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Groundwater Sampling, NAPL Monitoring/Recovery and Groundwater Treatment Performance Report for the First Quarter of 2017 (January - March) 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

December 2017

GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT FOR THE FIRST QUARTER OF 2017 (JANUARY - MARCH)

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

Prepared for:

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September 2017

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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
DUSR	data usability summary report
ft	foot (feet)
ft/ft	feet per feet
HIMW	Hempstead Intersection (Street) Monitoring Well
ISS	In Situ Solidification
LNAPL	light non-aqueous phase liquid
MGP	manufactured gas plant
µg/L	micrograms per liter
MP	monitoring points
NAPL	non-aqueous phase liquid
NYSDEC	New York State Department of Environmental Conservation
ORP	oxidation-reduction potential
PAHs	polycyclic aromatic hydrocarbons
PID	photo ionization detector
POB	Professional Office Building
QC	quality control
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

This 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 during the First Quarter (January, February, and March) 2017.

Quarterly groundwater monitoring and sampling were conducted on March 6 - 13, 2017. This included measuring the depth to groundwater and NAPL thickness in 44 wells. Groundwater samples were collected from 24 wells and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL monitoring was conducted on January 26, January 27, and March 6, 2017 for a total of three events and NAPL recovery was conducted on January 26 and 27 for a total of two events in the First Quarter of 2017.

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

- The general direction of groundwater flow in the First Quarter 2017 in the shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per feet (ft/ft) for shallow, intermediate, and deep water bearing zones.
- The extent of the dissolved-phase groundwater plume boundary and the data for the First Quarter 2017 are shown in Figure 4. The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100 µg/L, extends approximately 905 feet south of the site boundary.
- Dense non-aqueous phase liquid (DNAPL) was detected in one existing site-related well during the First Quarter. 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 and NAPL recovery was conducted twice during the quarter. There were 3.25 gallons of DNAPL removed during the First Quarter

2017. A total of 850.6 gallons of NAPL have been recovered to date from all of the Site related recovery wells between April 2007 and March 2017.

The first of two oxygen delivery systems (System No. 2) started operating in October 2010 and continued to promote aerobic conditions in the aquifer near the system during the First Quarter of 2017. The second of two oxygen delivery systems (System No. 1) started operating in April 2011 and continued to promote aerobic conditions in the aquifer near the system during the First Quarter of 2017.

Monthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by Island Pump & Tank Corporation. During the First Quarter of 2017, Island Pump & Tank monitored System No. 1 during three events and System No. 2 during three events.

1.0 INTRODUCTION

This quarterly report summarizes the field activities, analytical results, and data interpretations associated with groundwater sampling, gauging, and recovery of NAPL and the monitoring of the groundwater treatment systems during the First Quarter 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. In 2016, the Third and Fourth Quarters were combined in the 2016 Annual Report. Separate reports have been issued quarterly since 2007 as listed in the References section of this report.

AECOM USA, Inc. (AECOM) performed the following activities during the First Quarter of 2017:

- Measured the depth to groundwater and NAPL thickness in 44 off-site wells on March 6 – 13, 2017 (see Tables 1 and 2).
- Monitored and recovered NAPL at HIMW-021 on January 26 and January 27 and monitored only on March 6, 2017. There were 3.25 gallons of product recovered during the First Quarter 2017 (see Table 3).
- Collected groundwater samples from 24 monitoring wells for laboratory analysis during the scheduled round of quarterly groundwater sampling (see Table 4).

Island Pump & Tank 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 System No. 1 during three events and on System No. 2 during three events in the First Quarter 2017. Monitoring is conducted monthly to assess the performance of groundwater treatment System No. 1 and System No. 2. This data is 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 and NAPL thickness in 44 monitoring wells and the collection of groundwater samples from 24 monitoring wells.

Monitoring wells and piezometers used for these activities are listed in Table 1. First Quarter 2017 groundwater elevations and NAPL thickness values are presented in Table 2, NAPL recovery are reported in Table 3, and the results of groundwater sampling are presented in Table 4.

Island Pump & Tank performed measurements to monitor the performance of the groundwater treatment Systems No. 1 and No. 2 monthly during the First Quarter of 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 dissolved oxygen meter on System No. 1 on January 30, February 28, and March 29, 2017 and on System No. 2 on January 30, March 1, and March 28, 2017. This data is 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 are listed in Table 2. NAPL thicknesses and recovery amounts are listed in Table 3.

There were 44 monitoring wells gauged during the First Quarter March 6, 2017 gauging event. HIMW-12I was not gauged for DNAPL thickness or total well depth and HIMW-12D was not gauged for any of the gauging parameters due to obstructions inside the wells.

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 April 2007 and July 2011 when NAPL recovery ended upon the start of ISS treatment. All, but one, of the recovery wells were destroyed to complete the ISS work. NAPL recovery is limited to this one well, HIMW-021, which is located to the south of the site adjacent to the sidewalk of the Professional Office Building (POB), outside the ISS area.

NAPL levels were monitored in well HIMW-021 during three gauging events: January 26, January 27, and March 6, 2017. During the event, the well was gauged with a weighted cotton string to measure the DNAPL thickness. NAPL was recovered from HIMW-021 during the January 26 and 27 events. A total of 3.25 gallons were recovered during the First Quarter 2017. A total of 850.6 gallons of NAPL have been recovered from all of the Site related recovery wells between April 2007 and March 2017.

Table 3 presents First Quarter 2017 NAPL thickness and recovery amounts at HIMW-021 per event and the total NAPL recovery amounts from the site.

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 500 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. $\pm$ 10 percent] over a 15 minute period). Groundwater samples were collected afterwards and shipped under chain-of-custody procedures to Pace Analytical Laboratory for analysis of BTEX (United States Environmental Protection Agency [USEPA] Method 8260C) and PAHs (USEPA Method 8270D). Purge water was stored in an onsite storage tank for subsequent offsite disposal. The Data Usability Summary Report is presented in Appendix A.

There were 24 monitoring wells sampled during the First Quarter March 7-13, 2017 groundwater sampling event. Two monitoring wells from the sampling and analysis plan (HIMW-012I and HIMW-012D) were not sampled during this quarterly event because of obstructions inside the wells risers.

Analytical results from the quarterly groundwater sampling event and the additional monitoring wells are presented in Table 4 and Figure 4.

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 by Island Pump & Tank during the First Quarter 2017 through the measurement of water levels, headspace gas, and water quality parameters in the groundwater monthly, 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 and were taken during three events for System No. 1 on January 30, February 28, and March 29, 2017 and during three events for System No. 2 on January 30, March 1, and March 28, 2017. The full system data is included in Appendix B.

3.0 RESULTS

3.1 Dissolved-Phase Plume

The extent of the dissolved-phase groundwater plume boundary and the data for First Quarter 2017 (and the historical concentration ranges) are shown in Figure 4. The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100 µg/L, extends approximately 905 feet south of the site boundary.

3.2 Potentiometric Heads and NAPL Thickness

Potentiometric heads and NAPL thickness measurements for the First Quarter 2017 are presented in Table 2. Potentiometric surface maps for shallow, intermediate, and deep groundwater zones were developed using this data and are shown in Figures 5, 6, and 7, respectively for the First Quarter 2017. The data for First Quarter 2017 indicates 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.

DNAPL was observed in one well during the First Quarter 2017 on January 26, January 27, and March 6, 2017 for a total of three events, see Table 3. The well (HIMW-021) is located along the west side of Wendell Street south of the Site and Intersection Street (Figure 8). 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 are summarized in Section 3.1, Table 4, and Appendix A and are illustrated on Figures 4 and 8.

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 completeness of all required deliverables; holding times; 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. In the First Quarter 2017, NAPL levels were monitored in well HIMW-021 during three gauging events: January 26, January 27, and March 6, 2017. During these events, the well was gauged with a weighted cotton string to measure the DNAPL thickness. During the two January events, a total 3.25 gallons of NAPL was recovered from this well. A total of 8450.6 gallons of NAPL have been recovered to date from all of the Site related recovery wells between April 2007 and March 2017. Table 3 lists the amount of DNAPL gauged in HIMW-021 during each event and the total amount of product recovered.

3.5 Groundwater Treatment System Performance

Groundwater treatment system performance data for First Quarter 2017, as collected and reported by Island Pump & Tank, is presented in Table 5.

System No. 1

System No. 1 DO readings reported in the First Quarter 2017 ranged from a low of 3.97 mg/L at MP-1-8 on January 30, 2017 to a high of 38.07 mg/L at MP-1-2D on January 30, 2017. The overall average DO reading for System No. 1 in the First Quarter was 23.66 mg/L.

There was one PID headspace reading above 1 ppm for System No. 1 in the First Quarter 2017. This reading was 2.3 ppm on January 30, 2017 at MP-1-3D. All other PID readings were below 1 ppm.

During the First Quarter, the system was running and routine maintenance was regularly performed. System No. 1 performed as expected to create an aerobic environment in the aquifer.

System No. 2

System No. 2 DO readings reported in the First Quarter 2017 ranged from a low of 16.05 mg/L at MP-2-5 on March 28, 2017 to a high of 39.38 mg/L at MP-2-3D on January 30, 2017. The overall average DO reading for System No. 2 in the First Quarter was 28.08 mg/L.

There was only one PID headspace readings above 1 ppm for System No. 2 in the First Quarter 2017. This was a reading 1.3 ppm at MP-2-3D on January 30, 2017. All other PID headspace readings were below 0.5 ppm.

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

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TABLES

Table 1

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

Well ID	First Quarter (March 6 to 13, 2017)			NAPL Monitoring and DNAPL Recovery Events		
	Water Level	NAPL Thickness	Water Quality	January 26, 2017	January 27, 2017	March 6, 2017
HIMW-003S	X	X				
HIMW-003I	X	X				
HIMW-003D	X	X				
HIMW-004S	X	X				
HIMW-004I	X	X				
HIMW-004D	X	X				
HIMW-005S	X	X	X			
HIMW-005I	X	X	X			
HIMW-005D	X	X	X			
HIMW-008S	X	X	X			
HIMW-008I	X	X	X			
HIMW-008D	X	X	X			
HIMW-009S	X	X				
HIMW-009I	X	X				
HIMW-009D	X	X				
HIMW-010S						
HIMW-010I						
HIMW-011S	X	X				
HIMW-011I	X	X				
HIMW-011D	X	X				
HIMW-012S	X	X	X			
HIMW-012I	X					
HIMW-012D						
HIMW-013S	X	X				
HIMW-013I	X	X	X			
HIMW-013D	X	X	X			
HIMW-014I	X	X	X			
HIMW-014D	X	X				
HIMW-015I	X	X	X			
HIMW-015D	X	X	X			
HIMW-020S	X	X	X			
HIMW-020I	X	X	X			
HIMW-021	X	X		X	X	X (monitor only)
HIMW-022	X	X	X			
HIMW-023	X	X	X			
HIMW-024	X	X	X			
HIMW-025	X	X	X			
HIMW-026I	X	X	X			
HIMW-026D	X	X	X			
HIMW-027S	X	X	X			
HIMW-027I	X	X	X			
HIMW-028S	X	X	X			
HIMW-028I	X	X	X			

Table 1

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

Well ID	First Quarter (March 6 to 13, 2017)			NAPL Monitoring and DNAPL Recovery Events		
	Water Level	NAPL Thickness	Water Quality	January 26, 2017	January 27, 2017	March 6, 2017
PZ-02	X	X				
PZ-03	X	X				
OSMW-02	X	X				
OSMW-03	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 2
Groundwater and NAPL Measurements
First 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	3/6/2017	65.00	ND	22.33	ND	34.32	0	0.00	42.67
HIMW-003I	3/6/2017	64.94	ND	22.53	ND	84.97	0	0.00	42.41
HIMW-003D	3/6/2017	65.26	ND	23.14	ND	142.18	0	0.00	42.12
HIMW-004S	3/6/2017	72.74	ND	30.71	ND	41.63	0	0.00	42.03
HIMW-004I	3/6/2017	72.78	ND	30.77	ND	90.46	0	0.00	42.01
HIMW-004D	3/6/2017	72.65	ND	31.12	ND	177.01	0	0.00	41.53
HIMW-005S	3/6/2017	67.19	ND	25.05	ND	38.93	0	0.00	42.14
HIMW-005I	3/6/2017	67.22	ND	25.19	ND	90.48	0	0.00	42.03
HIMW-005D	3/6/2017	67.22	ND	25.54	ND	135.94	0	0.00	41.68
HIMW-008S	3/6/2017	65.04	ND	23.28	ND	36.88	0	0.00	41.76
HIMW-008I	3/6/2017	65.14	ND	23.47	ND	74.78	0	0.00	41.67
HIMW-008D	3/6/2017	64.93	ND	23.25	ND	114.53	0	0.00	41.68
HIMW-009S	3/6/2017	70.03	ND	27.89	ND	39.84	0	0.00	42.14
HIMW-009I	3/6/2017	69.93	ND	27.84	ND	80.44	0	0.00	42.09
HIMW-009D	3/6/2017	69.96	ND	27.91	ND	122.97	0	0.00	42.05
HIMW-010S	3/6/2017	71.60	NM	NM	NM	NM	NM	NM	NM
HIMW-010I	3/6/2017	71.47	NM	NM	NM	NM	NM	NM	NM
HIMW-011S	3/6/2017	71.62	28.98	29.03	ND	40.25	0.05	0.00	42.64
HIMW-011I	3/6/2017	71.43	ND	28.78	ND	93.19	0	0.00	42.65
HIMW-011D	3/6/2017	71.39	ND	28.77	ND	122.28	0	0.00	42.62
HIMW-012S	3/6/2017	61.58	ND	20.92	ND	33.11	0	0.00	40.66
HIMW-012I	3/6/2017	61.59	ND	20.79	ND	NM	0	NM	40.80
HIMW-012D	3/6/2017	61.82	NM	NM	NM	NM	NM	NM	NM
HIMW-013S	3/6/2017	72.83	ND	33.96	ND	48.58	0	0.00	38.87
HIMW-013I	3/6/2017	72.60	ND	33.74	ND	81.42	0	0.00	38.86
HIMW-013D	3/6/2017	72.53	ND	33.71	ND	122.04	0	0.00	38.82
HIMW-014I	3/6/2017	71.71	ND	32.85	ND	96.25	0	0.00	38.86
HIMW-014D	3/6/2017	71.59	ND	34.26	ND	151.85	0	0.00	37.33
HIMW-015I	3/6/2017	64.18	ND	27.81	ND	92.37	0	0.00	36.37
HIMW-015D	3/6/2017	63.96	ND	28.80	ND	152.08	0	0.00	35.16
HIMW-020S	3/6/2017	70.43	ND	29.15	ND	36.72	0	0.00	41.28
HIMW-020I	3/6/2017	70.30	ND	29.02	ND	74.65	0	0.00	41.28

Table 2
Groundwater and NAPL Measurements
First 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	3/6/2017	NM	23.58	23.59	43.80	45.30	0.01	1.50	NM
HIMW-022	3/6/2017	74.07	ND	33.97	ND	64.42	0	0.00	40.10
HIMW-023	3/6/2017	74.41	ND	34.13	ND	75.18	0	0.00	40.28
HIMW-024	3/6/2017	59.83	ND	18.72	ND	54.82	0	0.00	41.11
HIMW-025	3/6/2017	62.75	ND	21.17	ND	52.08	0	0.00	41.58
HIMW-26I	3/6/2017	68.13	ND	26.98	ND	84.83	0	0.00	41.15
HIMW-26D	3/6/2017	68.02	ND	26.99	ND	137.61	0	0.00	41.03
HIMW-27S	3/6/2017	69.49	ND	28.13	ND	41.21	0	0.00	41.36
HIMW-27I	3/6/2017	68.96	ND	27.58	ND	70.07	0	0.00	41.38
HIMW-28S	3/6/2017	69.87	ND	28.49	ND	41.38	0	0.00	41.38
HIMW-28I	3/6/2017	69.56	ND	28.25	ND	71.51	0	0.00	41.31
PZ-02	3/6/2017	72.96	ND	29.68	ND	35.47	0	0.00	43.28
PZ-03	3/6/2017	64.58	ND	21.58	ND	29.88	0	0.00	43.00
OSMW-02	3/6/2017	71.59	ND	29.07	ND	45.12	0	0.00	42.52
OSMW-03	3/6/2017	71.39	ND	28.93	ND	44.68	0	0.00	42.46

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 Recovery
First Quarter 2017
Hempstead Intersection Street Former MGP Site

Well ID	Well Diameter (inches)	1st Quarter 2017								
		January 26, 2017			January 27, 2017			March 6, 2017		
		Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed[(1)]	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed[(1)]	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed[(1)]
		[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]
HIMW-021	6	ND	2.50	1.75	ND	1.50	1.50	0.01	1.50	0.00
		Volume of NAPL Removed:		**1.75**	Volume of NAPL Removed:		**1.50**	Volume of NAPL Removed:		**0.00**
		Total NAPL volume recovered during the First Quarter 2017:								**3.25**

Total volume of NAPL recovered in the First Quarter 2017: **3.25** gallons

Total volume of NAPL recovered from April 2007 to First Quarter 2017: **850.6** gallons

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
NM Not Measured

Table 4

Dissolved-Phase Concentrations of Total BTEX and Total PAH Compounds First Quarter of 2017 Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2017 March 7 to March 13, 2017	
	BTEX [µg/L]	PAH [µg/L]
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		
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		
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		

Notes:

A blank field is "Not Sampled".
NAPL is periodically identified in this well.

BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
PAH	Polycyclic Aromatic Hydrocarbons
µg/L	micrograms per liter
ND	Not Detected

Table 5
Groundwater Treatment Performance Monitoring
First 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 #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

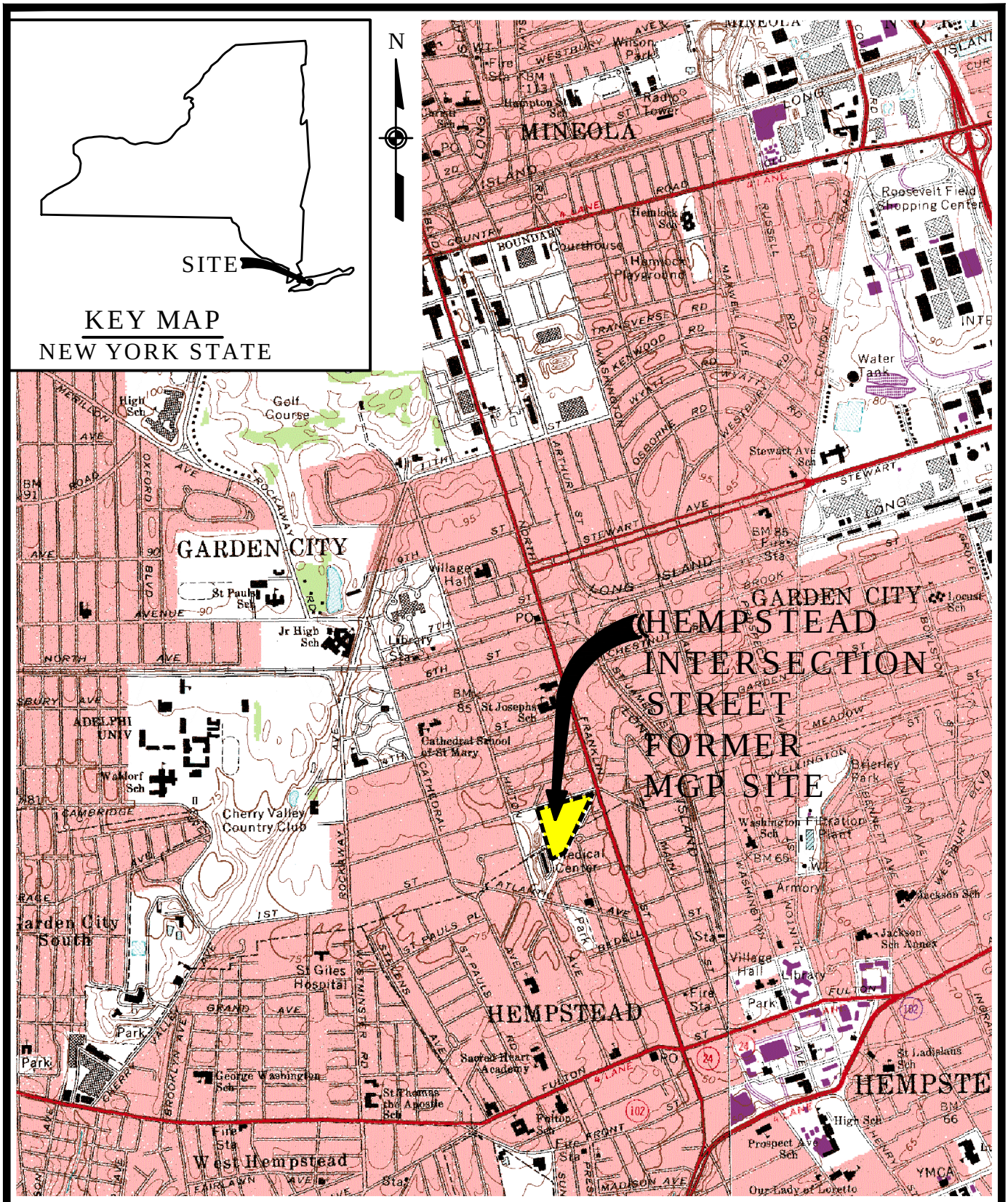
Abbreviations

DTW: Depth to water (feet)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
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%

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)

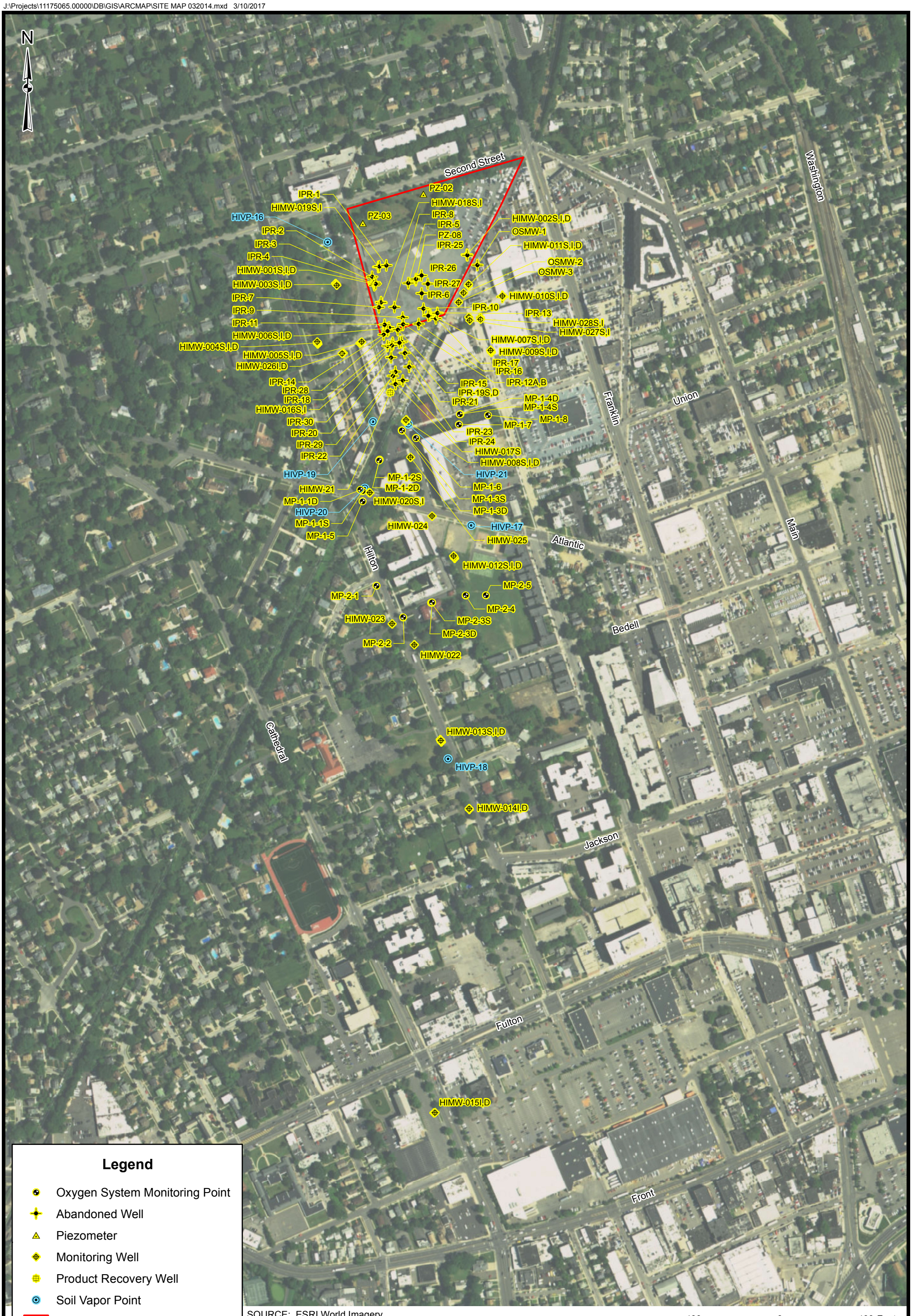
URS Corporation

LOCATION MAP

FIGURE 1

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\SECOND QUARTER 2014\FIGURE-1.dwg 6/11/14 - 1 RAL

J:\Projects\11175065.00000\DB\GIS\ARCMAP\SITE MAP 032014.mxd 3/10/2017



Legend

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

SOURCE: ESRI World Imagery

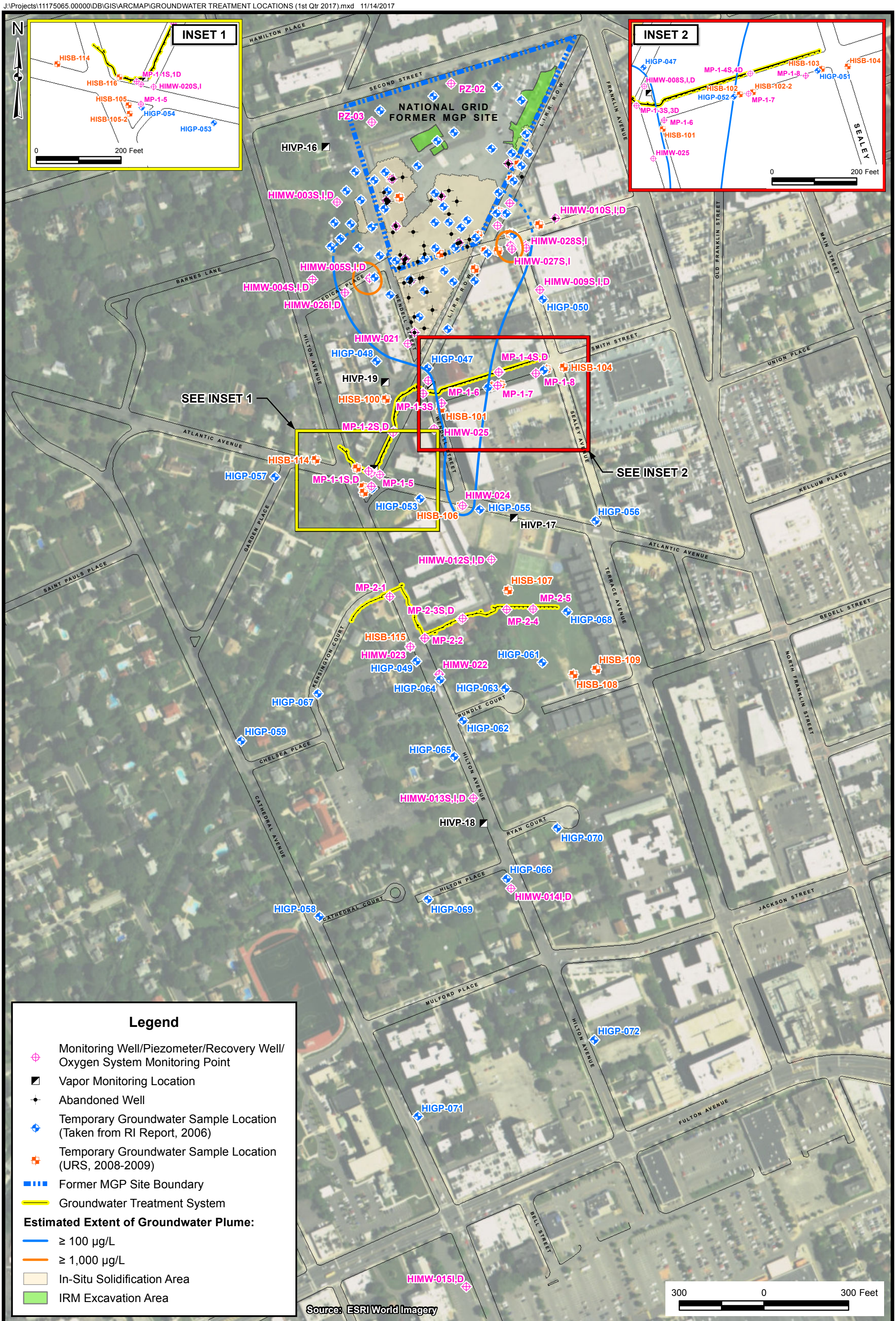
400 0 400 Feet

AECOM

NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY
SITE MAP - MARCH 2017

FIGURE 2

J:\Projects\11175065.00000\DB\GIS\ARCMAP\GROUNDWATER TREATMENT LOCATIONS (1st Qtr 2017).mxd 11/14/2017



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
- Groundwater Treatment System

Estimated Extent of Groundwater Plume:

- ≥ 100 µg/L
- ≥ 1,000 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
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 (59)	ND–3,069 (40)
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	3–273 (4)	25–288 (25)
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 (ND)	ND–573 (ND)

HIMW–028S,I		
DEPTH	TOT. BTEX	TOT. PAHs
20–40	ND–213 (90)	10–738 (229)
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 (2)	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	14–87 (14)	118–1,749 (305)

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 (74)	891–5,337 (1,457)
130–140	ND–359 (96)	ND–2,698 (1,584)

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

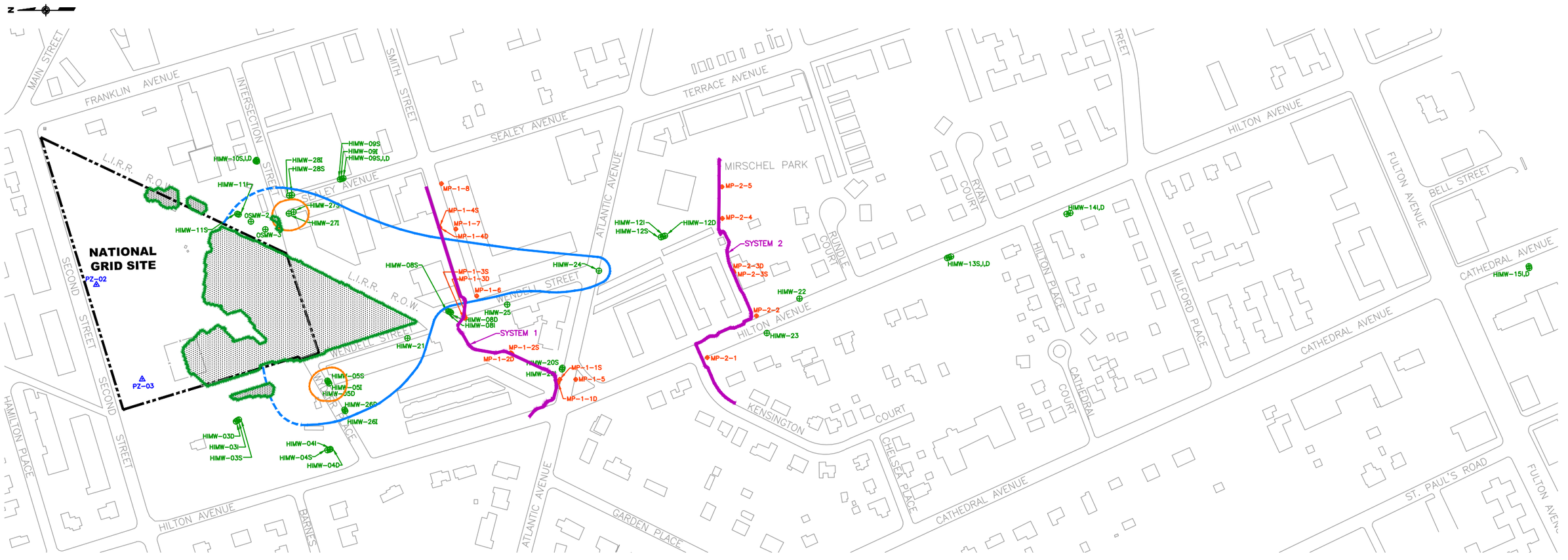
HIMW–013S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
38–48	ND–11	ND
70–80	ND–313 (ND)	ND–156 (ND)
110–120	2–30 (2)	ND–28 (14)

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

HIMW–024		
DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	ND–900 (7)	ND–1,024 (185)

HIMW–027S,I		
DEPTH	TOT. BTEX	TOT. PAHs
20–40	447–1,483 (1,084)	695–1,807 (1,165)
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 (7)	ND–1,024 (185)

← CONCENTRATION UNITS ARE ug/L (MARCH 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

EXTENT OF DISSOLVED-PHASE PLUME AND GROUNDWATER ANALYTICAL RESULTS - MARCH 2017

FIGURE 4

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\FIRST QUARTER 2017\FIGURE 4.dwg 6/14/17 – 5 RAL

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\MARCH 2017\FIGURE 5.dwg 7/11/17 - 1 RAL

N

PZ-02, 43.28

NATIONAL GRID
FORMER MGP SITE

PZ-03, 43.00

HIMW-03S, 42.67

OSMW-3, 42.46

HIMW-11S, 42.64

HIMW-10S, NM

OSMW-2, 42.52

HIMW-28S, 41.38

HIMW-09S, 42.14

HIMW-04S, 42.03

HIMW-05S, 42.14

HIMW-27S, 41.36

HIMW-8S, 41.76

HIMW-20S, 41.28

HIMW-12S, 40.66

HIMW-13S, 38.87

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.

SECOND STREET

HILTON AVENUE

BARNES LANE

WYCKLER PLACE

WENDELL STREET

SEALEY AVENUE

INTERSECTION STREET

SMITH STREET

FRANKLIN AVENUE

MAIN STREET

OLD FRANKLIN STREET

MEADOW PLACE

STOWE PLACE

SAMMIS PLACE

MILLER PLACE

UNION PLACE

ATLANTIC AVENUE

GARDEN PLACE

KENSINGTON COURT

CATHEDRAL AVENUE

CHELSEA PLACE

MIRSCHEL PARK

TERRACE AVENUE

MARGARET COURT

BEDELL STREET

RUNDLE COURT

NORTH FRANKLIN STREET

WEST COLUMBIA ST

KELLUM PLACE

RYAN COURT

JACKSON STREET

CATHEDRAL COURT

HILTON PLACE

MULFORD PLACE

FULTON AVENUE

BELL STREET

ST. PAUL'S

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
△	PIEZOMETER
→	GROUNDWATER FLOW DIRECTION
44	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-8S, 41.76	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
POTENTIOMETRIC SURFACE MAP FOR SHALLOW GROUNDWATER
MARCH 6, 2017

FIGURE 5

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\MARCH 2017\FIGURE 6.dwg 7/11/17 - 3 RAL

N

NATIONAL GRID
FORMER MGP SITE

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

HIMW-03I, 42.41
HIMW-27I, 41.38
HIMW-11I, 42.65
HIMW-10I, NM
HIMW-05I, 42.03
HIMW-28I, 41.31
HIMW-04I, 42.01
HIMW-09I, 42.09
HIMW-26I, 41.15
HIMW-08I, 41.67
HIMW-25, 41.58
HIMW-20I, 41.28
HIMW-24, 41.11
HIMW-12I, 40.80
HIMW-23, 40.28
HIMW-22, 40.10
HIMW-13I, 38.86
HIMW-14I, 38.86
HIMW-15I, 36.37

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
WYDLER PLACE
WENDELL STREET
SEALEY AVENUE
FRANKLIN AVENUE
OLD FRANKLIN STREET
MAIN STREET
STOWE PLACE
SAMMIS PLACE
MILLER PLACE
UNION PLACE
INTERSECTION STREET
SMITH STREET
ATLANTIC AVENUE
KELLUM PLACE
GARDEN PLACE
KENSINGTON COURT
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
NORTH FRANKLIN STREET
WEST COLUMBIA ST
CATHEDRAL AVENUE
CHELSEA PLACE
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
44	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-08I, 41.67	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
POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE GROUNDWATER
MARCH 6, 2017

FIGURE 6

J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\MARCH 2017\FIGURE 7.dwg 7/11/17 - 2 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-03D, 42.12
HIMW-11D, 42.62
HIMW-05D, 41.68
HIMW-04D, 41.53
HIMW-09D, 42.05
HIMW-26D, 41.03
HIMW-08D, 41.68
HIMW-12D, NM
HIMW-13D, 38.82
HIMW-14D, 37.33
HIMW-15D, 35.16

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
L.I.R.R. R.O.W.
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
GARDEN PLACE
KENSINGTON COURT
CATHEDRAL AVENUE
CHELSEA PLACE
CATHEDRAL COURT
HILTON PLACE
MULFORD PLACE
KELLUM PLACE
MARGARET COURT
TERRACE AVENUE
MIRSCHEL PARK
BEDELL STREET
RINDLE COURT
RYAN COURT
JACKSON STREET
NORTH FRANKLIN STREET
WEST COLUMBIA ST
FULTON AVENUE
BELL STREET
ST. PAUL'S

LEGEND:

⊕	MONITORING WELL
→	GROUNDWATER FLOW DIRECTION
43	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-14D, 37.33	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

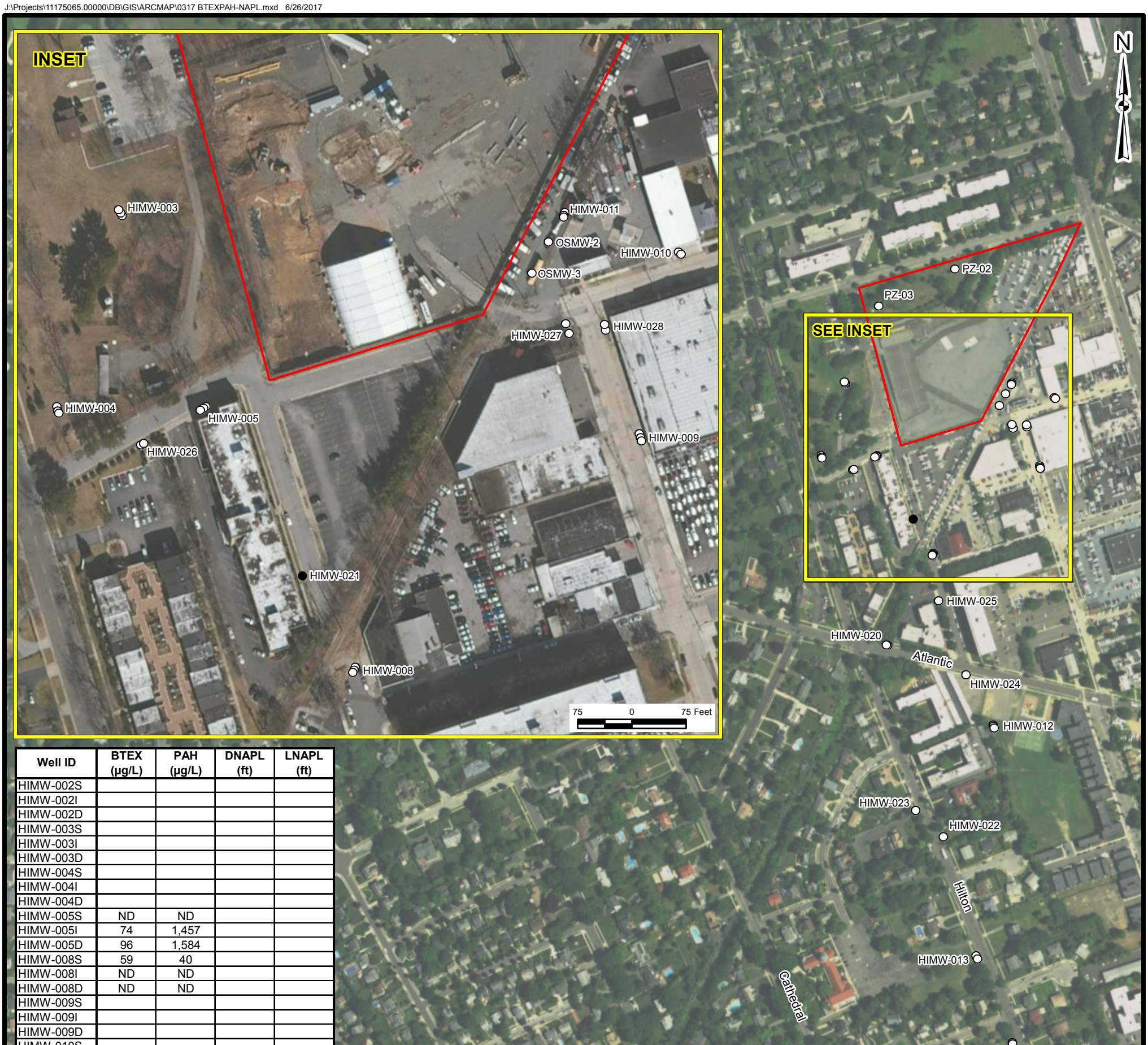
NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

AECOM

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR DEEP GROUNDWATER
MARCH 6, 2017

FIGURE 7

J:\Projects\11175065.00000\DB\GIS\ARCMAP\0317 BTEXPAH-NAPL.mxd 6/26/2017



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 8

APPENDIX A

DATA USABILITY SUMMARY REPORT

(Provided in Electronic Format Only)

APPENDIX A
DATA USABILITY SUMMARY REPORT
FIRST 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

June 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, 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 March 7-13, 2017. Six (6) of the groundwater samples (i.e., HIMW-26I, -26D, -27S, -27I, -28S, and -28I) were collected as part of the oxygen treatment system design evaluation, while the remaining eighteen (18) groundwater samples were collected as part of the 2016 1st 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 laboratory did not report any non-conformances, nor were there any noted during the data review.

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'.

For sample HIMW-27S, the o-xylene result reported by the laboratory from the undiluted analysis exceeded the linear range of calibration. However, the laboratory did not qualify the undiluted xylene result accordingly on the analytical summary ('E'). Therefore, the o-xylene result from the secondary dilution was used to determine the total xylene result, as reflected on Table A-1.

Field duplicates were collected from monitoring well locations HIMW-08S and HIMW-28S, 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. URS does not recommend the re-collection of any samples at this time.

Prepared By: _____ **Date:** 6/21/17
Peter R. Fairbanks, Senior Chemist

Reviewed By: _____ **Date:** 6/21/17
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-5D	HIMW-5I	HIMW-5S	HIMW-8D	HIMW-8I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/09/17	03/09/17	03/09/17	03/08/17	03/08/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	2.1	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	-	4.8	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	91.3	71.8	1.0 U	1.0 U	1.0 U
Total BTEX	UG/L	100	96.1	73.9	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	166 D	172 D	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	-	3.4 J	12.5	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	56.6	144 D	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	-	8.2	30.0	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	-	1,350 D	1,080 D	5.0 U	5.0 U	5.0 U
Phenanthrene	UG/L	-	5.0 U	18.6	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	1,584.2	1,457.1	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

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By: _____; Checked By: _____

Detection Limits shown are PQL

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

Location ID			HIMW-008S	HIMW-008S	HIMW-012S	HIMW-013D	HIMW-013I
Sample ID			DUP20170308	HIMW-8S	HIMW-12S	HIMW-13D	HIMW-13I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/08/17	03/08/17	03/07/17	03/07/17	03/07/17
Parameter	**Units**	**Criteria***	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	31.1	26.0	1.0 U	2.1	1.0 U
Ethylbenzene	UG/L	-	9.7	7.5	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	7.0	5.1	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	27.1	20.3	1.0 U	1.0 U	1.0 U
Total BTEX	UG/L	100	74.9	58.9	ND	2.1	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	1.5 J	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	-	1.1 J	1.6 J	5.0 U	5.1	5.0 U
Acenaphthylene	UG/L	-	3.5 J	4.7 J	5.0 U	8.6	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	1.1 J	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	-	13.3	28.7	5.0 U	5.0 U	5.0 U
Phenanthrene	UG/L	-	1.8 J	2.2 J	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	19.7	39.8	ND	13.7	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.

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D - Result reported from a secondary dilution analysis.

Made By: _____; Checked By: _____

Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
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			03/07/17	03/08/17	03/08/17	03/10/17	03/10/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	4.1	1.0 U	1.5	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	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total BTEX	UG/L	100	4.1	ND	1.5	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	-	9.1	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	10.2	5.0 U	5.3	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	-	2.7 J	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	-	3.2 J	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	25.2	ND	5.3	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.

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Made By: _____; Checked By: _____

Detection Limits shown are PQL

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TABLE A-1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
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	HIMW-26D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/13/17	03/08/17	03/09/17	03/07/17	03/09/17
Parameter	**Units**	**Criteria***					
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	-	1.0 U	1.0 U	6.7	1.0 U	13.7
Total BTEX	UG/L	100	ND	ND	6.7	ND	13.7
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	12.3	5.0 U	54.3
Acenaphthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	2.4 J
Acenaphthylene	UG/L	-	5.0 U	5.0 U	5.8	5.0 U	35.8
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	6.9
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	167 D	5.0 U	199 D
Phenanthrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	6.4
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	ND	185.1	ND	304.8

*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.

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

D - Result reported from a secondary dilution analysis.

Made By: _____; Checked By: _____

Detection Limits shown are PQL

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J:\Projects\11175065.00000\DB\Program\EDMS.mdb
Printed: 6/9/2017 9:23:13 AM
[LOGDATE] >= #1/1/2017# AND [MATRIX] = 'WG' AND [SACODE] <> 'TB

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	DUP20170310
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/09/17	03/13/17	03/13/17	03/09/17	03/10/17
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1.0 U	1.0 U	35.7	1.0 U	4.8
Ethylbenzene	UG/L	-	1.0 U	1.0 U	544 D	1.0 U	74.7
Toluene	UG/L	-	1.0 U	1.0 U	13.3	1.0 U	1.0 U
Xylene (total)	UG/L	-	1.0 U	1.0 U	491 D	1.0 U	8.1
Total BTEX	UG/L	100	ND	ND	1,084	ND	87.6
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U	5.0 U	155 D	5.0 U	13.0
Acenaphthene	UG/L	-	5.0 U	5.0 U	78.7	5.0 U	31.3
Acenaphthylene	UG/L	-	5.0 U	5.0 U	4.0 J	5.0 U	2.0 J
Anthracene	UG/L	-	5.0 U	5.0 U	7.5	5.0 U	3.2 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	34.6	5.0 U	21.9
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	838 D	5.0 U	118 D
Phenanthrene	UG/L	-	5.0 U	5.0 U	44.0	5.0 U	21.9
Pyrene	UG/L	-	5.0 U	5.0 U	2.9 J	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	1,164.7	ND	211.3

*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

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By: _____; Checked By: _____

Detection Limits shown are PQL

Advanced Selection: AMK-TEMF
J:\Projects\11175065.00000\DB\Program\EDMS.md
Printed: 6/9/2017 9:23:14 AM
[LOGDATE] >= #1/1/2017# AND [MATRIX] = 'WG' AND [SACODE] <> 'TB

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

Location ID			HIMW-028S
Sample ID			HIMW-28S
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			03/10/17
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
Benzene	UG/L	-	4.7
Ethylbenzene	UG/L	-	76.7
Toluene	UG/L	-	1.0 U
Xylene (total)	UG/L	-	8.6
Total BTEX	UG/L	100	90
Semivolatile Organic Compounds			
2-Methylnaphthalene	UG/L	-	14.3
Acenaphthene	UG/L	-	32.6
Acenaphthylene	UG/L	-	2.1 J
Anthracene	UG/L	-	3.5 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	-	24.0
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 U
Naphthalene	UG/L	-	129 D
Phenanthrene	UG/L	-	23.9
Pyrene	UG/L	-	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	229.4

*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

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By: _____; Checked By: _____

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			TB	TB030917	TB20170310	FB-031317	TB031317
Matrix			Water Quality	Water Quality	Groundwater	Water Quality	Water Quality
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/07/17	03/09/17	03/10/17	03/13/17	03/13/17
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	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 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 U	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

U - Not detected above the reported quantitation limit.

Made By: _____; Checked By: _____

Detection Limits shown are PQL

Advanced Selection: AMK-TEMP2
J:\Projects\11175065.00000\DB\Program\EDMS.md
Printed: 6/9/2017 9:29:47 AM
[LOGDATE] >= #1/1/2017# AND [LOCID] = 'FIELDQC

ATTACHMENT A

VALIDATED FORM 1'S

Pace Analytical
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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.: 7012857

Sample: HIMW-5S **Lab ID: 7012857012** Collected: 03/09/17 11:10 Received: 03/09/17 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	03/13/17 09:13	03/15/17 20:07	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 20:07	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	84	%.	35-114	1	03/13/17 09:13	03/15/17 20:07	4165-60-0	
2-Fluorobiphenyl (S)	76	%.	43-116	1	03/13/17 09:13	03/15/17 20:07	321-60-8	
p-Terphenyl-d14 (S)	47	%.	33-141	1	03/13/17 09:13	03/15/17 20:07	1718-51-0	
Phenol-d5 (S)	32	%.	10-110	1	03/13/17 09:13	03/15/17 20:07	4165-62-2	
2-Fluorophenol (S)	42	%.	21-110	1	03/13/17 09:13	03/15/17 20:07	367-12-4	
2,4,6-Tribromophenol (S)	74	%.	10-123	1	03/13/17 09:13	03/15/17 20:07	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	33-110	1	03/13/17 09:13	03/15/17 20:07	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	61	%.	16-110	1	03/13/17 09:13	03/15/17 20:07	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 19:58	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 19:58	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 19:58	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 19:58	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	68-153	1		03/13/17 19:58	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/13/17 19:58	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		03/13/17 19:58	2037-26-5	

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

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-5I **Lab ID: 7012857011** Collected: 03/09/17 09:50 Received: 03/09/17 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	**12.5**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	83-32-9	
Acenaphthylene	**144** D	ug/L	100	20	03/13/17 09:13	03/17/17 16:23	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	206-44-0	
Fluorene	**30.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	193-39-5	
2-Methylnaphthalene	**172** D	ug/L	100	20	03/13/17 09:13	03/17/17 16:23	91-57-6	
Naphthalene	**1080** D	ug/L	100	20	03/13/17 09:13	03/17/17 16:23	91-20-3	
Phenanthrene	**18.6**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:39	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	60	%.	35-114	1	03/13/17 09:13	03/15/17 19:39	4165-60-0	
2-Fluorobiphenyl (S)	75	%.	43-116	1	03/13/17 09:13	03/15/17 19:39	321-60-8	
p-Terphenyl-d14 (S)	67	%.	33-141	1	03/13/17 09:13	03/15/17 19:39	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/13/17 09:13	03/15/17 19:39	4165-62-2	
2-Fluorophenol (S)	45	%.	21-110	1	03/13/17 09:13	03/15/17 19:39	367-12-4	
2,4,6-Tribromophenol (S)	72	%.	10-123	1	03/13/17 09:13	03/15/17 19:39	118-79-6	
2-Chlorophenol-d4 (S)	67	%.	33-110	1	03/13/17 09:13	03/15/17 19:39	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	57	%.	16-110	1	03/13/17 09:13	03/15/17 19:39	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**2.1**	ug/L	1.0	1		03/13/17 20:18	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 20:18	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 20:18	108-88-3	
Xylene (Total)	**71.8**	ug/L	1.0	1		03/13/17 20:18	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%.	68-153	1		03/13/17 20:18	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 20:18	460-00-4	
Toluene-d8 (S)	95	%.	69-124	1		03/13/17 20:18	2037-26-5	

5/31/17
2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-5D **Lab ID: 7012857010** Collected: 03/09/17 08:15 Received: 03/09/17 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	**3.4J**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	83-32-9	
Acenaphthylene	**56.6**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	206-44-0	
Fluorene	**8.2**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	193-39-5	
2-Methylnaphthalene	**166** D	ug/L	100	20	03/13/17 09:13	03/17/17 15:55	91-57-6	
Naphthalene	**1350** D	ug/L	100	20	03/13/17 09:13	03/17/17 15:55	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 19:12	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	64	%.	35-114	1	03/13/17 09:13	03/15/17 19:12	4165-60-0	
2-Fluorobiphenyl (S)	76	%.	43-116	1	03/13/17 09:13	03/15/17 19:12	321-60-8	
p-Terphenyl-d14 (S)	76	%.	33-141	1	03/13/17 09:13	03/15/17 19:12	1718-51-0	
Phenol-d5 (S)	31	%.	10-110	1	03/13/17 09:13	03/15/17 19:12	4165-62-2	
2-Fluorophenol (S)	45	%.	21-110	1	03/13/17 09:13	03/15/17 19:12	367-12-4	
2,4,6-Tribromophenol (S)	71	%.	10-123	1	03/13/17 09:13	03/15/17 19:12	118-79-6	
2-Chlorophenol-d4 (S)	71	%.	33-110	1	03/13/17 09:13	03/15/17 19:12	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	57	%.	16-110	1	03/13/17 09:13	03/15/17 19:12	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 20:39	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 20:39	100-41-4	
Toluene	**4.8**	ug/L	1.0	1		03/13/17 20:39	108-88-3	
Xylene (Total)	**91.3**	ug/L	1.0	1		03/13/17 20:39	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		03/13/17 20:39	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/13/17 20:39	460-00-4	
Toluene-d8 (S)	96	%.	69-124	1		03/13/17 20:39	2037-26-5	

5/31/17

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-8S **Lab ID: 7012857014** Collected: 03/08/17 09:20 Received: 03/09/17 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	**1.6J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	83-32-9	
Acenaphthylene	**4.7J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	206-44-0	
Fluorene	**1.1J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	193-39-5	
2-Methylnaphthalene	**1.5J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	91-57-6	
Naphthalene	**28.7**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	91-20-3	
Phenanthrene	**2.2J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 20:25	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	84	%.	35-114	1	03/13/17 09:13	03/20/17 20:25	4165-60-0	
2-Fluorobiphenyl (S)	80	%.	43-116	1	03/13/17 09:13	03/20/17 20:25	321-60-8	
p-Terphenyl-d14 (S)	92	%.	33-141	1	03/13/17 09:13	03/20/17 20:25	1718-51-0	
Phenol-d5 (S)	35	%.	10-110	1	03/13/17 09:13	03/20/17 20:25	4165-62-2	
2-Fluorophenol (S)	49	%.	21-110	1	03/13/17 09:13	03/20/17 20:25	367-12-4	
2,4,6-Tribromophenol (S)	87	%.	10-123	1	03/13/17 09:13	03/20/17 20:25	118-79-6	
2-Chlorophenol-d4 (S)	75	%.	33-110	1	03/13/17 09:13	03/20/17 20:25	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	58	%.	16-110	1	03/13/17 09:13	03/20/17 20:25	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**26.0**	ug/L	1.0	1		03/13/17 19:17	71-43-2	
Ethylbenzene	**7.5**	ug/L	1.0	1		03/13/17 19:17	100-41-4	
Toluene	**5.1**	ug/L	1.0	1		03/13/17 19:17	108-88-3	
Xylene (Total)	**20.3**	ug/L	1.0	1		03/13/17 19:17	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	68-153	1		03/13/17 19:17	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 19:17	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		03/13/17 19:17	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: DUP20170308 **Lab ID: 7012857017** Collected: 03/08/17 07:00 Received: 03/09/17 16:00 Matrix: Water

HiMW-008S

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**1.1J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	83-32-9	
Acenaphthylene	**3.5J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	91-57-6	
Naphthalene	**13.3**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	91-20-3	
Phenanthrene	**1.8J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:58	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	74	%.	35-114	1	03/13/17 09:13	03/20/17 19:58	4165-60-0	
2-Fluorobiphenyl (S)	74	%.	43-116	1	03/13/17 09:13	03/20/17 19:58	321-60-8	
p-Terphenyl-d14 (S)	89	%.	33-141	1	03/13/17 09:13	03/20/17 19:58	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/13/17 09:13	03/20/17 19:58	4165-62-2	
2-Fluorophenol (S)	42	%.	21-110	1	03/13/17 09:13	03/20/17 19:58	367-12-4	
2,4,6-Tribromophenol (S)	83	%.	10-123	1	03/13/17 09:13	03/20/17 19:58	118-79-6	
2-Chlorophenol-d4 (S)	65	%.	33-110	1	03/13/17 09:13	03/20/17 19:58	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	52	%.	16-110	1	03/13/17 09:13	03/20/17 19:58	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**31.1**	ug/L	1.0	1		03/13/17 18:17	71-43-2	
Ethylbenzene	**9.7**	ug/L	1.0	1		03/13/17 18:17	100-41-4	
Toluene	**7.0**	ug/L	1.0	1		03/13/17 18:17	108-88-3	
Xylene (Total)	**27.1**	ug/L	1.0	1		03/13/17 18:17	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	68-153	1		03/13/17 18:17	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		03/13/17 18:17	460-00-4	
Toluene-d8 (S)	98	%.	69-124	1		03/13/17 18:17	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-8I **Lab ID: 7012857015** Collected: 03/08/17 11:55 Received: 03/09/17 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	03/13/17 09:13	03/20/17 17:40	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:40	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	71	%.	35-114	1	03/13/17 09:13	03/20/17 17:40	4165-60-0	
2-Fluorobiphenyl (S)	68	%.	43-116	1	03/13/17 09:13	03/20/17 17:40	321-60-8	
p-Terphenyl-d14 (S)	86	%.	33-141	1	03/13/17 09:13	03/20/17 17:40	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/13/17 09:13	03/20/17 17:40	4165-62-2	
2-Fluorophenol (S)	42	%.	21-110	1	03/13/17 09:13	03/20/17 17:40	367-12-4	
2,4,6-Tribromophenol (S)	71	%.	10-123	1	03/13/17 09:13	03/20/17 17:40	118-79-6	
2-Chlorophenol-d4 (S)	63	%.	33-110	1	03/13/17 09:13	03/20/17 17:40	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	52	%.	16-110	1	03/13/17 09:13	03/20/17 17:40	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 18:57	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 18:57	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 18:57	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 18:57	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		03/13/17 18:57	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 18:57	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		03/13/17 18:57	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-8D **Lab ID: 7012857016** Collected: 03/08/17 14:50 Received: 03/09/17 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	03/13/17 09:13	03/20/17 18:07	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:07	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	73	%.	35-114	1	03/13/17 09:13	03/20/17 18:07	4165-60-0	
2-Fluorobiphenyl (S)	69	%.	43-116	1	03/13/17 09:13	03/20/17 18:07	321-60-8	
p-Terphenyl-d14 (S)	89	%.	33-141	1	03/13/17 09:13	03/20/17 18:07	1718-51-0	
Phenol-d5 (S)	29	%.	10-110	1	03/13/17 09:13	03/20/17 18:07	4165-62-2	
2-Fluorophenol (S)	42	%.	21-110	1	03/13/17 09:13	03/20/17 18:07	367-12-4	
2,4,6-Tribromophenol (S)	76	%.	10-123	1	03/13/17 09:13	03/20/17 18:07	118-79-6	
2-Chlorophenol-d4 (S)	63	%.	33-110	1	03/13/17 09:13	03/20/17 18:07	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	55	%.	16-110	1	03/13/17 09:13	03/20/17 18:07	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 18:37	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 18:37	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 18:37	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 18:37	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		03/13/17 18:37	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 18:37	460-00-4	
Toluene-d8 (S)	98	%.	69-124	1		03/13/17 18:37	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-12S **Lab ID: 7012857004** Collected: 03/07/17 14:00 Received: 03/07/17 15:28 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	03/09/17 09:12	03/10/17 19:36	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:36	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	92	%.	35-114	1	03/09/17 09:12	03/10/17 19:36	4165-60-0	
2-Fluorobiphenyl (S)	81	%.	43-116	1	03/09/17 09:12	03/10/17 19:36	321-60-8	
p-Terphenyl-d14 (S)	72	%.	33-141	1	03/09/17 09:12	03/10/17 19:36	1718-51-0	
Phenol-d5 (S)	36	%.	10-110	1	03/09/17 09:12	03/10/17 19:36	4165-62-2	
2-Fluorophenol (S)	52	%.	21-110	1	03/09/17 09:12	03/10/17 19:36	367-12-4	
2,4,6-Tribromophenol (S)	75	%.	10-123	1	03/09/17 09:12	03/10/17 19:36	118-79-6	
2-Chlorophenol-d4 (S)	79	%.	33-110	1	03/09/17 09:12	03/10/17 19:36	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%.	16-110	1	03/09/17 09:12	03/10/17 19:36	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 09:08	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 09:08	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 09:08	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 09:08	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%.	68-153	1		03/13/17 09:08	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		03/13/17 09:08	460-00-4	
Toluene-d8 (S)	90	%.	69-124	1		03/13/17 09:08	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 Site
Pace Project No.: 7012857

Sample: HIMW-13I **Lab ID: 7012857002** Collected: 03/07/17 10:55 Received: 03/07/17 15:28 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	03/09/17 09:12	03/10/17 18:41	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:41	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	94	%.	35-114	1	03/09/17 09:12	03/10/17 18:41	4165-60-0	
2-Fluorobiphenyl (S)	86	%.	43-116	1	03/09/17 09:12	03/10/17 18:41	321-60-8	
p-Terphenyl-d14 (S)	96	%.	33-141	1	03/09/17 09:12	03/10/17 18:41	1718-51-0	
Phenol-d5 (S)	36	%.	10-110	1	03/09/17 09:12	03/10/17 18:41	4165-62-2	
2-Fluorophenol (S)	52	%.	21-110	1	03/09/17 09:12	03/10/17 18:41	367-12-4	
2,4,6-Tribromophenol (S)	80	%.	10-123	1	03/09/17 09:12	03/10/17 18:41	118-79-6	
2-Chlorophenol-d4 (S)	80	%.	33-110	1	03/09/17 09:12	03/10/17 18:41	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	66	%.	16-110	1	03/09/17 09:12	03/10/17 18:41	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 09:55	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 09:55	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 09:55	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 09:55	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%.	68-153	1		03/13/17 09:55	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/13/17 09:55	460-00-4	
Toluene-d8 (S)	92	%.	69-124	1		03/13/17 09:55	2037-26-5	

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

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-13D **Lab ID: 7012857005** Collected: 03/07/17 13:15 Received: 03/07/17 15:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**5.1**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	83-32-9	
Acenaphthylene	**8.6**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 20:04	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	94	%.	35-114	1	03/09/17 09:12	03/10/17 20:04	4165-60-0	
2-Fluorobiphenyl (S)	84	%.	43-116	1	03/09/17 09:12	03/10/17 20:04	321-60-8	
p-Terphenyl-d14 (S)	94	%.	33-141	1	03/09/17 09:12	03/10/17 20:04	1718-51-0	
Phenol-d5 (S)	35	%.	10-110	1	03/09/17 09:12	03/10/17 20:04	4165-62-2	
2-Fluorophenol (S)	52	%.	21-110	1	03/09/17 09:12	03/10/17 20:04	367-12-4	
2,4,6-Tribromophenol (S)	84	%.	10-123	1	03/09/17 09:12	03/10/17 20:04	118-79-6	
2-Chlorophenol-d4 (S)	78	%.	33-110	1	03/09/17 09:12	03/10/17 20:04	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	67	%.	16-110	1	03/09/17 09:12	03/10/17 20:04	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**2.1**	ug/L	1.0	1		03/13/17 08:45	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 08:45	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 08:45	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 08:45	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%.	68-153	1		03/13/17 08:45	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		03/13/17 08:45	460-00-4	
Toluene-d8 (S)	88	%.	69-124	1		03/13/17 08:45	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-14I **Lab ID: 7012857001** Collected: 03/07/17 10:10 Received: 03/07/17 15:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**9.1**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	83-32-9	
Acenaphthylene	**10.2**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	206-44-0	
Fluorene	**2.7J**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	91-20-3	
Phenanthrene	**3.2J**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 18:13	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	104	%.	35-114	1	03/09/17 09:12	03/10/17 18:13	4165-60-0	
2-Fluorobiphenyl (S)	92	%.	43-116	1	03/09/17 09:12	03/10/17 18:13	321-60-8	
p-Terphenyl-d14 (S)	90	%.	33-141	1	03/09/17 09:12	03/10/17 18:13	1718-51-0	
Phenol-d5 (S)	40	%.	10-110	1	03/09/17 09:12	03/10/17 18:13	4165-62-2	
2-Fluorophenol (S)	59	%.	21-110	1	03/09/17 09:12	03/10/17 18:13	367-12-4	
2,4,6-Tribromophenol (S)	85	%.	10-123	1	03/09/17 09:12	03/10/17 18:13	118-79-6	
2-Chlorophenol-d4 (S)	89	%.	33-110	1	03/09/17 09:12	03/10/17 18:13	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	70	%.	16-110	1	03/09/17 09:12	03/10/17 18:13	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**4.1**	ug/L	1.0	1		03/13/17 12:28	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 12:28	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 12:28	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 12:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%.	68-153	1		03/13/17 12:28	17060-07-0	
4-Bromofluorobenzene (S)	107	%.	79-124	1		03/13/17 12:28	460-00-4	
Toluene-d8 (S)	93	%.	69-124	1		03/13/17 12:28	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 Site
Pace Project No.: 7012857

Sample: HIMW-15I **Lab ID: 7012857008** Collected: 03/08/17 10:30 Received: 03/09/17 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	03/13/17 09:13	03/15/17 18:16	83-32-9	
Acenaphthylene	**5.3**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:16	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	71	%.	35-114	1	03/13/17 09:13	03/15/17 18:16	4165-60-0	
2-Fluorobiphenyl (S)	66	%.	43-116	1	03/13/17 09:13	03/15/17 18:16	321-60-8	
p-Terphenyl-d14 (S)	78	%.	33-141	1	03/13/17 09:13	03/15/17 18:16	1718-51-0	
Phenol-d5 (S)	29	%.	10-110	1	03/13/17 09:13	03/15/17 18:16	4165-62-2	
2-Fluorophenol (S)	40	%.	21-110	1	03/13/17 09:13	03/15/17 18:16	367-12-4	
2,4,6-Tribromophenol (S)	72	%.	10-123	1	03/13/17 09:13	03/15/17 18:16	118-79-6	
2-Chlorophenol-d4 (S)	60	%.	33-110	1	03/13/17 09:13	03/15/17 18:16	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	49	%.	16-110	1	03/13/17 09:13	03/15/17 18:16	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**1.5**	ug/L	1.0	1		03/13/17 21:19	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 21:19	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 21:19	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 21:19	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%.	68-153	1		03/13/17 21:19	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/13/17 21:19	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		03/13/17 21:19	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 Site
Pace Project No.: 7012857

Sample: HIMW-15D **Lab ID: 7012857007** Collected: 03/08/17 09:00 Received: 03/09/17 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	03/13/17 09:13	03/15/17 17:49	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 17:49	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	75	%.	35-114	1	03/13/17 09:13	03/15/17 17:49	4165-60-0	
2-Fluorobiphenyl (S)	69	%.	43-116	1	03/13/17 09:13	03/15/17 17:49	321-60-8	
p-Terphenyl-d14 (S)	71	%.	33-141	1	03/13/17 09:13	03/15/17 17:49	1718-51-0	
Phenol-d5 (S)	28	%.	10-110	1	03/13/17 09:13	03/15/17 17:49	4165-62-2	
2-Fluorophenol (S)	42	%.	21-110	1	03/13/17 09:13	03/15/17 17:49	367-12-4	
2,4,6-Tribromophenol (S)	69	%.	10-123	1	03/13/17 09:13	03/15/17 17:49	118-79-6	
2-Chlorophenol-d4 (S)	65	%.	33-110	1	03/13/17 09:13	03/15/17 17:49	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	54	%.	16-110	1	03/13/17 09:13	03/15/17 17:49	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 21:39	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 21:39	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 21:39	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 21:39	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	68-153	1		03/13/17 21:39	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 21:39	460-00-4	
Toluene-d8 (S)	96	%.	69-124	1		03/13/17 21:39	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 Site
Pace Project No.: 7013228

Sample: HIMW-20S **Lab ID: 7013228003** Collected: 03/10/17 13:05 Received: 03/10/17 14:08 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	03/15/17 09:45	03/20/17 13:02	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:02	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	78	%.	35-114	1	03/15/17 09:45	03/20/17 13:02	4165-60-0	
2-Fluorobiphenyl (S)	74	%.	43-116	1	03/15/17 09:45	03/20/17 13:02	321-60-8	
p-Terphenyl-d14 (S)	82	%.	33-141	1	03/15/17 09:45	03/20/17 13:02	1718-51-0	
Phenol-d5 (S)	31	%.	10-110	1	03/15/17 09:45	03/20/17 13:02	4165-62-2	
2-Fluorophenol (S)	46	%.	21-110	1	03/15/17 09:45	03/20/17 13:02	367-12-4	
2,4,6-Tribromophenol (S)	74	%.	10-123	1	03/15/17 09:45	03/20/17 13:02	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	33-110	1	03/15/17 09:45	03/20/17 13:02	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	61	%.	16-110	1	03/15/17 09:45	03/20/17 13:02	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/16/17 20:04	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 20:04	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 20:04	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 20:04	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		03/16/17 20:04	17060-07-0	
4-Bromofluorobenzene (S)	104	%.	79-124	1		03/16/17 20:04	460-00-4	
Toluene-d8 (S)	98	%.	69-124	1		03/16/17 20:04	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
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(631)694-3040

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7013228

Sample: HIMW-20I **Lab ID: 7013228002** Collected: 03/10/17 11:25 Received: 03/10/17 14:08 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	03/15/17 09:45	03/20/17 12:35	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:35	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	66	%.	35-114	1	03/15/17 09:45	03/20/17 12:35	4165-60-0	
2-Fluorobiphenyl (S)	63	%.	43-116	1	03/15/17 09:45	03/20/17 12:35	321-60-8	
p-Terphenyl-d14 (S)	76	%.	33-141	1	03/15/17 09:45	03/20/17 12:35	1718-51-0	
Phenol-d5 (S)	24	%.	10-110	1	03/15/17 09:45	03/20/17 12:35	4165-62-2	
2-Fluorophenol (S)	35	%.	21-110	1	03/15/17 09:45	03/20/17 12:35	367-12-4	
2,4,6-Tribromophenol (S)	70	%.	10-123	1	03/15/17 09:45	03/20/17 12:35	118-79-6	
2-Chlorophenol-d4 (S)	58	%.	33-110	1	03/15/17 09:45	03/20/17 12:35	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	50	%.	16-110	1	03/15/17 09:45	03/20/17 12:35	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/16/17 20:24	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 20:24	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 20:24	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 20:24	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	68-153	1		03/16/17 20:24	17060-07-0	
4-Bromofluorobenzene (S)	106	%.	79-124	1		03/16/17 20:24	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		03/16/17 20:24	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7013228

Sample: HIMW-22 **Lab ID: 7013228006** Collected: 03/13/17 09:05 Received: 03/13/17 15:24 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	03/15/17 09:45	03/20/17 13:58	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:58	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	79	%.	35-114	1	03/15/17 09:45	03/20/17 13:58	4165-60-0	
2-Fluorobiphenyl (S)	76	%.	43-116	1	03/15/17 09:45	03/20/17 13:58	321-60-8	
p-Terphenyl-d14 (S)	82	%.	33-141	1	03/15/17 09:45	03/20/17 13:58	1718-51-0	
Phenol-d5 (S)	31	%.	10-110	1	03/15/17 09:45	03/20/17 13:58	4165-62-2	
2-Fluorophenol (S)	47	%.	21-110	1	03/15/17 09:45	03/20/17 13:58	367-12-4	
2,4,6-Tribromophenol (S)	77	%.	10-123	1	03/15/17 09:45	03/20/17 13:58	118-79-6	
2-Chlorophenol-d4 (S)	73	%.	33-110	1	03/15/17 09:45	03/20/17 13:58	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	62	%.	16-110	1	03/15/17 09:45	03/20/17 13:58	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/16/17 19:03	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 19:03	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 19:03	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 19:03	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	68-153	1		03/16/17 19:03	17060-07-0	
4-Bromofluorobenzene (S)	99	%.	79-124	1		03/16/17 19:03	460-00-4	
Toluene-d8 (S)	96	%.	69-124	1		03/16/17 19:03	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-23 **Lab ID: 7012857009** Collected: 03/08/17 13:05 Received: 03/09/17 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	03/13/17 09:13	03/15/17 18:44	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/15/17 18:44	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	80	%.	35-114	1	03/13/17 09:13	03/15/17 18:44	4165-60-0	
2-Fluorobiphenyl (S)	72	%.	43-116	1	03/13/17 09:13	03/15/17 18:44	321-60-8	
p-Terphenyl-d14 (S)	66	%.	33-141	1	03/13/17 09:13	03/15/17 18:44	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/13/17 09:13	03/15/17 18:44	4165-62-2	
2-Fluorophenol (S)	44	%.	21-110	1	03/13/17 09:13	03/15/17 18:44	367-12-4	
2,4,6-Tribromophenol (S)	64	%.	10-123	1	03/13/17 09:13	03/15/17 18:44	118-79-6	
2-Chlorophenol-d4 (S)	65	%.	33-110	1	03/13/17 09:13	03/15/17 18:44	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	55	%.	16-110	1	03/13/17 09:13	03/15/17 18:44	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 20:59	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 20:59	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 20:59	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 20:59	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		03/13/17 20:59	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 20:59	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		03/13/17 20:59	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-24 **Lab ID: 7012857020** Collected: 03/09/17 13:20 Received: 03/09/17 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	03/13/17 09:13	03/20/17 19:30	83-32-9	
Acenaphthylene	**5.8**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	193-39-5	
2-Methylnaphthalene	**12.3**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	91-57-6	
Naphthalene	**167** D	ug/L	25.0	5	03/13/17 09:13	03/21/17 16:50	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:30	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	76	%.	35-114	1	03/13/17 09:13	03/20/17 19:30	4165-60-0	
2-Fluorobiphenyl (S)	73	%.	43-116	1	03/13/17 09:13	03/20/17 19:30	321-60-8	
p-Terphenyl-d14 (S)	81	%.	33-141	1	03/13/17 09:13	03/20/17 19:30	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/13/17 09:13	03/20/17 19:30	4165-62-2	
2-Fluorophenol (S)	45	%.	21-110	1	03/13/17 09:13	03/20/17 19:30	367-12-4	
2,4,6-Tribromophenol (S)	80	%.	10-123	1	03/13/17 09:13	03/20/17 19:30	118-79-6	
2-Chlorophenol-d4 (S)	69	%.	33-110	1	03/13/17 09:13	03/20/17 19:30	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	59	%.	16-110	1	03/13/17 09:13	03/20/17 19:30	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 17:16	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 17:16	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 17:16	108-88-3	
Xylene (Total)	**6.7**	ug/L	1.0	1		03/13/17 17:16	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	68-153	1		03/13/17 17:16	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/13/17 17:16	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		03/13/17 17:16	2037-26-5	

5/31/17

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-25 **Lab ID: 7012857003** Collected: 03/07/17 12:30 Received: 03/07/17 15:28 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	03/09/17 09:12	03/10/17 19:09	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/09/17 09:12	03/10/17 19:09	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	83	%.	35-114	1	03/09/17 09:12	03/10/17 19:09	4165-60-0	
2-Fluorobiphenyl (S)	74	%.	43-116	1	03/09/17 09:12	03/10/17 19:09	321-60-8	
p-Terphenyl-d14 (S)	92	%.	33-141	1	03/09/17 09:12	03/10/17 19:09	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/09/17 09:12	03/10/17 19:09	4165-62-2	
2-Fluorophenol (S)	43	%.	21-110	1	03/09/17 09:12	03/10/17 19:09	367-12-4	
2,4,6-Tribromophenol (S)	67	%.	10-123	1	03/09/17 09:12	03/10/17 19:09	118-79-6	
2-Chlorophenol-d4 (S)	67	%.	33-110	1	03/09/17 09:12	03/10/17 19:09	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	56	%.	16-110	1	03/09/17 09:12	03/10/17 19:09	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 09:32	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 09:32	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 09:32	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 09:32	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%.	68-153	1		03/13/17 09:32	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		03/13/17 09:32	460-00-4	
Toluene-d8 (S)	89	%.	69-124	1		03/13/17 09:32	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-26I **Lab ID: 7012857019** Collected: 03/09/17 11:00 Received: 03/09/17 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	03/13/17 09:13	03/20/17 19:02	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 19:02	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	81	%.	35-114	1	03/13/17 09:13	03/20/17 19:02	4165-60-0	
2-Fluorobiphenyl (S)	78	%.	43-116	1	03/13/17 09:13	03/20/17 19:02	321-60-8	
p-Terphenyl-d14 (S)	84	%.	33-141	1	03/13/17 09:13	03/20/17 19:02	1718-51-0	
Phenol-d5 (S)	34	%.	10-110	1	03/13/17 09:13	03/20/17 19:02	4165-62-2	
2-Fluorophenol (S)	46	%.	21-110	1	03/13/17 09:13	03/20/17 19:02	367-12-4	
2,4,6-Tribromophenol (S)	85	%.	10-123	1	03/13/17 09:13	03/20/17 19:02	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	33-110	1	03/13/17 09:13	03/20/17 19:02	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%.	16-110	1	03/13/17 09:13	03/20/17 19:02	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 17:36	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 17:36	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 17:36	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 17:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%.	68-153	1		03/13/17 17:36	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/13/17 17:36	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		03/13/17 17:36	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-26D **Lab ID: 7012857018** Collected: 03/09/17 08:50 Received: 03/09/17 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	**2.4J**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	83-32-9	
Acenaphthylene	**35.8**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	206-44-0	
Fluorene	**6.9**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	193-39-5	
2-Methylnaphthalene	**54.3**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	91-57-6	
Naphthalene	**199**	ug/L	25.0	5	03/13/17 09:13	03/21/17 16:22	91-20-3	D
Phenanthrene	**6.4**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 18:35	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	84	%.	35-114	1	03/13/17 09:13	03/20/17 18:35	4165-60-0	
2-Fluorobiphenyl (S)	81	%.	43-116	1	03/13/17 09:13	03/20/17 18:35	321-60-8	
p-Terphenyl-d14 (S)	81	%.	33-141	1	03/13/17 09:13	03/20/17 18:35	1718-51-0	
Phenol-d5 (S)	36	%.	10-110	1	03/13/17 09:13	03/20/17 18:35	4165-62-2	
2-Fluorophenol (S)	52	%.	21-110	1	03/13/17 09:13	03/20/17 18:35	367-12-4	
2,4,6-Tribromophenol (S)	89	%.	10-123	1	03/13/17 09:13	03/20/17 18:35	118-79-6	
2-Chlorophenol-d4 (S)	76	%.	33-110	1	03/13/17 09:13	03/20/17 18:35	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	65	%.	16-110	1	03/13/17 09:13	03/20/17 18:35	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 17:57	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 17:57	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 17:57	108-88-3	
Xylene (Total)	**13.7**	ug/L	1.0	1		03/13/17 17:57	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	68-153	1		03/13/17 17:57	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/13/17 17:57	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		03/13/17 17:57	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 Site
Pace Project No.: 7012857

Sample: HIMW-27S **Lab ID: 7012857022** Collected: 03/13/17 11:20 Received: 03/13/17 15:24 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**78.7**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	83-32-9	
Acenaphthylene	**4.0J**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	208-96-8	
Anthracene	**7.5**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	206-44-0	
Fluorene	**34.6**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	193-39-5	R1
2-Methylnaphthalene	**155** D	ug/L	100	20	03/17/17 09:59	03/21/17 17:18	91-57-6	M1
Naphthalene	**838** D	ug/L	100	20	03/17/17 09:59	03/21/17 17:18	91-20-3	M1
Phenanthrene	**44.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	85-01-8	
Pyrene	**2.9J**	ug/L	5.0	1	03/17/17 09:59	03/21/17 13:08	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	57	%.	35-114	1	03/17/17 09:59	03/21/17 13:08	4165-60-0	
2-Fluorobiphenyl (S)	64	%.	43-116	1	03/17/17 09:59	03/21/17 13:08	321-60-8	
p-Terphenyl-d14 (S)	75	%.	33-141	1	03/17/17 09:59	03/21/17 13:08	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/17/17 09:59	03/21/17 13:08	4165-62-2	
2-Fluorophenol (S)	43	%.	21-110	1	03/17/17 09:59	03/21/17 13:08	367-12-4	
2,4,6-Tribromophenol (S)	76	%.	10-123	1	03/17/17 09:59	03/21/17 13:08	118-79-6	
2-Chlorophenol-d4 (S)	67	%.	33-110	1	03/17/17 09:59	03/21/17 13:08	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	46	%.	16-110	1	03/17/17 09:59	03/21/17 13:08	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**35.7**	ug/L	1.0	1		03/17/17 02:12	71-43-2	
Ethylbenzene	**544** D	ug/L	20.0	20		03/17/17 16:02	100-41-4	
Toluene	**13.3**	ug/L	1.0	1		03/17/17 02:12	108-88-3	
Xylene (Total)	491 D ~~411~~	ug/L	1.0	1		03/17/17 02:12	1330-20-7	MS
Surrogates								
1,2-Dichloroethane-d4 (S)	111	%.	68-153	1		03/17/17 02:12	17060-07-0	
4-Bromofluorobenzene (S)	105	%.	79-124	1		03/17/17 02:12	460-00-4	
Toluene-d8 (S)	86	%.	69-124	1		03/17/17 02:12	2037-26-5	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
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Melville, NY 11747
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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7013228

Sample: HIMW-27I **Lab ID: 7013228007** Collected: 03/13/17 13:00 Received: 03/13/17 15:24 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	03/15/17 09:45	03/20/17 14:26	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 14:26	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	79	%.	35-114	1	03/15/17 09:45	03/20/17 14:26	4165-60-0	
2-Fluorobiphenyl (S)	76	%.	43-116	1	03/15/17 09:45	03/20/17 14:26	321-60-8	
p-Terphenyl-d14 (S)	84	%.	33-141	1	03/15/17 09:45	03/20/17 14:26	1718-51-0	
Phenol-d5 (S)	29	%.	10-110	1	03/15/17 09:45	03/20/17 14:26	4165-62-2	
2-Fluorophenol (S)	43	%.	21-110	1	03/15/17 09:45	03/20/17 14:26	367-12-4	
2,4,6-Tribromophenol (S)	80	%.	10-123	1	03/15/17 09:45	03/20/17 14:26	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	33-110	1	03/15/17 09:45	03/20/17 14:26	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	59	%.	16-110	1	03/15/17 09:45	03/20/17 14:26	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/16/17 18:43	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 18:43	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 18:43	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 18:43	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		03/16/17 18:43	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		03/16/17 18:43	460-00-4	
Toluene-d8 (S)	95	%.	69-124	1		03/16/17 18:43	2037-26-5	

Pace Analytical Services, LLC
575 Broad Hollow Road
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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7013228

Sample: HIMW-28S **Lab ID: 7013228001** Collected: 03/10/17 09:20 Received: 03/10/17 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**32.6**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	83-32-9	
Acenaphthylene	**2.1J**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	208-96-8	
Anthracene	**3.5J**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	206-44-0	
Fluorene	**24.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	193-39-5	
2-Methylnaphthalene	**14.3**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	91-57-6	
Naphthalene	**129** D	ug/L	25.0	5	03/15/17 09:45	03/20/17 15:22	91-20-3	
Phenanthrene	**23.9**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 12:07	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	74	%.	35-114	1	03/15/17 09:45	03/20/17 12:07	4165-60-0	
2-Fluorobiphenyl (S)	74	%.	43-116	1	03/15/17 09:45	03/20/17 12:07	321-60-8	
p-Terphenyl-d14 (S)	87	%.	33-141	1	03/15/17 09:45	03/20/17 12:07	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	03/15/17 09:45	03/20/17 12:07	4165-62-2	
2-Fluorophenol (S)	43	%.	21-110	1	03/15/17 09:45	03/20/17 12:07	367-12-4	
2,4,6-Tribromophenol (S)	82	%.	10-123	1	03/15/17 09:45	03/20/17 12:07	118-79-6	
2-Chlorophenol-d4 (S)	68	%.	33-110	1	03/15/17 09:45	03/20/17 12:07	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	57	%.	16-110	1	03/15/17 09:45	03/20/17 12:07	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**4.7**	ug/L	1.0	1		03/16/17 20:45	71-43-2	
Ethylbenzene	**76.7**	ug/L	1.0	1		03/16/17 20:45	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 20:45	108-88-3	
Xylene (Total)	**8.6**	ug/L	1.0	1		03/16/17 20:45	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	68-153	1		03/16/17 20:45	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		03/16/17 20:45	460-00-4	
Toluene-d8 (S)	96	%.	69-124	1		03/16/17 20:45	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 Site
Pace Project No.: 7013228

Sample: DUP20170310 **Lab ID: 7013228004** Collected: 03/10/17 07:00 Received: 03/10/17 14:08 Matrix: Water

HMW-128S

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
Acenaphthene	**31.3**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	83-32-9	
Acenaphthylene	**2.0J**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	208-96-8	
Anthracene	**3.2J**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	206-44-0	
Fluorene	**21.9**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	193-39-5	
2-Methylnaphthalene	**13.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	91-57-6	
Naphthalene	**118** D	ug/L	25.0	5	03/15/17 09:45	03/20/17 14:54	91-20-3	
Phenanthrene	**21.9**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/15/17 09:45	03/20/17 13:30	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	72	%.	35-114	1	03/15/17 09:45	03/20/17 13:30	4165-60-0	
2-Fluorobiphenyl (S)	70	%.	43-116	1	03/15/17 09:45	03/20/17 13:30	321-60-8	
p-Terphenyl-d14 (S)	70	%.	33-141	1	03/15/17 09:45	03/20/17 13:30	1718-51-0	
Phenol-d5 (S)	28	%.	10-110	1	03/15/17 09:45	03/20/17 13:30	4165-62-2	
2-Fluorophenol (S)	41	%.	21-110	1	03/15/17 09:45	03/20/17 13:30	367-12-4	
2,4,6-Tribromophenol (S)	79	%.	10-123	1	03/15/17 09:45	03/20/17 13:30	118-79-6	
2-Chlorophenol-d4 (S)	66	%.	33-110	1	03/15/17 09:45	03/20/17 13:30	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	53	%.	16-110	1	03/15/17 09:45	03/20/17 13:30	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**4.8**	ug/L	1.0	1		03/16/17 19:44	71-43-2	
Ethylbenzene	**74.7**	ug/L	1.0	1		03/16/17 19:44	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 19:44	108-88-3	
Xylene (Total)	**8.1**	ug/L	1.0	1		03/16/17 19:44	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%.	68-153	1		03/16/17 19:44	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		03/16/17 19:44	460-00-4	
Toluene-d8 (S)	94	%.	69-124	1		03/16/17 19:44	2037-26-5	

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REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: HIMW-28I **Lab ID: 7012857013** Collected: 03/09/17 13:20 Received: 03/09/17 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	03/13/17 09:13	03/20/17 17:12	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/13/17 09:13	03/20/17 17:12	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	74	%.	35-114	1	03/13/17 09:13	03/20/17 17:12	4165-60-0	
2-Fluorobiphenyl (S)	70	%.	43-116	1	03/13/17 09:13	03/20/17 17:12	321-60-8	
p-Terphenyl-d14 (S)	88	%.	33-141	1	03/13/17 09:13	03/20/17 17:12	1718-51-0	
Phenol-d5 (S)	28	%.	10-110	1	03/13/17 09:13	03/20/17 17:12	4165-62-2	
2-Fluorophenol (S)	41	%.	21-110	1	03/13/17 09:13	03/20/17 17:12	367-12-4	
2,4,6-Tribromophenol (S)	77	%.	10-123	1	03/13/17 09:13	03/20/17 17:12	118-79-6	
2-Chlorophenol-d4 (S)	64	%.	33-110	1	03/13/17 09:13	03/20/17 17:12	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	55	%.	16-110	1	03/13/17 09:13	03/20/17 17:12	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/13/17 19:38	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 19:38	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 19:38	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 19:38	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		03/13/17 19:38	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		03/13/17 19:38	460-00-4	
Toluene-d8 (S)	98	%.	69-124	1		03/13/17 19:38	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: TB **Lab ID: 7012857006** Collected: 03/07/17 00:00 Received: 03/07/17 15:28 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		03/13/17 08:21	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 08:21	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 08:21	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 08:21	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%.	68-153	1		03/13/17 08:21	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		03/13/17 08:21	460-00-4	
Toluene-d8 (S)	90	%.	69-124	1		03/13/17 08:21	2037-26-5	

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ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: TB030917 **Lab ID: 7012857021** Collected: 03/09/17 00:00 Received: 03/09/17 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		03/13/17 16:56	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/13/17 16:56	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/13/17 16:56	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/13/17 16:56	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	68-153	1		03/13/17 16:56	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		03/13/17 16:56	460-00-4	
Toluene-d8 (S)	95	%.	69-124	1		03/13/17 16:56	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 Site
Pace Project No.: 7013228

Sample: TB20170310 **Lab ID: 7013228005** Collected: 03/10/17 00:00 Received: 03/10/17 14:08 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		03/16/17 19:24	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 19:24	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 19:24	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 19:24	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	87	%.	68-153	1		03/16/17 19:24	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/16/17 19:24	460-00-4	
Toluene-d8 (S)	94	%.	69-124	1		03/16/17 19:24	2037-26-5	

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

ANALYTICAL RESULTS

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Sample: FB-031317 **Lab ID: 7012857023** Collected: 03/13/17 14:00 Received: 03/13/17 15:24 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	03/17/17 09:59	03/21/17 14:32	83-32-9	
Acenaphthylene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	208-96-8	
Anthracene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	56-55-3	
Benzo(a)pyrene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	50-32-8	
Benzo(b)fluoranthene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	205-99-2	
Benzo(g,h,i)perylene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	191-24-2	
Benzo(k)fluoranthene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	207-08-9	
Chrysene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	218-01-9	
Dibenz(a,h)anthracene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	53-70-3	
Fluoranthene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	206-44-0	
Fluorene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	86-73-7	
Indeno(1,2,3-cd)pyrene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	193-39-5	
2-Methylnaphthalene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	91-57-6	
Naphthalene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	91-20-3	
Phenanthrene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	85-01-8	
Pyrene	**<5.0**	ug/L	5.0	1	03/17/17 09:59	03/21/17 14:32	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	78	%.	35-114	1	03/17/17 09:59	03/21/17 14:32	4165-60-0	
2-Fluorobiphenyl (S)	68	%.	43-116	1	03/17/17 09:59	03/21/17 14:32	321-60-8	
p-Terphenyl-d14 (S)	73	%.	33-141	1	03/17/17 09:59	03/21/17 14:32	1718-51-0	
Phenol-d5 (S)	32	%.	10-110	1	03/17/17 09:59	03/21/17 14:32	4165-62-2	
2-Fluorophenol (S)	47	%.	21-110	1	03/17/17 09:59	03/21/17 14:32	367-12-4	
2,4,6-Tribromophenol (S)	62	%.	10-123	1	03/17/17 09:59	03/21/17 14:32	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	33-110	1	03/17/17 09:59	03/21/17 14:32	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	61	%.	16-110	1	03/17/17 09:59	03/21/17 14:32	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	**<1.0**	ug/L	1.0	1		03/16/17 19:10	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 19:10	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 19:10	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 19:10	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%.	68-153	1		03/16/17 19:10	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124	1		03/16/17 19:10	460-00-4	
Toluene-d8 (S)	88	%.	69-124	1		03/16/17 19:10	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 Site
Pace Project No.: 7013228

Sample: TB031317 **Lab ID: 7013228008** Collected: 03/13/17 00:00 Received: 03/13/17 15:24 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		03/16/17 18:23	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	1		03/16/17 18:23	100-41-4	
Toluene	**<1.0**	ug/L	1.0	1		03/16/17 18:23	108-88-3	
Xylene (Total)	**<1.0**	ug/L	1.0	1		03/16/17 18:23	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	68-153	1		03/16/17 18:23	17060-07-0	
4-Bromofluorobenzene (S)	105	%.	79-124	1		03/16/17 18:23	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		03/16/17 18:23	2037-26-5	

ATTACHMENT B

SUPPORT DOCUMENTATION

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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.

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1921417

Section A — Required Client Information:

Company: AECOM (B)
Address: Buffalo NY
Email To: jon.sundquist
Phone: 716 856 5636 Fax:
Requested Due Date/TAT: Stnd

Section B — Required Project Information:

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

Section C — Invoice Information:

Attention: Jon Sundquist
Company Name: AECOM
Address:
Pace Quote Reference:
Pace Project Manager: Jen Araci
Pace Profile #: 5407

REGULATORY AGENCY

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

Site Location STATE: NY

Requested Analysis

WO#:7012857

7012857

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

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)	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	Analysis Test: BTEX	Analysis Test: PAHs	Residual Chlorine	Pace Project No./ Lab I.D.
1	HIMW-14I	WT		3/7/17	1010				4	2			2					X	X			-001
2	HIMW-13I	"		"	1055				4	2			2					X	X			-002
3	HIMW-25	"		"	1230				4	2			2					X	X			-003
4	HIMW-12S	"		"	1400				4	2			2					X	X			-004
5	HIMW-13D	↓		↓	1315				4	2			2					X	X			-005
6																						
7																						
8																						
9																						
10																						
11																						
12	TB	DW		3/7/17									2					2				-006

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Cary Friedman / AECOM	3/7/17	1449	Clay D'Isere	3-7-17	14:44				
	Clay D'Isere	3/7/17	15:28		3/7/17	1528	4.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE: Cary Friedman
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 3/7/17

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

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 any invoices not paid within 30 days.

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Sample Condition Upon Receipt

Pace Analytical

Client Name: Aecom National Grid Hempstead Project # 7012857

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other _____

Optional Proj. Due Date: Proj. Name:

Tracking #: _____

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

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: TH077 (TH078) Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4.3

Date and Initials of person examining contents: 3/17/20

Comments:

Temp should be above freezing to 6°C

Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No	☐N/A	7.
Sufficient Volume:	☒Yes	☐No	☐N/A	8.
Correct Containers Used:	☒Yes	☐No	☐N/A	9.
-Pace Containers Used:	☒Yes	☐No	☐N/A	
Containers Intact:	☒Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis	Matrix: SL (WT) OIL			
All containers needing preservation have been checked.	☐Yes	☐No	☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☒N/A	Initial when completed: / Lot # of added preservative: / Date and Time preservative added:
Exceptions: VOA, micro, TOC, O&G				
Samples checked for dechlorination:	☐Yes	☐No	☒N/A	14.
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 purchased): _____				

Field Data Required? Y / N

Client Notification/ Resolution: Date/Time: _____

Person Contacted: _____

Comments/ Resolution: _____

F-LI-C-002-rev.00

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

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request

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

WO#: 7012857
PM: JSA Due Date: 03/21/17
CLIENT: AECOM-B

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: AECOM	Report To: Peter Fairbanks	Attention: Jon Sundquist
Address: Buffalo NY	Copy To: Jon Sundquist	Company Name: AECOM
Email To: jon.sundquist@aecom.com	Purchase Order No.:	Address:
Phone: 716 856 5636 Fax:	Project Name: National Grid - Hempstead	Pace Quote Reference:
Requested Due Date/TAT: STND	Project Number: SAME	Pace Project Manager: Jennifer Arach
		Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ 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

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	Requested Analysis Filtered (Y/N): BTEX	PAHs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-15D	WT		3/8/17	900				4	2			2						X	X			007
2	HIMW-15I	WT			1030				4	2			2						X	X			
3	HIMW-23	WT			1305				4	2			2						X	X			
4	HIMW-5D	WT		3/9/17	815				4	2			2						X	X			
5	NIMW-5I	WT			950				4	2			2						X	X			
6	HIMW-5S	WT			1110				4	2			2						X	X			
7	HIMW-28I	WT			1320				4	2			2						X	X			013
8																							
9																							
12	TB			3/9/17					2				2						X				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	AECOM	3/9/17	1504		3/9/17	1504				
		3/9/17	1600		3/9/17	1600	3.5	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Gary Friedman
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 3/9/17

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.

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1934439

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: AECOM CORP.	Report To: PETER.FAIRBANKS@AECOM.COM	Attention:
Address: 257 W. GENESSEE ST. BUFFALO, N.Y. 14202	Copy To: JON SUNDQUIST	Company Name:
Email To: PETER.FAIRBANKS@AECOM.COM	Purchase Order No.:	Address:
Phone: 716-856-5636 Fax: —	Project Name: NATIONAL GRID HOMESTEAD	Pace Quote Reference:
Requested Due Date/TAT: STD	Project Number: 60611920.111176098	Pace Project Manager:
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NY

701285

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	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	Y/N	Analysis Test: BTEX	PAH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-8S	WT	G	3/8/17	9:20				4	2			2					X	X			014
2	HIMW-8I	WT	G		11:55				4	2			2					X	X			
3	HIMW-8D	WT	G		14:50				4	2			2					X	X			
4	DUP20170308	WT	G		7:00				4	2			2					X	X			
5	HIMW-26D	WT	G	3/9/17	8:50				4	2			2					X	X			
6	HIMW-26I	WT	G		11:00				4	2			2					X	X			
7	HIMW-24	WT	G		13:20				4	2			2					X	X			020
8																						
9																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	John Lange / AECOM	3/9/17	15:04	n/d	3/9/17	1504				
	n/d	3/9/17	1600	Lmuban	3/9/17	1600	3.5	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

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

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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WO#:7012857

PM: JSA Due Date: 03/21/17
CLIENT: AECOM-B

Sample Condition Upon Receip

Pace Analytical

Client Name: AECOM -B Project #:

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

Optional
Proj. Due Date:
Proj. Name:

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used: TH077 (TH078) Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 3.5°C; 2.9°C; 5.4°C

Date and Initials of person examining contents: 3/9/17 JR

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL WT OIL		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Initial when completed: / Lot # of added preservative:
Exceptions: VOA, micro, TOC, O&G		Date and Time preservative added:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
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 purchased):		

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
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

WO#: 7012857

PM: JSA Due Date: 03/21/17
CLIENT: AECOM-B

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: AECOM	Report To: Peter Fairbanks	Attention: Jon Sundquist
Address: Buffalo NY	Copy To: Jon Sundquist	Company Name:
Email To: JON.sundquist@aecom.com	Purchase Order No.:	Address:
Phone: 716 856 5636 Fax:	Project Name: National Grid - Hempstead	Pace Quote Reference:
Requested Due Date/TAT: STND	Project Number:	Pace Project Manager: Jennifer Aracri
		Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____
Site Location STATE: NY

7012857

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	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	Analysis Test: 8260 X3TCL	Analysis Test: STARS X	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-22			3/13/17	905				4	2			2					X	X			GW
2	HIMW-27S				1110				4	2			2					X	X			~~GW~~ 022
3	HIMW-27S MS/MSD				1120			(5°)	8	12	6		6					X	X			~~GW~~ 022
4	HIMW-27I				1300				4	2			2					X	X			GW
5	FB-031317				1400				4	2			2					X	X			~~GW~~ 023
6																						
7																						
8																						
9																						
10																						
11																						
12	TB								2				2					X				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Cary Friedman	3/13/17	1434	Chey D'Aoust	3/13/17	1434	
	Chey D'Aoust	3/13/17	15:21	Mubarak	3/13/17	1524	4.8 Y Y Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Cary Friedman
SIGNATURE of SAMPLER: Cary Friedman DATE Signed (MM/DD/YY): 3/13/17

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

WO#:7012857

PM: JSA Due Date: 03/21/17
CLIENT: AECOM-B

Sample Condition Upon Receip

Pace Analytical

Client Name: Aecom Hempstead

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other _____

Optional
Proj. Due Date:
Proj. Name:

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: TH077 TH078 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4.8

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 3/13/17 JR

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix SL WT OIL		
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	Initial when completed: / Lot # of added preservative:
Exceptions: VOA, micro, TOC, O&G		Date and Time preservative added:
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
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 purchased): _____		

Field Data Required? Y / N

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: MS/MSD put on COC as 2 sep. samples w/ 2 different times of collection. logged as one sample.

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

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

WO#:7013228

7013228

Section A — **Required** Client Information:

Company:	AECOM CORP.
Address:	257 W. GENESSEE ST. BUFFALO, NY 14202
Email To:	JON.SUNDQUIST@AECOM.COM
Phone: 716.856.5636	Fax:
Requested Due Date/TAT:	

Section B — **Required** Project Information:

Report To:	PETER.FAIRBANKS@AECOM.COM
Copy To:	JON SUNDQUIST
Purchase Order No.:	
Project Name:	NATIONAL GRID. HEMPSTEAD
Project Number:	60419920.1.1176098

Section C — Invoice Information:

Attention:	JON SUNDQUIST
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	JENNIFER AMICI
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ 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

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	PAH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HIMW-28S	WT	G	3/10/17	9:20				4	2			2						X	X		
2	HIMW-20I	WT	G		11:25				4	2			2						X	X		
3	HIMW-20S	WT	G		13:05				4	2			2						X	X		
4	DUP20170310	WT	G		7:00				4	2			2						X	X		
5	TB20170310	WT	G	3/10/17	~~7~~ 13:30				2				2						X			
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	John Crespo/AECOM	3/10/17	13:40	Chey D'Amore	3/10/17	13:40				
	Chey D'Amore	3/10/17	14:08		3/10/17	14:08	2.4	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JOHN CRESPO

SIGNATURE of SAMPLER: John Crespo — DATE Signed (MM/DD/YY): 03/10/17

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 Recei

WO#:7013228

PM: JSA Due Date: 03/24/17
CLIENT: AECOM-B

Client Name: Accom

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

Optional
Proj. Due Date:
Proj. Name:

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

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

Thermometer Used: TH077 TH078 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 2.4

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: MD 3/10/17

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix SL WT OIL		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Initial when completed: / Lot # of added preservative:
Exceptions: VOA, micro, TOC, O&G		Date and Time preservative added:
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
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 purchased): _____		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

F-LI-C-002-rev.00

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

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: March 27, 2017

General Information:
21 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.

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: 17237

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7012857022

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

- MS (Lab ID: 82927)
  - 2-Methylnaphthalene
  - Naphthalene
- MSD (Lab ID: 82928)
  - 2-Methylnaphthalene
  - Naphthalene

R1: RPD value was outside control limits.

- MSD (Lab ID: 82928)
  - Indeno(1,2,3-cd)pyrene

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

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: March 27, 2017

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7012857

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: AECOM
Date: March 27, 2017

General Information:
23 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.

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

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7013228

Method: **EPA 8270D**
Description: 8270 MSSV
Client: AECOM
Date: March 20, 2017

General Information:
6 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.

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.

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid Hempstead Site
Pace Project No.: 7013228

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: AECOM
Date: March 20, 2017

General Information:
8 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: 17267

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 83030)
  - Toluene

Additional Comments:

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

APPENDIX B

OXYGEN SYSTEM OPERATION & MAINTENANCE MEASUREMENTS

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	1/30/2017
Time:	13:45
Weather:	Clear
Outdoor Temperature:	~39° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	18,683.0	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	105	(psi)
Oxygen Purity	76.0	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	122	(psi)
Element Outlet Temperature	185	(oF)
Running Hours	21,879	(hours)
Loading Hours	14,293	(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	30	31	OW-1-5S	67.3	30	19	OW-1-9D	88.5	30	30
OW-1-2	96.5	30	19	OW-1-6S	67.0	25	20	OW-1-10D	87.2	40	24
OW-1-3	96.3	30	31	OW-1-7S	66.9	30	18	OW-1-11D	86.1	35	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	18	OW-1-12D	85.3	35	30
OW-1-5D	93.9	35	30	OW-1-9S	66.0	30	18	OW-1-13D	84.7	45	31
OW-1-6D	92.4	35	32	OW-1-10S	54.6	25	13	OW-1-14D	84.1	30	30
OW-1-7D	91.1	35	31	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	29
OW-1-8D	89.6	40	30	OW-1-12S	53.6	30	15	OW-1-16D	82.5	30	15

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: 1/30/2017

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	40	15	OW-1-17D	79.5	30	15	OW-1-21S	49.3	25	13
OW-1-14S	52.7	30	14	OW-1-18D	78.3	35	26	OW-1-22S	49.3	30	13
OW-1-15S	52.2	30	12	OW-1-19D	78.9	45	27	OW-1-23S	48.8	30	13
OW-1-16SR	51.8	25	28	OW-1-20D	79.5	35	26	OW-1-24S	48.4	30	13
OW-1-17S	50.7	30	26	OW-1-21D	79.5	30	27	OW-1-25S	48.8	30	13
OW-1-18S	50.2	35	13	OW-1-22D	79.5	30	28	OW-1-26SR	48.3	30	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	27	OW-1-27S	48.3	35	13
OW-1-20S	49.3	30	10	OW-1-24D	78.2	35	30	OW-1-28S	48.3	30	13

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	30	28	OW-1-29S	48.5	25	13	OW-1-33D	83.2	35	29
OW-1-26D	78.1	30	27	OW-1-30S	48.8	25	13	OW-1-34D	84.5	35	30
OW-1-27D	77.9	30	29	OW-1-31S	49.3	35	14	OW-1-35D	85.0	35	30
OW-1-28D	78.0	30	27	OW-1-32S	49.3	30	15	OW-1-36D	85.0	40	30
OW-1-29D	78.4	30	27	OW-1-33S	49.7	30	14	OW-1-37D	84.0	30	29
OW-1-30D	79.0	30	36	OW-1-34S	50.1	30	13	OW-1-38D	82.0	30	28
OW-1-31D	80.5	30	26	OW-1-35S	50.3	20	13	OW-1-39D	78.0	30	28
OW-1-32D	81.6	30	30	OW-1-36S	50.3	30	14	OW-1-40D	76.0	30	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.

Date: 1/30/2017

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	30	12	OW-1-41D	73.6	30	24	OW-1-43	67.4	25	21
OW-1-38S	50.6	35	14	OW-1-42D	71.0	35	22	OW-1-44	66.6	30	19
OW-1-39S	50.7	40	13	OW-1-45	65.7	35	20	OW-1-51R	60.6	30	18
OW-1-40S	51.1	40	13	OW-1-46	64.3	30	18	OW-1-52	59.3	40	17
OW-1-41S	51.5	40	15	OW-1-47	63.4	30	18	OW-1-53	60.0	30	18
OW-1-42S	51.3	30	14	OW-1-48	62.5	30	18	OW-1-54	60.0	30	18
				OW-1-49	61.5	35	17				
				OW-1-50	61.0	35	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. 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	30.64		0	MP-1-5	30.45	20.21	0	MP-1-1D	29.11
MP-1-1S	30.70	25.55	0	MP-1-6	22.75	13.45	0.2	MP-1-2D	38.07
MP-1-2D	25.00		0	MP-1-7	25.90	30.01	0	MP-1-3D	25.24
MP-1-2S	25.20	22.79	0	MP-1-8	27.50	3.97	0	MP-1-4D	26.99
MP-1-3D	23.08		2.3						
MP-1-3S	23.15	19.11	0.9						
MP-1-4D	25.92		0						
MP-1-4S	25.96	20.40	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: 1/30/2017

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 changed Yes No X
8) Terminal strips checked Yes X No

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:

1-30-17 Found system running upon arrival. Found air leak on top of water knock out bowl and a bad solenoid valve. Need to return with parts to replace. Wiped down all equipment and cleaned up debris and leaves around shed. Left system running.

1-31-17 Found system running upon arrival. Took apart water knock out bowl and found broken site glass. Need to order replacement site glass for unit. Took apart bad solenoid valve and found a torn diaphragm. Replaced damaged unit with new solenoid valve. Restarted system and left running.

OW-1-19S remains off due to leaking line.

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 # 96-934-323 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:	2/28/2017
Time:	14:50
Weather:	Cloudy
Outdoor Temperature:	~51° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	19,219.0	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	110	(psi)
Oxygen Purity	77.0	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	100	(psi)
(readings below are made from control panel)		
Delivery Air	120	(psi)
Element Outlet Temperature	178	(oF)
Running Hours	22,459	(hours)
Loading Hours	14,683	(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	30	33	OW-1-5S	67.3	30	19	OW-1-9D	88.5	40	30
OW-1-2	96.5	40	19	OW-1-6S	67.0	30	18	OW-1-10D	87.2	35	23
OW-1-3	96.3	40	30	OW-1-7S	66.9	30	20	OW-1-11D	86.1	30	31
OW-1-4	95.0	40	32	OW-1-8S	66.7	35	18	OW-1-12D	85.3	30	30
OW-1-5D	93.9	30	32	OW-1-9S	66.0	30	19	OW-1-13D	84.7	30	32
OW-1-6D	92.4	35	30	OW-1-10S	54.6	30	13	OW-1-14D	84.1	40	30
OW-1-7D	91.1	30	32	OW-1-11S	54.1	30	15	OW-1-15D	83.3	45	28
OW-1-8D	89.6	30	33	OW-1-12S	53.6	35	16	OW-1-16D	82.5	35	14

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: 2/28/2017

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	30	15	OW-1-17D	79.5	30	15	OW-1-21S	49.3	35	13
OW-1-14S	52.7	35	16	OW-1-18D	78.3	30	25	OW-1-22S	49.3	35	13
OW-1-15S	52.2	30	13	OW-1-19D	78.9	30	26	OW-1-23S	48.8	35	13
OW-1-16SR	51.8	30	30	OW-1-20D	79.5	30	28	OW-1-24S	48.4	30	13
OW-1-17S	50.7	40	30	OW-1-21D	79.5	30	27	OW-1-25S	48.8	30	13
OW-1-18S	50.2	30	12	OW-1-22D	79.5	30	27	OW-1-26SR	48.3	35	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	25	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	10	OW-1-24D	78.2	30	28	OW-1-28S	48.3	25	13

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	45	28	OW-1-29S	48.5	40	14	OW-1-33D	83.2	30	31
OW-1-26D	78.1	40	28	OW-1-30S	48.8	30	14	OW-1-34D	84.5	35	32
OW-1-27D	77.9	30	27	OW-1-31S	49.3	30	15	OW-1-35D	85.0	40	32
OW-1-28D	78.0	30	28	OW-1-32S	49.3	30	14	OW-1-36D	85.0	45	29
OW-1-29D	78.4	30	27	OW-1-33S	49.7	30	14	OW-1-37D	84.0	40	29
OW-1-30D	79.0	35	35	OW-1-34S	50.1	30	13	OW-1-38D	82.0	30	30
OW-1-31D	80.5	45	26	OW-1-35S	50.3	30	14	OW-1-39D	78.0	30	28
OW-1-32D	81.6	40	30	OW-1-36S	50.3	30	15	OW-1-40D	76.0	30	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.

Date: 2/28/2017

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	30	13	OW-1-41D	73.6	30	25	OW-1-43	67.4	30	20
OW-1-38S	50.6	30	14	OW-1-42D	71.0	40	22	OW-1-44	66.6	45	20
OW-1-39S	50.7	30	13	OW-1-45	65.7	40	19	OW-1-51R	60.6	35	19
OW-1-40S	51.1	35	13	OW-1-46	64.3	35	18	OW-1-52	59.3	30	18
OW-1-41S	51.5	30	15	OW-1-47	63.4	30	7	OW-1-53	60.0	30	17
OW-1-42S	51.3	35	13	OW-1-48	62.5	30	19	OW-1-54	60.0	35	17
				OW-1-49	61.5	30	18				
				OW-1-50	61.0	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. 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	30.48		0.2	MP-1-5	30.20	25.39	0	MP-1-1D	29.25
MP-1-1S	30.40	27.59	0.5	MP-1-6	22.53	24.11	0	MP-1-2D	31.12
MP-1-2D	24.78		0	MP-1-7	25.80	22.53	0	MP-1-3D	30.58
MP-1-2S	25.02	25.44	0	MP-1-8	27.31	7.72	0	MP-1-4D	30.07
MP-1-3D	22.99		0						
MP-1-3S	22.95	29.50	0						
MP-1-4D	25.75		0.4						
MP-1-4S	25.78	31.01	0.4						

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: 2/28/2017

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 changed Yes No X
8) Terminal strips checked Yes X No

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:

2-28-17 Found system running upon arrival. Added a small amount of oil to the compressor. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

OW-1-19S remains off due to leaking line.

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 # 96-934-323 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:	3/29/2017
Time:	17:45
Weather:	Clear
Outdoor Temperature:	~48° F
Inside Trailer Temperature:	~71° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	19,737.0	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	95	(psi)
Oxygen Purity	88.6	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	105	(psi)
Element Outlet Temperature	185	(oF)
Running Hours	23,019	(hours)
Loading Hours	15,056	(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	30	32	OW-1-5S	67.3	40	19	OW-1-9D	88.5	35	30
OW-1-2	96.5	35	20	OW-1-6S	67.0	40	18	OW-1-10D	87.2	45	25
OW-1-3	96.3	40	30	OW-1-7S	66.9	30	19	OW-1-11D	86.1	30	30
OW-1-4	95.0	40	30	OW-1-8S	66.7	30	19	OW-1-12D	85.3	35	30
OW-1-5D	93.9	35	32	OW-1-9S	66.0	35	18	OW-1-13D	84.7	30	29
OW-1-6D	92.4	30	31	OW-1-10S	54.6	30	13	OW-1-14D	84.1	35	30
OW-1-7D	91.1	30	30	OW-1-11S	54.1	30	14	OW-1-15D	83.3	40	29
OW-1-8D	89.6	30	30	OW-1-12S	53.6	30	15	OW-1-16D	82.5	30	16

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: 3/29/2017

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	30	15	OW-1-17D	79.5	40	15	OW-1-21S	49.3	35	13
OW-1-14S	52.7	30	14	OW-1-18D	78.3	30	26	OW-1-22S	49.3	40	13
OW-1-15S	52.2	30	13	OW-1-19D	78.9	40	27	OW-1-23S	48.8	40	13
OW-1-16SR	51.8	35	30	OW-1-20D	79.5	35	29	OW-1-24S	48.4	40	13
OW-1-17S	50.7	40	26	OW-1-21D	79.5	35	27	OW-1-25S	48.8	35	13
OW-1-18S	50.2	30	13	OW-1-22D	79.5	35	27	OW-1-26SR	48.3	40	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	26	OW-1-27S	48.3	40	14
OW-1-20S	49.3	35	10	OW-1-24D	78.2	30	28	OW-1-28S	48.3	35	13

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	30	28	OW-1-29S	48.5	35	13	OW-1-33D	83.2	30	30
OW-1-26D	78.1	40	29	OW-1-30S	48.8	25	13	OW-1-34D	84.5	35	30
OW-1-27D	77.9	30	28	OW-1-31S	49.3	25	14	OW-1-35D	85.0	40	29
OW-1-28D	78.0	30	28	OW-1-32S	49.3	20	13	OW-1-36D	85.0	35	31
OW-1-29D	78.4	30	27	OW-1-33S	49.7	35	13	OW-1-37D	84.0	40	28
OW-1-30D	79.0	30	36	OW-1-34S	50.1	30	14	OW-1-38D	82.0	30	28
OW-1-31D	80.5	30	20	OW-1-35S	50.3	25	13	OW-1-39D	78.0	30	28
OW-1-32D	81.6	30	29	OW-1-36S	50.3	30	13	OW-1-40D	76.0	30	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.

Date: 3/29/2017

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	30	13	OW-1-41D	73.6	30	25	OW-1-43	67.4	30	21
OW-1-38S	50.6	30	13	OW-1-42D	71.0	40	23	OW-1-44	66.6	30	18
OW-1-39S	50.7	35	13	OW-1-45	65.7	40	20	OW-1-51R	60.6	30	17
OW-1-40S	51.1	25	14	OW-1-46	64.3	45	19	OW-1-52	59.3	40	17
OW-1-41S	51.5	35	14	OW-1-47	63.4	40	18	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	15	OW-1-48	62.5	45	18	OW-1-54	60.0	40	17
				OW-1-49	61.5	45	17				
				OW-1-50	61.0	30	19				

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	30.23		0	MP-1-5	30.05	20.25	0	MP-1-1D	24.71
MP-1-1S	30.35	18.69	0	MP-1-6	22.20	8.06	0	MP-1-2D	33.79
MP-1-2D	24.64		0.2	MP-1-7	25.52	18.57	0	MP-1-3D	27.30
MP-1-2S	24.83	25.83	0.4	MP-1-8	27.07	6.25	0	MP-1-4D	29.89
MP-1-3D	22.75		0						
MP-1-3S	22.70	24.70	0						
MP-1-4D	25.50		0						
MP-1-4S	25.54	25.59	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: 3/29/2017

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 changed Yes No X
8) Terminal strips checked Yes X No

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:

3-29-30-17 Found system running upon arrival. Added a small amount of oil to the compressor. Replaced fresh air door filters. Found bad leak in brass nipple on bank #3. Made repairs as needed and tested under pressure and leaks were gone. Repaired crack in water knock out bowl with glue and sealant. Wiped down all equipment and cleaned up debris and leaves around shed. Restarted system and left system running.

OW-1-19S remains off due to leaking line.

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 # 96-934-323 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:	12/29/2016
Time:	10:45
Weather:	Cloudy
Outdoor Temperature:	~35° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	35,752	
Feed Air Pressure *	105	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	105	(psi)
Oxygen Purity	78	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	100	(psi)
(readings below are made from control panel)		
Delivery Air	108	(psi)
Element Outlet Temperature	147	(^{o}F)
Running Hours	38,004	(hours)
Loading Hours	35,327	(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	30	OW-2-9S	75'	30	19	OW-2-10D	97.2'	35	27
OW-2-3	94.3'	30	30	OW-2-10S	75'	35	29	OW-2-11D	100.8'	35	34
OW-2-4	94.7'	40	34	OW-2-11S	76.5'	30	22	OW-2-12	94'	35	20
OW-2-5	95.3'	35	33	OW-2-13S	75'	35	20	OW-2-13D	97'	30	36
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	21	OW-2-14	96.4'	30	29
OW-2-7	96'	30	30	OW-2-16S	75.5'	40	20	OW-2-15D	94.6'	30	29
OW-2-8	96.3'	40	31	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	30	29
OW-2-9D	96.7'	40	30	OW-2-20S	79'	30	23	OW-2-17	95'	30	31

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: 12/29/2016

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'	20	30	OW-2-22S	76'	25	29	OW-2-26D	95'	30	29
OW-2-19	96.1'	25	30	OW-2-24S	77.8'	30	29	OW-2-27	93.5'	30	30
OW-2-20D	96.6'	35	33	OW-2-26S	74'	25	31	OW-2-28D	92.1'	30	27
OW-2-21	96.6'	30	30	OW-2-28S	76'	25	30	OW-2-29	92.2'	30	29
OW-2-22D	96.3'	30	29	OW-2-30S	67.8'	30	29	OW-2-30D	88'	30	28
OW-2-23	97.2'	30	29	OW-2-34	71'	30	27	OW-2-31	86'	30	29
OW-2-24D	97'	30	31	OW-2-35	69.2'	30	31	OW-2-32	84'	30	30
OW-2-25	96'	30	30	OW-2-36	64.8'	30	33	OW-2-33	82'	30	34

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'	35	22	OW-2-45	61.1'	30	21	MP-2-1	33.51	23.00	0
OW-2-38	62.1'	35	23	OW-2-46	61'	35	21	MP-2-2	34.83	21.49	0
OW-2-39	60'	40	20	OW-2-47	60.5'	30	21	MP-2-3S	34.65	35.51	0.1
OW-2-40	61.7'	40	21					MP-2-3D	34.83	39.38	1.3
OW-2-41	61.7'	30	20					MP-2-4	23.32	37.33	0
OW-2-42	61.6'	30	20					MP-2-5	21.48	28.78	0
OW-2-43	61.4'	35	22								
OW-2-44R	60.6'	30	20								

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: 12/29/2016

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:

1-25-16 Responded to alarm condition at site. Found system off due to the relay or the start/stop switch on the air compressor tripped out. System tripped out due to a power failure from the last storm event. Restart system and observed to make sure it was cycling correctly. Left system running.

1-30-16 Found system running upon arrival. Made slight adjustment to temperature inside shed. Wiped down all equipment and cleaned up debris and leaves around shed. 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:	3/1/2017
Time:	16:30
Weather:	Cloudy
Outdoor Temperature:	~65° F
Inside Trailer Temperature:	~71° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	36,207	
Feed Air Pressure *	120	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	78	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	120	(psi)
(readings below are made from control panel)		
Delivery Air	113	(psi)
Element Outlet Temperature	165	(^{o}F)
Running Hours	38,698	(hours)
Loading Hours	35,801	(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	30	OW-2-9S	75'	35	21	OW-2-10D	97.2'	35	30
OW-2-3	94.3'	30	30	OW-2-10S	75'	30	31	OW-2-11D	100.8'	45	34
OW-2-4	94.7'	30	35	OW-2-11S	76.5'	30	22	OW-2-12	94'	40	23
OW-2-5	95.3'	35	33	OW-2-13S	75'	30	23	OW-2-13D	97'	40	36
OW-2-6	95.7'	35	30	OW-2-15S	75'	30	20	OW-2-14	96.4'	40	28
OW-2-7	96'	30	30	OW-2-16S	75.5'	35	20	OW-2-15D	94.6'	30	29
OW-2-8	96.3'	40	33	OW-2-18S	74.5'	35	21	OW-2-16D	94.1'	30	29
OW-2-9D	96.7'	30	30	OW-2-20S	79'	35	23	OW-2-17	95'	30	30

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: 3/1/2017

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'	35	28	OW-2-26D	95'	30	30
OW-2-19	96.1'	30	31	OW-2-24S	77.8'	35	30	OW-2-27	93.5'	30	30
OW-2-20D	96.6'	35	32	OW-2-26S	74'	35	30	OW-2-28D	92.1'	30	29
OW-2-21	96.6'	40	30	OW-2-28S	76'	40	29	OW-2-29	92.2'	30	28
OW-2-22D	96.3'	30	29	OW-2-30S	67.8'	30	27	OW-2-30D	88'	30	28
OW-2-23	97.2'	30	31	OW-2-34	71'	40	27	OW-2-31	86'	30	27
OW-2-24D	97'	30	30	OW-2-35	69.2'	40	31	OW-2-32	84'	30	31
OW-2-25	96'	35	28	OW-2-36	64.8'	30	33	OW-2-33	82'	30	33

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	20	OW-2-45	61.1'	30	21	MP-2-1	33.22	28.61	0
OW-2-38	62.1'	30	22	OW-2-46	61'	30	21	MP-2-2	34.57	31.58	0.2
OW-2-39	60'	30	21	OW-2-47	60.5'	25	20	MP-2-3S	34.45	27.11	0
OW-2-40	61.7'	35	20					MP-2-3D	34.57	32.34	0.2
OW-2-41	61.7'	35	20					MP-2-4	23.11	27.94	0.3
OW-2-42	61.6'	45	19					MP-2-5	21.30	30.07	0
OW-2-43	61.4'	35	22								
OW-2-44R	60.6'	30	20								

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: 3/1/2017

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:

3-1-17 Found system running upon arrival. Made adjustment to auto drain pressure to prevent it from spilling onto floor. 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:	3/28/2017
Time:	15:50
Weather:	Rain
Outdoor Temperature:	~45° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O2 Generator (AirSep)

Hours	36,613	
Feed Air Pressure *	80	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	78.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	80	(psi)
(readings below are made from control panel)		
Delivery Air	84	(psi)
Element Outlet Temperature	172	(^{o}F)
Running Hours	39,319	(hours)
Loading Hours	36,225	(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	33	OW-2-9S	75'	30	21	OW-2-10D	97.2'	30	2
OW-2-3	94.3'	30	31	OW-2-10S	75'	30	33	OW-2-11D	100.8'	30	33
OW-2-4	94.7'	30	32	OW-2-11S	76.5'	30	25	OW-2-12	94'	25	20
OW-2-5	95.3'	25	30	OW-2-13S	75'	40	20	OW-2-13D	97'	20	36
OW-2-6	95.7'	25	30	OW-2-15S	75'	35	21	OW-2-14	96.4'	30	28
OW-2-7	96'	25	30	OW-2-16S	75.5'	30	21	OW-2-15D	94.6'	35	29
OW-2-8	96.3'	35	30	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	30	28
OW-2-9D	96.7'	40	30	OW-2-20S	79'	30	21	OW-2-17	95'	40	30

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: 3/28/2017

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'	30	20	OW-2-26D	95'	30	29
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	23	OW-2-27	93.5'	30	31
OW-2-20D	96.6'	35	31	OW-2-26S	74'	30	21	OW-2-28D	92.1'	30	28
OW-2-21	96.6'	30	34	OW-2-28S	76'	30	22	OW-2-29	92.2'	35	29
OW-2-22D	96.3'	40	28	OW-2-30S	67.8'	30	18	OW-2-30D	88'	35	28
OW-2-23	97.2'	40	30	OW-2-34	71'	35	22	OW-2-31	86'	35	27
OW-2-24D	97'	40	29	OW-2-35	69.2'	30	23	OW-2-32	84'	25	30
OW-2-25	96'	40	29	OW-2-36	64.8'	35	34	OW-2-33	82'	25	21

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	20	OW-2-45	61.1'	30	21	MP-2-1	33.17	29.15	0.2
OW-2-38	62.1'	30	22	OW-2-46	61'	30	21	MP-2-2	34.51	28.12	0
OW-2-39	60'	25	20	OW-2-47	60.5'	30	20	MP-2-3S	34.36	24.77	0
OW-2-40	61.7'	35	20					MP-2-3D	34.43	26.00	0
OW-2-41	61.7'	45	20					MP-2-4	23.07	18.12	0
OW-2-42	61.6'	40	20					MP-2-5	21.25	16.05	0
OW-2-43	61.4'	30	22								
OW-2-44R	60.6'	30	21								

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: 3/28/2017

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:

3-28-17 Found system running upon arrival. Added small amount of cooling oil to compressor. Took apart auto drains to clean heavy buildup on floats. 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: