines presented in the following USEPA Region II documents:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Rev. 4*, October 2014 and

- *Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22, Rev. 4,* August 2008.

The limited data validation included a review of completeness of all required deliverables; holding times; quality control (QC) results (instrument tunes, calibration standards, blanks, matrix spike recoveries, field duplicate analyses, laboratory control sample (LCS) recoveries, and surrogate/internal standard

recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

The validated analytical results are presented in Tables A-1 and A-2. Copies of the validated laboratory results (i.e., Form 1's) are presented in Attachment A. Copies of the chain-of-custodies, case narratives, and documentation supporting the qualification of data are presented in Attachment B. Only problems affecting data usability are discussed in this report.

III. DATA DELIVERABLE COMPLETENESS

Full deliverable data packages (i.e., NYSDEC ASP Category B or equivalent) were provided by the laboratory, and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

IV. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC), except for the following instance.

- The cooler temperature associated with samples collected on 12/22/17 was above the QC limits of 4º ± 2° C. The samples were received at the laboratory on the same day they were collected, hence, there was insufficient time for the samples to cool down during transit. No further qualification of the data was deemed necessary.

All samples were analyzed within the required holding times.

V. NON-CONFORMANCES

The BTEX matrix duplicate analysis associated with sample HIMW-014I exhibited a relative percent difference (RPD) exceedance for benzene. The benzene result for sample HIMW-014I was qualified 'J'. Support documentation (i.e., Form III VOA-1) is presented in Attachment B.

The PAH MS/MSD analyses associated with sample HIMW-08S exhibited RPD exceedances for all PAHs. This may have been a result of the laboratory spiking the MS at 50 ppb and the MSD at 15 ppb. Typically, the MS and MSD are spiked at the same level. Since the percent recoveries for the MS/ MSD and corresponding LCS were within QC limits, no further qualification of the data was deemed necessary.

VI. SAMPLE RESULTS AND REPORTING

All sample results were reported in accordance with method requirements and were adjusted for sample size and dilution factors. Results detected below the quantitation limits were qualified 'J' by the laboratory, while results reported from secondary dilution analyses were qualified 'D'.

Field duplicates were collected from monitoring well locations HIMW-013D and HIMW-026D, which exhibited good field and analytical precision.

VII. SUMMARY

All sample analyses were found to be compliant with the method and validation criteria, and the data are usable as reported. Those results qualified 'J' (estimated) during the data review are considered conditionally usable. URS does not recommend the re-collection of any samples at this time.

Prepared By: Peter R. Fairbanks **Date:** 3/20/18
Peter R. Fairbanks, Senior Chemist

Reviewed By: George E. Kisluk **Date:** 3/20/18
George E. Kisluk, Senior Chemist

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

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 reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The sample results are reported from a separate secondary dilution analysis.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-003D	HIMW-003I	HIMW-003S	HIMW-005D	HIMW-005I
Sample ID			HIMW-03D	HIMW-03I	HIMW-03S	HIMW-05D	HIMW-05I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/17	12/20/17	12/20/17	12/27/17	12/27/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	3.1	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	2.8	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	57.4	56.4
Total BTEX	UG/L	100	ND	ND	ND	63.3	56.4
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	214 DJ	330 D
Acenaphthene	UG/L	-	5.0 U	5.0 U	5.0 U	4.7 J	14.9
Acenaphthylene	UG/L	-	5.0 U	5.0 U	5.0 U	68.2	297 D
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	3.0 J
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	5.0 U	9.3	34.4
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	1,550 D	1,710 D
Phenanthrene	UG/L	-	5.0 U	5.0 U	5.0 U	1.0 J	21.8
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	1,847.2	2,411.1

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

Made By_PRF 02/15/18_; Checked By_AMK 02/15/18_

Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-005S	HIMW-008D	HIMW-008I	HIMW-008S	HIMW-012S
Sample ID			HIMW-05S	HIMW-08D	HIMW-08I	HIMW-08S	HIMW-12S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/27/17	12/26/17	12/26/17	12/26/17	12/22/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	25.0	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	2.7	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total BTEX	UG/L	100	ND	ND	ND	27.7	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	5.0 U	5.0 U	5.0 U	1.6 J	5.0 U
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	UG/L	-	5.0 U	5.0 U	5.0 U	3.6 J	5.0 U
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	5.2	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

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Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-013D	HIMW-013D	HIMW-013I	HIMW-013S	HIMW-014D
Sample ID			DUP20171221	HIMW-13D	HIMW-13I	HIMW-13S	HIMW-14D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/21/17	12/21/17	12/21/17	12/19/17	12/21/17
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	1.4	1.3	0.43 J	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total BTEX	UG/L	100	1.4	1.3	0.43	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	-	4.6 J	4.7 J	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	9.9	10	5.0 U	5.0 U	5.0 U
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	14.5	14.7	ND	ND	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

Made By_PRF 02/15/18_; Checked By_AMK 02/15/18_

Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-014I	HIMW-015D	HIMW-015I	HIMW-020I	HIMW-020S
Sample ID			HIMW-14I	HIMW-15D	HIMW-15I	HIMW-20I	HIMW-20S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/20/17	12/19/17	12/19/17	12/27/17	12/27/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	2.4 J	1.0 U	3.9	3.9	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	28.3	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	2.6	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	153	2.0 U
Total BTEX	UG/L	100	2.4	ND	3.9	187.8	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	9.8	5.0 U
Acenaphthene	UG/L	-	8.2	5.0 U	5.0 U	13.6	5.0 U
Acenaphthylene	UG/L	-	11.1	5.0 U	5.4	225 D	5.0 U
Anthracene	UG/L	-	0.64 J	5.0 U	5.0 U	3.3 J	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	3.1 J	5.0 U	5.0 U	25.1	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	158 D	5.0 U
Phenanthrene	UG/L	-	2.8 J	5.0 U	5.0 U	30.2	5.0 U
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	25.84	ND	5.4	465	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

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Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-022	HIMW-023	HIMW-024	HIMW-025	HIMW-026D
Sample ID			HIMW-22	HIMW-23	HIMW-24	HIMW-25	DUP20171228
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/19/17	12/18/17	12/22/17	12/22/17	12/28/17
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	591 D	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	17.4	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	3.5	2.2
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	217	97.1
Total BTEX	UG/L	100	ND	ND	ND	828.9	99.3
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	13.8	299 D
Acenaphthene	UG/L	-	5.0 U	5.0 U	5.0 U	2.6 J	7.0
Acenaphthylene	UG/L	-	5.0 U	5.0 U	5.0 U	27.2	142 DJ
Anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	1.3 J
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	5.0 U	3.1 J	18.3
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	5.0 U	5.0 U	5.0 U	460 D	1,830 D
Phenanthrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	16.6
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	506.7	2,314.2

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

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Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-026D	HIMW-026I	HIMW-027I	HIMW-027S	HIMW-028I
Sample ID			HIMW-26D	HIMW-26I	HIMW-27I	HIMW-27S	HIMW-28I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/28/17	12/28/17	12/28/17	12/28/17	12/27/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	7.2	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	373 D	1.0 U
Toluene	UG/L	-	2.3	1.0 U	1.0 U	8.9	1.0 U
Xylene (total)	UG/L	-	103	2.0 U	2.0 U	408 D	2.0 U
Total BTEX	UG/L	100	105.3	ND	ND	797.1	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	257 D	5.0 U	5.0 U	259 D	5.0 U
Acenaphthene	UG/L	-	7.1	5.0 U	5.0 U	117 DJ	5.0 U
Acenaphthylene	UG/L	-	137 DJ	5.0 U	5.0 U	5.9	5.0 U
Anthracene	UG/L	-	1.2 J	5.0 U	5.0 U	11.9	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	3.1 J	5.0 U
Fluorene	UG/L	-	18.6	5.0 U	5.0 U	57.3	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	-	1,700 D	5.0 U	5.0 U	1,300 D	5.0 U
Phenanthrene	UG/L	-	16.8	5.0 U	5.0 U	65.8	5.0 U
Pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	4.1 J	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	2,137.7	ND	ND	1,824.1	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

Made By_PRF 02/15/18_; Checked By_AMK 02/15/18_

Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-028S
Sample ID			HIMW-28S
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			12/27/17
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
Benzene	UG/L	-	2.4
Ethylbenzene	UG/L	-	113
Toluene	UG/L	-	1.2
Xylene (total)	UG/L	-	9.3
Total BTEX	UG/L	100	125.9
Semivolatile Organic Compounds			
2-Methylnaphthalene	UG/L	-	156 D
Acenaphthene	UG/L	-	40.1
Acenaphthylene	UG/L	-	2.0 J
Anthracene	UG/L	-	5.0 J
Benzo(a)anthracene	UG/L	-	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U
Benzo(g,h,i)perylene	UG/L	-	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U
Chrysene	UG/L	-	5.0 U
Dibenz(a,h)anthracene	UG/L	-	5.0 U
Fluoranthene	UG/L	-	5.0 U
Fluorene	UG/L	-	23.3
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U
Naphthalene	UG/L	-	471 D
Phenanthrene	UG/L	-	23.5
Pyrene	UG/L	-	1.1 J
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	722

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

U - Not detected above the reported quantitation limit. NA - Not Analyzed ND - not Detected

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TABLE A-2
VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB 20171219	TB20171221	TB20171222	TB20171227	FB20171228
Matrix			Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/19/17	12/21/17	12/22/17	12/27/17	12/28/17
Parameter	**Units**	**Criteria***	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total BTEX	UG/L	100	ND	ND	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	NA	NA	NA	NA	5.0 U
Acenaphthene	UG/L	-	NA	NA	NA	NA	5.0 U
Acenaphthylene	UG/L	-	NA	NA	NA	NA	5.0 U
Anthracene	UG/L	-	NA	NA	NA	NA	5.0 U
Benzo(a)anthracene	UG/L	-	NA	NA	NA	NA	5.0 U
Benzo(a)pyrene	UG/L	-	NA	NA	NA	NA	5.0 U
Benzo(b)fluoranthene	UG/L	-	NA	NA	NA	NA	5.0 U
Benzo(g,h,i)perylene	UG/L	-	NA	NA	NA	NA	5.0 U
Benzo(k)fluoranthene	UG/L	-	NA	NA	NA	NA	5.0 U
Chrysene	UG/L	-	NA	NA	NA	NA	5.0 U
Dibenz(a,h)anthracene	UG/L	-	NA	NA	NA	NA	5.0 U
Fluoranthene	UG/L	-	NA	NA	NA	NA	5.0 U
Fluorene	UG/L	-	NA	NA	NA	NA	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	NA	NA	5.0 U
Naphthalene	UG/L	-	NA	NA	NA	NA	5.0 U
Phenanthrene	UG/L	-	NA	NA	NA	NA	5.0 U
Pyrene	UG/L	-	NA	NA	NA	NA	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	NA	NA	ND

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

NA - The sample was not analyzed for this parameter. ND - Not detected.

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Detection Limits shown are PQL

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TABLE A-2
VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS
4TH QUARTER 2017
NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			FIELDQC
Sample ID			TB20171228
Matrix			Water Quality
Depth Interval (ft)			-
Date Sampled			12/28/17
Parameter	**Units**	**Criteria***	Trip Blank (1-1)
Volatile Organic Compounds			
Benzene	UG/L	-	1.0 U
Ethylbenzene	UG/L	-	1.0 U
Toluene	UG/L	-	1.0 U
Xylene (total)	UG/L	-	2.0 U
Total BTEX	UG/L	100	ND
Semivolatile Organic Compounds			
2-Methylnaphthalene	UG/L	-	NA
Acenaphthene	UG/L	-	NA
Acenaphthylene	UG/L	-	NA
Anthracene	UG/L	-	NA
Benzo(a)anthracene	UG/L	-	NA
Benzo(a)pyrene	UG/L	-	NA
Benzo(b)fluoranthene	UG/L	-	NA
Benzo(g,h,i)perylene	UG/L	-	NA
Benzo(k)fluoranthene	UG/L	-	NA
Chrysene	UG/L	-	NA
Dibenz(a,h)anthracene	UG/L	-	NA
Fluoranthene	UG/L	-	NA
Fluorene	UG/L	-	NA
Indeno(1,2,3-cd)pyrene	UG/L	-	NA
Naphthalene	UG/L	-	NA
Phenanthrene	UG/L	-	NA
Pyrene	UG/L	-	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA

*Criteria- Goundwater Plume Delineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempstead Intersection Street Former MGP Site, Appendix E, Final, URS 2008.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

NA - The sample was not analyzed for this parameter. ND - Not detected.

Made By_PRF 02/15/18_; Checked By_AMK 02/15/18_

Detection Limits shown are PQL

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ATTACHMENT A

VALIDATED FORM 1'S

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-03S **Lab ID: 7038591007** Collected: 12/20/17 08:35 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 13:56	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	66	%	35-114	1	12/26/17 10:55	12/27/17 13:56	4165-60-0	
2-Fluorobiphenyl (S)	86	%	43-116	1	12/26/17 10:55	12/27/17 13:56	321-60-8	
p-Terphenyl-d14 (S)	65	%	33-141	1	12/26/17 10:55	12/27/17 13:56	1718-51-0	
Phenol-d5 (S)	32	%	10-110	1	12/26/17 10:55	12/27/17 13:56	4165-62-2	
2-Fluorophenol (S)	50	%	21-110	1	12/26/17 10:55	12/27/17 13:56	367-12-4	
2,4,6-Tribromophenol (S)	93	%	10-123	1	12/26/17 10:55	12/27/17 13:56	118-79-6	
2-Chlorophenol-d4 (S)	85	%	33-110	1	12/26/17 10:55	12/27/17 13:56	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	78	%	16-110	1	12/26/17 10:55	12/27/17 13:56	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 10:45	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 10:45	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 10:45	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 10:45	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%	68-153	1		12/28/17 10:45	17060-07-0	
4-Bromofluorobenzene (S)	103	%	79-124	1		12/28/17 10:45	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		12/28/17 10:45	2037-26-5	

Pace Analytical
www.pacelabs.com

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-03I **Lab ID: 7038591008** Collected: 12/20/17 12:00 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:23	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	61	%	35-114	1	12/26/17 10:55	12/27/17 14:23	4165-60-0	
2-Fluorobiphenyl (S)	77	%	43-116	1	12/26/17 10:55	12/27/17 14:23	321-60-8	
p-Terphenyl-d14 (S)	68	%	33-141	1	12/26/17 10:55	12/27/17 14:23	1718-51-0	
Phenol-d5 (S)	30	%	10-110	1	12/26/17 10:55	12/27/17 14:23	4165-62-2	
2-Fluorophenol (S)	47	%	21-110	1	12/26/17 10:55	12/27/17 14:23	367-12-4	
2,4,6-Tribromophenol (S)	89	%	10-123	1	12/26/17 10:55	12/27/17 14:23	118-79-6	
2-Chlorophenol-d4 (S)	74	%	33-110	1	12/26/17 10:55	12/27/17 14:23	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	71	%	16-110	1	12/26/17 10:55	12/27/17 14:23	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 11:03	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 11:03	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 11:03	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 11:03	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	115	%	68-153	1		12/28/17 11:03	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/28/17 11:03	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		12/28/17 11:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-03D **Lab ID: 7038591009** Collected: 12/20/17 09:35 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 14:51	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	57	%	35-114	1	12/26/17 10:55	12/27/17 14:51	4165-60-0	
2-Fluorobiphenyl (S)	78	%	43-116	1	12/26/17 10:55	12/27/17 14:51	321-60-8	
p-Terphenyl-d14 (S)	74	%	33-141	1	12/26/17 10:55	12/27/17 14:51	1718-51-0	
Phenol-d5 (S)	28	%	10-110	1	12/26/17 10:55	12/27/17 14:51	4165-62-2	
2-Fluorophenol (S)	44	%	21-110	1	12/26/17 10:55	12/27/17 14:51	367-12-4	
2,4,6-Tribromophenol (S)	89	%	10-123	1	12/26/17 10:55	12/27/17 14:51	118-79-6	
2-Chlorophenol-d4 (S)	77	%	33-110	1	12/26/17 10:55	12/27/17 14:51	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	72	%	16-110	1	12/26/17 10:55	12/27/17 14:51	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 11:21	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 11:21	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 11:21	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 11:21	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/28/17 11:21	17060-07-0	
4-Bromofluorobenzene (S)	103	%	79-124	1		12/28/17 11:21	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 11:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-05S **Lab ID: 7039186004** Collected: 12/27/17 09:15 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 12:39	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	75	%	35-114	1	01/03/18 10:23	01/05/18 12:39	4165-60-0	
2-Fluorobiphenyl (S)	78	%	43-116	1	01/03/18 10:23	01/05/18 12:39	321-60-8	
p-Terphenyl-d14 (S)	43	%	33-141	1	01/03/18 10:23	01/05/18 12:39	1718-51-0	
Phenol-d5 (S)	32	%	10-110	1	01/03/18 10:23	01/05/18 12:39	4165-62-2	
2-Fluorophenol (S)	45	%	21-110	1	01/03/18 10:23	01/05/18 12:39	367-12-4	
2,4,6-Tribromophenol (S)	111	%	10-123	1	01/03/18 10:23	01/05/18 12:39	118-79-6	E
2-Chlorophenol-d4 (S)	75	%	33-110	1	01/03/18 10:23	01/05/18 12:39	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	72	%	16-110	1	01/03/18 10:23	01/05/18 12:39	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 18:47	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 18:47	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 18:47	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 18:47	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	83	%	68-153	1		12/31/17 18:47	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		12/31/17 18:47	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/31/17 18:47	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-05I **Lab ID: 7039186005** Collected: 12/27/17 10:03 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**14.9**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	83-32-9	
Acenaphthylene	**297** D	ug/L	250	50	01/03/18 10:23	01/08/18 17:51	208-96-8	
Anthracene	**3.0J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	206-44-0	
Fluorene	**34.4**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	193-39-5	
2-Methylnaphthalene	**330** D	ug/L	250	50	01/03/18 10:23	01/08/18 17:51	91-57-6	
Naphthalene	**1710** D	ug/L	250	50	01/03/18 10:23	01/08/18 17:51	91-20-3	
Phenanthrene	**21.8**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 13:35	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	84	%	35-114	1	01/03/18 10:23	01/05/18 13:35	4165-60-0	
2-Fluorobiphenyl (S)	82	%	43-116	1	01/03/18 10:23	01/05/18 13:35	321-60-8	
p-Terphenyl-d14 (S)	60	%	33-141	1	01/03/18 10:23	01/05/18 13:35	1718-51-0	
Phenol-d5 (S)	36	%	10-110	1	01/03/18 10:23	01/05/18 13:35	4165-62-2	
2-Fluorophenol (S)	52	%	21-110	1	01/03/18 10:23	01/05/18 13:35	367-12-4	
2,4,6-Tribromophenol (S)	115	%	10-123	1	01/03/18 10:23	01/05/18 13:35	118-79-6	E
2-Chlorophenol-d4 (S)	80	%	33-110	1	01/03/18 10:23	01/05/18 13:35	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	72	%	16-110	1	01/03/18 10:23	01/05/18 13:35	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 18:26	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 18:26	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 18:26	108-88-3	
Xylene (Total)	**56.4**	ug/L	2.0	1		12/31/17 18:26	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	79	%	68-153	1		12/31/17 18:26	17060-07-0	
4-Bromofluorobenzene (S)	96	%	79-124	1		12/31/17 18:26	460-00-4	
Toluene-d8 (S)	94	%	69-124	1		12/31/17 18:26	2037-26-5	

2/15/18

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-05D **Lab ID: 7039186006** Collected: 12/27/17 08:40 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**4.7J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	83-32-9	
Acenaphthylene	**68.2**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	206-44-0	
Fluorene	**9.3**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	193-39-5	
2-Methylnaphthalene	**214J** D	ug/L	250	50	01/03/18 10:23	01/08/18 18:19	91-57-6	
Naphthalene	**1550** D	ug/L	250	50	01/03/18 10:23	01/08/18 18:19	91-20-3	
Phenanthrene	**1.0J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:30	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	87	%	35-114	1	01/03/18 10:23	01/05/18 14:30	4165-60-0	
2-Fluorobiphenyl (S)	85	%	43-116	1	01/03/18 10:23	01/05/18 14:30	321-60-8	
p-Terphenyl-d14 (S)	68	%	33-141	1	01/03/18 10:23	01/05/18 14:30	1718-51-0	
Phenol-d5 (S)	37	%	10-110	1	01/03/18 10:23	01/05/18 14:30	4165-62-2	
2-Fluorophenol (S)	53	%	21-110	1	01/03/18 10:23	01/05/18 14:30	367-12-4	
2,4,6-Tribromophenol (S)	118	%	10-123	1	01/03/18 10:23	01/05/18 14:30	118-79-6	E
2-Chlorophenol-d4 (S)	84	%	33-110	1	01/03/18 10:23	01/05/18 14:30	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	75	%	16-110	1	01/03/18 10:23	01/05/18 14:30	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**3.1**	ug/L	1.0	1		12/31/17 18:06	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 18:06	100-41-4	
Toluene	**2.8**	ug/L	1.0	1		12/31/17 18:06	108-88-3	
Xylene (Total)	**57.4**	ug/L	2.0	1		12/31/17 18:06	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	82	%	68-153	1		12/31/17 18:06	17060-07-0	
4-Bromofluorobenzene (S)	94	%	79-124	1		12/31/17 18:06	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/31/17 18:06	2037-26-5	

2/16/18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-08S **Lab ID: 7039186003** Collected: 12/26/17 14:15 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	83-32-9	R1
Acenaphthylene	**1.6J**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	208-96-8	R1
Anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	120-12-7	R1
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	56-55-3	R1
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	50-32-8	R1
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	205-99-2	R1
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	191-24-2	R1
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	207-08-9	R1
Chrysene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	218-01-9	R1
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	53-70-3	R1
Fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	206-44-0	R1
Fluorene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	86-73-7	R1
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	193-39-5	R1
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	91-57-6	R1
Naphthalene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	91-20-3	R1
Phenanthrene	**3.6J**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	85-01-8	R1
Pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 21:04	129-00-0	R1
Surrogates								
Nitrobenzene-d5 (S)	83	%	35-114	1	01/02/18 16:48	01/03/18 21:04	4165-60-0	
2-Fluorobiphenyl (S)	82	%	43-116	1	01/02/18 16:48	01/03/18 21:04	321-60-8	
p-Terphenyl-d14 (S)	92	%	33-141	1	01/02/18 16:48	01/03/18 21:04	1718-51-0	
Phenol-d5 (S)	25	%	10-110	1	01/02/18 16:48	01/03/18 21:04	4165-62-2	
2-Fluorophenol (S)	36	%	21-110	1	01/02/18 16:48	01/03/18 21:04	367-12-4	
2,4,6-Tribromophenol (S)	105	%	10-123	1	01/02/18 16:48	01/03/18 21:04	118-79-6	
2-Chlorophenol-d4 (S)	72	%	33-110	1	01/02/18 16:48	01/03/18 21:04	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	67	%	16-110	1	01/02/18 16:48	01/03/18 21:04	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**25.0**	ug/L	1.0	1		12/31/17 22:32	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 22:32	100-41-4	
Toluene	**2.7**	ug/L	1.0	1		12/31/17 22:32	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 22:32	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	80	%	68-153	1		12/31/17 22:32	17060-07-0	
4-Bromofluorobenzene (S)	97	%	79-124	1		12/31/17 22:32	460-00-4	
Toluene-d8 (S)	100	%	69-124	1		12/31/17 22:32	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-08I **Lab ID: 7039186002** Collected: 12/26/17 12:55 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:37	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	83	%	35-114	1	01/02/18 16:48	01/03/18 20:37	4165-60-0	
2-Fluorobiphenyl (S)	81	%	43-116	1	01/02/18 16:48	01/03/18 20:37	321-60-8	
p-Terphenyl-d14 (S)	97	%	33-141	1	01/02/18 16:48	01/03/18 20:37	1718-51-0	
Phenol-d5 (S)	19	%	10-110	1	01/02/18 16:48	01/03/18 20:37	4165-62-2	
2-Fluorophenol (S)	29	%	21-110	1	01/02/18 16:48	01/03/18 20:37	367-12-4	
2,4,6-Tribromophenol (S)	96	%	10-123	1	01/02/18 16:48	01/03/18 20:37	118-79-6	
2-Chlorophenol-d4 (S)	66	%	33-110	1	01/02/18 16:48	01/03/18 20:37	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	74	%	16-110	1	01/02/18 16:48	01/03/18 20:37	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 19:07	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 19:07	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 19:07	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 19:07	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	79	%	68-153	1		12/31/17 19:07	17060-07-0	
4-Bromofluorobenzene (S)	95	%	79-124	1		12/31/17 19:07	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/31/17 19:07	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-08D **Lab ID: 7039186001** Collected: 12/26/17 11:35 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/02/18 16:48	01/03/18 20:10	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	80	%	35-114	1	01/02/18 16:48	01/03/18 20:10	4165-60-0	
2-Fluorobiphenyl (S)	83	%	43-116	1	01/02/18 16:48	01/03/18 20:10	321-60-8	
p-Terphenyl-d14 (S)	95	%	33-141	1	01/02/18 16:48	01/03/18 20:10	1718-51-0	
Phenol-d5 (S)	24	%	10-110	1	01/02/18 16:48	01/03/18 20:10	4165-62-2	
2-Fluorophenol (S)	35	%	21-110	1	01/02/18 16:48	01/03/18 20:10	367-12-4	
2,4,6-Tribromophenol (S)	106	%	10-123	1	01/02/18 16:48	01/03/18 20:10	118-79-6	
2-Chlorophenol-d4 (S)	68	%	33-110	1	01/02/18 16:48	01/03/18 20:10	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	66	%	16-110	1	01/02/18 16:48	01/03/18 20:10	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 19:28	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 19:28	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 19:28	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 19:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	82	%	68-153	1		12/31/17 19:28	17060-07-0	
4-Bromofluorobenzene (S)	95	%	79-124	1		12/31/17 19:28	460-00-4	
Toluene-d8 (S)	97	%	69-124	1		12/31/17 19:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-12S **Lab ID: 7038591016** Collected: 12/22/17 09:05 Received: 12/22/17 13:48 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	83-32-9	M1
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	208-96-8	M1
Anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	86-73-7	M1
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	91-20-3	M1
Phenanthrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 13:25	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	78	%	35-114	1	12/29/17 14:25	01/03/18 13:25	4165-60-0	
2-Fluorobiphenyl (S)	80	%	43-116	1	12/29/17 14:25	01/03/18 13:25	321-60-8	
p-Terphenyl-d14 (S)	91	%	33-141	1	12/29/17 14:25	01/03/18 13:25	1718-51-0	
Phenol-d5 (S)	15	%	10-110	1	12/29/17 14:25	01/03/18 13:25	4165-62-2	
2-Fluorophenol (S)	25	%	21-110	1	12/29/17 14:25	01/03/18 13:25	367-12-4	
2,4,6-Tribromophenol (S)	93	%	10-123	1	12/29/17 14:25	01/03/18 13:25	118-79-6	
2-Chlorophenol-d4 (S)	61	%	33-110	1	12/29/17 14:25	01/03/18 13:25	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	74	%	16-110	1	12/29/17 14:25	01/03/18 13:25	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 13:10	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 13:10	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 13:10	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 13:10	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	115	%	68-153	1		12/28/17 13:10	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/28/17 13:10	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		12/28/17 13:10	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-13S **Lab ID: 7038591004** Collected: 12/19/17 12:00 Received: 12/19/17 16:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:58	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	75	%	35-114	1	12/21/17 13:45	12/22/17 14:58	4165-60-0	
2-Fluorobiphenyl (S)	80	%	43-116	1	12/21/17 13:45	12/22/17 14:58	321-60-8	
p-Terphenyl-d14 (S)	79	%	33-141	1	12/21/17 13:45	12/22/17 14:58	1718-51-0	
Phenol-d5 (S)	33	%	10-110	1	12/21/17 13:45	12/22/17 14:58	4165-62-2	
2-Fluorophenol (S)	49	%	21-110	1	12/21/17 13:45	12/22/17 14:58	367-12-4	
2,4,6-Tribromophenol (S)	93	%	10-123	1	12/21/17 13:45	12/22/17 14:58	118-79-6	
2-Chlorophenol-d4 (S)	77	%	33-110	1	12/21/17 13:45	12/22/17 14:58	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	74	%	16-110	1	12/21/17 13:45	12/22/17 14:58	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/23/17 00:18	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/23/17 00:18	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/23/17 00:18	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/23/17 00:18	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%	68-153	1		12/23/17 00:18	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/23/17 00:18	460-00-4	
Toluene-d8 (S)	101	%	69-124	1		12/23/17 00:18	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-13I **Lab ID: 7038591011** Collected: 12/21/17 09:10 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 16:44	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	66	%	35-114	1	12/26/17 10:55	12/27/17 16:44	4165-60-0	
2-Fluorobiphenyl (S)	81	%	43-116	1	12/26/17 10:55	12/27/17 16:44	321-60-8	
p-Terphenyl-d14 (S)	78	%	33-141	1	12/26/17 10:55	12/27/17 16:44	1718-51-0	
Phenol-d5 (S)	24	%	10-110	1	12/26/17 10:55	12/27/17 16:44	4165-62-2	
2-Fluorophenol (S)	38	%	21-110	1	12/26/17 10:55	12/27/17 16:44	367-12-4	
2,4,6-Tribromophenol (S)	97	%	10-123	1	12/26/17 10:55	12/27/17 16:44	118-79-6	
2-Chlorophenol-d4 (S)	76	%	33-110	1	12/26/17 10:55	12/27/17 16:44	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	68	%	16-110	1	12/26/17 10:55	12/27/17 16:44	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**0.43J**	ug/L	1.0	1		12/28/17 11:57	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 11:57	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 11:57	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 11:57	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%	68-153	1		12/28/17 11:57	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/28/17 11:57	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 11:57	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-13D **Lab ID: 7038591012** Collected: 12/21/17 10:40 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**4.7J**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	83-32-9	
Acenaphthylene	**10**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 17:12	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	61	%	35-114	1	12/26/17 10:55	12/27/17 17:12	4165-60-0	
2-Fluorobiphenyl (S)	76	%	43-116	1	12/26/17 10:55	12/27/17 17:12	321-60-8	
p-Terphenyl-d14 (S)	74	%	33-141	1	12/26/17 10:55	12/27/17 17:12	1718-51-0	
Phenol-d5 (S)	25	%	10-110	1	12/26/17 10:55	12/27/17 17:12	4165-62-2	
2-Fluorophenol (S)	39	%	21-110	1	12/26/17 10:55	12/27/17 17:12	367-12-4	
2,4,6-Tribromophenol (S)	92	%	10-123	1	12/26/17 10:55	12/27/17 17:12	118-79-6	
2-Chlorophenol-d4 (S)	63	%	33-110	1	12/26/17 10:55	12/27/17 17:12	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	70	%	16-110	1	12/26/17 10:55	12/27/17 17:12	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**1.3**	ug/L	1.0	1		12/28/17 12:15	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 12:15	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 12:15	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 12:15	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/28/17 12:15	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124	1		12/28/17 12:15	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 12:15	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: DUP20171221 (HMW-13D) **Lab ID: 7038591014** Collected: 12/21/17 12:00 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**4.6J**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	83-32-9	
Acenaphthylene	**9.9**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 14:18	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	47	%	35-114	1	12/28/17 17:18	12/29/17 14:18	4165-60-0	
2-Fluorobiphenyl (S)	69	%	43-116	1	12/28/17 17:18	12/29/17 14:18	321-60-8	
p-Terphenyl-d14 (S)	80	%	33-141	1	12/28/17 17:18	12/29/17 14:18	1718-51-0	
Phenol-d5 (S)	14	%	10-110	1	12/28/17 17:18	12/29/17 14:18	4165-62-2	
2-Fluorophenol (S)	23	%	21-110	1	12/28/17 17:18	12/29/17 14:18	367-12-4	
2,4,6-Tribromophenol (S)	86	%	10-123	1	12/28/17 17:18	12/29/17 14:18	118-79-6	
2-Chlorophenol-d4 (S)	53	%	33-110	1	12/28/17 17:18	12/29/17 14:18	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	52	%	16-110	1	12/28/17 17:18	12/29/17 14:18	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**1.4**	ug/L	1.0	1		12/28/17 12:51	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 12:51	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 12:51	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 12:51	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/28/17 12:51	17060-07-0	
4-Bromofluorobenzene (S)	103	%	79-124	1		12/28/17 12:51	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 12:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-14I **Lab ID: 7038591010** Collected: 12/20/17 14:05 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**8.2**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	83-32-9	
Acenaphthylene	**11.1**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	208-96-8	
Anthracene	**0.64J**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	206-44-0	
Fluorene	**3.1J**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	91-20-3	
Phenanthrene	**2.8J**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/26/17 10:55	12/27/17 15:19	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	66	%	35-114	1	12/26/17 10:55	12/27/17 15:19	4165-60-0	
2-Fluorobiphenyl (S)	87	%	43-116	1	12/26/17 10:55	12/27/17 15:19	321-60-8	
p-Terphenyl-d14 (S)	79	%	33-141	1	12/26/17 10:55	12/27/17 15:19	1718-51-0	
Phenol-d5 (S)	27	%	10-110	1	12/26/17 10:55	12/27/17 15:19	4165-62-2	
2-Fluorophenol (S)	45	%	21-110	1	12/26/17 10:55	12/27/17 15:19	367-12-4	
2,4,6-Tribromophenol (S)	103	%	10-123	1	12/26/17 10:55	12/27/17 15:19	118-79-6	
2-Chlorophenol-d4 (S)	81	%	33-110	1	12/26/17 10:55	12/27/17 15:19	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	76	%	16-110	1	12/26/17 10:55	12/27/17 15:19	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**2.4** J	ug/L	1.0	1		12/28/17 11:39	71-43-2	D6
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 11:39	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 11:39	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 11:39	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%	68-153	1		12/28/17 11:39	17060-07-0	
4-Bromofluorobenzene (S)	103	%	79-124	1		12/28/17 11:39	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		12/28/17 11:39	2037-26-5	

2/13/18
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-14D **Lab ID: 7038591013** Collected: 12/21/17 13:12 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/28/17 17:18	12/29/17 13:50	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	49	%	35-114	1	12/28/17 17:18	12/29/17 13:50	4165-60-0	
2-Fluorobiphenyl (S)	64	%	43-116	1	12/28/17 17:18	12/29/17 13:50	321-60-8	
p-Terphenyl-d14 (S)	64	%	33-141	1	12/28/17 17:18	12/29/17 13:50	1718-51-0	
Phenol-d5 (S)	9	%	10-110	1	12/28/17 17:18	12/29/17 13:50	4165-62-2	S0
2-Fluorophenol (S)	16	%	21-110	1	12/28/17 17:18	12/29/17 13:50	367-12-4	S0
2,4,6-Tribromophenol (S)	77	%	10-123	1	12/28/17 17:18	12/29/17 13:50	118-79-6	
2-Chlorophenol-d4 (S)	40	%	33-110	1	12/28/17 17:18	12/29/17 13:50	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	49	%	16-110	1	12/28/17 17:18	12/29/17 13:50	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 12:33	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 12:33	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 12:33	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 12:33	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/28/17 12:33	17060-07-0	
4-Bromofluorobenzene (S)	103	%	79-124	1		12/28/17 12:33	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 12:33	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-15I **Lab ID: 7038591002** Collected: 12/19/17 08:45 Received: 12/19/17 16:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	83-32-9	
Acenaphthylene	**5.4**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:34	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	73	%	35-114	1	12/21/17 13:45	12/22/17 13:34	4165-60-0	
2-Fluorobiphenyl (S)	76	%	43-116	1	12/21/17 13:45	12/22/17 13:34	321-60-8	
p-Terphenyl-d14 (S)	67	%	33-141	1	12/21/17 13:45	12/22/17 13:34	1718-51-0	
Phenol-d5 (S)	30	%	10-110	1	12/21/17 13:45	12/22/17 13:34	4165-62-2	
2-Fluorophenol (S)	44	%	21-110	1	12/21/17 13:45	12/22/17 13:34	367-12-4	
2,4,6-Tribromophenol (S)	91	%	10-123	1	12/21/17 13:45	12/22/17 13:34	118-79-6	
2-Chlorophenol-d4 (S)	72	%	33-110	1	12/21/17 13:45	12/22/17 13:34	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	67	%	16-110	1	12/21/17 13:45	12/22/17 13:34	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**3.9**	ug/L	1.0	1		12/23/17 01:49	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/23/17 01:49	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/23/17 01:49	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/23/17 01:49	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%	68-153	1		12/23/17 01:49	17060-07-0	
4-Bromofluorobenzene (S)	104	%	79-124	1		12/23/17 01:49	460-00-4	
Toluene-d8 (S)	100	%	69-124	1		12/23/17 01:49	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-15D **Lab ID: 7038591003** Collected: 12/19/17 09:55 Received: 12/19/17 16:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 14:30	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	76	%	35-114	1	12/21/17 13:45	12/22/17 14:30	4165-60-0	
2-Fluorobiphenyl (S)	80	%	43-116	1	12/21/17 13:45	12/22/17 14:30	321-60-8	
p-Terphenyl-d14 (S)	76	%	33-141	1	12/21/17 13:45	12/22/17 14:30	1718-51-0	
Phenol-d5 (S)	31	%	10-110	1	12/21/17 13:45	12/22/17 14:30	4165-62-2	
2-Fluorophenol (S)	46	%	21-110	1	12/21/17 13:45	12/22/17 14:30	367-12-4	
2,4,6-Tribromophenol (S)	92	%	10-123	1	12/21/17 13:45	12/22/17 14:30	118-79-6	
2-Chlorophenol-d4 (S)	76	%	33-110	1	12/21/17 13:45	12/22/17 14:30	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	72	%	16-110	1	12/21/17 13:45	12/22/17 14:30	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/23/17 00:00	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/23/17 00:00	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/23/17 00:00	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/23/17 00:00	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%	68-153	1		12/23/17 00:00	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/23/17 00:00	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		12/23/17 00:00	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-20S **Lab ID: 7039186007** Collected: 12/27/17 11:50 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 14:57	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	84	%	35-114	1	01/03/18 10:23	01/05/18 14:57	4165-60-0	
2-Fluorobiphenyl (S)	83	%	43-116	1	01/03/18 10:23	01/05/18 14:57	321-60-8	
p-Terphenyl-d14 (S)	71	%	33-141	1	01/03/18 10:23	01/05/18 14:57	1718-51-0	
Phenol-d5 (S)	33	%	10-110	1	01/03/18 10:23	01/05/18 14:57	4165-62-2	
2-Fluorophenol (S)	48	%	21-110	1	01/03/18 10:23	01/05/18 14:57	367-12-4	
2,4,6-Tribromophenol (S)	107	%	10-123	1	01/03/18 10:23	01/05/18 14:57	118-79-6	E
2-Chlorophenol-d4 (S)	79	%	33-110	1	01/03/18 10:23	01/05/18 14:57	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	78	%	16-110	1	01/03/18 10:23	01/05/18 14:57	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 17:46	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 17:46	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 17:46	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 17:46	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	82	%	68-153	1		12/31/17 17:46	17060-07-0	
4-Bromofluorobenzene (S)	94	%	79-124	1		12/31/17 17:46	460-00-4	
Toluene-d8 (S)	92	%	69-124	1		12/31/17 17:46	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-20I **Lab ID: 7039186008** Collected: 12/27/17 11:55 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**13.6**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	83-32-9	
Acenaphthylene	**225** D	ug/L	50.0	10	01/03/18 10:23	01/08/18 16:29	208-96-8	
Anthracene	**3.3J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	206-44-0	
Fluorene	**25.1**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	193-39-5	
2-Methylnaphthalene	**9.8**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	91-57-6	
Naphthalene	**158** D	ug/L	50.0	10	01/03/18 10:23	01/08/18 16:29	91-20-3	
Phenanthrene	**30.2**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:25	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	89	%	35-114	1	01/03/18 10:23	01/05/18 15:25	4165-60-0	
2-Fluorobiphenyl (S)	93	%	43-116	1	01/03/18 10:23	01/05/18 15:25	321-60-8	
p-Terphenyl-d14 (S)	70	%	33-141	1	01/03/18 10:23	01/05/18 15:25	1718-51-0	
Phenol-d5 (S)	35	%	10-110	1	01/03/18 10:23	01/05/18 15:25	4165-62-2	
2-Fluorophenol (S)	54	%	21-110	1	01/03/18 10:23	01/05/18 15:25	367-12-4	
2,4,6-Tribromophenol (S)	124	%	10-123	1	01/03/18 10:23	01/05/18 15:25	118-79-6	E,S0
2-Chlorophenol-d4 (S)	84	%	33-110	1	01/03/18 10:23	01/05/18 15:25	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	77	%	16-110	1	01/03/18 10:23	01/05/18 15:25	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**3.9**	ug/L	1.0	1		12/31/17 17:25	71-43-2	
Ethylbenzene	**28.3**	ug/L	1.0	1		12/31/17 17:25	100-41-4	
Toluene	**2.6**	ug/L	1.0	1		12/31/17 17:25	108-88-3	
Xylene (Total)	**153**	ug/L	2.0	1		12/31/17 17:25	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	81	%	68-153	1		12/31/17 17:25	17060-07-0	
4-Bromofluorobenzene (S)	96	%	79-124	1		12/31/17 17:25	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		12/31/17 17:25	2037-26-5	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-22 **Lab ID: 7038591005** Collected: 12/19/17 14:25 Received: 12/19/17 16:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 15:25	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	79	%	35-114	1	12/21/17 13:45	12/22/17 15:25	4165-60-0	
2-Fluorobiphenyl (S)	84	%	43-116	1	12/21/17 13:45	12/22/17 15:25	321-60-8	
p-Terphenyl-d14 (S)	84	%	33-141	1	12/21/17 13:45	12/22/17 15:25	1718-51-0	
Phenol-d5 (S)	30	%	10-110	1	12/21/17 13:45	12/22/17 15:25	4165-62-2	
2-Fluorophenol (S)	46	%	21-110	1	12/21/17 13:45	12/22/17 15:25	367-12-4	
2,4,6-Tribromophenol (S)	99	%	10-123	1	12/21/17 13:45	12/22/17 15:25	118-79-6	
2-Chlorophenol-d4 (S)	80	%	33-110	1	12/21/17 13:45	12/22/17 15:25	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	79	%	16-110	1	12/21/17 13:45	12/22/17 15:25	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/23/17 00:36	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/23/17 00:36	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/23/17 00:36	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/23/17 00:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/23/17 00:36	17060-07-0	
4-Bromofluorobenzene (S)	103	%	79-124	1		12/23/17 00:36	460-00-4	
Toluene-d8 (S)	101	%	69-124	1		12/23/17 00:36	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-23 **Lab ID: 7038591001** Collected: 12/18/17 14:22 Received: 12/19/17 16:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/21/17 13:45	12/22/17 13:07	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	77	%	35-114	1	12/21/17 13:45	12/22/17 13:07	4165-60-0	
2-Fluorobiphenyl (S)	80	%	43-116	1	12/21/17 13:45	12/22/17 13:07	321-60-8	
p-Terphenyl-d14 (S)	79	%	33-141	1	12/21/17 13:45	12/22/17 13:07	1718-51-0	
Phenol-d5 (S)	32	%	10-110	1	12/21/17 13:45	12/22/17 13:07	4165-62-2	
2-Fluorophenol (S)	48	%	21-110	1	12/21/17 13:45	12/22/17 13:07	367-12-4	
2,4,6-Tribromophenol (S)	92	%	10-123	1	12/21/17 13:45	12/22/17 13:07	118-79-6	
2-Chlorophenol-d4 (S)	76	%	33-110	1	12/21/17 13:45	12/22/17 13:07	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	72	%	16-110	1	12/21/17 13:45	12/22/17 13:07	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/22/17 22:48	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/22/17 22:48	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/22/17 22:48	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/22/17 22:48	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%	68-153	1		12/22/17 22:48	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/22/17 22:48	460-00-4	
Toluene-d8 (S)	101	%	69-124	1		12/22/17 22:48	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-24 **Lab ID: 7038591017** Collected: 12/22/17 10:35 Received: 12/22/17 13:48 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 14:19	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	76	%	35-114	1	12/29/17 14:25	01/03/18 14:19	4165-60-0	
2-Fluorobiphenyl (S)	76	%	43-116	1	12/29/17 14:25	01/03/18 14:19	321-60-8	
p-Terphenyl-d14 (S)	88	%	33-141	1	12/29/17 14:25	01/03/18 14:19	1718-51-0	
Phenol-d5 (S)	15	%	10-110	1	12/29/17 14:25	01/03/18 14:19	4165-62-2	
2-Fluorophenol (S)	25	%	21-110	1	12/29/17 14:25	01/03/18 14:19	367-12-4	
2,4,6-Tribromophenol (S)	88	%	10-123	1	12/29/17 14:25	01/03/18 14:19	118-79-6	
2-Chlorophenol-d4 (S)	59	%	33-110	1	12/29/17 14:25	01/03/18 14:19	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	68	%	16-110	1	12/29/17 14:25	01/03/18 14:19	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 13:27	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 13:27	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 13:27	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 13:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/28/17 13:27	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124	1		12/28/17 13:27	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 13:27	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: HIMW-25 **Lab ID: 7038591018** Collected: 12/22/17 12:20 Received: 12/22/17 13:48 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**2.6J**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	83-32-9	
Acenaphthylene	**27.2**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	206-44-0	
Fluorene	**3.1J**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	193-39-5	
2-Methylnaphthalene	**13.8**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	91-57-6	
Naphthalene	**460** D	ug/L	50.0	10	12/29/17 14:25	01/03/18 16:32	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	12/29/17 14:25	01/03/18 15:14	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	66	%	35-114	1	12/29/17 14:25	01/03/18 15:14	4165-60-0	
2-Fluorobiphenyl (S)	69	%	43-116	1	12/29/17 14:25	01/03/18 15:14	321-60-8	
p-Terphenyl-d14 (S)	89	%	33-141	1	12/29/17 14:25	01/03/18 15:14	1718-51-0	
Phenol-d5 (S)	17	%	10-110	1	12/29/17 14:25	01/03/18 15:14	4165-62-2	
2-Fluorophenol (S)	26	%	21-110	1	12/29/17 14:25	01/03/18 15:14	367-12-4	
2,4,6-Tribromophenol (S)	96	%	10-123	1	12/29/17 14:25	01/03/18 15:14	118-79-6	
2-Chlorophenol-d4 (S)	55	%	33-110	1	12/29/17 14:25	01/03/18 15:14	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%	16-110	1	12/29/17 14:25	01/03/18 15:14	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**591** D	ug/L	10.0	10		12/28/17 14:21	71-43-2	
Ethylbenzene	**17.4**	ug/L	1.0	1		12/28/17 13:45	100-41-4	
Toluene	**3.5**	ug/L	1.0	1		12/28/17 13:45	108-88-3	
Xylene (Total)	**217**	ug/L	2.0	1		12/28/17 13:45	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	121	%	68-153	1		12/28/17 13:45	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/28/17 13:45	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 13:45	2037-26-5	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-26I **Lab ID: 7039186013** Collected: 12/28/17 09:20 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:14	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	74	%	35-114	1	01/03/18 10:23	01/05/18 17:14	4165-60-0	
2-Fluorobiphenyl (S)	77	%	43-116	1	01/03/18 10:23	01/05/18 17:14	321-60-8	
p-Terphenyl-d14 (S)	79	%	33-141	1	01/03/18 10:23	01/05/18 17:14	1718-51-0	
Phenol-d5 (S)	28	%	10-110	1	01/03/18 10:23	01/05/18 17:14	4165-62-2	
2-Fluorophenol (S)	42	%	21-110	1	01/03/18 10:23	01/05/18 17:14	367-12-4	
2,4,6-Tribromophenol (S)	109	%	10-123	1	01/03/18 10:23	01/05/18 17:14	118-79-6	E
2-Chlorophenol-d4 (S)	73	%	33-110	1	01/03/18 10:23	01/05/18 17:14	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	68	%	16-110	1	01/03/18 10:23	01/05/18 17:14	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 22:11	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 22:11	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 22:11	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 22:11	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	83	%	68-153	1		12/31/17 22:11	17060-07-0	
4-Bromofluorobenzene (S)	96	%	79-124	1		12/31/17 22:11	460-00-4	
Toluene-d8 (S)	97	%	69-124	1		12/31/17 22:11	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-26D **Lab ID: 7039186012** Collected: 12/28/17 08:55 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**7.1**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	83-32-9	
Acenaphthylene	**137J**	ug/L	250	50	01/03/18 10:23	01/08/18 18:46	208-96-8	
Anthracene	**1.2J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	206-44-0	
Fluorene	**18.6**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	193-39-5	
2-Methylnaphthalene	**257**	ug/L	250	50	01/03/18 10:23	01/08/18 18:46	91-57-6	
Naphthalene	**1700**	ug/L	250	50	01/03/18 10:23	01/08/18 18:46	91-20-3	
Phenanthrene	**16.8**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:47	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	89	%	35-114	1	01/03/18 10:23	01/05/18 16:47	4165-60-0	
2-Fluorobiphenyl (S)	90	%	43-116	1	01/03/18 10:23	01/05/18 16:47	321-60-8	
p-Terphenyl-d14 (S)	65	%	33-141	1	01/03/18 10:23	01/05/18 16:47	1718-51-0	
Phenol-d5 (S)	36	%	10-110	1	01/03/18 10:23	01/05/18 16:47	4165-62-2	
2-Fluorophenol (S)	54	%	21-110	1	01/03/18 10:23	01/05/18 16:47	367-12-4	
2,4,6-Tribromophenol (S)	123	%	10-123	1	01/03/18 10:23	01/05/18 16:47	118-79-6	E
2-Chlorophenol-d4 (S)	86	%	33-110	1	01/03/18 10:23	01/05/18 16:47	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	77	%	16-110	1	01/03/18 10:23	01/05/18 16:47	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 21:51	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 21:51	100-41-4	
Toluene	**2.3**	ug/L	1.0	1		12/31/17 21:51	108-88-3	
Xylene (Total)	**103**	ug/L	2.0	1		12/31/17 21:51	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	92	%	68-153	1		12/31/17 21:51	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		12/31/17 21:51	460-00-4	
Toluene-d8 (S)	96	%	69-124	1		12/31/17 21:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: DUP20171228 (HIMW-26D) **Lab ID: 7039186016** Collected: 12/28/17 08:00 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**7.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	83-32-9	
Acenaphthylene	**142J** D	ug/L	250	50	01/03/18 10:23	01/08/18 19:42	208-96-8	
Anthracene	**1.3J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	206-44-0	
Fluorene	**18.3**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	193-39-5	
2-Methylnaphthalene	**299** D	ug/L	250	50	01/03/18 10:23	01/08/18 19:42	91-57-6	
Naphthalene	**1830** D	ug/L	250	50	01/03/18 10:23	01/08/18 19:42	91-20-3	
Phenanthrene	**16.6**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:37	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	100	%	35-114	1	01/03/18 10:23	01/05/18 18:37	4165-60-0	
2-Fluorobiphenyl (S)	102	%	43-116	1	01/03/18 10:23	01/05/18 18:37	321-60-8	
p-Terphenyl-d14 (S)	56	%	33-141	1	01/03/18 10:23	01/05/18 18:37	1718-51-0	
Phenol-d5 (S)	39	%	10-110	1	01/03/18 10:23	01/05/18 18:37	4165-62-2	
2-Fluorophenol (S)	57	%	21-110	1	01/03/18 10:23	01/05/18 18:37	367-12-4	
2,4,6-Tribromophenol (S)	120	%	10-123	1	01/03/18 10:23	01/05/18 18:37	118-79-6	E
2-Chlorophenol-d4 (S)	89	%	33-110	1	01/03/18 10:23	01/05/18 18:37	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	73	%	16-110	1	01/03/18 10:23	01/05/18 18:37	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		01/02/18 16:46	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		01/02/18 16:46	100-41-4	
Toluene	**2.2**	ug/L	1.0	1		01/02/18 16:46	108-88-3	
Xylene (Total)	**97.1**	ug/L	2.0	1		01/02/18 16:46	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	84	%	68-153	1		01/02/18 16:46	17060-07-0	
4-Bromofluorobenzene (S)	96	%	79-124	1		01/02/18 16:46	460-00-4	
Toluene-d8 (S)	97	%	69-124	1		01/02/18 16:46	2037-26-5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-27S **Lab ID: 7039186014** Collected: 12/28/17 11:50 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**117J** D	ug/L	250	50	01/03/18 10:23	01/08/18 19:14	83-32-9	
Acenaphthylene	**5.9**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	208-96-8	
Anthracene	**11.9**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	53-70-3	
Fluoranthene	**3.1J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	206-44-0	
Fluorene	**57.3**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	193-39-5	
2-Methylnaphthalene	**259** D	ug/L	250	50	01/03/18 10:23	01/08/18 19:14	91-57-6	
Naphthalene	**1300** D	ug/L	250	50	01/03/18 10:23	01/08/18 19:14	91-20-3	
Phenanthrene	**65.8**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	85-01-8	
Pyrene	**4.1J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 17:42	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	86	%	35-114	1	01/03/18 10:23	01/05/18 17:42	4165-60-0	
2-Fluorobiphenyl (S)	91	%	43-116	1	01/03/18 10:23	01/05/18 17:42	321-60-8	
p-Terphenyl-d14 (S)	88	%	33-141	1	01/03/18 10:23	01/05/18 17:42	1718-51-0	
Phenol-d5 (S)	34	%	10-110	1	01/03/18 10:23	01/05/18 17:42	4165-62-2	
2-Fluorophenol (S)	57	%	21-110	1	01/03/18 10:23	01/05/18 17:42	367-12-4	
2,4,6-Tribromophenol (S)	115	%	10-123	1	01/03/18 10:23	01/05/18 17:42	118-79-6	E
2-Chlorophenol-d4 (S)	88	%	33-110	1	01/03/18 10:23	01/05/18 17:42	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	78	%	16-110	1	01/03/18 10:23	01/05/18 17:42	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**7.2**	ug/L	1.0	1		01/02/18 15:41	71-43-2	
Ethylbenzene	**373** D	ug/L	5.0	5		01/02/18 16:05	100-41-4	
Toluene	**8.9**	ug/L	1.0	1		01/02/18 15:41	108-88-3	
Xylene (Total)	**408** D	ug/L	10.0	5		01/02/18 16:05	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	82	%	68-153	1		01/02/18 15:41	17060-07-0	
4-Bromofluorobenzene (S)	95	%	79-124	1		01/02/18 15:41	460-00-4	
Toluene-d8 (S)	91	%	69-124	1		01/02/18 15:41	2037-26-5	

2/15/18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-27I **Lab ID: 7039186015** Collected: 12/28/17 12:48 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 18:09	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	82	%	35-114	1	01/03/18 10:23	01/05/18 18:09	4165-60-0	
2-Fluorobiphenyl (S)	85	%	43-116	1	01/03/18 10:23	01/05/18 18:09	321-60-8	
p-Terphenyl-d14 (S)	40	%	33-141	1	01/03/18 10:23	01/05/18 18:09	1718-51-0	
Phenol-d5 (S)	42	%	10-110	1	01/03/18 10:23	01/05/18 18:09	4165-62-2	
2-Fluorophenol (S)	58	%	21-110	1	01/03/18 10:23	01/05/18 18:09	367-12-4	
2,4,6-Tribromophenol (S)	115	%	10-123	1	01/03/18 10:23	01/05/18 18:09	118-79-6	E
2-Chlorophenol-d4 (S)	86	%	33-110	1	01/03/18 10:23	01/05/18 18:09	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	81	%	16-110	1	01/03/18 10:23	01/05/18 18:09	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		01/02/18 16:25	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		01/02/18 16:25	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		01/02/18 16:25	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		01/02/18 16:25	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	79	%	68-153	1		01/02/18 16:25	17060-07-0	
4-Bromofluorobenzene (S)	96	%	79-124	1		01/02/18 16:25	460-00-4	
Toluene-d8 (S)	100	%	69-124	1		01/02/18 16:25	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-28S **Lab ID: 7039186011** Collected: 12/27/17 15:45 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**40.1**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	83-32-9	
Acenaphthylene	**2.0J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	208-96-8	
Anthracene	**5.0J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	206-44-0	
Fluorene	**23.3**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	193-39-5	
2-Methylnaphthalene	**156** D	ug/L	50.0	10	01/03/18 10:23	01/08/18 16:57	91-57-6	
Naphthalene	**471** D	ug/L	50.0	10	01/03/18 10:23	01/08/18 16:57	91-20-3	
Phenanthrene	**23.5**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	85-01-8	
Pyrene	**1.1J**	ug/L	5.0	1	01/03/18 10:23	01/05/18 16:20	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	95	%	35-114	1	01/03/18 10:23	01/05/18 16:20	4165-60-0	
2-Fluorobiphenyl (S)	80	%	43-116	1	01/03/18 10:23	01/05/18 16:20	321-60-8	
p-Terphenyl-d14 (S)	53	%	33-141	1	01/03/18 10:23	01/05/18 16:20	1718-51-0	
Phenol-d5 (S)	44	%	10-110	1	01/03/18 10:23	01/05/18 16:20	4165-62-2	
2-Fluorophenol (S)	62	%	21-110	1	01/03/18 10:23	01/05/18 16:20	367-12-4	
2,4,6-Tribromophenol (S)	113	%	10-123	1	01/03/18 10:23	01/05/18 16:20	118-79-6	E
2-Chlorophenol-d4 (S)	98	%	33-110	1	01/03/18 10:23	01/05/18 16:20	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	88	%	16-110	1	01/03/18 10:23	01/05/18 16:20	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**2.4**	ug/L	1.0	1		12/31/17 21:31	71-43-2	
Ethylbenzene	**113**	ug/L	1.0	1		12/31/17 21:31	100-41-4	
Toluene	**1.2**	ug/L	1.0	1		12/31/17 21:31	108-88-3	
Xylene (Total)	**9.3**	ug/L	2.0	1		12/31/17 21:31	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	79	%	68-153	1		12/31/17 21:31	17060-07-0	
4-Bromofluorobenzene (S)	94	%	79-124	1		12/31/17 21:31	460-00-4	
Toluene-d8 (S)	95	%	69-124	1		12/31/17 21:31	2037-26-5	

2/15/18 2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: HIMW-28I **Lab ID: 7039186009** Collected: 12/27/17 14:45 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 15:52	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	81	%	35-114	1	01/03/18 10:23	01/05/18 15:52	4165-60-0	
2-Fluorobiphenyl (S)	86	%	43-116	1	01/03/18 10:23	01/05/18 15:52	321-60-8	
p-Terphenyl-d14 (S)	58	%	33-141	1	01/03/18 10:23	01/05/18 15:52	1718-51-0	
Phenol-d5 (S)	35	%	10-110	1	01/03/18 10:23	01/05/18 15:52	4165-62-2	
2-Fluorophenol (S)	49	%	21-110	1	01/03/18 10:23	01/05/18 15:52	367-12-4	
2,4,6-Tribromophenol (S)	110	%	10-123	1	01/03/18 10:23	01/05/18 15:52	118-79-6	E
2-Chlorophenol-d4 (S)	83	%	33-110	1	01/03/18 10:23	01/05/18 15:52	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	75	%	16-110	1	01/03/18 10:23	01/05/18 15:52	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 17:05	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 17:05	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 17:05	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 17:05	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	84	%	68-153	1		12/31/17 17:05	17060-07-0	
4-Bromofluorobenzene (S)	98	%	79-124	1		12/31/17 17:05	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/31/17 17:05	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: TB 20171219 **Lab ID: 7038591006** Collected: 12/19/17 14:45 Received: 12/19/17 16:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/22/17 22:30	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/22/17 22:30	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/22/17 22:30	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/22/17 22:30	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/22/17 22:30	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/22/17 22:30	460-00-4	
Toluene-d8 (S)	100	%	69-124	1		12/22/17 22:30	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: TB20171221 **Lab ID: 7038591015** Collected: 12/21/17 14:00 Received: 12/21/17 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 10:09	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 10:09	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 10:09	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 10:09	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	111	%	68-153	1		12/28/17 10:09	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/28/17 10:09	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 10:09	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Sample: TB20171222 **Lab ID: 7038591019** Collected: 12/22/17 12:20 Received: 12/22/17 13:48 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/28/17 10:27	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/28/17 10:27	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/28/17 10:27	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/28/17 10:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%	68-153	1		12/28/17 10:27	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124	1		12/28/17 10:27	460-00-4	
Toluene-d8 (S)	98	%	69-124	1		12/28/17 10:27	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: TB20171227 **Lab ID: 7039186010** Collected: 12/27/17 00:00 Received: 12/27/17 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		12/31/17 16:44	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		12/31/17 16:44	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		12/31/17 16:44	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		12/31/17 16:44	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	79	%	68-153	1		12/31/17 16:44	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		12/31/17 16:44	460-00-4	
Toluene-d8 (S)	97	%	69-124	1		12/31/17 16:44	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: TB20171228 **Lab ID: 7039186017** Collected: 12/28/17 13:10 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		01/02/18 17:06	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		01/02/18 17:06	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		01/02/18 17:06	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		01/02/18 17:06	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	83	%	68-153	1		01/02/18 17:06	17060-07-0	
4-Bromofluorobenzene (S)	94	%	79-124	1		01/02/18 17:06	460-00-4	
Toluene-d8 (S)	94	%	69-124	1		01/02/18 17:06	2037-26-5	

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ANALYTICAL RESULTS

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Sample: FB20171228 **Lab ID: 7039186018** Collected: 12/28/17 13:10 Received: 12/28/17 14:11 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	01/03/18 10:23	01/05/18 19:04	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	119	%	35-114	1	01/03/18 10:23	01/05/18 19:04	4165-60-0	S3
2-Fluorobiphenyl (S)	89	%	43-116	1	01/03/18 10:23	01/05/18 19:04	321-60-8	
p-Terphenyl-d14 (S)	78	%	33-141	1	01/03/18 10:23	01/05/18 19:04	1718-51-0	
Phenol-d5 (S)	40	%	10-110	1	01/03/18 10:23	01/05/18 19:04	4165-62-2	
2-Fluorophenol (S)	59	%	21-110	1	01/03/18 10:23	01/05/18 19:04	367-12-4	
2,4,6-Tribromophenol (S)	114	%	10-123	1	01/03/18 10:23	01/05/18 19:04	118-79-6	E
2-Chlorophenol-d4 (S)	89	%	33-110	1	01/03/18 10:23	01/05/18 19:04	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	84	%	16-110	1	01/03/18 10:23	01/05/18 19:04	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		01/02/18 17:27	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		01/02/18 17:27	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		01/02/18 17:27	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	1		01/02/18 17:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	79	%	68-153	1		01/02/18 17:27	17060-07-0	
4-Bromofluorobenzene (S)	96	%	79-124	1		01/02/18 17:27	460-00-4	
Toluene-d8 (S)	97	%	69-124	1		01/02/18 17:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

ATTACHMENT B

SUPPORT DOCUMENTATION

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All ...

WO#: 7038591

Page: 1 of 1

2155209

Section A Required Client Information.	Section B Required Project Information.	Section C Invoice Information
Company: AECOM	Report To: Peter Fairbanks	Attention:
Address:	Copy To: Jan Sundquist	Company Name:
		Address:
Email To: peter.fairbanks@aecom.com	Purchase Order No.:	Pace Quote Reference:
Phone: 716-856-5636 Fax:	Project Name: National Grid Hempstead	Pace Project Manager:
Requested Due Date/TAT: Standard	Project Number: 60411920	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NY

Section D Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX 8260	PAH 8270	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-23	WT	G			12/18/17	1422	15	4	2			2						X	X		001
2	HIMW-15I	WT	G			12/19/17	0845	14	4	2			2						X	X		002
3	HIMW-15D	WT	G			12/19/17	0955	14	4	2			2						X	X		003
4	HIMW-13S	WT	G			12/19/17	1200	14	4	2			2						X	X		004
5	HIMW-22	WT	G			12/19/17	1425	15	4	2			2						X	X		005
6	TB 20171219	WT	G			12/19/17	1445		2				2						X			006
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		12/19/17	1502		12/19/17	1502	
		12/19/17	1605		12/19/17	16:05	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: M Dascoli + J Crespo

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 12/18/17

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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Pace Analytical

Sample Condition Upon Receipt

Client Name: AECOM

Projec WO#:7038591

PM: JSA Due Date: 01/04/18

CLIENT: AECOM-B

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Tracking #: —

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals intact: ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH092 Correction Factor: +0.0 ☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 2.7 Cooler Temperature Corrected (°C): 2.7 Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample) Date and Initials of person examining contents: SG 12/19/17

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4
Samples Arrived within Hold Time:	☑Yes	☐No		5
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6
Rush Turn Around Time Requested:	☐Yes	☑No		7
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9
-Pace Containers Used	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container
Sample Labels match COC:	☑Yes	☐No		12
-Includes date/time/ID/Analysis Matrix SL WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water) Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14
Residual chlorine strips Lot #				Positive for Res Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15
Trip Blank Present:	☐Yes	☑No	☐N/A	16
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted _____ Date/Time _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.

WO#:7038591

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately.

Se
Re 7038591

Page: 1 of 1

1934446

Company: AECom	Report To: Peter Fairbanks	**Section C** Invoice Information: Attention:
Address:	Copy To: Jon Sundquist	Company Name
		Address:
Email To: JON.SUNDQUIST@AECOM.COM	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: National Grid Hempstead	Pace Project Manager:
Requested Due Date/TAT: Standard TAT	Project Number: 60411920	Pace Profile #:

REGULATORY AGENCY: NYSDEC

NPDES / X GROUND WATER / DRINKING WATER
UST / RCRA / OTHER

Site Location STATE: NY

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N): N N

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BTEX 8260	PAH 8270	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-03S	WT	G			12/20/17	835	14	4	X			2					X	X		
2	HIMW-03I					12/20/17	1200	14	4	X			2					X	X		
3	HIMW-03D					12/20/17	935	14	4	X			2					X	X		
4	HIMW-14I					12/20/17	1405	14	4	X			2					X	X		
5	HIMW-13I					12/21/17	910	14	4	2			2					X	X		
6	HIMW-13D					12/21/17	1040	14	4	2			2					X	X		
7	HIMW-14D					12/21/17	1325	14	4	2			2					X	X		
8	DUP20171221 (-13D)					12/21/17	1200	14	4	2			2					X	X		
9																					
10	TB20171221					12/21/17	1400	14	2				2					X			
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature]	12/21/17	1505	[signature]	12/21/17	1505				
	[signature]	12/21/17	1615	[signature]	12/21/17	16:15	1.5	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: John Crespo

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/20/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev 07, 15-May-2007

Pace Analytical

Sample Condition Upon Receipt

Client Name: AECOM

Proj: WO#:7038591

PM: JSA Due Date: 01/04/18

CLIENT: AECOM-B

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals intact: ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☑ None ☐ Other Type of Ice: ☑ Wet ☐ Blue ☐ None

Thermometer Used: T1092 Correction Factor: +0.0 ☑ Samples on ice, cooling process has begun

Cooler Temperature (°C): 1.5 Cooler Temperature Corrected (°C): 1.5 Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample) Date and Initials of person examining contents: SG 12/21/17

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix SL WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13 ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method: VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Sample #
				Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14
Residual chlorine strips Lot #				Positive for Res Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15
Trip Blank Present:	☑Yes	☑No	☐N/A	16
Trip Blank Custody Seals Present	☑Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT ... ely.

WO#:7038591

7038591

Page: 1 of 1

2155213

Section A
Required Client Information:

Company:	AECOM
Address:	
Email To:	Jon.Sundquist@AECOM.com
Phone:	Fax:
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	Jon Sundquist
Copy To:	Peter Fairbanks
Purchase Order No.:	
Project Name:	National Grid Hempstead
Project Number:	60411920

Section C

Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY NYSDEC

NPDES X GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: NY

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N): N N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	8260 BTEX	8270 PAH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-12S	WT	G			12/22/17	905	15	4	2			2					X	X		001
2	HIMW-24	WT	G			12/22/17	1035	15	4	2			2					X	X		002
3	HIMW-25	WT	G			12/22/17	1220	15	4	2			2					X	X		003
4	TB20171222	WT				12/22/17	1220	15	2				2					X			004
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	John Cyr / AECOM	12/22/17	13:48	[signature]	12/22/17	13:48	2.8			
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Megan Dascal

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/22/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical

Sample Condition Upon Receipt

WO#: 7038591

Client Name: P PM: JSA Due Date: 01/04/18 CLIENT: AECOM-B

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☐ Other Type of Ice: Wet Blue None

Thermometer Used: TH092 Correction Factor: +0.0 ☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 12.8 Cooler Temperature Corrected (°C): 12.8 Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample) Date and Initials of person examining contents: SB 12/22/17

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container
Sample Labels match COC:	☑Yes	☐No		12
-Includes date/time/ID/Analysis Matrix SL WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15
Trip Blank Present:	☐Yes	☑No	☐N/A	16
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

Pace Analytical
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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Method: EPA 8270D
Description: 8270 MSSV
Client: AECOM
Date: January 03, 2018

General Information:
16 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 51357

S0: Surrogate recovery outside laboratory control limits.
- DUP (Lab ID: 238175)
  - 2-Fluorophenol (S)
  - Phenol-d5 (S)
- HIMW-14D (Lab ID: 7038591013)
  - 2-Fluorophenol (S)
  - Phenol-d5 (S)

QC Batch: 51523

S0: Surrogate recovery outside laboratory control limits.
- MS (Lab ID: 238614)
  - 2-Chlorophenol-d4 (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Phenol-d5 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: January 03, 2018

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 51523

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7038591016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 238614)
  - Acenaphthene
  - Acenaphthylene
  - Fluorene
  - Naphthalene

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 50917

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 236811)
  - Fluorene
  - Phenanthrene
  - Pyrene

Additional Comments:

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/18
Pace Project No.: 7038591

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: AECOM
Date: January 03, 2018

General Information:
19 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 51245

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 238224)
  - Benzene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

MSV - FORM III VOA-1

WATER VOLATILE SAMPLE/DUPLICATE RECOVERY

Lab Name: Pace Analytical - New York
Date Extracted: 12/28/2017
Instrument 70MSV6
Lab Sample ID: HIMW-14I

Duplicate Sample No: 7038591010DUP
Date Analyzed: 12/28/2017
Lab File ID: 122817.B\J41949.D
SDG No.: 7038591

COMPOUND	SAMPLE CONCENTRATION (ug/L)	DUPLICATE CONCENTRATION (ug/L)	RPD	RPD LIMITS
Benzene	2.4	1.8	28	0-20
Ethylbenzene	<1.0	<1.0		0-20
Toluene	<1.0	<1.0		0-20
Xylene (Total)	<2.0	<2.0		0-20

RPD: 1 out of 1 outside limits.

Pace

WO#:7039186

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

2155212

Section A Required Client Info: 7039186

Section C Invoice Information

Company: AECOM	Report To: Jon Sundquist	Attention:	
Address:	Copy To: Peter Fairbanks	Company Name:	REGULATORY AGENCY: NYSDEC
		Address:	☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
Email To:	Purchase Order No.:	Pace Quote Reference:	☐ UST ☐ RCRA ☐ OTHER
Phone: Fax:	Project Name: National Grid Hempstead	Pace Project Manager:	Site Location STATE: NY
Requested Due Date/TAT: standard	Project Number: 60471920	Pace Profile #:	

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX 8260	PAH 8270	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-08D	WT	G			12/26/17	1135	14	4	2			2					X	X		001
2	HIMW-08I	WT	G			12/26/17	1255	14	4	2			2					X	X		002
2	HIMW-08S	WT	G			12/26/17	1415	14	4	2			2					X	X		003
4	HIMW-08S MS/MSD	WT	G			12/26/17	1415	14	8	4			4					X	X		004
6	HIMW-05S	WT	G			12/27/17	0915	12	4	2			2					X	X		
6	HIMW-05I	WT	G			12/27/17	1003	12	4	2			2					X	X		006
7	HIMW-05D	WT	G			12/27/17	840	12	4	2			2					X	X		007
6	HIMW-20S	WT	G			12/27/17	1150	13	4	2			2					X	X		008
6	HIMW-20I	WT	G			12/27/17	1155	13	4	2			2					X	X		009
10	HIMW-28I	WT	G			12/27/17	1445	13	4	2			2					X	X		010
11																					
12	TB20171227	WT				12/27/17			2				2					X			011

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Megan Dascoli / AECOM	12/26/17	1500		12/27/17	1500	1.5	Y	Y	Y
		12/27/17	1500		12/27/17	1600	2.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Megan Dascoli + John Cresap

SIGNATURE of SAMPLER: Megan Dascoli / John Cresap DATE Signed (MM/DD/YY): 12/27/17

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical

Sample Condition Upon Receipt

Client Name: ARCM

Proje WO#:7039186

PM: JSA Due Date: 01/11/18

CLIENT: AECOM-B

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ Yes ☐ No Seals intact: ☒ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ Ziploc ☐ None ☐ Other Type of Ice: Wet Blue None

Thermometer Used: TH092 _____ Correction Factor: +0.0 ☐ Samples on ice cooling process has begun

Cooler Temperature (°C): 1.9/2.6 Cooler Temperature Corrected (°C): 1.9/2.6 Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample) Date and Initials of person examining contents TJ 12.1 17

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☐Yes	☐No		1
Chain of Custody Filled Out:	☐Yes	☐No		2
Chain of Custody Relinquished:	☐Yes	☐No		3
Sampler Name & Signature on COC:	☐Yes	☐No	☐N/A	4
Samples Arrived within Hold Time:	☐Yes	☐No		5
Short Hold Time Analysis (<72hr):	☐Yes	☒No		6
Rush Turn Around Time Requested:	☐Yes	☒No		7
Sufficient Volume: (Triple volume provided for MS/MSD	☐Yes	☐No		8
Correct Containers Used	☐Yes	☐No		9
-Pace Containers Used:	☐Yes	☐No		
Containers Intact:	☐Yes	☐No		10
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☒Yes	☐No		12
-Includes date/time/ID/Analysis Matrix SL WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☒N/A	13 ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☒N/A	Sample #
				Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐Yes	☐No	☒N/A	14
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	15
Trip Blank Present:	☐Yes	☒No	☐N/A	16
Trip Blank Custody Seals Present	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if applicable): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.

WO#:7039186

PM: JSA Due Date: 01/11/18

CLIENT: AECOM-B

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page: 1 of 1

1934437

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information:	
Company: AECOM	Report To: Jon Sundquist	Attention:			
Address:	Copy To: Peter Fairbanks	Company Name:		REGULATORY AGENCY	
		Address:		NPDES X GROUND WATER DRINKING WATER	
Email To:	Purchase Order No.:	Pace Quote Reference:		UST RCRA OTHER	
Phone: Fax:	Project Name: National Grid Hempstead	Pace Project Manager:		Site Location STATE: NY	
Requested Due Date/TAT: Standard	Project Number: 60411920	Pace Profile #:			

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): 8260 Y/N	8170 Y/N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D
1	HIMW-28S	Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT	WT	G			12/27/17	1545	13	4	2			2						X	X		60411911
2	HIMW-26D						12/28/17	855	13	4	2			2						X	X		60411912
3	HIMW-26I							0920	13	4	2			2						X	X		60411913
4	HIMW-27S							1150	13	4	2			2						X	X		60411914
5	HIMW-27I							1248	13	4	2			2						X	X		60411915
6	DUP 20171228 (-26D)							0800	13	4	2			2						X	X		60411916
7	TB20171228						12/28/17	1310	13	4	2			2						X			60411917
8	EB20171228			G			12/28/17	1310	13	4	2			2						X	X		60411918
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Megan Deal	12/28/17	1411		12/28/17	14:11	6.4 1.4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MDascoli + J Crespo

SIGNATURE of SAMPLER: [signature] + [signature] DATE Signed (MM/DD/YY): 12/28/17

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month not paid within 30 days.

F-ALL-Q-020rev 07, 15-May-2007

Pace Analytical

Sample Condition Upon Receipt

Client Name: AECOM

Proje WO#:7039186

PM: JSA Due Date: 01/11/18

CLIENT: AECOM-B

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ Ziploc ☐ None ☐ Other Type of Ice: (Wet) Blue None

Thermometer Used: TH092 Correction Factor: +0.0 ☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 5.4, 1.9 Cooler Temperature Corrected (°C): 5.4, 1.9 Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample) Date and Initials of person examining contents: SB 12/28/17

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and Include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix: St WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide)	☐Yes	☐No	☑N/A	Sample #
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water)				Initial when completed. / Lot # of added preservative: / Date/Time preservative added
Per Method, VOA pH is checked after analysis				
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable)				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

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PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Method: EPA 8270D
Description: 8270 MSSV
Client: AECOM
Date: January 09, 2018

General Information:
16 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 51679

S0: Surrogate recovery outside laboratory control limits.
- HIMW-20I (Lab ID: 7039186008)
  - 2,4,6-Tribromophenol (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- FB20171228 (Lab ID: 7039186018)
  - Nitrobenzene-d5 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 51638

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7039186003

R1: RPD value was outside control limits.
- MSD (Lab ID: 239325)
  - 2-Methylnaphthalene

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PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Method: EPA 8270D
Description: 8270 MSSV
Client: AECOM
Date: January 09, 2018

QC Batch: 51638

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7039186003

R1: RPD value was outside control limits.

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(k)fluoranthene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indéno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 51679

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- DUP (Lab ID: 239547)
  - 2,4,6-Tribromophenol (S)
- DUP20171228 (Lab ID: 7039186016)
  - 2,4,6-Tribromophenol (S)
- FB20171228 (Lab ID: 7039186018)
  - 2,4,6-Tribromophenol (S)
- HIMW-05D (Lab ID: 7039186006)
  - 2,4,6-Tribromophenol (S)
- HIMW-05I (Lab ID: 7039186005)
  - 2,4,6-Tribromophenol (S)
- HIMW-05S (Lab ID: 7039186004)
  - 2,4,6-Tribromophenol (S)
- HIMW-20I (Lab ID: 7039186008)
  - 2,4,6-Tribromophenol (S)
- HIMW-20S (Lab ID: 7039186007)
  - 2,4,6-Tribromophenol (S)

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PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: January 09, 2018

Analyte Comments:

QC Batch: 51679

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- HIMW-26D (Lab ID: 7039186012)
  - 2,4,6-Tribromophenol (S)
- HIMW-26I (Lab ID: 7039186013)
  - 2,4,6-Tribromophenol (S)
- HIMW-27I (Lab ID: 7039186015)
  - 2,4,6-Tribromophenol (S)
- HIMW-27S (Lab ID: 7039186014)
  - 2,4,6-Tribromophenol (S)
- HIMW-28I (Lab ID: 7039186009)
  - 2,4,6-Tribromophenol (S)
- HIMW-28S (Lab ID: 7039186011)
  - 2,4,6-Tribromophenol (S)
- LCS (Lab ID: 239438)
  - 2,4,6-Tribromophenol (S)
- MS (Lab ID: 239546)
  - 2,4,6-Tribromophenol (S)

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PROJECT NARRATIVE

Project: NATIONAL GRID HEMPSTEAD 12/27
Pace Project No.: 7039186

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: AECOM
Date: January 09, 2018

General Information:
18 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

APPENDIX B

OXYGEN SYSTEM OPERATION & MAINTENANCE MEASUREMENTS,

THIRD AND FOURTH QUARTERS 2017

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	7/28/2017
Time:	11:15
Weather:	Sunny
Outdoor Temperature:	~85° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours: 20,311.0

Feed Air Pressure *: _____ (psi)

Cycle Pressure *: _____ (psi)

Oxygen Receiver Pressure *: _____ (psi)

Oxygen Purity: _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *: _____ (psi)

(readings below are made from control panel)

Delivery Air: _____ (psi)

Element Outlet Temperature: _____ (oF)

Running Hours: 23,681 (hours)

Loading Hours: 15,499 (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	OFF	OFF	OW-1-5S	67.3	OFF	OFF	OW-1-9D	88.5	OFF	OFF
OW-1-2	96.5	OFF	OFF	OW-1-6S	67.0	OFF	OFF	OW-1-10D	87.2	OFF	OFF
OW-1-3	96.3	OFF	OFF	OW-1-7S	66.9	OFF	OFF	OW-1-11D	86.1	OFF	OFF
OW-1-4	95.0	OFF	OFF	OW-1-8S	66.7	OFF	OFF	OW-1-12D	85.3	OFF	OFF
OW-1-5D	93.9	OFF	OFF	OW-1-9S	66.0	OFF	OFF	OW-1-13D	84.7	OFF	OFF
OW-1-6D	92.4	OFF	OFF	OW-1-10S	54.6	OFF	OFF	OW-1-14D	84.1	OFF	OFF
OW-1-7D	91.1	OFF	OFF	OW-1-11S	54.1	OFF	OFF	OW-1-15D	83.3	OFF	OFF
OW-1-8D	89.6	OFF	OFF	OW-1-12S	53.6	OFF	OFF	OW-1-16D	82.5	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/28/2017

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	OFF	OFF	OW-1-17D	79.5	OFF	OFF	OW-1-21S	49.3	OFF	OFF
OW-1-14S	52.7	OFF	OFF	OW-1-18D	78.3	OFF	OFF	OW-1-22S	49.3	OFF	OFF
OW-1-15S	52.2	OFF	OFF	OW-1-19D	78.9	OFF	OFF	OW-1-23S	48.8	OFF	OFF
OW-1-16SR	51.8	OFF	OFF	OW-1-20D	79.5	OFF	OFF	OW-1-24S	48.4	OFF	OFF
OW-1-17S	50.7	OFF	OFF	OW-1-21D	79.5	OFF	OFF	OW-1-25S	48.8	OFF	OFF
OW-1-18S	50.2	OFF	OFF	OW-1-22D	79.5	OFF	OFF	OW-1-26SR	48.3	OFF	OFF
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	OFF	OFF	OW-1-27S	48.3	OFF	OFF
OW-1-20S	49.3	OFF	OFF	OW-1-24D	78.2	OFF	OFF	OW-1-28S	48.3	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	OFF	OFF	OW-1-29S	48.5	OFF	OFF	OW-1-33D	83.2	OFF	OFF
OW-1-26D	78.1	OFF	OFF	OW-1-30S	48.8	OFF	OFF	OW-1-34D	84.5	OFF	OFF
OW-1-27D	77.9	OFF	OFF	OW-1-31S	49.3	OFF	OFF	OW-1-35D	85.0	OFF	OFF
OW-1-28D	78.0	OFF	OFF	OW-1-32S	49.3	OFF	OFF	OW-1-36D	85.0	OFF	OFF
OW-1-29D	78.4	OFF	OFF	OW-1-33S	49.7	OFF	OFF	OW-1-37D	84.0	OFF	OFF
OW-1-30D	79.0	OFF	OFF	OW-1-34S	50.1	OFF	OFF	OW-1-38D	82.0	OFF	OFF
OW-1-31D	80.5	OFF	OFF	OW-1-35S	50.3	OFF	OFF	OW-1-39D	78.0	OFF	OFF
OW-1-32D	81.6	OFF	OFF	OW-1-36S	50.3	OFF	OFF	OW-1-40D	76.0	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 7/28/2017

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	OFF	OFF	OW-1-41D	73.6	OFF	OFF	OW-1-43	67.4	OFF	OFF
OW-1-38S	50.6	OFF	OFF	OW-1-42D	71.0	OFF	OFF	OW-1-44	66.6	OFF	OFF
OW-1-39S	50.7	OFF	OFF	OW-1-45	65.7	OFF	OFF	OW-1-51R	60.6	OFF	OFF
OW-1-40S	51.1	OFF	OFF	OW-1-46	64.3	OFF	OFF	OW-1-52	59.3	OFF	OFF
OW-1-41S	51.5	OFF	OFF	OW-1-47	63.4	OFF	OFF	OW-1-53	60.0	OFF	OFF
OW-1-42S	51.3	OFF	OFF	OW-1-48	62.5	OFF	OFF	OW-1-54	60.0	OFF	OFF
				OW-1-49	61.5	OFF	OFF				
				OW-1-50	61.0	OFF	OFF				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O_2 Injection System #1

Monitoring Points Log				Monitoring Points Log				Monitoring Points Log	
ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	29.06		0.3	MP-1-5	28.78	6.95	0	MP-1-1D	7.12
MP-1-1S	28.96	5.11	0	MP-1-6	21.10	7.01	0	MP-1-2D	5.87
MP-1-2D	23.44		0	MP-1-7	24.35	12.22	0	MP-1-3D	6.95
MP-1-2S	23.57	5.45	0	MP-1-8	25.91	3.84	0	MP-1-4D	7.14
MP-1-3D	21.54		0.2						
MP-1-3S	21.50	7.27	0.3						
MP-1-4D	24.29		0						
MP-1-4S	24.33	7.11	0.1						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/28/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) X Normal (green) ____ High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator changed Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Profiler changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

7-28-17 Took field reading. No system readings as system is off until we receive parts for compressor (i.e. filters, oil, etc.).

OW-1-19S remains off due to leaking line.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	8/25/2017
Time:	13:45
Weather:	Sunny
Outdoor Temperature:	~82° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours: 20,311.0

Feed Air Pressure * _____ (psi)

Cycle Pressure * _____ (psi)

Oxygen Receiver Pressure * _____ (psi)

Oxygen Purity _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank * _____ (psi)

(readings below are made from control panel)

Delivery Air _____ (psi)

Element Outlet Temperature _____ (oF)

Running Hours 23,681 (hours)

Loading Hours 15,499 (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	OFF	OFF	OW-1-5S	67.3	OFF	OFF	OW-1-9D	88.5	OFF	OFF
OW-1-2	96.5	OFF	OFF	OW-1-6S	67.0	OFF	OFF	OW-1-10D	87.2	OFF	OFF
OW-1-3	96.3	OFF	OFF	OW-1-7S	66.9	OFF	OFF	OW-1-11D	86.1	OFF	OFF
OW-1-4	95.0	OFF	OFF	OW-1-8S	66.7	OFF	OFF	OW-1-12D	85.3	OFF	OFF
OW-1-5D	93.9	OFF	OFF	OW-1-9S	66.0	OFF	OFF	OW-1-13D	84.7	OFF	OFF
OW-1-6D	92.4	OFF	OFF	OW-1-10S	54.6	OFF	OFF	OW-1-14D	84.1	OFF	OFF
OW-1-7D	91.1	OFF	OFF	OW-1-11S	54.1	OFF	OFF	OW-1-15D	83.3	OFF	OFF
OW-1-8D	89.6	OFF	OFF	OW-1-12S	53.6	OFF	OFF	OW-1-16D	82.5	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/25/2017

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	OFF	OFF	OW-1-17D	79.5	OFF	OFF	OW-1-21S	49.3	OFF	OFF
OW-1-14S	52.7	OFF	OFF	OW-1-18D	78.3	OFF	OFF	OW-1-22S	49.3	OFF	OFF
OW-1-15S	52.2	OFF	OFF	OW-1-19D	78.9	OFF	OFF	OW-1-23S	48.8	OFF	OFF
OW-1-16SR	51.8	OFF	OFF	OW-1-20D	79.5	OFF	OFF	OW-1-24S	48.4	OFF	OFF
OW-1-17S	50.7	OFF	OFF	OW-1-21D	79.5	OFF	OFF	OW-1-25S	48.8	OFF	OFF
OW-1-18S	50.2	OFF	OFF	OW-1-22D	79.5	OFF	OFF	OW-1-26SR	48.3	OFF	OFF
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	OFF	OFF	OW-1-27S	48.3	OFF	OFF
OW-1-20S	49.3	OFF	OFF	OW-1-24D	78.2	OFF	OFF	OW-1-28S	48.3	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	OFF	OFF	OW-1-29S	48.5	OFF	OFF	OW-1-33D	83.2	OFF	OFF
OW-1-26D	78.1	OFF	OFF	OW-1-30S	48.8	OFF	OFF	OW-1-34D	84.5	OFF	OFF
OW-1-27D	77.9	OFF	OFF	OW-1-31S	49.3	OFF	OFF	OW-1-35D	85.0	OFF	OFF
OW-1-28D	78.0	OFF	OFF	OW-1-32S	49.3	OFF	OFF	OW-1-36D	85.0	OFF	OFF
OW-1-29D	78.4	OFF	OFF	OW-1-33S	49.7	OFF	OFF	OW-1-37D	84.0	OFF	OFF
OW-1-30D	79.0	OFF	OFF	OW-1-34S	50.1	OFF	OFF	OW-1-38D	82.0	OFF	OFF
OW-1-31D	80.5	OFF	OFF	OW-1-35S	50.3	OFF	OFF	OW-1-39D	78.0	OFF	OFF
OW-1-32D	81.6	OFF	OFF	OW-1-36S	50.3	OFF	OFF	OW-1-40D	76.0	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 8/25/2017

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	OFF	OFF	OW-1-41D	73.6	OFF	OFF	OW-1-43	67.4	OFF	OFF
OW-1-38S	50.6	OFF	OFF	OW-1-42D	71.0	OFF	OFF	OW-1-44	66.6	OFF	OFF
OW-1-39S	50.7	OFF	OFF	OW-1-45	65.7	OFF	OFF	OW-1-51R	60.6	OFF	OFF
OW-1-40S	51.1	OFF	OFF	OW-1-46	64.3	OFF	OFF	OW-1-52	59.3	OFF	OFF
OW-1-41S	51.5	OFF	OFF	OW-1-47	63.4	OFF	OFF	OW-1-53	60.0	OFF	OFF
OW-1-42S	51.3	OFF	OFF	OW-1-48	62.5	OFF	OFF	OW-1-54	60.0	OFF	OFF
				OW-1-49	61.5	OFF	OFF				
				OW-1-50	61.0	OFF	OFF				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O_2 Injection System #1

Monitoring Points Log				Monitoring Points Log				Monitoring Points Log	
ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	29.40		0.2	MP-1-5	28.78	6.95	0	MP-1-1D	7.12
MP-1-1S	29.50	5.08	0	MP-1-6	21.10	7.01	0	MP-1-2D	5.87
MP-1-2D	23.91		0	MP-1-7	24.35	12.22	0	MP-1-3D	6.95
MP-1-2S	24.00	6.02	0	MP-1-8	25.91	3.84	0	MP-1-4D	7.14
MP-1-3D	21.98		0.2						
MP-1-3S	21.91	7.12	0.2						
MP-1-4D	24.75		0						
MP-1-4S	24.77	7.01	0						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/25/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) X Normal (green) ____ High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator changed Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Profiler changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

8-11-17 Removed and replaced existing vent valve on air compressor. Found clogs in oil lines and flushed to clear out lines. Flushed out cooling coils and changed oil filter. Added oil to compressor and restarted unit. Allowed unit to build pressure, however it was taking a long time and not operating optimally. Found shut off not working in controls. Cut down heavy over grown brush around shed and down path to street.

8-14-17 Return to site and turn on air compressor. Cleaned a small amount of oil in water knock out bowls. Check each auto drain on all equipment and found working correctly. Built up oxygen level in holding tank to 110 psi, but found compressor working hard and slow to build up pressure. Shut down and drained pressure to check and make sure filters wee not clogged. No problem with filters was found. Restarted equipment and found compressor still making air extremely slow. Checked intake air filter and removed to allow more air flow. Additional fresh air did not solve the problem. Shut down all equipment and drained all cooling oil from compressor and found oil to be black in color. Drained cooling coils and filter of all oil. Replaced the filter and filled compressor with new cooling oil. Found compressor not draining pressure when off. Needed to drain off pressure manually. Traced through wiring and found no signal from the PLC coming through to open check valve. Called technical support and tried a variety of different things to try and get compressor working properly. Made sure oil was in pump to help lube the pump and system. Changed belt on compressor as it was wearing. Restarted system but did not see a change in air production. Need to return with a Kaeser compressor repair company.

8-25-17 Took field reading. No system readings as system is off until we receive approval from AECOM & National Grid to bring in a compressor repair company.

OW-1-19S remains off due to leaking line.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	9/27/2017
Time:	13:45
Weather:	Sunny
Outdoor Temperature:	~68° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours: 20,311.0

Feed Air Pressure * _____ (psi)

Cycle Pressure * _____ (psi)

Oxygen Receiver Pressure * _____ (psi)

Oxygen Purity _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank * _____ (psi)

(readings below are made from control panel)

Delivery Air _____ (psi)

Element Outlet Temperature _____ (oF)

Running Hours 23,681 (hours)

Loading Hours 15,499 (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	OFF	OFF	OW-1-5S	67.3	OFF	OFF	OW-1-9D	88.5	OFF	OFF
OW-1-2	96.5	OFF	OFF	OW-1-6S	67.0	OFF	OFF	OW-1-10D	87.2	OFF	OFF
OW-1-3	96.3	OFF	OFF	OW-1-7S	66.9	OFF	OFF	OW-1-11D	86.1	OFF	OFF
OW-1-4	95.0	OFF	OFF	OW-1-8S	66.7	OFF	OFF	OW-1-12D	85.3	OFF	OFF
OW-1-5D	93.9	OFF	OFF	OW-1-9S	66.0	OFF	OFF	OW-1-13D	84.7	OFF	OFF
OW-1-6D	92.4	OFF	OFF	OW-1-10S	54.6	OFF	OFF	OW-1-14D	84.1	OFF	OFF
OW-1-7D	91.1	OFF	OFF	OW-1-11S	54.1	OFF	OFF	OW-1-15D	83.3	OFF	OFF
OW-1-8D	89.6	OFF	OFF	OW-1-12S	53.6	OFF	OFF	OW-1-16D	82.5	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/27/2017

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	OFF	OFF	OW-1-17D	79.5	OFF	OFF	OW-1-21S	49.3	OFF	OFF
OW-1-14S	52.7	OFF	OFF	OW-1-18D	78.3	OFF	OFF	OW-1-22S	49.3	OFF	OFF
OW-1-15S	52.2	OFF	OFF	OW-1-19D	78.9	OFF	OFF	OW-1-23S	48.8	OFF	OFF
OW-1-16SR	51.8	OFF	OFF	OW-1-20D	79.5	OFF	OFF	OW-1-24S	48.4	OFF	OFF
OW-1-17S	50.7	OFF	OFF	OW-1-21D	79.5	OFF	OFF	OW-1-25S	48.8	OFF	OFF
OW-1-18S	50.2	OFF	OFF	OW-1-22D	79.5	OFF	OFF	OW-1-26SR	48.3	OFF	OFF
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	OFF	OFF	OW-1-27S	48.3	OFF	OFF
OW-1-20S	49.3	OFF	OFF	OW-1-24D	78.2	OFF	OFF	OW-1-28S	48.3	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	OFF	OFF	OW-1-29S	48.5	OFF	OFF	OW-1-33D	83.2	OFF	OFF
OW-1-26D	78.1	OFF	OFF	OW-1-30S	48.8	OFF	OFF	OW-1-34D	84.5	OFF	OFF
OW-1-27D	77.9	OFF	OFF	OW-1-31S	49.3	OFF	OFF	OW-1-35D	85.0	OFF	OFF
OW-1-28D	78.0	OFF	OFF	OW-1-32S	49.3	OFF	OFF	OW-1-36D	85.0	OFF	OFF
OW-1-29D	78.4	OFF	OFF	OW-1-33S	49.7	OFF	OFF	OW-1-37D	84.0	OFF	OFF
OW-1-30D	79.0	OFF	OFF	OW-1-34S	50.1	OFF	OFF	OW-1-38D	82.0	OFF	OFF
OW-1-31D	80.5	OFF	OFF	OW-1-35S	50.3	OFF	OFF	OW-1-39D	78.0	OFF	OFF
OW-1-32D	81.6	OFF	OFF	OW-1-36S	50.3	OFF	OFF	OW-1-40D	76.0	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 9/27/2017

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	OFF	OFF	OW-1-41D	73.6	OFF	OFF	OW-1-43	67.4	OFF	OFF
OW-1-38S	50.6	OFF	OFF	OW-1-42D	71.0	OFF	OFF	OW-1-44	66.6	OFF	OFF
OW-1-39S	50.7	OFF	OFF	OW-1-45	65.7	OFF	OFF	OW-1-51R	60.6	OFF	OFF
OW-1-40S	51.1	OFF	OFF	OW-1-46	64.3	OFF	OFF	OW-1-52	59.3	OFF	OFF
OW-1-41S	51.5	OFF	OFF	OW-1-47	63.4	OFF	OFF	OW-1-53	60.0	OFF	OFF
OW-1-42S	51.3	OFF	OFF	OW-1-48	62.5	OFF	OFF	OW-1-54	60.0	OFF	OFF
				OW-1-49	61.5	OFF	OFF				
				OW-1-50	61.0	OFF	OFF				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O_2 Injection System #1

Monitoring Points Log				Monitoring Points Log				Monitoring Points Log	
ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	29.23		0.3	MP-1-5	29.67	5.45	0	MP-1-1D	6.02
MP-1-1S	29.26	4.90	0.4	MP-1-6	22.01	7.00	0	MP-1-2D	5.59
MP-1-2D	24.27		0	MP-1-7	25.27	10.12	0	MP-1-3D	6.21
MP-1-2S	24.49	5.56	0	MP-1-8	26.81	3.55	0	MP-1-4D	6.54
MP-1-3D	22.49		0						
MP-1-3S	22.38	7.10	0						
MP-1-4D	25.23		0						
MP-1-4S	25.26	7.03	0						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/27/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) ____ High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator changed Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Profiler changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

9-27-17 Took field reading. No system readings as system is off until compressor repair company can analyze compressor issues.

OW-1-19S remains off due to leaking line.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	11/21/2017
Time:	13:45
Weather:	Sunny
Outdoor Temperature:	~35° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours: 20,311.0

Feed Air Pressure *: _____ (psi)

Cycle Pressure *: _____ (psi)

Oxygen Receiver Pressure *: _____ (psi)

Oxygen Purity: _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *: _____ (psi)

(readings below are made from control panel)

Delivery Air: _____ (psi)

Element Outlet Temperature: _____ (oF)

Running Hours: 23,681 (hours)

Loading Hours: 15,499 (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	OFF	OFF	OW-1-5S	67.3	OFF	OFF	OW-1-9D	88.5	OFF	OFF
OW-1-2	96.5	OFF	OFF	OW-1-6S	67.0	OFF	OFF	OW-1-10D	87.2	OFF	OFF
OW-1-3	96.3	OFF	OFF	OW-1-7S	66.9	OFF	OFF	OW-1-11D	86.1	OFF	OFF
OW-1-4	95.0	OFF	OFF	OW-1-8S	66.7	OFF	OFF	OW-1-12D	85.3	OFF	OFF
OW-1-5D	93.9	OFF	OFF	OW-1-9S	66.0	OFF	OFF	OW-1-13D	84.7	OFF	OFF
OW-1-6D	92.4	OFF	OFF	OW-1-10S	54.6	OFF	OFF	OW-1-14D	84.1	OFF	OFF
OW-1-7D	91.1	OFF	OFF	OW-1-11S	54.1	OFF	OFF	OW-1-15D	83.3	OFF	OFF
OW-1-8D	89.6	OFF	OFF	OW-1-12S	53.6	OFF	OFF	OW-1-16D	82.5	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/21/2017

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	OFF	OFF	OW-1-17D	79.5	OFF	OFF	OW-1-21S	49.3	OFF	OFF
OW-1-14S	52.7	OFF	OFF	OW-1-18D	78.3	OFF	OFF	OW-1-22S	49.3	OFF	OFF
OW-1-15S	52.2	OFF	OFF	OW-1-19D	78.9	OFF	OFF	OW-1-23S	48.8	OFF	OFF
OW-1-16SR	51.8	OFF	OFF	OW-1-20D	79.5	OFF	OFF	OW-1-24S	48.4	OFF	OFF
OW-1-17S	50.7	OFF	OFF	OW-1-21D	79.5	OFF	OFF	OW-1-25S	48.8	OFF	OFF
OW-1-18S	50.2	OFF	OFF	OW-1-22D	79.5	OFF	OFF	OW-1-26SR	48.3	OFF	OFF
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	OFF	OFF	OW-1-27S	48.3	OFF	OFF
OW-1-20S	49.3	OFF	OFF	OW-1-24D	78.2	OFF	OFF	OW-1-28S	48.3	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	OFF	OFF	OW-1-29S	48.5	OFF	OFF	OW-1-33D	83.2	OFF	OFF
OW-1-26D	78.1	OFF	OFF	OW-1-30S	48.8	OFF	OFF	OW-1-34D	84.5	OFF	OFF
OW-1-27D	77.9	OFF	OFF	OW-1-31S	49.3	OFF	OFF	OW-1-35D	85.0	OFF	OFF
OW-1-28D	78.0	OFF	OFF	OW-1-32S	49.3	OFF	OFF	OW-1-36D	85.0	OFF	OFF
OW-1-29D	78.4	OFF	OFF	OW-1-33S	49.7	OFF	OFF	OW-1-37D	84.0	OFF	OFF
OW-1-30D	79.0	OFF	OFF	OW-1-34S	50.1	OFF	OFF	OW-1-38D	82.0	OFF	OFF
OW-1-31D	80.5	OFF	OFF	OW-1-35S	50.3	OFF	OFF	OW-1-39D	78.0	OFF	OFF
OW-1-32D	81.6	OFF	OFF	OW-1-36S	50.3	OFF	OFF	OW-1-40D	76.0	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 11/21/2017

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	OFF	OFF	OW-1-41D	73.6	OFF	OFF	OW-1-43	67.4	OFF	OFF
OW-1-38S	50.6	OFF	OFF	OW-1-42D	71.0	OFF	OFF	OW-1-44	66.6	OFF	OFF
OW-1-39S	50.7	OFF	OFF	OW-1-45	65.7	OFF	OFF	OW-1-51R	60.6	OFF	OFF
OW-1-40S	51.1	OFF	OFF	OW-1-46	64.3	OFF	OFF	OW-1-52	59.3	OFF	OFF
OW-1-41S	51.5	OFF	OFF	OW-1-47	63.4	OFF	OFF	OW-1-53	60.0	OFF	OFF
OW-1-42S	51.3	OFF	OFF	OW-1-48	62.5	OFF	OFF	OW-1-54	60.0	OFF	OFF
				OW-1-49	61.5	OFF	OFF				
				OW-1-50	61.0	OFF	OFF				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O_2 Injection System #1

Monitoring Points Log				Monitoring Points Log				Monitoring Points Log	
ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	29.95		0.1	MP-1-5	29.75	4.57	0	MP-1-1D	6.27
MP-1-1S	30.05	5.45	0	MP-1-6	22.10	5.15	0	MP-1-2D	5.11
MP-1-2D	24.56		0	MP-1-7	25.35	7.99	0	MP-1-3D	7.96
MP-1-2S	24.33	5.66	0	MP-1-8	26.86	3.02	0	MP-1-4D	6.49
MP-1-3D	22.47		0						
MP-1-3S	22.53	7.55	0						
MP-1-4D	25.53		0						
MP-1-4S	25.30	7.00	0						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/21/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) ____ High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator changed Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Profiler changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

11-21-17 Took field reading. No system readings as system is off until compressor repair company can make repairs to the system. Cleaned out heavy build up of leaves within fence area. Cut back overgrown brush along path to shed. Sprayed all locks with WD-40.

OW-1-19S remains off due to leaking line.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	12/27/2017
Time:	2:00
Weather:	Cold
Outdoor Temperature:	~20° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours: 20,311.0

Feed Air Pressure *: _____ (psi)

Cycle Pressure *: _____ (psi)

Oxygen Receiver Pressure *: _____ (psi)

Oxygen Purity: _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *: _____ (psi)

(readings below are made from control panel)

Delivery Air: _____ (psi)

Element Outlet Temperature: _____ (oF)

Running Hours: 23,681 (hours)

Loading Hours: 15,499 (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	OFF	OFF	OW-1-5S	67.3	OFF	OFF	OW-1-9D	88.5	OFF	OFF
OW-1-2	96.5	OFF	OFF	OW-1-6S	67.0	OFF	OFF	OW-1-10D	87.2	OFF	OFF
OW-1-3	96.3	OFF	OFF	OW-1-7S	66.9	OFF	OFF	OW-1-11D	86.1	OFF	OFF
OW-1-4	95.0	OFF	OFF	OW-1-8S	66.7	OFF	OFF	OW-1-12D	85.3	OFF	OFF
OW-1-5D	93.9	OFF	OFF	OW-1-9S	66.0	OFF	OFF	OW-1-13D	84.7	OFF	OFF
OW-1-6D	92.4	OFF	OFF	OW-1-10S	54.6	OFF	OFF	OW-1-14D	84.1	OFF	OFF
OW-1-7D	91.1	OFF	OFF	OW-1-11S	54.1	OFF	OFF	OW-1-15D	83.3	OFF	OFF
OW-1-8D	89.6	OFF	OFF	OW-1-12S	53.6	OFF	OFF	OW-1-16D	82.5	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/27/2017

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	OFF	OFF	OW-1-17D	79.5	OFF	OFF	OW-1-21S	49.3	OFF	OFF
OW-1-14S	52.7	OFF	OFF	OW-1-18D	78.3	OFF	OFF	OW-1-22S	49.3	OFF	OFF
OW-1-15S	52.2	OFF	OFF	OW-1-19D	78.9	OFF	OFF	OW-1-23S	48.8	OFF	OFF
OW-1-16SR	51.8	OFF	OFF	OW-1-20D	79.5	OFF	OFF	OW-1-24S	48.4	OFF	OFF
OW-1-17S	50.7	OFF	OFF	OW-1-21D	79.5	OFF	OFF	OW-1-25S	48.8	OFF	OFF
OW-1-18S	50.2	OFF	OFF	OW-1-22D	79.5	OFF	OFF	OW-1-26SR	48.3	OFF	OFF
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	OFF	OFF	OW-1-27S	48.3	OFF	OFF
OW-1-20S	49.3	OFF	OFF	OW-1-24D	78.2	OFF	OFF	OW-1-28S	48.3	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	OFF	OFF	OW-1-29S	48.5	OFF	OFF	OW-1-33D	83.2	OFF	OFF
OW-1-26D	78.1	OFF	OFF	OW-1-30S	48.8	OFF	OFF	OW-1-34D	84.5	OFF	OFF
OW-1-27D	77.9	OFF	OFF	OW-1-31S	49.3	OFF	OFF	OW-1-35D	85.0	OFF	OFF
OW-1-28D	78.0	OFF	OFF	OW-1-32S	49.3	OFF	OFF	OW-1-36D	85.0	OFF	OFF
OW-1-29D	78.4	OFF	OFF	OW-1-33S	49.7	OFF	OFF	OW-1-37D	84.0	OFF	OFF
OW-1-30D	79.0	OFF	OFF	OW-1-34S	50.1	OFF	OFF	OW-1-38D	82.0	OFF	OFF
OW-1-31D	80.5	OFF	OFF	OW-1-35S	50.3	OFF	OFF	OW-1-39D	78.0	OFF	OFF
OW-1-32D	81.6	OFF	OFF	OW-1-36S	50.3	OFF	OFF	OW-1-40D	76.0	OFF	OFF

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 12/27/2017

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	OFF	OFF	OW-1-41D	73.6	OFF	OFF	OW-1-43	67.4	OFF	OFF
OW-1-38S	50.6	OFF	OFF	OW-1-42D	71.0	OFF	OFF	OW-1-44	66.6	OFF	OFF
OW-1-39S	50.7	OFF	OFF	OW-1-45	65.7	OFF	OFF	OW-1-51R	60.6	OFF	OFF
OW-1-40S	51.1	OFF	OFF	OW-1-46	64.3	OFF	OFF	OW-1-52	59.3	OFF	OFF
OW-1-41S	51.5	OFF	OFF	OW-1-47	63.4	OFF	OFF	OW-1-53	60.0	OFF	OFF
OW-1-42S	51.3	OFF	OFF	OW-1-48	62.5	OFF	OFF	OW-1-54	60.0	OFF	OFF
				OW-1-49	61.5	OFF	OFF				
				OW-1-50	61.0	OFF	OFF				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O_2 Injection System #1

Monitoring Points Log				Monitoring Points Log				Monitoring Points Log	
ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	30.45		0.3	MP-1-5	30.20	8.72	0	MP-1-1D	8.85
MP-1-1S	30.35	9.23	0	MP-1-6	22.50	8.11	0	MP-1-2D	7.69
MP-1-2D	24.73		0	MP-1-7	25.77	4.57	0	MP-1-3D	6.01
MP-1-2S	25.00	8.55	0	MP-1-8	27.30	3.15	0	MP-1-4D	8.66
MP-1-3D	22.94		0.3						
MP-1-3S	22.90	6.37	0.2						
MP-1-4D	25.73		0						
MP-1-4S	25.76	7.12	0						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/27/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) ____ High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator changed Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Profiler changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

12-4-17 Met with the crew from Iacono, performed troubleshooting problems in regards to air compressor. Crew arrived onsite with new parts that were previously ordered. Took apart the top and side of the compressor to install the new parts. Replaced top section of the head. Tested out and observed the compressor runs well with pressure building up to its proper 120 psi, however, identified vent valve not operating properly. Valve should turn off air pressure with a bypass of 120 psi, and back on at 90 psi. Please note this is a safety valve that prevents damage to the unit, and must be replaced. Additionally, a small section of wire terminal must be ordered, as the current one is worn out. Left system off while parts are ordered.

12-27-17 Performed monitoring of all site wells at this system. Sprayed all locks with WD-40.

OW-1-19S remains off due to leaking line.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	7/26/2017
Time:	12:40
Weather:	Sunny
Outdoor Temperature:	~87° F
Inside Trailer Temperature:	~80° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	38,057	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	110	(psi)
Oxygen Purity	76.8	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	109	(psi)
Element Outlet Temperature	165	(^{o}F)
Running Hours	41,954	(hours)
Loading Hours	37,867	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	35	28	OW-2-9S	75'	30	19	OW-2-10D	97.2'	30	27
OW-2-3	94.3'	25	30	OW-2-10S	75'	35	32	OW-2-11D	100.8'	35	31
OW-2-4	94.7'	30	30	OW-2-11S	76.5'	30	25	OW-2-12	94'	40	18
OW-2-5	95.3'	30	28	OW-2-13S	75'	30	20	OW-2-13D	97'	40	18
OW-2-6	95.7'	40	27	OW-2-15S	75'	35	20	OW-2-14	96.4'	40	27
OW-2-7	96'	35	28	OW-2-16S	75.5'	40	21	OW-2-15D	94.6'	30	29
OW-2-8	96.3'	30	31	OW-2-18S	74.5'	40	22	OW-2-16D	94.1'	35	26
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	21	OW-2-17	95'	35	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/26/2017

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	32	OW-2-22S	76'	25	19	OW-2-26D	95'	35	29
OW-2-19	96.1'	30	31	OW-2-24S	77.8'	20	19	OW-2-27	93.5'	30	31
OW-2-20D	96.6'	40	30	OW-2-26S	74'	20	19	OW-2-28D	92.1'	30	29
OW-2-21	96.6'	45	29	OW-2-28S	76'	25	20	OW-2-29	92.2'	40	29
OW-2-22D	96.3'	40	29	OW-2-30S	67.8'	40	16	OW-2-30D	88'	35	28
OW-2-23	97.2'	35	30	OW-2-34	71'	30	18	OW-2-31	86'	30	28
OW-2-24D	97'	30	32	OW-2-35	69.2'	35	20	OW-2-32	84'	25	30
OW-2-25	96'	25	29	OW-2-36	64.8'	30	27	OW-2-33	82'	30	32

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	23	OW-2-45	61.1'	30	21	MP-2-1	31.85	22.87	0
OW-2-38	62.1'	30	22	OW-2-46	61'	35	22	MP-2-2	33.16	23.88	0
OW-2-39	60'	30	21	OW-2-47	60.5'	30	21	MP-2-3S	33.04	35.42	0
OW-2-40	61.7'	35	21					MP-2-3D	33.20	30.38	0
OW-2-41	61.7'	35	21					MP-2-4	21.75	24.49	0
OW-2-42	61.6'	45	20					MP-2-5	19.93	18.92	0
OW-2-43	61.4'	30	22								
OW-2-44R	60.6'	25	22								

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/26/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes X No
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) X High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator cleaned Yes ____ No X
8) Terminal strips checked Yes X No ____

AS-80 O_2 Generator

1) Prefilter changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

7-5-17 Found system running. Shed was extremely hot. Investigated air conditioner and found unit to be tripping breaker instantly upon starting. Disconnect existing breaker and installed a new one. Turned on AC unit and it instantly tripped out breaker. Opened up electrical compartment to expose wring and GFI switch. Disconnected from GFI and ran to a 220 volt receptacle. Started unit and it ran for 2 minutes before tripping breaker. AC unit needs to be replaced. Restarted system and let run. Found knock out bowl leaking air from top. Took apart and repaired leak.

7-26-17 Found system operational upon arrival. Check auto drains and found clear and operating properly. Found oil level normal and the dryer unit in the green. Found crack in water knock out bowl and need a replacement part. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	8/25/2017
Time:	10:15
Weather:	Sunny
Outdoor Temperature:	~82° F
Inside Trailer Temperature:	~85° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	38,394	
Feed Air Pressure *	115	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	110	(psi)
Oxygen Purity	77.8	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	115	(psi)
(readings below are made from control panel)		
Delivery Air	114	(psi)
Element Outlet Temperature	169	(^{o}F)
Running Hours	42,673	(hours)
Loading Hours	38,254	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	29	OW-2-9S	75'	30	20	OW-2-10D	97.2'	30	27
OW-2-3	94.3'	30	30	OW-2-10S	75'	30	31	OW-2-11D	100.8'	35	30
OW-2-4	94.7'	35	1	OW-2-11S	76.5'	35	27	OW-2-12	94'	45	19
OW-2-5	95.3'	40	29	OW-2-13S	75'	35	22	OW-2-13D	97'	40	18
OW-2-6	95.7'	35	28	OW-2-15S	75'	35	21	OW-2-14	96.4'	40	27
OW-2-7	96'	30	28	OW-2-16S	75.5'	36	21	OW-2-15D	94.6'	30	29
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	36	22	OW-2-16D	94.1'	35	27
OW-2-9D	96.7'	30	30	OW-2-20S	79'	36	22	OW-2-17	95'	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/25/2017

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	35	31	OW-2-22S	76'	30	20	OW-2-26D	95'	30	29
OW-2-19	96.1'	35	30	OW-2-24S	77.8'	30	19	OW-2-27	93.5'	35	30
OW-2-20D	96.6'	30	30	OW-2-26S	74'	30	20	OW-2-28D	92.1'	35	30
OW-2-21	96.6'	30	30	OW-2-28S	76'	30	20	OW-2-29	92.2'	40	30
OW-2-22D	96.3'	30	29	OW-2-30S	67.8'	30	16	OW-2-30D	88'	40	29
OW-2-23	97.2'	35	31	OW-2-34	71'	35	18	OW-2-31	86'	30	29
OW-2-24D	97'	40	32	OW-2-35	69.2'	30	20	OW-2-32	84'	35	31
OW-2-25	96'	30	30	OW-2-36	64.8'	35	26	OW-2-33	82'	30	32

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	40	22	OW-2-45	61.1'	30	21	MP-2-1	32.25	24.01	0
OW-2-38	62.1'	40	22	OW-2-46	61'	30	22	MP-2-2	33.57	23.51	0
OW-2-39	60'	30	21	OW-2-47	60.5'	30	22	MP-2-3S	33.47	36.55	0
OW-2-40	61.7'	30	22					MP-2-3D	33.60	32.12	0
OW-2-41	61.7'	35	21					MP-2-4	22.16	24.25	0.3
OW-2-42	61.6'	30	20					MP-2-5	20.32	19.11	0.5
OW-2-43	61.4'	30	21								
OW-2-44R	60.6'	30	22								

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/25/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes X No
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) X Normal (green) High (orange)
3) Oil added Yes X No
4) Oil changed Yes No X
5) Oil filter changed Yes No X
6) Air filter Changed Yes No X
7) Oil separator cleaned Yes No X
8) Terminal strips checked Yes X No

AS-80 O_2 Generator

1) Prefilter changed Yes No X
2) Coalescing changed Yes No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No
2) Abnormal conditions observed (e.g. vandalism)
3) Other major activities completed
4) Supplies needed
5) Visitors

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

8-25-17 Found system operation upon arrival. Added small amount of cooling oil to air compressor and adjusted belt tension. Checked auto drains and found clear and operating properly. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	9/27/2017
Time:	11:45
Weather:	Sunny
Outdoor Temperature:	~68° F
Inside Trailer Temperature:	~85° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	38,769	
Feed Air Pressure *	95	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	79.5	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	95	(psi)
(readings below are made from control panel)		
Delivery Air	105	(psi)
Element Outlet Temperature	169	(^{o}F)
Running Hours	43,469	(hours)
Loading Hours	38,691	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	35	30	OW-2-9S	75'	35	22	OW-2-10D	97.2'	30	27
OW-2-3	94.3'	30	32	OW-2-10S	75'	35	33	OW-2-11D	100.8'	30	29
OW-2-4	94.7'	30	30	OW-2-11S	76.5'	45	28	OW-2-12	94'	25	20
OW-2-5	95.3'	30	30	OW-2-13S	75'	30	22	OW-2-13D	97'	30	19
OW-2-6	95.7'	40	28	OW-2-15S	75'	30	21	OW-2-14	96.4'	30	27
OW-2-7	96'	30	29	OW-2-16S	75.5'	30	22	OW-2-15D	94.6'	35	29
OW-2-8	96.3'	30	31	OW-2-18S	74.5'	40	23	OW-2-16D	94.1'	30	28
OW-2-9D	96.7'	30	30	OW-2-20S	79'	25	22	OW-2-17	95'	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/27/2017

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	30	OW-2-22S	76'	30	21	OW-2-26D	95'	35	29
OW-2-19	96.1'	35	31	OW-2-24S	77.8'	30	20	OW-2-27	93.5'	35	29
OW-2-20D	96.6'	30	32	OW-2-26S	74'	30	20	OW-2-28D	92.1'	35	30
OW-2-21	96.6'	30	30	OW-2-28S	76'	30	20	OW-2-29	92.2'	35	30
OW-2-22D	96.3'	25	31	OW-2-30S	67.8'	30	16	OW-2-30D	88'	30	29
OW-2-23	97.2'	25	32	OW-2-34	71'	35	18	OW-2-31	86'	30	29
OW-2-24D	97'	30	32	OW-2-35	69.2'	40	20	OW-2-32	84'	25	31
OW-2-25	96'	30	30	OW-2-36	64.8'	35	25	OW-2-33	82'	30	32

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	22	OW-2-45	61.1'	30	20	MP-2-1	32.61	25.12	0
OW-2-38	62.1'	30	21	OW-2-46	61'	30	21	MP-2-2	33.82	24.55	0
OW-2-39	60'	30	20	OW-2-47	60.5'	30	21	MP-2-3S	33.71	35.00	0
OW-2-40	61.7'	30	23					MP-2-3D	33.84	33.51	0
OW-2-41	61.7'	30	22					MP-2-4	22.55	24.44	0.1
OW-2-42	61.6'	30	20					MP-2-5	20.70	21.12	0.1
OW-2-43	61.4'	35	22								
OW-2-44R	60.6'	35	22								

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/27/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes X No
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) X High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator cleaned Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Prefilter changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

8-27-17 Found system operation upon arrival. Found puddle of water on floor next to separator cannister. Drained water and found tubing clogged and had to flush out to clear line. Checked auto drains and found clear and operating properly. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	11/20/2017
Time:	12:40
Weather:	Sunny
Outdoor Temperature:	~31° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	39,490	
Feed Air Pressure *	90	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	125	(psi)
Oxygen Purity	84.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	100	(psi)
(readings below are made from control panel)		
Delivery Air	105	(psi)
Element Outlet Temperature	171	(^{o}F)
Running Hours	44,697	(hours)
Loading Hours	39,477	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	29	OW-2-9S	75'	40	20	OW-2-10D	97.2'	35	28
OW-2-3	94.3'	30	24	OW-2-10S	75'	30	18	OW-2-11D	100.8'	35	30
OW-2-4	94.7'	30	32	OW-2-11S	76.5'	30	20	OW-2-12	94'	35	26
OW-2-5	95.3'	30	28	OW-2-13S	75'	35	20	OW-2-13D	97'	30	31
OW-2-6	95.7'	35	25	OW-2-15S	75'	40	18	OW-2-14	96.4'	30	28
OW-2-7	96'	30	28	OW-2-16S	75.5'	35	19	OW-2-15D	94.6'	30	28
OW-2-8	96.3'	35	29	OW-2-18S	74.5'	35	18	OW-2-16D	94.1'	30	27
OW-2-9D	96.7'	35	27	OW-2-20S	79'	40	19	OW-2-17	95'	30	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/20/2017

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	30	OW-2-22S	76'	30	18	OW-2-26D	95'	35	31
OW-2-19	96.1'	30	28	OW-2-24S	77.8'	30	18	OW-2-27	93.5'	35	27
OW-2-20D	96.6'	30	27	OW-2-26S	74'	30	18	OW-2-28D	92.1'	40	26
OW-2-21	96.6'	30	28	OW-2-28S	76'	35	20	OW-2-29	92.2'	40	27
OW-2-22D	96.3'	30	25	OW-2-30S	67.8'	45	17	OW-2-30D	88'	30	25
OW-2-23	97.2'	30	25	OW-2-34	71'	40	18	OW-2-31	86'	30	30
OW-2-24D	97'	30	26	OW-2-35	69.2'	30	18	OW-2-32	84'	40	26
OW-2-25	96'	30	25	OW-2-36	64.8'	30	18	OW-2-33	82'	35	27

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	18	OW-2-45	61.1'	30	20	MP-2-1	32.81	23.45	0
OW-2-38	62.1'	25	18	OW-2-46	61'	30	19	MP-2-2	34.10	28.21	0
OW-2-39	60'	30	17	OW-2-47	60.5'	30	20	MP-2-3S	34.00	35.05	0
OW-2-40	61.7'	35	18					MP-2-3D	34.16	36.29	0
OW-2-41	61.7'	30	18					MP-2-4	22.72	24.11	0
OW-2-42	61.6'	25	17					MP-2-5	20.90	22.79	0
OW-2-43	61.4'	25	18								
OW-2-44R	60.6'	30	18								

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/20/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes X No
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) X High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator cleaned Yes ____ No X
8) Terminal strips checked Yes ____ No X

AS-80 O_2 Generator

1) Prefilter changed Yes X No ____
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

11-20-17 Found system operation upon arrival. Found small leak in oxygen generator and repaired. Checked auto drains and found clear and operating properly. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	12/27/2017
Time:	1:00
Weather:	Cold
Outdoor Temperature:	~20° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	40,127	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	90	(psi)
Oxygen Purity	80.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	110	(psi)
Element Outlet Temperature	169	(^{o}F)
Running Hours	45,533	(hours)
Loading Hours	40,132	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	28	OW-2-9S	75'	40	20	OW-2-10D	97.2'	30	25
OW-2-3	94.3'	35	30	OW-2-10S	75'	45	30	OW-2-11D	100.8'	35	28
OW-2-4	94.7'	35	30	OW-2-11S	76.5'	30	28	OW-2-12	94'	45	20
OW-2-5	95.3'	30	28	OW-2-13S	75'	30	22	OW-2-13D	97'	40	18
OW-2-6	95.7'	30	28	OW-2-15S	75'	30	20	OW-2-14	96.4'	35	25
OW-2-7	96'	40	27	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	27
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	21	OW-2-16D	94.1'	30	28
OW-2-9D	96.7'	35	28	OW-2-20S	79'	30	22	OW-2-17	95'	30	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/27/2017

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	30	22	OW-2-26D	95'	30	28
OW-2-19	96.1'	40	31	OW-2-24S	77.8'	35	20	OW-2-27	93.5'	30	29
OW-2-20D	96.6'	40	30	OW-2-26S	74'	40	19	OW-2-28D	92.1'	30	28
OW-2-21	96.6'	30	30	OW-2-28S	76'	30	18	OW-2-29	92.2'	35	28
OW-2-22D	96.3'	40	28	OW-2-30S	67.8'	30	16	OW-2-30D	88'	25	30
OW-2-23	97.2'	30	30	OW-2-34	71'	35	18	OW-2-31	86'	35	29
OW-2-24D	97'	30	32	OW-2-35	69.2'	35	21	OW-2-32	84'	30	30
OW-2-25	96'	30	30	OW-2-36	64.8'	30	23	OW-2-33	82'	30	32

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	25	21	OW-2-45	61.1'	30	20	MP-2-1	33.30	21.12	0
OW-2-38	62.1'	30	20	OW-2-46	61'	30	20	MP-2-2	34.57	16.18	0
OW-2-39	60'	30	20	OW-2-47	60.5'	30	21	MP-2-3S	34.45	23.10	0
OW-2-40	61.7'	30	22					MP-2-3D	34.50	24.81	0.2
OW-2-41	61.7'	30	21					MP-2-4	23.15	20.04	0.2
OW-2-42	61.6'	30	20					MP-2-5	21.35	18.77	0
OW-2-43	61.4'	30	22								
OW-2-44R	60.6'	30	23								

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/27/2017

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes X No
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) X High (orange) ____
3) Oil added Yes ____ No X
4) Oil changed Yes ____ No X
5) Oil filter changed Yes ____ No X
6) Air filter Changed Yes ____ No X
7) Oil separator cleaned Yes ____ No X
8) Terminal strips checked Yes X No ____

AS-80 O_2 Generator

1) Prefilter changed Yes ____ No X
2) Coalescing changed Yes ____ No X

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No ____
2) Abnormal conditions observed (e.g. vandalism) ____
3) Other major activities completed ____
4) Supplies needed ____
5) Visitors ____

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

12-27-17 Found system operational upon arrival. Found oxygen leak in main feed hose off holding tank due to dry rot. Cut back hose to make repairs. Found additional minor leaks in the manifolds that will be repaired next visit. Checked auto drains and found clear and operating properly. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items: