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Groundwater Sampling, NAPL Monitoring/Recovery and Groundwater Treatment Performance Report for the Second Quarter of 2013 (April - June 2013) 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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Prepared by:

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URS

December 2013

GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT FOR THE SECOND QUARTER OF 2013 (APRIL-JUNE)

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

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BTEX	benzene, toluene, ethylbenzene, xylenes
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DTW	depth to water
DUSR	data usability summary report
F&N	Fenley & Nicol Environmental, Inc.
ft	foot (feet)
ft/ft	feet per feet
HIMW	Hempstead Intersection (Street) Monitoring Well
IPR	Intersection (Street) Product Recovery
ISS	In Situ Solidification
LNAPL	light non-aqueous phase liquid
LOCID	Location Identifier
MGP	manufactured gas plant
µg/L	micrograms per liter
MP	monitoring points
NA	not accessible
NAPL	non-aqueous phase liquid
ND	not detected
NM	not measured
NYSDEC	New York State Department of Environmental Conservation
ORP	oxidation-reduction potential
PAHs	polycyclic aromatic hydrocarbons
PID	photo ionization detector
PZ	piezometer
QC	quality control
TOR	top of riser
URS	URS Corporation
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 Second Quarter (April, May, and June) 2013.

Groundwater monitoring and sampling were conducted on June 4 – June 14, 2013. This included measuring the depth to groundwater and NAPL thickness in approximately 48 wells. Groundwater samples were collected from 20 wells and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL monitoring and recovery was conducted on April 14, May 19, and June 2 for a total of three events in the Second Quarter of 2013.

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

- The general direction of groundwater flow in the Second Quarter 2013 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 100 ug/L dissolved-phase plume extended approximately 2,300 ft south of the site boundary.
- Dense non-aqueous phase liquid (DNAPL) was detected in 13 existing wells during the Second Quarter. The wells were located within a parking lot immediately south of the site. Of this group, four wells were decommissioned in early May 2013.
- NAPL recovery activities were resumed in February 2013 on a monthly basis. Approximately 745 gallons of NAPL were recovered between April 2007 and July 2011. Approximately 41.84 gallons of NAPL were recovered during the Second Quarter of 2013.

- Based on a comparison between the First Quarter 2013 and Second Quarter 2013 data and the previous 2012 data, the concentrations of total BTEX and total PAHs remained stable or increased slightly in most site monitoring wells.

The first of two oxygen delivery systems (System No. 2) started operating in October 2010 and promoted aerobic conditions in the aquifer near the system during the Second Quarter of 2013. The second of two oxygen delivery systems (System No. 1) started operating in April 2011 and promoted aerobic conditions in the aquifer near the system during the Second Quarter of 2013.

Bimonthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by Fenley & Nicol, Environmental, Inc. (F&N). During the Second Quarter, F&N monitored System No. 1 during seven events and System No. 2 during seven 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 Second Quarter of 2013 at the Hempstead Intersection Street Former MGP site (refer to Figures 1 and 2).

Quarterly groundwater monitoring and bimonthly recovery of NAPL was initiated in April 2007. Separate reports are typically provided for the first three quarters of the year and the fourth quarter data typically gets reported as part of the Annual Report. Separate reports have been issued quarterly since 2007 as listed in the References section of this report.

URS performed the following activities during the Second Quarter of 2013:

- Measured the depth to groundwater and NAPL thickness in all accessible on site and off site monitoring wells (on June 4, 2013), see Tables 1 and 2 and Figure 2.
- Recovered NAPL from monitoring wells and product recovery wells in the parking area directly south of the site in three events (April 14, May 19, and June 2, 2013), see Tables 1 and 3.
- Collected groundwater samples from 20 monitoring wells for laboratory analysis, see Table 4.

F&N also performed water level measurements, well headspace monitoring with a multi-gas meter (RKI Eagle MultiGas meter), and dissolved oxygen (DO) measurements with a DO meter (YSI 55A) on Oxygenation System No. 1 during seven events and on Oxygenation System No. 2 during seven events in First Quarter 2013. Monitoring is conducted bi-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 URS during the Second Quarter of 2013 included the measurement of the depth to groundwater and NAPL thickness in 48 monitoring wells, the collection of groundwater samples from 20 monitoring wells, and recovery of NAPL from accessible monitoring wells that contained measurable NAPL.

Monitoring wells and piezometers used for these activities are listed in Table 1. Second Quarter 2013 groundwater elevations and NAPL thickness values are presented in Table 2, NAPL recovery amounts are presented in Table 3, and the results of groundwater sampling are presented in Table 4.

F&N performed measurements to monitor the performance of the groundwater treatment Systems No. 1 and No. 2 approximately twice monthly during the Second Quarter of 2013. F&N collected water level measurements with an electronic oil/water interface probe, well headspace monitoring data with an RKI Eagle Multigas meter, and dissolved oxygen measurements with a YSI 55A dissolved oxygen meter on System No. 1 on April 5, April 19, May 3, May 15, May 31, June 19, and July 1, 2013 and on System No. 2 on April 4, April 18, May 2, May 14, May 30, June 18, and June 28, 2013. This data is presented in Table 5.

2.1 Groundwater Depth and NAPL Thickness Measurements

Depths to groundwater and NAPL thickness measurements are listed in Table 2. NAPL thickness and recovery measurements are listed in Table 3. 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.

2.2 NAPL Recovery

NAPL recovery occurred between 2007 and the Third Quarter of 2011 when the In Situ Solidification (ISS) remediation project began. Approximately 745 gallons of NAPL were recovered between 2007 and 2011 when NAPL recovery ended upon the start of ISS treatment. The earlier stage of the ISS treatment project was originally intended to begin at the Professional Office Building property, where the majority of the NAPL recovery wells were located. However, the project sequencing changed and the ISS work for the Professional Office Building property was moved to the end of the project. Therefore, the New York State Department of Environmental Conservation (NYSDEC) requested that National Grid resume NAPL recovery until the ISS work moved into the off-site area of the Professional Office Building property.

NAPL levels were monitored during three events on April 14, May 19, and June 2, 2013. NAPL levels were monitored in 17 wells during the April 14 event and DNAPL was detected in 13 of these wells. Recovery wells IPR-14, 15, 16, and 17 were decommissioned in early May 2013. Therefore, during the May 19 and June 2 events, 13 wells were monitored. DNAPL was detected in 11 of these wells during each event. All observed NAPL consisted of dense non-aqueous phase liquid (DNAPL) located at the bottom of the wells. All accessible wells included in the recovery program were gauged using an oil/water interface probe to determine the depth to water and the depth and thickness to any possible LNAPL at the top of the water column. Wells were then gauged with a weighted cotton string to measure the DNAPL thickness. The DNAPL was recovered using either a Waterra inertial lift pump or a dedicated bailer, if the DNAPL was particularly viscous. Recovered water and product were stored in 55-gallon steel drums for subsequent offsite hazardous waste disposal.

The quantity of recovered DNAPL was estimated based on gallon markings on the side of the purge bucket used to collect the purged liquids during recovery. Table 3 presents Second Quarter NAPL thicknesses and NAPL recovery amounts for existing recovery wells, located south of the site in the parking lot of the Professional Office Building.

2.3 Groundwater Sampling

Low-flow groundwater sampling methods were used to sample groundwater, which included purging groundwater at a rate of between 100 and 250 milliliters per minute. The water

was pumped through a flow-through cell and monitored for pH, conductivity, turbidity, DO, temperature, and oxidation-reduction potential (ORP). Purging was continued until stable conditions were achieved (defined as three consecutive stable readings [i.e. ± 10 percent] over a 15 minute period). Groundwater samples were collected afterwards and shipped under chain-of-custody procedures to H2M laboratories, Inc. for analysis of BTEX (United States Environmental Protection Agency [USEPA] Method 8260B) and PAHs (USEPA Method 8270C). Purge water is stored in an onsite storage tank for subsequent offsite disposal. The Data Usability Summary Report is presented in Appendix A.

There were 20 monitoring wells sampled during the Second Quarter June 4 – June 14, 2013 groundwater sampling event. Results of this groundwater sampling event are presented in Table 4.

2.4 Groundwater Treatment System Operation

Two oxygen delivery systems were installed to treat 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 F&N during the Second Quarter 2013 through the measurement of water levels, headspace gas, and water quality parameters in the groundwater approximately twice per month, see Table 5. F&N performed water level measurements with an electronic oil/water interface probe, well headspace monitoring with a multi-gas meter (RKI Eagle MultiGas meter), and dissolved oxygen (DO) measurements with a DO meter (YSI 55A). These measurements were collected during the Second Quarter and were taken for System No. 1 on April 5, April 19, May 3, May 15, May 31, June 19, and July 1, 2013 for a total of seven events (the July 1 event is included here as the companion event to the System No. 2 June 28 event, even though it was technically performed in the Third Quarter). System No. 2 measurements were collected on April 4, April 18, May 2, May 14, May 30, June 18, and June 28, 2013 for a total of seven events. 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 Second Quarter 2013 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 2,300 feet south of the site boundary. Based on comparisons to previous quarterly groundwater monitoring data, the concentrations of total BTEX or PAHs in groundwater sampled during the Second Quarter in most site monitoring wells remained relatively stable, while a few wells showed modest increases.

In June 2013, the concentrations of total BTEX or total PAHs in the furthest downgradient well pair (HIMW-015I/D) ranged from "not detected" (deep well, HIMW-015D) to 14 μg/L for BTEX and 27 μg/L for PAHs (intermediate well, HIMW-015I). The concentrations of total BTEX or total PAHs in wells located between the site and the HIMW-015 cluster varied from "not detected" to 2,155 μg/L (intermediate well, HIMW-005I) for PAHs, see Figure 4.

The following are some wells showing notable changes during Second Quarter 2013. Wells HIMW-005D, HIMW-013I, HIMW-014I, and HIMW-024 are discussed below:

- For HIMW-005D, total BTEX concentrations decreased from 64 μg/L in the First Quarter to 23 μg/L in the Second Quarter. The PAH concentrations decreased from 900 μg/L in the First Quarter to 508 μg/L in the Second Quarter. This continues the downward trend of PAH values for this well.

- For HIMW-013I, total BTEX concentrations increased from 53 μg/L in the First Quarter to 83 μg/L in the Second Quarter. PAH concentrations increased from 13 μg/L in the First Quarter to 60 μg/L in the Second Quarter.

- For HIMW-014I, total BTEX concentrations remained stable from First to Second Quarter (38 to 45 μg/L). The PAH concentrations increased from 43 μg/L in the First Quarter to 103 μg/L in the Second Quarter. The PAHs had been stable or decreasing since June 2012.

- For HIMW-024, total BTEX concentrations increased from 107 µg/L in the First Quarter to 226 µg/L in the Second Quarter. PAH concentrations increased from 74 µg/L in the First Quarter to 126 µg/L in the Second Quarter.

3.2 Potentiometric Heads and NAPL Thickness

Potentiometric heads and NAPL thickness measurements for Second Quarter 2013 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 for Second Quarter 2013. The data for Second Quarter 2013 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 historically consistent.

DNAPL was observed in 13 of the existing wells during the Second Quarter 2013. All of the wells where DNAPL was identified are within the Professional Office Building parking lot that is immediately south of the site (Figure 8). 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 Figure 4.

A Data Usability Summary Report (DUSR) was prepared following the guidelines provided in 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. An electronic copy of the DUSR is included as Appendix A. The review included a review of holding times; completeness of all required deliverables; quality control (QC) results (blanks, instrument tunes, calibration standards, matrix spike recoveries, duplicate analyses, and laboratory control sample recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of

the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers. All sample analyses were found to be compliant with the method and validation criteria and the data is useable as reported, except where noted in the DUSRs.

3.4 NAPL Recovery Volumes

The volume of NAPL recovered was 16.67 gallons during the April 14 event, 14.75 gallons in the May 19 event, and 10.41 gallons during the June 2 event for a total of 41.84 gallons of NAPL recovered during the Second Quarter 2013. Approximately 745 gallons of NAPL were recovered between April 2007 and July 2011. Approximately 22.11 gallons of NAPL were recovered in the First Quarter 2013. A total of 808.9 gallons of NAPL have been recovered from April 2007 through Second Quarter 2013. Table 3 lists the amount of DNAPL gauged in each well and the total amount recovered during each event.

3.5 Groundwater Treatment System Performance

Groundwater treatment system performance data for Second Quarter 2013, as collected and reported by F&N, is presented in Table 5.

System No. 1

System No. 1 DO readings reported in the Second Quarter 2013 ranged from a low of 9.24 mg/L at MP-1-8 to a high of 56.52 mg/L at MP-1-3D. The reported DO was averaged for System No. 1 and calculated to be 30.95 mg/L. The wells with consistently high dissolved oxygen concentrations (over 40 mg/L) were MP-1-4S and MP-1-7. The wells MP-1-3D and MP-1-4D had inconsistently high dissolved oxygen concentrations throughout the quarter. In the Second Quarter, there was only one instance of a PID headspace reading over 1 ppm; at MP-1-4D on May 15, the PID reading was 108 ppm.

Based on the data collected during the Second Quarter of 2013, System No. 1 is performing as expected and creating an aerobic environment in the aquifer.

System No. 2

System No. 2 DO readings reported in the Second Quarter 2013 ranged from a low of 15.44 mg/L at MP-2-4 to a high of 49.95 mg/L at MP-2-2, top of water column. The reported DO was averaged for System No. 2 and was calculated to be 34.11 mg/L. The wells with the most consistently high dissolved oxygen concentrations (over 40 mg/L) were MP-2-2, MP-2-3S, and MP-2-3D. MP-2-3S had dissolved oxygen concentrations over 40 mg/L in the first half of the quarter that dropped to values between 28.10 to 33.65 mg/L in the second half of the quarter. There were no PID headspace readings over 1 ppm at System No. 2 in the Second Quarter.

Based on the data collected during the Second Quarter of 2013, System No. 2 is performing as expected and creating an aerobic environment in the aquifer.

4.0 SUMMARY

Following is a summary of the Second Quarter 2013 groundwater sampling, NAPL monitoring and recovery data, and groundwater treatment performance presented in this report:

- The general direction of groundwater flow in the Second Quarter 2013 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 100 ug/L dissolved-phase plume contour is approximately 2,300 ft south of the site boundary.
- DNAPL was detected in 13 existing wells during the Second Quarter. The wells were located within a parking lot immediately south of the site.
- NAPL recovery was resumed in February 2013. Approximately 745 gallons of NAPL was recovered between April 2007 and July 2011. Approximately 41.83 gallons of NAPL were recovered during the Second Quarter of 2013 in three events conducted April 14, May 19, and June 2.
- Based on a comparison between the First Quarter 2013 and Second Quarter 2013 data and the previous 2012 data, the concentrations of total BTEX and total PAHs remained stable or increased slightly in most site monitoring wells.
- The first of two oxygen delivery systems (System No. 2), brought on line in October 2010, is promoting aerobic conditions in the aquifer near the system.
- The second of two oxygen delivery systems (System No. 1), brought on line in April 2011, is promoting aerobic conditions in the aquifer near the system.
- Bimonthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by F&N. During the Second Quarter, F&N monitored System No. 1 and No. 2 during seven events. Both systems are performing as expected and creating an aerobic environment in the aquifer.

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URS, 2008c. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Second Quarter of 2008 (April - June 2008) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* October.

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URS, 2009c. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the First Quarter of 2009 (January - March 2009) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* June.

URS, 2009d. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Second Quarter of 2009 (April - June 2009) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* September.

URS, 2009e. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Third Quarter of 2009 (July - September 2009) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* November.

URS, 2010a. *2009 Annual Groundwater Sampling and NAPL Monitoring/Recovery Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* February.

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URS, 2010c. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Second Quarter of 2010 (April - June 2010) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* September.

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URS, 2013a. *2012 Annual Groundwater Sampling, NAPL Monitoring, and Groundwater Treatment Performance Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site*. May.

URS, 2013b. *Groundwater Sampling and Groundwater Treatment Performance Report for the First Quarter of 2013 (January – March 2013) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* September.

TABLES

Table 1

Summary of Field Activities: Water Level Measurements, NAPL Thickness Measurements, NAPL Recovery, and Water Quality Sampling
Second Quarter 2013 [(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	Second Quarter (June 4 to 14, 2013)			NAPL Monitoring and DNAPL Recovery Events		
	Water Level	NAPL Thickness	Water Quality	April 14, 2013	May 19, 2013	June 2, 2013
HIMW-002S*						
HIMW-002I*						
HIMW-002D*						
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	X	X				
HIMW-010I	X	X				
HIMW-010D**						
HIMW-011S	X	X				
HIMW-011I						
HIMW-011D	X	X				
HIMW-012S	X	X	X			
HIMW-012I	X	X	X			
HIMW-012D	X	X	X			
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-016S	X	X				X
HIMW-016I	X	X				X
HIMW-017S	X	X		X		
HIMW-20S	X	X	X			
HIMW-20I	X	X	X			
HIMW-21	X	X		X	X	
HIMW-22	X	X	X			
HIMW-23	X	X	X			
HIMW-24	X	X	X			
HIMW-25	X	X	X			
PZ-02						
PZ-03						

Table 1

Summary of Field Activities: Water Level Measurements, NAPL Thickness Measurements, NAPL Recovery, and Water Quality Sampling
Second Quarter 2013 (1), (2)
Hempstead Intersection Street Former MGP Site

Well ID	Second Quarter (June 4 to 14, 2013)			NAPL Monitoring and DNAPL Recovery Events		
	Water Level	NAPL Thickness	Water Quality	April 14, 2013	May 19, 2013	June 2, 2013
IPR-14	Decommissioned, May 2013					
IPR-15	Decommissioned, May 2013					
IPR-16	Decommissioned, May 2013					
IPR-17	Decommissioned, May 2013					
IPR-18	X	X				
IPR-19S***						
IPR-19D	X	X				
IPR-20	X	X			X	X
IPR-21	X	X		X		X
IPR-22	X	X			X	X
IPR-23	X	X				
IPR-24	X	X		X		
IPR-29	X	X		X	X	
IPR-30	X	X				
OSMW-01						
OSMW-02						
OSMW-03						

Notes:

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

2 Blank field indicates that the activity was not performed.

* During 2012, the stick up risers at HIMW-002 S, I, and D were cut to grade. Water levels were not collected because the locations were not resurveyed.

** HIMW-10D was destroyed by sidewalk/driveway construction.

*** IPR-19S is covered with cold patch and is inaccessible.

Shaded cell indicates well was decommissioned in May 2013.

Table 2
Groundwater and NAPL Measurements
Second Quarter 2013
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 amsl]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-002S	6/4/2013	73.82	NM	NM	NM	39.80	NM	NM	NM
HIMW-002I	6/4/2013	78.87	NM	NM	NM	88.80	NM	NM	NM
HIMW-002D	6/4/2013	74.13	NM	NM	NM	110.80	NM	NM	NM
HIMW-003S	6/4/2013	65.00	ND	17.97	ND	34.51	0	0.00	47.03
HIMW-003I	6/4/2013	64.94	ND	18.26	ND	85.31	0	0.00	46.68
HIMW-003D	6/4/2013	65.26	ND	18.99	ND	142.76	0	0.00	46.27
HIMW-004S	6/4/2013	72.74	ND	26.36	ND	41.61	0	0.00	46.38
HIMW-004I	6/4/2013	72.78	ND	26.51	ND	90.40	0	0.00	46.27
HIMW-004D	6/4/2013	72.65	ND	27.14	ND	177.09	0	0.00	45.51
HIMW-005S	6/4/2013	67.19	ND	20.62	ND	38.91	0	0.00	46.57
HIMW-005I	6/4/2013	67.22	ND	20.84	ND	91.92	0	0.00	46.38
HIMW-005D	6/4/2013	67.22	ND	21.46	ND	139.60	0	0.00	45.76
HIMW-008S	6/4/2013	65.04	ND	18.89	ND	36.96	0	0.00	46.15
HIMW-008I	6/4/2013	65.14	ND	19.11	ND	75.02	0	0.00	46.03
HIMW-008D	6/4/2013	64.93	ND	18.96	ND	114.63	0	0.00	45.97
HIMW-009S	6/4/2013	70.03	ND	23.38	ND	39.61	0	0.00	46.65
HIMW-009I	6/4/2013	69.93	ND	23.35	ND	80.45	0	0.00	46.58
HIMW-009D	6/4/2013	69.96	ND	24.36	ND	122.80	0	0.00	45.60
HIMW-010S	6/4/2013	71.60	ND	24.50	ND	39.10	0	0.00	47.10
HIMW-010I	6/4/2013	71.47	ND	23.78	ND	89.77	0	0.00	47.69
HIMW-010D[(2)]	6/4/2013	71.44	NM	NM	NM	136.02	0	0.00	NM
HIMW-011S	6/4/2013	71.62	ND	24.47	ND	39.85	0	0.00	47.15
HIMW-011I	6/4/2013	71.43	ND	NM	ND	92.95	0	0.00	NM
HIMW-011D	6/4/2013	71.39	ND	24.29	ND	122.10	0	0.00	47.10
HIMW-012S	6/4/2013	61.58	ND	16.68	ND	32.95	0	0.00	44.90
HIMW-012I	6/4/2013	61.59	ND	16.56	ND	74.50	0	0.00	45.03
HIMW-012D	6/4/2013	61.82	ND	19.09	ND	128.31	0	0.00	42.73
HIMW-013S	6/4/2013	72.83	ND	29.86	ND	48.57	0	0.00	42.97
HIMW-013I	6/4/2013	72.60	ND	29.65	ND	81.52	0	0.00	42.95
HIMW-013D	6/4/2013	72.53	ND	29.62	ND	121.93	0	0.00	42.91
HIMW-014I	6/4/2013	71.71	ND	28.72	ND	96.54	0	0.00	42.99
HIMW-014D	6/4/2013	71.59	ND	32.25	ND	152.04	0	0.00	39.34
HIMW-015I	6/4/2013	64.18	ND	24.52	ND	92.45	0	0.00	39.66
HIMW-015D	6/4/2013	63.96	ND	26.98	ND	153.14	0	0.00	36.98
HIMW-016S	6/4/2013	67.45	ND	20.82	32.61	34.41	0	1.80	46.63
HIMW-016I	6/4/2013	67.50	ND	21.98	77.36	82.66	0	5.30	45.52
HIMW-017S	6/4/2013	65.96	ND	19.63	36.50	36.70	0	0.20	46.33
HIMW-020S	6/4/2013	70.43	ND	24.88	ND	36.61	0	0.00	45.55
HIMW-020I	6/4/2013	70.30	ND	24.72	ND	74.51	0	0.00	45.58

Table 2
Groundwater and NAPL Measurements
Second Quarter 2013
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 amsl]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-021	6/4/2013	NM	ND	19.27	42.8	45.30	0	2.50	NM
HIMW-022	6/4/2013	NM	ND	29.83	ND	64.41	0	0.00	NM
HIMW-023	6/4/2013	NM	ND	29.98	ND	75.56	0	0.00	NM
HIMW-024	6/4/2013	NM	ND	14.42	ND	55.01	0	0.00	NM
HIMW-025	6/4/2013	NM	ND	16.85	ND	52.29	0	0.00	NM
PZ-02	6/4/2013	72.96	NM	NM	NM	35.25	NM	NM	NM
PZ-03	6/4/2013	64.58	NM	NM	NM	29.49	NM	NM	NM
IPR-14	Decommissioned in May 2013								
IPR-15	Decommissioned in May 2013								
IPR-16	Decommissioned in May 2013								
IPR-17	Decommissioned in May 2013								
IPR-18	6/4/2013	66.87	ND	20.27	49.94	49.95	0	0.01	46.60
IPR-19S(2)	6/4/2013	67.68	NM	NM	NM	45.12	NM	NM	NM
IPR-19D	6/4/2013	67.96	ND	21.31	ND	89.92	0	0.00	46.65
IPR-20	6/4/2013	66.70	ND	20.21	45.39	45.40	0	0.01	46.49
IPR-21	6/4/2013	67.67	ND	21.09	44.46	44.96	0	0.50	46.58
IPR-22	6/4/2013	66.33	ND	19.96	44.80	45.40	0	0.60	46.37
IPR-23	6/4/2013	66.67	ND	20.26	45.40	45.40	0	0.00	46.41
IPR-24	6/4/2013	65.88	ND	19.61	43.35	44.35	0	1.00	46.27
IPR-29	6/4/2013	NM	ND	19.57	49.5	49.70	0	0.20	NM
IPR-30	6/4/2013	NM	ND	20.61	47.0	50.00	0	3.00	NM
OSMW-01	6/4/2013	71.12	NM	NM	NM	42.15	0	NM	NM
OSMW-02	6/4/2013	71.59	NM	NM	NM	45.06	0	NM	NM
OSMW-03	6/4/2013	71.39	NM	NM	NM	44.73	0	NM	NM

Notes:

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

(2) HIMW-010D was destroyed in Third Quarter 2011. HIMW-019S is covered with cold patch and inaccessible.

Shaded cell indicates well was decommissioned in early May 2013.

sheen	Sheen = assumed thickness of 0.01 ft
NM	not measured
LNAPL	light non-aqueous phase liquid
DNAPL	dense non-aqueous phase liquid
TOR	top of riser
amsl	above mean sea level
ND	NAPL not detected

Table 3
NAPL Recovery
Second Quarter 2013
Hempstead Intersection Street Former MGP Site

Well ID	Well Diameter	April 14, 2013			May 19, 2013			June 2, 2013		
		Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed
		[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]
HIMW-016S	2	ND	5.00	0.00	ND	5.00	0.00	ND	5.00	0.85
HIMW-016I	2	ND	5.00	0.00	ND	5.50	0.00	ND	5.50	0.94
HIMW-017S	2	ND	1.00	0.17	ND	0.50	0.00	ND	0.20	0.00
HIMW-021	6	ND	4.0	5.00	ND	3.00	2.00	ND	2.1	0.00
IPR-14	6	ND	0.0	0.00						
IPR-15	6	ND	trace	0.00						
IPR-16	5.75	ND	trace	0.00						
IPR-17	5.75	ND	trace	0.00						
IPR-18	6	ND	trace	0.00	ND	0.00	0.00	ND	0.00	0.00
IPR-19S[(1)]	6	NM	NM	0.00	NM	NM	0.00	NM	NM	0.00
IPR-19D	6	ND	0.00	0.00	ND	trace	0.00	ND	trace	0.00
IPR-20	6	ND	0.00	0.00	ND	1.50	2.25	ND	1.50	2.18
IPR-21	6	ND	1.00	1.50	ND	3.20	0.00	ND	3.00	4.50
IPR-22	6	ND	4.00	0.00	ND	3.80	5.50	ND	1.30	1.95
IPR-23	6	ND	0.00	0.00	ND	0.00	0.00	ND	0.00	0.00
IPR-24	6	ND	2.00	3.00	ND	0.50	0.00	ND	1.50	0.00
IPR-29	6	ND	6.5	7.00	ND	5.50	5.00	ND	0.2	0.00
IPR-30	6	ND	2.0	0.00	ND	2.60	0.00	ND	2.8	0.00
		Volume Removed		**16.67**	Volume Removed		**14.75**	Volume Removed		**10.42**

Total volume recovered during the Second Quarter 2013: 41.84

Total volume of NAPL recovered since April 2007: 808.9

Notes:

(1) HIMW-019S is covered with cold patch and inaccessible.

Shaded cell indicates well was decommissioned in early May 2013.

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
Second Quarter of 2013
Hempstead Intersection Street Former MGP Site

Well ID	Second Quarter 2013 June 4- June 14, 2013	
	Total BTEX [ug/L]	Total PAH [ug/L]
HIMW-002D		
HIMW-002I		
HIMW-002S		
HIMW-003D		
HIMW-003I		
HIMW-003S		
HIMW-004D		
HIMW-004I		
HIMW-004S		
HIMW-005D	23	508
HIMW-005I	96	2,155
HIMW-005S	ND	ND
HIMW-008D	ND	ND
HIMW-008I	ND	ND
HIMW-008S	25	2
HIMW-009D		
HIMW-009I		
HIMW-009S		
HIMW-010D		
HIMW-010I		
HIMW-010S		
HIMW-011D		
HIMW-011I		
HIMW-011S		
HIMW-012D	ND	ND
HIMW-012I	41 (DUP-40)	115 (DUP-108)
HIMW-012S	ND	ND
HIMW-013D	4 (DUP-3.9)	15 (DUP-16)
HIMW-013I	83	60
HIMW-013S		
HIMW-014D		
HIMW-014I	45	103
HIMW-015D	ND	ND
HIMW-015I	14	27
HIMW-016I		
HIMW-016S		
HIMW-017S		
HIMW-020I	1	3
HIMW-020S	ND	ND
HIMW-022	ND	ND
HIMW-023	ND	ND
HIMW-024	226	126
HIMW-025	ND	ND
PZ-02		
PZ-03		

Notes:

	A blank field is "Not Sampled".
	NAPL is periodically identified in this well.
ND	Not Detected.
ug/L	micrograms per liter

Table 5
Groundwater Treatment Performance Monitoring
Second Quarter 2013
Hempstead Intersection Street Former MGP Site

System #1

	April 5, 2013						April 19, 2013						May 3, 2013						May 15, 2013					
Well ID[2]	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1S	26.13	39.9	0.0	36.9	NM	NM	25.98	40.0	0.0	26.81	NM	NM	26.28	39.9	0.1	21.07	NM	NM	26.16	39.9	0.0	22.04	NM	NM
MP-1-1D	26.41	22.8	0.0	48.69	19.94	15.27	25.83	22.9	0.0	41.85	16.03	11.07	26.11	22.8	0.1	26.89	14.33	16.51	26.02	22.4	0.2	33.61	24.01	17.11
MP-1-2S	20.42	40.0	0.9	42.70	NM	NM	20.36	39.7	0.5	33.10	NM	NM	20.67	38.1	0.4	26.14	NM	NM	20.58	37.0	0.3	28.11	NM	NM
MP-1-2D	19.98	24.1	0.0	41.77	40.11	32.12	19.89	38.1	0.0	38.41	35.34	28.18	20.25	40.1	0.0	40.35	37.77	28.81	20.14	38.7	0.0	37.17	31.00	25.25
MP-1-3S	18.22	21.5	0.0	37.4	NM	NM	18.09	23.8	0.0	36.99	NM	NM	18.38	22.7	0.0	37.12	NM	NM	18.27	23.4	0.0	35.41	NM	NM
MP-1-3D	17.97	20.9	0.0	51.96	40.51	38.37	18.11	20.7	0.0	38.24	33.35	27.75	18.40	20.9	0.3	41.55	35.38	29.11	18.30	20.1	0.0	43.44	39.35	34.00
MP-1-4S	20.77	36.4	0.0	44.69	NM	NM	20.64	38.2	0.0	41.10	NM	NM	20.96	27.7	0.0	49.04	NM	NM	20.80	39.7	0.0	36.82	NM	NM
MP-1-4D	20.98	27.5	0.0	45.41	41.05	37.17	20.83	39.7	0.0	36.54	31.19	29.14	21.17	31.1	0.1	35.21	30.22	22.25	20.95	37.2	108	30.16	26.06	12.43
MP-1-5	25.62	21.2	0.0	34.72	NM	NM	25.42	21.4	0.0	29.37	NM	NM	25.77	21.6	0.2	35.39	NM	NM	25.65	21.2	0.0	34.12	NM	NM
MP-1-6	18.04	20.9	0.0	16.15	NM	NM	17.88	22.4	0.0	14.31	NM	NM	18.20	21.9	0.0	13.31	NM	NM	18.07	21.0	0.0	15.04	NM	NM
MP-1-7	21.31	20.9	0.0	40.50	NM	NM	21.13	20.9	0.0	40.39	NM	NM	21.48	20.9	0.0	42.12	NM	NM	21.35	20.4	0.0	39.51	NM	NM
MP-1-8	22.33	20.9	0.0	19.43	NM	NM	22.21	24.1	0.0	12.95	NM	NM	22.55	21.1	0.0	9.24	NM	NM	22.38	20.6	0.0	10.62	NM	NM

	May 31, 2013						June 19, 2013						July 1, 2013[3]					
Well ID[2]	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1S	26.30	39.5	0.0	25.46	NM	NM	25.12	39.2	0.0	27.61	NM	NM	24.95	39.6	0.0	25.88	NM	NM
MP-1-1D	26.12	21.6	0.0	32.12	24.19	17.18	25.07	21.6	0.0	34.51	30.31	24.12	24.89	18.1	0.0	32.14	28.11	30.64
MP-1-2S	20.68	39.7	0.0	25.50	NM	NM	19.62	38.8	0.3	25.78	NM	NM	19.48	32.9	0.3	26.17	NM	NM
MP-1-2D	20.29	31.9	0.0	39.19	13.14	27.77	19.39	39.7	0.2	38.91	24.44	21.12	19.25	35.5	0.3	36.11	31.00	29.55
MP-1-3S	18.43	23.7	0.0	39.12	NM	NM	17.42	20.9	0.0	36.66	NM	NM	17.29	36.6	0.0	33.39	NM	NM
MP-1-3D	18.47	19.4	0.0	56.52	46.90	46.47	17.54	20.4	0.0	44.12	35.12	34.02	17.45	19.8	0.0	52.19	50.51	52.39
MP-1-4S	20.98	37.8	0.0	40.90	NM	NM	20.26	38.8	0.0	37.71	NM	NM	20.20	36.3	0.0	23.06	NM	NM
MP-1-4D	21.17	40.0	0.0	39.58	31.75	24.68	20.22	40.0	0.0	44.13	52.00	48.88	20.15	40.0	0.0	48.98	8.17	8.08
MP-1-5	25.80	20.9	0.1	41.55	NM	NM	24.86	19.3	0.2	38.54	NM	NM	24.67	18.7	0.0	39.19	NM	NM
MP-1-6	18.23	22.2	0.0	39.12	NM	NM	17.05	20.9	0.0	39.51	NM	NM	16.95	21.7	0.0	16.15	NM	NM
MP-1-7	21.55	20.4	0.0	40.39	NM	NM	20.27	20.9	0.0	38.13	NM	NM	20.22	20.6	0.0	46.21	NM	NM
MP-1-8	22.54	19.6	0.0	16.44	NM	NM	21.78	17.6	0.0	15.61	NM	NM	21.74	16.6	0.0	13.41	NM	NM

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

Notes

(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%
(2) DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).
(3) Readings taken on July 1, 2013 are included here as the companion event to System #2 readings collected on June 28, 2013.

Table 5
Groundwater Treatment Performance Monitoring
Second Quarter 2013
Hempstead Intersection Street Former MGP Site

System #2

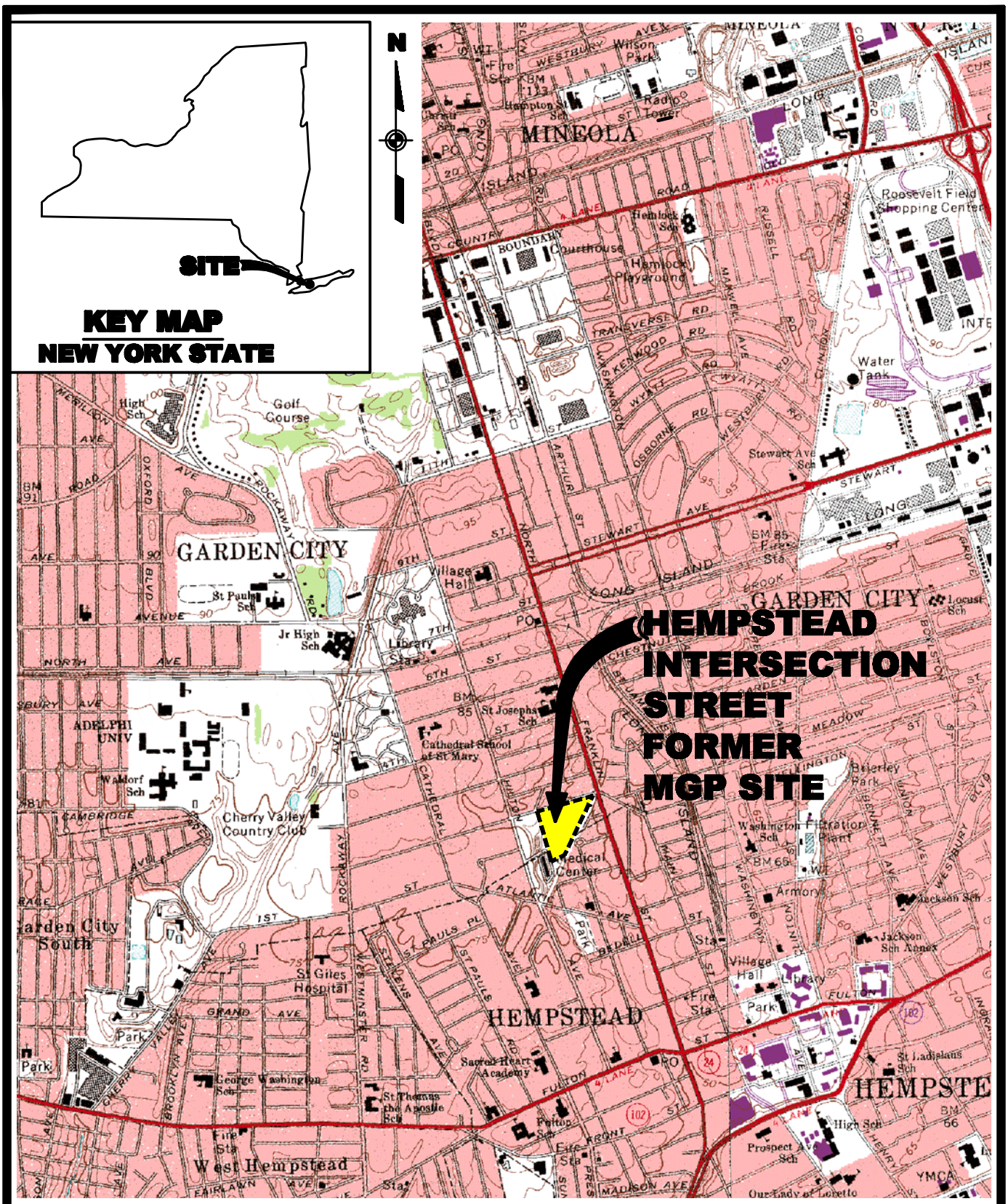
	April 4, 2013						April 18, 2013						May 2, 2013						May 14, 2013					
Well ID	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**
MP-2-1	29.23	20.9	0.0	24.87	NM	NM	29.07	20.9	0.0	23.27	NM	NM	29.26	20.9	0.2	22.87	NM	NM	29.23	23.5	0.0	20.78	NM	NM
MP-2-2	30.31	19.3	0.0	43.78	41.14	29.91	30.23	19.2	0.0	44.45	46.41	47.05	30.36	20.9	0.0	40.71	34.80	28.17	30.32	20.7	0.0	36.62	32.41	25.18
MP-2-3S	30.44	20.9	0.0	45.44	41.25	39.11	30.35	20.9	0.0	41.11	37.75	33.31	30.47	20.9	0.0	41.14	36.88	34.50	30.41	21.0	0.0	42.14	39.91	27.90
MP-2-3D	30.62	40.0	0.0	46.70	44.77	40.89	30.41	40.0	0.0	35.12	31.13	32.17	30.68	39.7	0.0	33.12	30.01	24.14	30.61	39.7	0.0	48.44	40.61	39.11
MP-2-4	19.08	20.9	0.0	19.98	NM	NM	18.87	21.1	0.0	21.23	NM	NM	19.12	21.8	0.0	21.17	NM	NM	19.07	20.9	0.0	15.44	NM	NM
MP-2-5	17.26	22.5	0.0	32.92	20.75	24.53	17.06	22.8	0.0	39.27	33.47	32.12	17.33	23.6	0.0	44.41	31.12	33.62	17.25	23.5	0.0	45.28	28.36	18.91

	May 30, 2013						June 18, 2013						June 28, 2013					
Well ID	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)[1]**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**
MP-2-1	29.27	23.1	0.0	26.36	NM	NM	28.05	22.6	0.0	25.14	NM	NM	27.75	23.3	0.0	21.54	NM	NM
MP-2-2	30.33	21.6	0.0	47.43	40.15	27.16	29.37	21.0	0.0	45.41	48.19	49.95	29.11	18.8	0.0	43.30	39.11	25.15
MP-2-3S	30.43	24.2	0.0	28.10	30.42	33.11	29.19	25.5	0.0	29.99	31.13	33.38	28.95	23.6	0.0	31.44	28.95	33.65
MP-2-3D	30.45	40.3	0.2	46.77	45.09	40.99	29.30	39.1	0.3	45.14	40.11	40.57	29.07	39.2	0.4	41.25	40.02	36.71
MP-2-4	19.93	20.9	0.0	20.51	NM	NM	17.83	20.9	0.0	18.16	NM	NM	17.71	21.2	0.0	22.97	NM	NM
MP-2-5	17.31	22.4	0.0	38.22	29.39	17.54	15.96	22.5	0.0	35.55	30.01	21.12	15.84	22.4	0.0	31.13	33.39	38.77

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

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

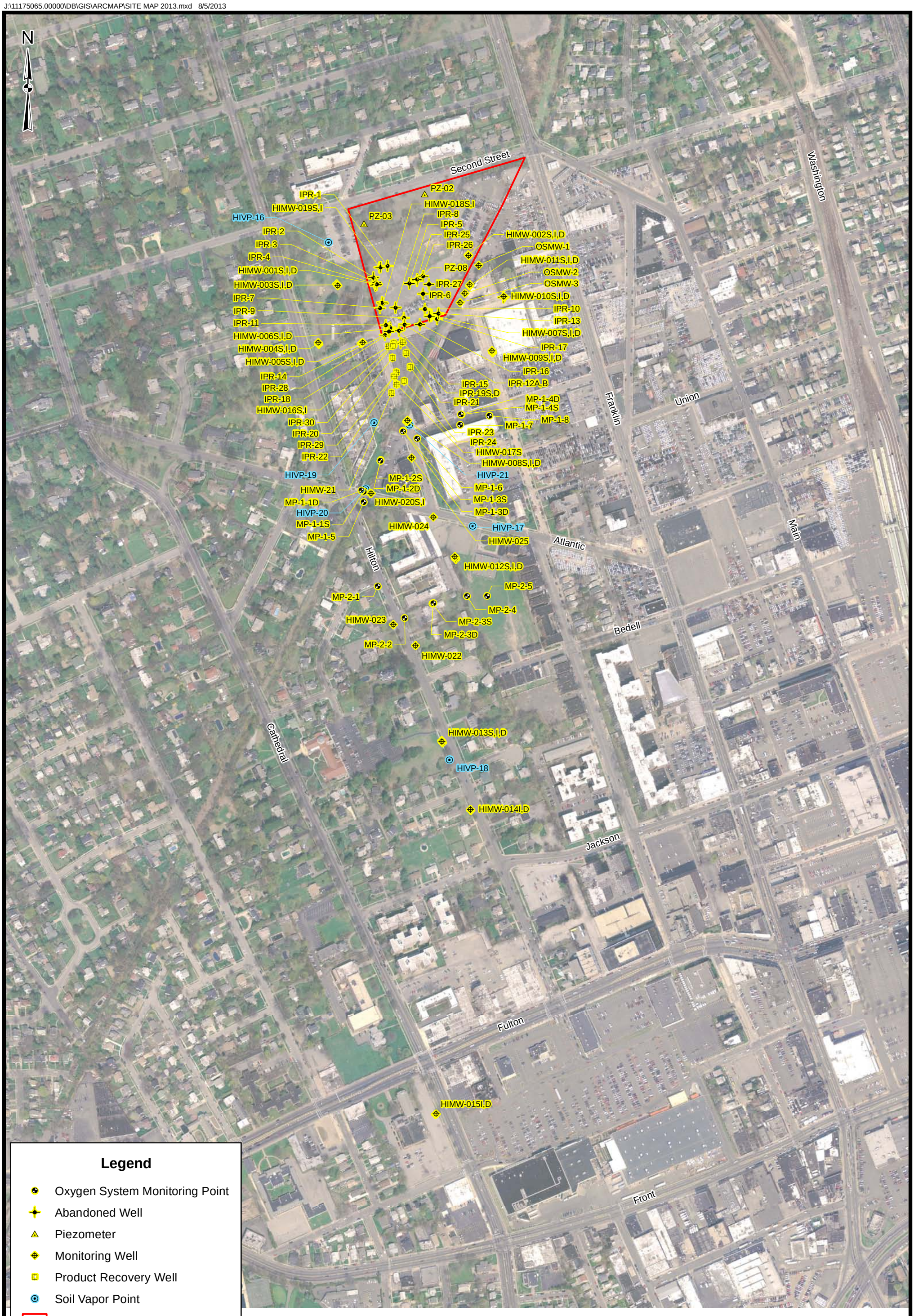
URS Corporation

LOCATION MAP

FIGURE 1

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\FIGURE-1.dwg 3/13/09 - 1 RAL

J:\11175065.00000\DB\GIS\ARCMAP\SITE MAP 2013.mxd 8/5/2013



Legend

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

400 0 400 Feet

URS

NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY
SITE MAP - JUNE 2013

FIGURE 2

J:\11175065.00000\DB\GIS\ARCMAP\GROUNDWATER TREATMENT LOCATIONS (11x17) (REV5).mxd 10/22/2013

N

INSET 1

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

INSET 2

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

NATIONAL GRID
FORMER MGP SITE

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

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

300 0 300 Feet

Legend

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

Estimated Extent of Groundwater Plume:

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

URS

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

FIGURE 3

DGP–209 (11/11/08)		
DEPTH	TOT. BTEX	TOT. PAHs
34–38	1,709	1,066
40–44	4,980	645
50–54	3,859	1,297
70–74	2	3

HIGP–40 (8/7/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	4,166	9,815
56–60	4	112

HIGP–49 (10/16/00)		
DEPTH	TOT. BTEX	TOT. PAHs
36–40	ND	ND
60–64	7	63
90–94	ND	16

HIGP–55 (9/7/00)		
DEPTH	TOT. BTEX	TOT. PAHs
23–27	31	244
60–64	69	532
80–84	2	ND

HIGP–61 (11/8/00)		
DEPTH	TOT. BTEX	TOT. PAHs
26–30	ND	ND
60–64	30	39
90–94	2	2

HIGP–66 (12/14/00)		
DEPTH	TOT. BTEX	TOT. PAHs
40–44	ND	1
56–60	8	60
72–76	398	787
90–94	12,970	259

HIGP–71 (11/6/01)		
DEPTH	TOT. BTEX	TOT. PAHs
46–50	ND	ND
54–58	ND	ND
62–66	1	7
72–76	29	84
81–85	126	95

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–015 I,D		
DEPTH	TOT. BTEX	TOT. PAHs
80–90	5–111 (14)	ND–273 (27)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

HISB–100 (11/19/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	12,000	1,576
50–54	441	332
60–64	1,470	599
70–74	747	1,809
80–84	22	21

HISB–104 (9/24/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
45–49	ND	ND
55–59	ND	ND

HISB–108 (12/9/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	ND	ND
50–54	ND	ND
60–64	ND	ND
70–74	12	1
80–84	20	1
90–94	26	2

HISB–116 (6/23/09)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	ND	ND
50–54	1.3	ND
60–64	100	192
70–74	6	37
80–84	91	330
90–94	100	451
100–104	292	604

HIGP–01 (8/7/00)		
DEPTH	TOT. BTEX	TOT. PAHs
25–29	ND	ND
56–60	1	1

HIGP–41 (8/11/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	2,241	3,258
58–62	1	17

HIGP–50 (9/8/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	8
60–64	ND	ND

HIGP–56 (10/9/00)		
DEPTH	TOT. BTEX	TOT. PAHs
24–28	ND	2
60–64	ND	ND

HIGP–62 (11/8/00)		
DEPTH	TOT. BTEX	TOT. PAHs
37–41	8	4
54–58	771	152
84–89	45	89

HIGP–67 (12/20/00)		
DEPTH	TOT. BTEX	TOT. PAHs
37–41	ND	ND
54–58	ND	ND
72–76	ND	27
90–94	ND	ND

HIGP–72 (11/6/01)		
DEPTH	TOT. BTEX	TOT. PAHs
52–56	ND	ND
62–66	ND	ND
72–76	ND	ND
82–86	ND	ND
92–96	ND	ND

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–020S,I		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–3 (ND)	ND (ND)
63–73	1–474 (1)	ND–3,968 (3)

HISB–101 (11/19/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	122	190
40–44	14,100	4,356
50–54	4,040	3,244
60–64	1,995	2,074
70–74	4	4
80–84	1	2

HISB–105 (12/4/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	ND	518
50–54	469	ND
60–64	1,043	3,058
70–74	60	59
80–84	279	576
90–94	48	99

HISB–109 (12/10/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	ND	ND
50–54	8	ND
60–64	19	ND
70–74	28	ND
80–84	31	2
90–94	ND	ND

HISB–117 (4/22/10)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	ND	ND
50–54	ND	ND
60–64	ND	ND
70–74	ND	2
80–84	2	32
90–94	ND	2
100–104	ND	ND

HIGP–02 (8/8/00)		
DEPTH	TOT. BTEX	TOT. PAHs
31–35	ND	ND
56–60	ND	ND

HIGP–44 (8/10/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	469	244
57–61	3	47

HIGP–51 (8/31/00)		
DEPTH	TOT. BTEX	TOT. PAHs
28–32	ND	ND
58–60	ND	ND

HIGP–57 (9/21/00)		
DEPTH	TOT. BTEX	TOT. PAHs
36–40	ND	ND
64–68	ND	ND

HIGP–63 (12/15/00)		
DEPTH	TOT. BTEX	TOT. PAHs
37–41	2	3
54–58	18	22
72–76	3,979	2,769
90–94	773	63

HIGP–68 (12/20/00)		
DEPTH	TOT. BTEX	TOT. PAHs
37–41	3	5
54–58	163	300
72–76	ND	ND
90–94	ND	ND

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–012S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
22–32	ND–338.8 (ND)	ND–1,391 (ND)
63–73	29.2–256 (41)	65–527 (115)
117–127	ND–6 (ND)	ND–2 (ND)

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

HISB–102 (12/1/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	1,800	2,706
40–44	835	1,119
50–54	225	2,735
60–64	ND	10
70–74	1	4
80–84	76	130

HISB–105(2) (12/18/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	15	19
40–44	14	35
50–54	247	912
60–64	560	2,941
70–74	59	34
80–84	14	69
90–94	24	221
100–104	1	ND

HISB–114 (12/23/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	ND	ND
50–54	ND	ND
60–64	ND	ND
70–74	ND	ND
80–84	ND	ND
90–94	ND	ND

HISB–119 (4/14/10)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	2
40–44	ND	1
50–54	ND	2
60–64	ND	ND
70–74	ND	4
80–84	ND	16
90–94	ND	4

HIGP–03 (7/28/00)		
DEPTH	TOT. BTEX	TOT. PAHs
33–37	ND	ND
56–60	ND	ND

HIGP–45 (10/17/00)		
DEPTH	TOT. BTEX	TOT. PAHs
32–38	1,229	1,254
60–64	ND	ND

HIGP–52 (9/11/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	1,031	2,629
58–60	ND	ND

HIGP–58 (10/18/00)		
DEPTH	TOT. BTEX	TOT. PAHs
36–40	ND	ND
60–64	ND	ND
90–94	ND	ND

HIGP–64 (12/18/00)		
DEPTH	TOT. BTEX	TOT. PAHs
37–41	27	17
54–58	4,031	1,574
72–76	401	239
90–94	14	48

HIGP–69 (9/24/01)		
DEPTH	TOT. BTEX	TOT. PAHs
54–58	ND	ND
70–74	28	28
82–86	126	76
90–94	12	19
104–108	5	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–013S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
38–48	ND–11	ND
70–80	ND–313 (83)	5–156 (60)
110–120	2–30 (4)	ND–28 (15)

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

HISB–102(2) (1/8/09)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	423	859
40–44	464	274
50–54	349	652
60–64	68	453
70–74	5	5
80–84	ND	1

HISB–106 (12/4/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	418	602
40–44	1,162	383
50–54	1,800	2,513
60–64	815	572
70–74	68	51
80–84	38	30
90–94	124	98

HISB–115 (1/14/09)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	15
40–44	9	14
50–54	288	265
60–64	125	133
70–74	1,411	1,153
80–84	123	99
90–94	56	67

HIGP–04 (7/24/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
56–60	ND	2

HIGP–47 (8/22/00)		
DEPTH	TOT. BTEX	TOT. PAHs
31–35	6,670	18,715
60–64	500	369

HIGP–53 (9/1/00)		
DEPTH	TOT. BTEX	TOT. PAHs
27–31	76	317
60–64	15	35
90–94	1	ND

HIGP–59 (10/17/00)		
DEPTH	TOT. BTEX	TOT. PAHs
34–38	1	ND
60–64	ND	2
90–94	27	4

HIGP–65 (12/19/00)		
DEPTH	TOT. BTEX	TOT. PAHs
37–41	2	ND
54–58	376	125
72–76	775	190
90–94	36	59

HIGP–70 (9/20/01)		
DEPTH	TOT. BTEX	TOT. PAHs
54–58	ND	0
70–74	21	20
82–86	29	38
92–96	15	18
110–114	3	6
140–144	3	ND

HIMW–005S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
27–37	ND–232 (ND)	ND–765 (ND)
80–90	95–439 (96)	1,454–5,337 (2,155)
130–140	ND–359 (23)	ND–2,698 (508)

HIMW–014 I,D		
DEPTH	TOT. BTEX	TOT. PAHs
85–95	24–273 (45)	26–288 (103)
140–150	ND–15	ND

HIMW–024		
DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	30–900 (226)	13–1,020 (126)

HISB–103 (12/1/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	4	6
50–54	84	171
60–64	ND	ND
70–74	ND	ND
80–84	5	9

HISB–107 (12/8/08)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	ND
40–44	217	47
50–54	551	258
60–64	29	68
70–74	ND	ND
80–84	ND	ND
90–94	24	8

HIGP–28 (8/4/00)		
DEPTH	TOT. BTEX	TOT. PAHs
29–33	17	22
58–62	2,640	5,933

HIGP–48 (8/25/00)		
DEPTH	TOT. BTEX	TOT. PAHs
30–34	ND	2
60–64	766	926

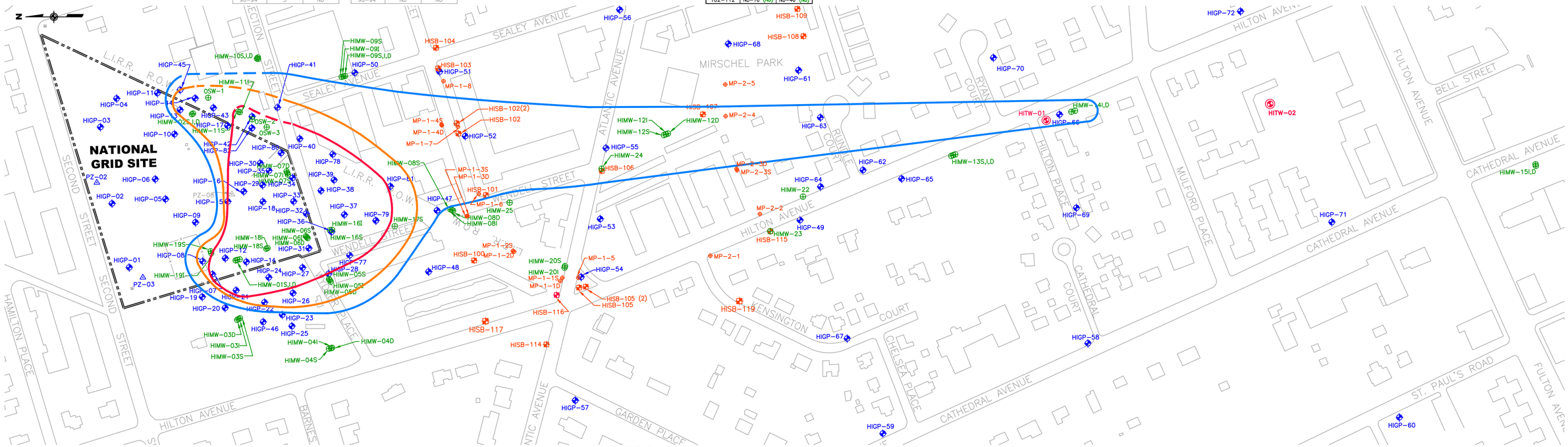
HIGP–54 (9/5/00)		
DEPTH	TOT. BTEX	TOT. PAHs
33–37	ND	1
60–64	373	338
90–94	3	ND

HIGP–60 (10/19/00)		
DEPTH	TOT. BTEX	TOT. PAHs
33–37	ND	ND
60–64	ND	ND
90–94	ND	ND

HIMW–008S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–8,240 (25)	ND–3,069 (2)
63–73	ND–8.6 (ND)	ND–251 (ND)
102–112	ND–16 (ND)	ND–46 (ND)

HIMW–025		
DEPTH	TOT. BTEX	TOT. PAHs
42–52	2–552 (ND)	ND–573(ND)

HITW–02 (10/31/01)		
DEPTH	TOT. BTEX	TOT. PAHs
55–60	2	ND
65–70	5	9
75–80	9	40
85–90	29	52
115–120	42	ND
148–153	9	0



HITW–02 TEMPORARY GROUNDWATER MONITORING WELL (TAKEN FROM RI REPORT, 2006)

HIGP–53 TEMPORARY GROUNDWATER SAMPLE LOCATION (TAKEN FROM RI REPORT, 2006)

MP–2–1 OXYGEN SYSTEM MONITORING WELL

HIMW–13 MONITORING WELL

PZ–02 PIEZOMETER

PZ–08 ABANDONED PIEZOMETER

HISB–114 TEMPORARY GROUNDWATER SAMPLE LOCATION (URS, 2008–2009)

ND NOT DETECTED

LEGEND:

LOCATION ID → HIMW–015 I,D

DEPTH (ft bgs) →

DEPTH	TOT. BTEX	TOT. PAHs
80–90	5–111 (14)	ND–273 (27)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

← CONCENTRATION UNITS ARE ug/L (JUNE 2013 CONCENTRATION)

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 5,000 ug/L

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.

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

150' 0 150'
SCALE IN FEET

URS Corporation

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

EXTENT OF DISSOLVED-PHASE PLUME AND GROUNDWATER ANALYTICAL RESULTS - JUNE 2013

FIGURE 4

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\SECOND QUARTER 2013\FIGURE 4.dwg 10/22/13 – 5 RAL

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\JUNE 2013\FIGURE 5.dwg 10/22/13 - 1 ELB

N

NATIONAL GRID
FORMER MGP SITE

PZ-02, NM
PZ-03, NM
HIMW-02S, NM
OSMW-1, NM
HIMW-03S, 47.03
OSMW-3, NM
HIMW-11S, 47.15
HIMW-10S, 47.10
OSMW-2, NM
IPR-14, NM
IPR-15, NM
HIMW-04S, 46.38
IPR-19S, NM
HIMW-09S, 46.65
HIMW-05S, 46.57
IPR-21, 46.58
HIMW-016S, 46.63
IPR-23, 46.41
IPR-20, 46.49
IPR-24, 46.27
IPR-22, 46.37
HIMW-17S, 46.33
HIMW-8S, 46.15
HIMW-20S, 45.55
HIMW-12S, 44.90
HIMW-13S, 42.97

47
46.5
46
45.5
45
44.5
44
43.5
43

SECOND STREET
HILTON AVENUE
BARNES LANE
WHITE PLACE
MULFORD PLACE
L.I.R.R. R.O.W.
FRANKLIN AVENUE
MAIN STREET
MEADOW PLACE
STOWE PLACE
SAMMIS PLACE
OLD FRANKLIN STREET
INTERSECTION STREET
MILLER PLACE
UNION PLACE
SEALEY AVENUE
SMITH STREET
WENDELL STREET
ATLANTIC AVENUE
GARDEN PLACE
KELLUM PLACE
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
NORTH FRANKLIN STREET
WEST COLUMBIA ST
KENSINGTON COURT
CATHEDRAL AVENUE
CHELSEA PLACE
RUNDLE COURT
RYAN COURT
HILTON PLACE
CATHEDRAL COURT
JACKSON STREET
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, 46.15	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

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR SHALLOW GROUNDWATER
JUNE 4, 2013

FIGURE 5

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\JUNE 2013\FIGURE 6.dwg 8/7/13 - 3 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-02I, NM
HIMW-11I, NM
HIMW-10I, 47.69
HIMW-03I, 46.68
HIMW-05I, 46.38
IPR-17, NM
IPR-16, NM
47
HIMW-04I, 46.27
IPR-19D, 46.65
HIMW-09I, 46.58
HIMW-16I, 45.52
46
IPR-18, 46.60
HIMW-08I, 46.03
46
HIMW-25, 45.90
HIMW-20I, 45.58
HIMW-24, 45.41
HIMW-12I, 45.03
45
HIMW-23, 43.43
HIMW-22, 44.24
44
HIMW-13I, 42.95
43
HIMW-14I, 42.99
42
41
40
HIMW-15I, 39.66

SECOND STREET
HILTON AVENUE
BARNES LANE
WYDLER PLACE
WENDELL STREET
L.I.R.R. R.O.W.
FRANKLIN AVENUE
INTERSECTION STREET
SEALEY AVENUE
SMITH STREET
ATLANTIC AVENUE
GARDEN PLACE
KENSINGTON COURT
HILTON AVENUE
MIRSCHEL PARK
TERRACE AVENUE
MARGARET COURT
BEDELL STREET
OLD FRANKLIN STREET
MAIN STREET
MEADOW PLACE
STOWE PLACE
SAMMIS PLACE
MILLER PLACE
UNION PLACE
KELLUM PLACE
NORTH FRANKLIN STREET
WEST COLUMBIA ST
CATHEDRAL AVENUE
CHELSEA PLACE
RUNDLE COURT
RYAN COURT
CATHEDRAL COURT
HILTON PLACE
MULFORD PLACE
JACKSON STREET
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, 46.03 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

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE GROUNDWATER
JUNE 4, 2013

FIGURE 6

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\JUNE 2013\FIGURE 7.dwg 8/7/13 - 2 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-02D, NM
HIMW-03D, 46.27
HIMW-11D, 47.10
HIMW-10D, NM
HIMW-04D, 45.51
HIMW-05D, 45.76
HIMW-09D, 45.60
HIMW-8D, 45.97
HIMW-12D, 42.73
HIMW-13D, 42.91
HIMW-14D, 39.34
HIMW-15D, 36.98

47
46
45
44
43
42
41
40
39
38
37

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

LEGEND:

⊕	MONITORING WELL
➡	GROUNDWATER FLOW DIRECTION
43	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-12D, 42.73	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

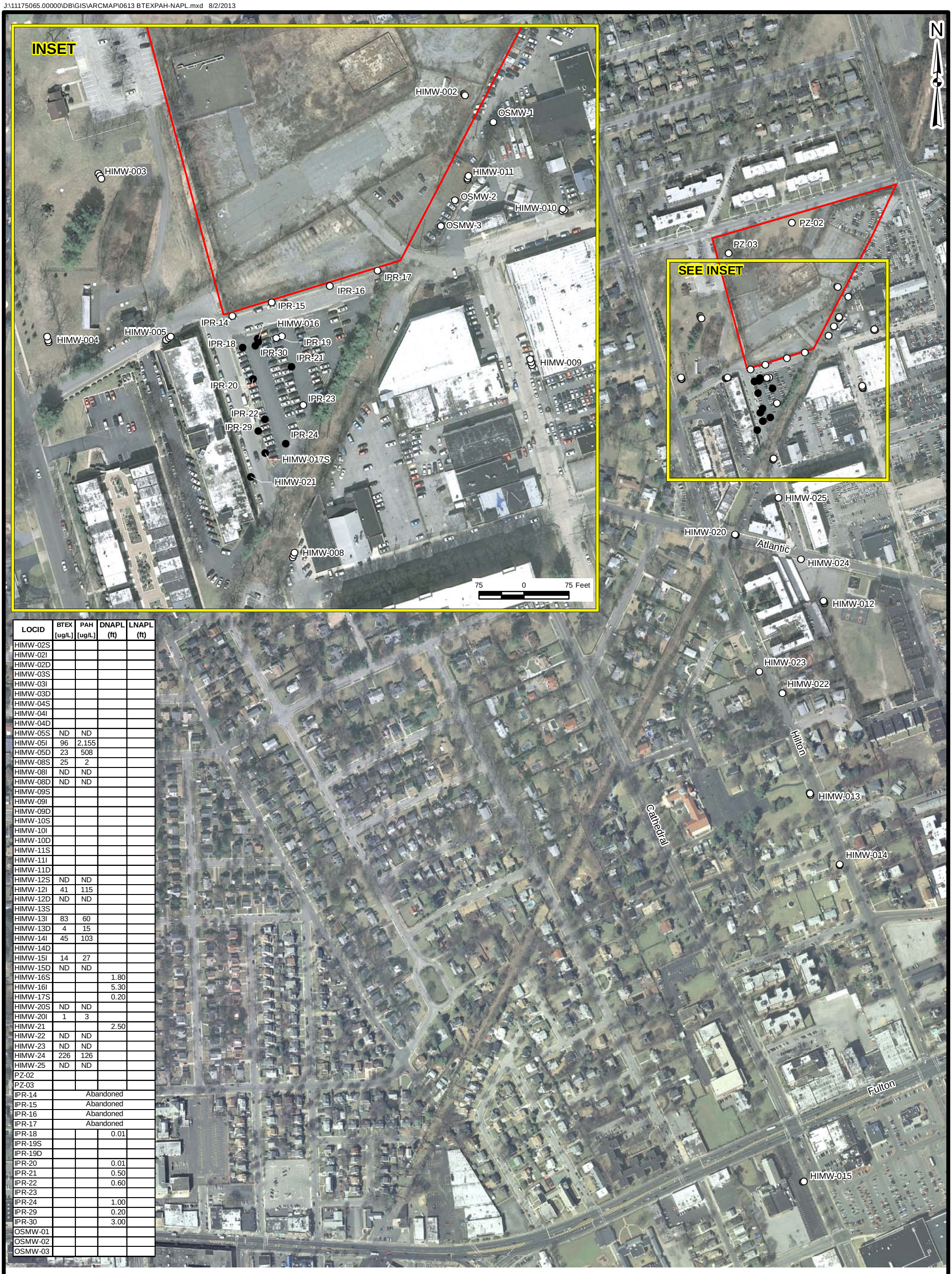
NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR DEEP GROUNDWATER
JUNE 4, 2013

FIGURE 7

J:\11175065.00000\DB\GIS\ARCMAP\0613 BTEXPAH-NAPL.mxd 8/2/2013



LOCID	BTEX [ug/L]	PAH [ug/L]	DNAPL (ft)	LNAPL (ft)
HIMW-02S				
HIMW-02I				
HIMW-02D				
HIMW-03S				
HIMW-03I				
HIMW-03D				
HIMW-04S				
HIMW-04I				
HIMW-04D				
HIMW-05S	ND	ND		
HIMW-05I	96	2,155		
HIMW-05D	23	508		
HIMW-08S	25	2		
HIMW-08I	ND	ND		
HIMW-08D	ND	ND		
HIMW-09S				
HIMW-09I				
HIMW-09D				
HIMW-10S				
HIMW-10I				
HIMW-10D				
HIMW-11S				
HIMW-11I				
HIMW-11D				
HIMW-12S	ND	ND		
HIMW-12I	41	115		
HIMW-12D	ND	ND		
HIMW-13S				
HIMW-13I	83	60		
HIMW-13D	4	15		
HIMW-14I	45	103		
HIMW-14D				
HIMW-15I	14	27		
HIMW-15D	ND	ND		
HIMW-16S			1.80	
HIMW-16I			5.30	
HIMW-17S			0.20	
HIMW-20S	ND	ND		
HIMW-20I	1	3		
HIMW-21			2.50	
HIMW-22	ND	ND		
HIMW-23	ND	ND		
HIMW-24	226	126		
HIMW-25	ND	ND		
PZ-02				
PZ-03				
IPR-14	Abandoned			
IPR-15	Abandoned			
IPR-16	Abandoned			
IPR-17	Abandoned			
IPR-18			0.01	
IPR-19S				
IPR-19D				
IPR-20			0.01	
IPR-21			0.50	
IPR-22			0.60	
IPR-23				
IPR-24			1.00	
IPR-29			0.20	
IPR-30			3.00	
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

400 0 400 Feet

URS

HEMPSTEAD/GARDEN CITY, NY
TOTAL DISSOLVED-PHASE BTEX/PAH CONCENTRATIONS AND FREE PRODUCT THICKNESS
SECOND QUARTER 2013

FIGURE 8

APPENDIX A

DATA USABILITY SUMMARY REPORT

(Provided in Electronic Format Only)

APPENDIX A
DATA USABILITY SUMMARY REPORT
SECOND QUARTER 2013

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

Analyses Performed by:
H2M LABS, INC.

Prepared For:

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

Prepared by:

URS CORPORATION
77 GOODELL STREET
BUFFALO, NY 14203

JULY 2013

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 (20) groundwater samples, two (2) field duplicates, one (1) matrix spike/matrix spike duplicate (MS/MSD) pair, one (1) field blank, and three (3) trip blanks collected by URS personnel on June 4-14, 2013. The samples were collected as part of the 2013 2nd quarter groundwater monitoring event at the Hempstead Intersection Street Former MGP Site.

II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION

The samples were analyzed by H2M Labs, Inc. (Melville, NY) for the following parameters:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) – USEPA Method SW8260B, and
- Polynuclear aromatic hydrocarbons (PAHs) – USEPA Method SW8270C.

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, SOP HW-24, Rev. 2,* August 2008; 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/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

There were no non-conformances noted during the data validation that required further qualification of the data.

VI. SAMPLE RESULTS AND REPORTING

All sample results were reported in accordance with method requirements and were adjusted for sample size and dilution factors. BTEX and PAH results detected below the quantitation limits

were qualified 'J' by the laboratory. The results reported from secondary dilution analyses were qualified 'D' by the laboratory.

Field duplicates were collected from monitoring well locations HIMW-12I and HIMW-13D, 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: Peter R Fair **Date:** 7/19/13
Peter R. Fairbanks, Senior Chemist

Reviewed By: [signature] **Date:** 7/19/13
George E. Kisluk, Senior Chemist

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

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

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

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

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

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

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

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

Location ID			HIMW-005D	HIMW-005I	HIMW-005S	HIMW-008D	HIMW-008I
Sample ID			HIMW-05D	HIMW-05I	HIMW-05S	HIMW-08D	HIMW-08I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/13	06/05/13	06/12/13	06/11/13	06/11/13
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	7	5	1 U	1 U	1 U
Ethylbenzene	UG/L	-	1 U	3	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	16	88	1 U	1 U	1 U
Total BTEX	UG/L	100	23	96	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	67	320 DJ	10 U	10 U	10 U
Acenaphthene	UG/L	-	2 J	13	10 U	10 U	10 U
Acenaphthylene	UG/L	-	25	180 DJ	10 U	10 U	10 U
Anthracene	UG/L	-	10 U	2 J	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	4 J	26	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	410 D	1,600 D	10 U	10 U	10 U
Phenanthrene	UG/L	-	10 U	14	10 U	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	508	2,155	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

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

D - Result reported from a secondary dilution analysis.

Made By_PRF 07/16/13_; Checked By_AMK 07/17/13_

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-012D	HIMW-012I	HIMW-012I	HIMW-012S
Sample ID			HIMW-08S	HIMW-12D	DUP 061213	HIMW-12I	HIMW-12S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/11/13	06/12/13	06/12/13	06/12/13	06/12/13
Parameter	Units	Criteria*			Field Duplicate (1-1)		
Volatile Organic Compounds							
Benzene	UG/L	-	25	1 U	37	38	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	3	3	1 U
Total BTEX	UG/L	100	25	ND	40	41	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	38	41	10 U
Acenaphthylene	UG/L	-	1 J	10 U	34	37	10 U
Anthracene	UG/L	-	1 J	10 U	1 J	1 J	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	23	24	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	10 U	2 J	2 J	10 U
Phenanthrene	UG/L	-	10 U	10 U	10	10	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	2	ND	108	115	ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

D - Result reported from a secondary dilution analysis.

Made By_PRF 07/16/13_; Checked By_AMK 07/17/13_

Detection Limits shown are PQL

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

Location ID			HIMW-013D	HIMW-013D	HIMW-013I	HIMW-014I	HIMW-015D
Sample ID			DUP 061013	HIMW-13D	HIMW-13I	HIMW-14I	HIMW-15D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/10/13	06/10/13	06/10/13	06/10/13	06/05/13
Parameter	Units	Criteria*	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	3	3	77	34	1 U
Ethylbenzene	UG/L	-	1 U	1 U	3	7	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	0.9 J	1	3	4	1 U
Total BTEX	UG/L	100	3.9	4	83	45	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	32	58	10 U
Acenaphthene	UG/L	-	5 J	5 J	2 J	15	10 U
Acenaphthylene	UG/L	-	11	10	19	17	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	1	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	4 J	6 J	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Phenanthrene	UG/L	-	10 U	10 U	3 J	6 J	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	16	15	60	103	ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

D - Result reported from a secondary dilution analysis.

Made By_PRF 07/16/13_; Checked By_AMK 07/17/13_

Detection Limits shown are PQL

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

Location ID			HIMW-015I	HIMW-020I	HIMW-020S	HIMW-022	HIMW-023
Sample ID			HIMW-15I	HIMW-20I	HIMW-20S	HIMW-22	HIMW-23
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/13	06/11/13	06/11/13	06/14/13	06/14/13
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	11	1 U	1 U	1 U	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	3	1	1 U	1 U	1 U
Total BTEX	UG/L	100	14	1	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	7 J	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	-	18	3 J	10 U	10 U	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Phenanthrene	UG/L	-	2 J	10 U	10 U	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	27	3	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

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

D - Result reported from a secondary dilution analysis.

Made By_PRF 07/16/13_; Checked By_AMK 07/17/13_

Detection Limits shown are PQL

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

Location ID			HIMW-024	HIMW-025
Sample ID			HIMW-24	HIMW-25
Matrix			Groundwater	Groundwater
Depth Interval (ft)			-	-
Date Sampled			06/10/13	06/04/13
Parameter	**Units**	**Criteria***		
Volatile Organic Compounds				
Benzene	UG/L	-	120	1 U
Ethylbenzene	UG/L	-	2	1 U
Toluene	UG/L	-	6	1 U
Xylene (total)	UG/L	-	98	1 U
Total BTEX	UG/L	100	226	ND
Semivolatile Organic Compounds				
2-Methylnaphthalene	UG/L	-	10 U	10 U
Acenaphthene	UG/L	-	1 J	10 U
Acenaphthylene	UG/L	-	3 J	10 U
Anthracene	UG/L	-	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U
Chrysene	UG/L	-	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U
Fluorene	UG/L	-	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U
Naphthalene	UG/L	-	120 D	10 U
Phenanthrene	UG/L	-	2 J	10 U
Pyrene	UG/L	-	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	126	ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.
J - The reported concentration is an estimated value.
D - Result reported from a secondary dilution analysis.
Made By_PRF 07/16/13_; Checked By_AMK 07/17/13_

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
Sample ID			TB-060713	TB-061013	FB 061413	TB 061413
Matrix			Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)			-	-	-	-
Date Sampled			06/07/13	06/10/13	06/14/13	06/14/13
Parameter	Units	Criteria*	Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds						
Benzene	UG/L	-	1 U	1 U	1 U	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	1 U	1 U
Total BTEX	UG/L	100	ND	ND	ND	ND
Semivolatile Organic Compounds						
2-Methylnaphthalene	UG/L	-	NA	NA	10 U	NA
Acenaphthene	UG/L	-	NA	NA	10 U	NA
Acenaphthylene	UG/L	-	NA	NA	10 U	NA
Anthracene	UG/L	-	NA	NA	10 U	NA
Benzo(a)anthracene	UG/L	-	NA	NA	10 U	NA
Benzo(a)pyrene	UG/L	-	NA	NA	10 U	NA
Benzo(b)fluoranthene	UG/L	-	NA	NA	10 U	NA
Benzo(g,h,i)perylene	UG/L	-	NA	NA	10 U	NA
Benzo(k)fluoranthene	UG/L	-	NA	NA	10 U	NA
Chrysene	UG/L	-	NA	NA	10 U	NA
Dibenz(a,h)anthracene	UG/L	-	NA	NA	10 U	NA
Fluoranthene	UG/L	-	NA	NA	10 U	NA
Fluorene	UG/L	-	NA	NA	10 U	NA
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	10 U	NA
Naphthalene	UG/L	-	NA	NA	10 U	NA
Phenanthrene	UG/L	-	NA	NA	10 U	NA
Pyrene	UG/L	-	NA	NA	10 U	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	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_PRF 07/16/13_; Checked By_AMK 07/17/13_

Detection Limits shown are PQL

ATTACHMENT A

VALIDATED FORM 1'S

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-25

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19658.

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S29

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19659.

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	7	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	16	

KEY-URS168 S30

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19660.

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	5	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	3	
1330-20-7	Xylene (total)	88	

KEY-URS168 S31

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19661.

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S32

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19662.

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	11	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	3	

KEY-URS168 S33

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-060713

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19663.

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S34

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19734.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S35

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19735.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S36

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19736.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	25	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S37

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-20I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19731.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	

KEY-URS168 S38

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-20S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19737.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S39

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19738.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S40

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19739.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S41

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19740.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S42

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-010A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19732.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	38	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	3	

KEY-URS168 S43

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP 061213

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19733.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	37	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	3	

KEY-URS168 S44

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-23

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-011A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19741.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S45

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-22

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-012A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19742.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S46

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB 061413

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-013A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19743.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S47

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB 061413

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-014A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19744.

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: not dec. Date Analyzed: 06/17/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S48

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-14I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19664.

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	34	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	7	
1330-20-7	Xylene (total)	4	

KEY-URS168 S49

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19667.

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	3	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	

KEY-URS168 S50

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP 061013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19668.

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	3	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	0.9	J

KEY-URS168 S51

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19669.

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	77	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	3	
1330-20-7	Xylene (total)	3	

KEY-URS168 S52

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-24

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19657.

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	120	
108-88-3	Toluene	6	
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	98	

KEY-URS168 S53

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-061013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G19670.

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: not dec. Date Analyzed: 06/13/13

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

KEY-URS168 S54

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-25

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16556.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-05D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16557.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	~~440~~ 40	~~B~~ D
91-57-6	2-Methylnaphthalene	67	
208-96-8	Acenaphthylene	25	
83-32-9	Acenaphthene	2	J
86-73-7	Fluorene	4	J
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

7/16/13

1C

EPA SAMPLE NO.

HIMW-05DDL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-002BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 3\R16564.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 10.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	410	D
91-57-6	2-Methylnaphthalene	69	DJ
208-96-8	Acenaphthylene	25	DJ
83-32-9	Acenaphthene	100	U
86-73-7	Fluorene	100	U
85-01-8	Phenanthrene	100	U
120-12-7	Anthracene	100	U
206-44-0	Fluoranthene	100	U
129-00-0	Pyrene	100	U
56-55-3	Benzo(a)anthracene	100	U
218-01-9	Chrysene	100	U
205-99-2	Benzo(b)fluoranthene	100	U
207-08-9	Benzo(k)fluoranthene	100	U
50-32-8	Benzo(a)pyrene	100	U
193-39-5	Indeno(1,2,3-cd)pyrene	100	U
53-70-3	Dibenzo(a,h)anthracene	100	U
191-24-2	Benzo(g,h,i)perylene	100	U

(1) Cannot be separated from Diphenylamine

7/16/13

KEY-URS168 S60

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16558.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	~~1500~~ 1600	~~E~~ D
91-57-6	2-Methylnaphthalene	~~270~~ 320	~~E~~ DJ
208-96-8	Acenaphthylene	~~170~~ 180	~~E~~ DJ
83-32-9	Acenaphthene	13	
86-73-7	Fluorene	26	
85-01-8	Phenanthrene	14	
120-12-7	Anthracene	2	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

7/16/13

KEY-URS168 S61

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05IDL

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-003BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 3\R16565.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 50.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	1600	D
91-57-6	2-Methylnaphthalene	320	DJ
208-96-8	Acenaphthylene	180	DJ
83-32-9	Acenaphthene	500	U
86-73-7	Fluorene	500	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) Cannot be separated from Diphenylamine

7/16/13

1C

EPA SAMPLE NO.

HIMW-15D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16559.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306376-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16560.D

Level: (low/med) LOW Date Received: 06/07/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/10/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	18	
83-32-9	Acenaphthene	7	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	2	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-14I

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N58770.D

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/18/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	58	
208-96-8	Acenaphthylene	17	
83-32-9	Acenaphthene	15	
86-73-7	Fluorene	6	J
85-01-8	Phenanthrene	6	J
120-12-7	Anthracene	1	
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-13D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N58773.D

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/18/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	
83-32-9	Acenaphthene	5	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP 061013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N58774.D

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/18/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	11	
83-32-9	Acenaphthene	5	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N58775.D

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/18/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	32	
208-96-8	Acenaphthylene	19	
83-32-9	Acenaphthene	2	J
86-73-7	Fluorene	4	J
85-01-8	Phenanthrene	3	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-24

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N58776.D

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/18/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	120	~~E~~ D
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	3	J
83-32-9	Acenaphthene	1	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	2	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

7/16/13

KEY-URS168 S69

1C

EPA SAMPLE NO.

HIMW-24DL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306611-005BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 3\N58829.D

Level: (low/med) LOW Date Received: 06/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/20/13

Injection Volume: 2 (µL) Dilution Factor: 4.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	120	D
91-57-6	2-Methylnaphthalene	40	U
208-96-8	Acenaphthylene	40	U
83-32-9	Acenaphthene	40	U
86-73-7	Fluorene	40	U
85-01-8	Phenanthrene	40	U
120-12-7	Anthracene	40	U
206-44-0	Fluoranthene	40	U
129-00-0	Pyrene	40	U
56-55-3	Benzo(a)anthracene	40	U
218-01-9	Chrysene	40	U
205-99-2	Benzo(b)fluoranthene	40	U
207-08-9	Benzo(k)fluoranthene	40	U
50-32-8	Benzo(a)pyrene	40	U
193-39-5	Indeno(1,2,3-cd)pyrene	40	U
53-70-3	Dibenzo(a,h)anthracene	40	U
191-24-2	Benzo(g,h,i)perylene	40	U

(1) Cannot be separated from Diphenylamine

7/10/13

KEY-URS168 S70

1C

EPA SAMPLE NO.

HIMW-08D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16569.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16570.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-08S

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16571.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	1	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-20I

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16572.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	3	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-20S

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16573.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/19/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-05S

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16574.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-007B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16670.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-12D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-008B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16671.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

DUP 061213

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-009B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16672.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	34	
83-32-9	Acenaphthene	38	
86-73-7	Fluorene	23	
85-01-8	Phenanthrene	10	
120-12-7	Anthracene	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-12I

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-010B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16673.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	37	
83-32-9	Acenaphthene	41	
86-73-7	Fluorene	24	
85-01-8	Phenanthrene	10	
120-12-7	Anthracene	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-23

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-011B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16674.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

HIMW-22

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-012B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16675.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FB 061413

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS168

Matrix: (soil/water) WATER Lab Sample ID: 1306792-013B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R16676.D

Level: (low/med) LOW Date Received: 06/14/13

% Moisture: Decanted: (Y/N) N Date Extracted: 06/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/25/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

ATTACHMENT B

SUPPORT DOCUMENTATION

H 2 M labs

575 Broad Hollow Rd., Melville, NY 11747
(631) 694-3040 Fax: (631) 420-8436
www.h2mlabs.com

00831

EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corporation

H2M SDG NO: KEY-URS168

PROJECT NAME/NUMBER:
National GRid - Hempstead
11176098

SAMPLERS: (Signature)/Client
Mira Abdelaziz/Mira Abdelaziz
Cary Friedman/Cary Friedman

DELIVERABLES:

TURNAROUND TIME:
Standard

NOTES:
Please Call Peter Fairbanks Withany Questions

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	BTEX 8260B (2 VOC Bottles)	PAH 8270C (2 Amber Jars)	LAB I.D. NO.	REMARKS:
6/4/13	1320	AQ	HIMW-25	4	X	X	1306376-001	
6/5/13	0745	AQ	HIMW-05D	4	X	X	-002	
6/5/13	0855	AQ	HIMW-05I	4	X	X	-003	
6/5/13	1035	AQ	HIMW-15D	4	X	X	-004	
6/5/13	1200	AQ	HIMW-15I	4	X	X	-005	
6/7/13	0730	AQ	TB060713	2	X		-006	

Cooler temp 2.4 °C
IR gun (122336969) 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Mira Abdelaziz	6/7/13	1105	John Sanfilippo	6/7/13	11:00
John Sanfilippo	6/7/13	12:30	M. Hall	6-7-13	1230

LABORATORY USE ONLY

Samples were:
1. Shipped ___ or Hand Delivered ✓ Airbill # _____

COC Tape was:
1. Present on outer package: Y or (N)
2. Unbroken on outer package: Y or (N)

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

KEY-URS168 S3

H 2 M labs

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(631) 694-3040 Fax: (631) 420-8436
www.h2mlabs.com

00851 key-URS

EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corporation | **H2M SDG NO:** key-URS168

PROJECT NAME/NUMBER: National GRid - Hempstead 11176098

SAMPLERS: (Signature)/Client: Mira Abdelaziz, Cary Friedman > URS

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES: Please call Peter Fairbanks with any Questions

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: BTEX 8260B	Sample Container Description: PAH 8270C	LAB I.D. NO.	REMARKS:
6/10/13	0800	AQ	HIMW-14I	4	X (2 VOC Bottles)	X (2 Amber Jars)		1306611-001
6/10/13	0805	AQ	HIMW-14IMS	4	X	X		-002
6/10/13	0810	AQ	HIMW-14IMSD	4	X	X		-003
6/10/13	0925	AQ	HIMW-13D	4	X	X		-004
6/10/13	—	AQ	DUP061013	4	X	X		-005
6/10/13	1050	AQ	HIMW-13I	4	X	X		-006
6/10/13	1150	AQ	HIMW-24	4	X	X		
6/10/13	—	AQ	TB061013	2	X			

Cooler temp 3.1 °C
IR gun (122336969) / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Mira Abdelaziz	6/10/13	1:45		6/11/13	13:45
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6/11/13	17:25		6-11-13	1725
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

LABORATORY USE ONLY

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill # ___

COC Tape was:
1. Present on outer package: Y or (N)
2. Unbroken on outer package: Y or (N)

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KEY-URS168 S9

H 2 M labs

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www.h2mlabs.com

00932

EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corporation | **H2M SDG NO:** KEY-URS168

PROJECT NAME/NUMBER: National Grid - Hempstead 11176098

SAMPLERS: (Signature)/Client: Mira Abdelaziz / URS, Gary Friedman

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES: Please Call Peter Fairbanks with any Questions

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

Sample Container Description: BTEX 8260B; PAH 8270C

ANALYSIS REQUESTED

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	2 x 40 mL Bottles	2 Amber Jars	LAB I.D. NO.	REMARKS:
6/11/13	0750	AQ	HIMW-08D	4	X	X		1306792-1
6/11/13	0850	AQ	HIMW-08I	4	X	X		2
6/11/13	1000	AQ	HIMW-08S	4	X	X		3
6/11/13	1125	AQ	HIMW-20I	4	X	X		4
6/11/13	1220	AQ	HIMW-20S	4	X	X		5
6/12/13	0715	AQ	HIMW-05S	4	X	X		6
6/12/13	0835	AQ	HIMW-12S	4	X	X		7
6/12/13	0940	AQ	HIMW-12D	4	X	X		8
6/12/13	—	AQ	DUP061213	4	X	X		9
6/12/13	1100	AQ	HIMW-12I	4	X	X		10

Cooler temp 0.4 °C
IR gun (22336969) / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Mira Abdelaziz	6/14/13	1125	John Laughlin	6/14/13	11:20
John Laughlin	6/14/13	12:55	M. Holt	6-14-13	1255
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

LABORATORY USE ONLY

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill # ___

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N

WHITE COPY - ORIGINAL — YELLOW COPY - CLIENT — PINK COPY - LABORATORY

H 2 M labs

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(631) 694-3040 Fax: (631) 420-8436
www.h2mlabs.com

00852

EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corporation | **H2M SDG NO:** KEY-URS168

PROJECT NAME/NUMBER: National GRid - Hempstead 11176098

SAMPLERS: (Signature)/Client: Mira Abdelaziz > URS; Cary Friedman

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES: Please call Peter Fairbanks w/ any Questions

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: BTEX 8260B	PAH 8270C	LAB I.D. NO.	REMARKS:
6/14/13	—	AQ	TB061413	2	X		1306792 -14	
6/14/13	1045	AQ	FB061413	4	X	X	-13	
6/14/13	0740	AQ	HIMW-23	4	X	X	-11	
6/14/13	0850	AQ	HIMW-22	4	X	X	-12	

Cooler temp 0.7 °C
IR gun (122336969) 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Mira Abdelaziz	6/14/13	1125	John Sanphi	6/14/13	11:20
John Sanphi	6/14/13	12:55	M-Wall	6-14-13	1255
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

LABORATORY USE ONLY

Samples were:
1. Shipped ___ or Hand Delivered ✓ Airbill # _____

COC Tape was:
1. Present on outer package: Y or (N)
2. Unbroken on outer package: Y or (N)

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KEY-URS168 S16

YELLOW COPY - CLIENT

PINK COPY - LABORATORY

H2M labs

H2M LABS INC
575 Broad Hollow Rd.
Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
Website: www.h2mlabs.com

KEY-URS 168

Sample Receipt Checklist

Client Name **KEY-URS** Date and Time Received: **6/14/2013 12:55:00 PM**

Work Order Number: **1306792** RcptNo: 1 Received by **MelissaWatson**

Completed by: M - Wat Reviewed by: Jennifer Ar

Completed Date: 6/14/2013 Reviewed Date: 6/19/2013 7:31:02 PM

Carrier name: H2M Pickup

Chain of custody present?	Yes	☑	No	☐		
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Are matrices correctly identified on Chain of custody?	Yes	☑	No	☐		
Is it clear what analyses were requested?	Yes	☑	No	☐		
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
Samples in proper container/bottle?	Yes	☑	No	☐		
Were correct preservatives used and noted?	Yes	☑	No	☐	NA	☐
Preservative added to bottles:						
Sample Condition?	Intact	☑	Broken	☐	Leaking	☐
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
Were container labels complete (ID, Pres, Date)?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes	☑	No	☐	NA	☐
Response when temperature is outside of range:						
Sample Temp. taken and recorded upon receipt?	Yes	☑	No	☐	To	0.2 °
Water - Were bubbles absent in VOC vials?	Yes	☐	No	☑	No Vials	☐
Water - Was there Chlorine Present?	Yes	☐	No	☐	NA	☑
Water - pH acceptable upon receipt?	Yes	☑	No	☐	No Water	☐
Are Samples considered acceptable?	Yes	☑	No	☐		
Custody Seals present?	Yes	☐	No	☑		
Airbill or Sticker?	Air Bil	☐	Sticker	☐	Not Present	☑
Airbill No:						

Case Number: SDG: KEY-URS168 SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted? ☐ Yes ☑ No Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

Comments:

One vial from sample HIMW-20I has a 1cm diameter headspace bubble. There is a spare.

CorrectiveAction:

KEY-URS168 S17

H2M labs
575 Broad Hollow Road
Melville, NY 11747
631.694.3040
631.420.8436

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLES RECEIVED: 6/7/13, 6/11/13 & 6/14/13
SDG #: KEY-URS168

For Samples:

HIMW-25	HIMW-13I	HIMW-12S
HIMW-05D	HIMW-24	HIMW-12D
HIMW-05I	TB-061013	DUP 061213
HIMW-15D	HIMW-08D	HIMW-12I
HIMW-15I	HIMW-08I	HIMW-23
TB-060713	HIMW-08S	HIMW-22
HIMW-14I	HIMW-20I	FB 061413
HIMW-13D	HIMW-20S	TB 061413
DUP 061013	HIMW-05S	

The above water sample(s) and blank(s) was/were analyzed for a select list of volatile organic analytes by EPA method 8260B.

All Q. C. data and calibrations met the requirements of the method, and no problems were encountered with sample analysis. The following should be noted:

Sample HIMW-14I was analyzed as the matrix spike/matrix spike duplicate. All percent recoveries and RPDs were met. Lab fortified blanks were analyzed and indicate good method efficiency.

CCC and SPCC requirements were met in all calibrations. Average response factors were used for the initial calibration.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date Reported: July 10, 2013

****
* *
* *
****
Joann M. Slavin
Senior Vice President

H2M labs
575 Broad Hollow Road
Melville, NY 11747
tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLE(S) RECEIVED: 6/7/13, 6/11/13 & 6/14/13
SDG #: KEY-URS168

For Sample(s):

HIMW-25	HIMW-13I	HIMW-12S
HIMW-05D	HIMW-24	HIMW-12D
HIMW-05I	HIMW-08D	DUP 061213
HIMW-15D	HIMW-08I	HIMW-12I
HIMW-15I	HIMW-08S	HIMW-23
HIMW-14I	HIMW-20I	HIMW-22
HIMW-13D	HIMW-20S	FB 061413
DUP 061013	HIMW-05S	

The above sample(s) and blank(s) was/were analyzed for a select list of base/neutral extractables (PNA's) by EPA method 8270C.

All Q.C. data and calibrations met the requirements of the method. The following should be noted:

Sample HIMW-14I was analyzed as the matrix spike/matrix spike duplicate. All percent recoveries and RPDs were met. Lab fortified blanks were analyzed and indicate good method efficiency.

Samples HIMW-05D, HIMW-05I and HIMW-24 were reanalyzed at a dilution due to concentration levels of targeted analytes above the calibration range. All surrogate recoveries were diluted out in the dilution of sample HIMW-05I. Both sets of data are submitted.

Benzo(k)fluoranthene had a %D greater than 25% in the continuing calibration of 6/17/13 and 6/20/13.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date Reported: July 2, 2013

****
* *
* *
****
Joann M. Slavin
Senior Vice President

APPENDIX B

OXYGEN SYSTEM OPERATION & MAINTENANCE MEASUREMENTS

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	4/4/2013
Time:	12:29
Weather:	Sunny
Outdoor Temperature:	~65° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	17,587	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	95.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	95	(psi)
(readings below are made from control panel)		
Delivery Air	118	(psi)
Element Outlet Temperature	187	(^{o}F)
Running Hours	17,771	(hours)
Loading Hours	17,320	(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	32	OW-2-9S	75'	40	20	OW-2-10D	97.2'	30	29
OW-2-3	94.3'	30	29	OW-2-10S	75'	45	30	OW-2-11D	100.8'	30	32
OW-2-4	94.7'	30	33	OW-2-11S	76.5'	55	21	OW-2-12	94'	30	21
OW-2-5	95.3'	30	30	OW-2-13S	75'	50	19	OW-2-13D	97'	30	30
OW-2-6	95.7'	40	30	OW-2-15S	75'	40	17	OW-2-14	96.4'	45	29
OW-2-7	96'	30	29	OW-2-16S	75.5'	30	19	OW-2-15D	94.6'	45	29
OW-2-8	96.3'	35	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	50	33
OW-2-9D	96.7'	35	30	OW-2-20S	79'	30	22	OW-2-17	95'	40	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 4/4/2013

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	40	21	OW-2-26D	95'	30	35
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	50	29	OW-2-27	93.5'	30	30
OW-2-20D	96.6'	30	29	OW-2-26S	74'	30	20	OW-2-28D	92.1'	30	27
OW-2-21	96.6'	35	29	OW-2-28S	76'	20	21	OW-2-29	92.2'	30	28
OW-2-22D	96.3'	35	28	OW-2-30S	67.8'	25	18	OW-2-30D	88'	30	27
OW-2-23	97.2'	35	31	OW-2-34	71'	10	18	OW-2-31	86'	30	29
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	21	OW-2-32	84'	30	36
OW-2-25	96'	40	29	OW-2-36	64.8'	30	21	OW-2-33	82'	30	35

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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	25	20	OW-2-45	61.1'	30	20	MP-2-1	29.23	20.9	24.87	0
OW-2-38	62.1'	20	20	OW-2-46	61'	35	20	MP-2-2	30.31	19.3	43.78	0
OW-2-39	60'	10	19	OW-2-47	60.5'	30	19	MP-2-3S	30.44	20.9	45.44	0
OW-2-40	61.7'	30	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.62	40.0	46.70	0
OW-2-41	61.7'	30	19	MP-2-2	41.14	29.91		MP-2-4	19.08	20.9	19.98	0
OW-2-42	61.6'	30	19	MP-2-3S	41.25	39.11		MP-2-5	17.26	22.5	32.92	0
OW-2-43	61.4'	30	20	MP-2-3D	44.77	40.89						
OW-2-44R	60.6'	30	20	MP-2-5	20.75	24.53						

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: 4/4/2013

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:

Soaked up small amount of oil and water from separator unit for disposal. Repaired roof shingles that were blown off. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

The solenoid valve at the location that was temporarily replaced needs to be replaced with a new solenoid valve. This valve was ordered and is currently on backorder. When the valve arrives it will be replaced.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 102.6 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100.5 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	4/5/2013
Time:	13:03
Weather:	Sunny
Outdoor Temperature:	~48° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	5,880.0	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	95	(psi)
Oxygen Purity	94.8	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	119	(psi)
Element Outlet Temperature	201	(oF)
Running Hours	6,832	(hours)
Loading Hours	4,295	(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	30	OW-1-5S	67.3	30	18	OW-1-9D	88.5	30	28
OW-1-2	96.5	30	31	OW-1-6S	67.0	30	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	30	31	OW-1-7S	66.9	30	17	OW-1-11D	86.1	45	30
OW-1-4	95.0	35	30	OW-1-8S	66.7	30	17	OW-1-12D	85.3	40	29
OW-1-5D	93.9	35	29	OW-1-9S	66.0	30	19	OW-1-13D	84.7	30	29
OW-1-6D	92.4	35	30	OW-1-10S	54.6	30	13	OW-1-14D	84.1	20	29
OW-1-7D	91.1	40	28	OW-1-11S	54.1	30	14	OW-1-15D	83.3	15	30
OW-1-8D	89.6	40	29	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: 4/5/2013

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	25	14	OW-1-21S	49.3	30	11
OW-1-14S	52.7	50	15	OW-1-18D	78.3	35	28	OW-1-22S	49.3	30	11
OW-1-15S	52.2	60	14	OW-1-19D	78.9	30	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	60	26	OW-1-20D	79.5	30	28	OW-1-24S	48.4	35	12
OW-1-17S	50.7	30	23	OW-1-21D	79.5	30	27	OW-1-25S	48.8	35	13
OW-1-18S	50.2	35	14	OW-1-22D	79.5	30	27	OW-1-26SR	48.3	30	13
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	26	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	40	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	29
OW-1-26D	78.1	45	28	OW-1-30S	48.8	30	13	OW-1-34D	84.5	30	32
OW-1-27D	77.9	35	29	OW-1-31S	49.3	35	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	30	27	OW-1-32S	49.3	55	13	OW-1-36D	85.0	40	29
OW-1-29D	78.4	30	26	OW-1-33S	49.7	30	13	OW-1-37D	84.0	45	28
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	12	OW-1-38D	82.0	55	30
OW-1-31D	80.5	30	26	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	27
OW-1-32D	81.6	30	30	OW-1-36S	50.3	30	13	OW-1-40D	76.0	20	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 4/5/2013

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	20	23	OW-1-43	67.4	30	21
OW-1-38S	50.6	30	13	OW-1-42D	71.0	30	21	OW-1-44	66.6	30	19
OW-1-39S	50.7	30	14	OW-1-45	65.7	20	19	OW-1-51R	60.6	30	17
OW-1-40S	51.1	30	14	OW-1-46	64.3	20	18	OW-1-52	59.3	45	15
OW-1-41S	51.5	30	14	OW-1-47	63.4	35	17	OW-1-53	60.0	45	17
OW-1-42S	51.3	30	14	OW-1-48	62.5	30	17	OW-1-54	60.0	45	15
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	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 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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.41	22.8	48.69	0	MP-1-5	25.62	21.2	34.72	0	MP-1-1D	19.94	15.27
MP-1-1S	26.13	39.9	36.90	0	MP-1-6	18.04	20.9	16.15	0	MP-1-2D	40.11	32.12
MP-1-2D	19.98	24.1	41.77	0	MP-1-7	21.31	20.9	40.50	0	MP-1-3D	40.51	38.37
MP-1-2S	20.42	40.0	42.70	0.9	MP-1-8	22.33	20.9	19.43	0	MP-1-4D	41.05	37.17
MP-1-3D	17.97	20.9	51.96	0								
MP-1-3S	18.22	21.5	37.40	0								
MP-1-4D	20.98	27.5	45.41	0								
MP-1-4S	20.77	36.4	44.69	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 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: 4/5/2013

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) 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:

On March 19, 2013, removed one flow meter from a not in use injection bank to replace broken flow meter in System #2. This flow meter was replaced with a new unit on April 5, 2013.

Added small amount of cooling oil to compressor. Soaked up small amount of oil and water from separator for disposal. Took apart solenoid valve on injection bank #5 and adjusted spring tension as valve was still not opening all the way. Wiped down all equipment and cleaned up all garbage from around fence areas.

Found high pressure under monitoring point MP-1-3D and MP-1-4D.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 102.6 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100.5 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:	4/18/2013
Time:	13:01
Weather:	Light Rain
Outdoor Temperature:	~46° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	17,736	
Feed Air Pressure *	90	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	96.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	95	(psi)
(readings below are made from control panel)		
Delivery Air	105	(psi)
Element Outlet Temperature	171	(^{o}F)
Running Hours	17,928	(hours)
Loading Hours	17,471	(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	31	OW-2-9S	75'	40	21	OW-2-10D	97.2'	30	29
OW-2-3	94.3'	30	29	OW-2-10S	75'	20	30	OW-2-11D	100.8'	30	32
OW-2-4	94.7'	30	33	OW-2-11S	76.5'	25	21	OW-2-12	94'	35	21
OW-2-5	95.3'	30	30	OW-2-13S	75'	20	18	OW-2-13D	97'	25	31
OW-2-6	95.7'	35	31	OW-2-15S	75'	20	18	OW-2-14	96.4'	20	30
OW-2-7	96'	35	28	OW-2-16S	75.5'	35	19	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	33
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 4/18/2013

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	30	21	OW-2-26D	95'	20	34
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	35	29	OW-2-27	93.5'	25	30
OW-2-20D	96.6'	40	29	OW-2-26S	74'	30	21	OW-2-28D	92.1'	35	27
OW-2-21	96.6'	50	28	OW-2-28S	76'	30	21	OW-2-29	92.2'	30	28
OW-2-22D	96.3'	55	28	OW-2-30S	67.8'	30	18	OW-2-30D	88'	30	27
OW-2-23	97.2'	65	32	OW-2-34	71'	40	18	OW-2-31	86'	30	29
OW-2-24D	97'	60	30	OW-2-35	69.2'	45	21	OW-2-32	84'	30	35
OW-2-25	96'	40	29	OW-2-36	64.8'	30	21	OW-2-33	82'	30	35

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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	29.07	20.9	23.27	0
OW-2-38	62.1'	30	20	OW-2-46	61'	25	20	MP-2-2	30.23	19.2	44.45	0
OW-2-39	60'	35	18	OW-2-47	60.5'	30	18	MP-2-3S	30.35	20.9	41.11	0
OW-2-40	61.7'	30	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.41	40.0	35.12	0
OW-2-41	61.7'	30	19	MP-2-2	46.41	47.05		MP-2-4	18.87	21.1	21.23	0
OW-2-42	61.6'	30	19	MP-2-3S	37.75	33.31		MP-2-5	17.06	22.8	39.27	0
OW-2-43	61.4'	30	20	MP-2-3D	31.13	32.17						
OW-2-44R	60.6'	30	20	MP-2-5	33.47	32.12						

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: 4/18/2013

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_3 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:

Found drain hose blown off the top of the separator unit. Replaced hose and secured on top of copper drain line. Soaked up small amount of oil and water from separator unit for disposal. Changed 60 watt bulb in shed that was blown. Removed plywood blocking fresh air vents, turned off heater and set air conditioning unit at 68°F. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

The solenoid valve at the location that was temporarily replaced was replaced with a new valve during the April 18, 2013 site visit.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 111.5 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 101.5 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	4/19/2013
Time:	13:15
Weather:	Rain
Outdoor Temperature:	~45° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,002.6	
Feed Air Pressure *	90	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	98.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	108	(psi)
Element Outlet Temperature	176	(oF)
Running Hours	6,969	(hours)
Loading Hours	4,378	(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	30	OW-1-5S	67.3	40	18	OW-1-9D	88.5	30	28
OW-1-2	96.5	30	32	OW-1-6S	67.0	40	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	35	31	OW-1-7S	66.9	45	17	OW-1-11D	86.1	30	31
OW-1-4	95.0	30	30	OW-1-8S	66.7	45	17	OW-1-12D	85.3	30	30
OW-1-5D	93.9	30	29	OW-1-9S	66.0	30	20	OW-1-13D	84.7	40	29
OW-1-6D	92.4	30	30	OW-1-10S	54.6	35	13	OW-1-14D	84.1	30	29
OW-1-7D	91.1	30	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	40	30
OW-1-8D	89.6	30	29	OW-1-12S	53.6	30	15	OW-1-16D	82.5	40	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: 4/19/2013

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	14	OW-1-21S	49.3	25	11
OW-1-14S	52.7	35	15	OW-1-18D	78.3	30	29	OW-1-22S	49.3	35	11
OW-1-15S	52.2	30	14	OW-1-19D	78.9	30	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	60	26	OW-1-20D	79.5	10	28	OW-1-24S	48.4	30	12
OW-1-17S	50.7	55	25	OW-1-21D	79.5	30	27	OW-1-25S	48.8	40	14
OW-1-18S	50.2	40	14	OW-1-22D	79.5	30	28	OW-1-26SR	48.3	30	13
OW-1-19S	49.7	35	15	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	26	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	27	OW-1-29S	48.5	40	13	OW-1-33D	83.2	20	29
OW-1-26D	78.1	30	28	OW-1-30S	48.8	40	13	OW-1-34D	84.5	30	32
OW-1-27D	77.9	30	30	OW-1-31S	49.3	45	13	OW-1-35D	85.0	40	30
OW-1-28D	78.0	35	28	OW-1-32S	49.3	55	13	OW-1-36D	85.0	40	29
OW-1-29D	78.4	45	26	OW-1-33S	49.7	30	13	OW-1-37D	84.0	30	28
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	12	OW-1-38D	82.0	30	30
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	27
OW-1-32D	81.6	30	30	OW-1-36S	50.3	30	13	OW-1-40D	76.0	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 4/19/2013

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	35	24	OW-1-43	67.4	30	21
OW-1-38S	50.6	30	13	OW-1-42D	71.0	30	20	OW-1-44	66.6	35	20
OW-1-39S	50.7	30	14	OW-1-45	65.7	30	19	OW-1-51R	60.6	35	17
OW-1-40S	51.1	30	14	OW-1-46	64.3	30	18	OW-1-52	59.3	35	15
OW-1-41S	51.5	30	15	OW-1-47	63.4	35	17	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	14	OW-1-48	62.5	30	17	OW-1-54	60.0	30	15
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	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 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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	25.83	22.9	41.85	0	MP-1-5	25.42	21.4	29.37	0	MP-1-1D	16.03	11.07
MP-1-1S	25.98	40.0	26.81	0	MP-1-6	17.88	22.4	14.31	0	MP-1-2D	35.34	28.18
MP-1-2D	19.89	38.1	38.41	0	MP-1-7	21.13	20.9	40.39	0	MP-1-3D	33.35	27.75
MP-1-2S	20.36	39.7	33.10	0.5	MP-1-8	22.21	24.1	12.95	0	MP-1-4D	31.19	29.14
MP-1-3D	18.11	20.7	38.24	0								
MP-1-3S	18.09	23.8	36.99	0								
MP-1-4D	20.83	39.7	36.54	0								
MP-1-4S	20.64	38.2	41.10	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 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: 4/19/2013

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) 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:

Found system running with low pressure at Banks #1, 2 and 4. Found solenoid valves stuck open and in need of cleaning. Added small amount of cooling oil to compressor. Soaked up small amount of oil and water from separator for disposal. Removed all plywood panels from fresh air vents in shed, set air conditioning unit at 65°F and turned off the heater. Wiped down all equipment and cleaned up all garbage from around fence areas.

Found high pressure under monitoring point MP-1-3D and MP-1-4D. Monitoing points will be modified as soon as the backordered parts arrive to conduct the modifications.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 111.5 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 101.5 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:	5/2/2013
Time:	11:47
Weather:	Sunny
Outdoor Temperature:	~69° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	17,879	
Feed Air Pressure *	105	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	93.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	115	(psi)
(readings below are made from control panel)		
Delivery Air	112	(psi)
Element Outlet Temperature	151	(^{o}F)
Running Hours	18,079	(hours)
Loading Hours	17,614	(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'	40	20	OW-2-10D	97.2'	30	28
OW-2-3	94.3'	30	28	OW-2-10S	75'	35	30	OW-2-11D	100.8'	50	32
OW-2-4	94.7'	30	32	OW-2-11S	76.5'	35	21	OW-2-12	94'	45	20
OW-2-5	95.3'	40	30	OW-2-13S	75'	35	19	OW-2-13D	97'	60	31
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	19	OW-2-14	96.4'	50	30
OW-2-7	96'	30	29	OW-2-16S	75.5'	30	19	OW-2-15D	94.6'	35	31
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	31
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	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: 5/2/2013

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	28	OW-2-22S	76'	30	20	OW-2-26D	95'	30	37
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	28	OW-2-27	93.5'	20	27
OW-2-20D	96.6'	30	30	OW-2-26S	74'	30	20	OW-2-28D	92.1'	15	28
OW-2-21	96.6'	40	30	OW-2-28S	76'	30	21	OW-2-29	92.2'	25	28
OW-2-22D	96.3'	30	27	OW-2-30S	67.8'	30	17	OW-2-30D	88'	35	26
OW-2-23	97.2'	45	28	OW-2-34	71'	30	18	OW-2-31	86'	30	28
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	20	OW-2-32	84'	30	37
OW-2-25	96'	35	29	OW-2-36	64.8'	30	19	OW-2-33	82'	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. 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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	29.26	20.9	22.87	0.2
OW-2-38	62.1'	30	19	OW-2-46	61'	35	19	MP-2-2	30.36	20.9	40.71	0
OW-2-39	60'	40	18	OW-2-47	60.5'	30	19	MP-2-3S	30.47	20.9	41.14	0
OW-2-40	61.7'	40	19	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.68	39.7	33.12	0
OW-2-41	61.7'	40	19	MP-2-2	34.80	28.17		MP-2-4	19.12	21.8	21.17	0
OW-2-42	61.6'	30	20	MP-2-3S	36.88	34.50		MP-2-5	17.33	23.6	44.41	0
OW-2-43	61.4'	30	21	MP-2-3D	30.01	24.14						
OW-2-44R	60.6'	20	20	MP-2-5	31.12	33.62						

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: 5/2/2013

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_3 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:

Found small leak at one flow meter and made repair. Changed filter mat on cooling side of air compressor due to heavy build up. Added small amount oil to the compressor. Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 105.1 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100.5 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	5/3/2013
Time:	13:18
Weather:	Sunny
Outdoor Temperature:	~62° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,124.6	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	105	(psi)
Oxygen Purity	97.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	115	(psi)
(readings below are made from control panel)		
Delivery Air	113	(psi)
Element Outlet Temperature	162	(oF)
Running Hours	7,104	(hours)
Loading Hours	4,461	(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	30	OW-1-5S	67.3	20	18	OW-1-9D	88.5	45	28
OW-1-2	96.5	30	32	OW-1-6S	67.0	25	19	OW-1-10D	87.2	45	27
OW-1-3	96.3	30	31	OW-1-7S	66.9	35	17	OW-1-11D	86.1	40	31
OW-1-4	95.0	60	30	OW-1-8S	66.7	30	17	OW-1-12D	85.3	40	30
OW-1-5D	93.9	50	28	OW-1-9S	66.0	30	21	OW-1-13D	84.7	40	29
OW-1-6D	92.4	35	30	OW-1-10S	54.6	30	13	OW-1-14D	84.1	35	29
OW-1-7D	91.1	30	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	30
OW-1-8D	89.6	30	29	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: 5/3/2013

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	14	OW-1-21S	49.3	25	11
OW-1-14S	52.7	30	15	OW-1-18D	78.3	30	29	OW-1-22S	49.3	30	11
OW-1-15S	52.2	30	15	OW-1-19D	78.9	30	29	OW-1-23S	48.8	35	12
OW-1-16SR	51.8	30	26	OW-1-20D	79.5	30	29	OW-1-24S	48.4	30	12
OW-1-17S	50.7	40	25	OW-1-21D	79.5	40	27	OW-1-25S	48.8	30	14
OW-1-18S	50.2	30	14	OW-1-22D	79.5	40	28	OW-1-26SR	48.3	30	13
OW-1-19S	49.7	30	15	OW-1-23D	78.7	45	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	13	OW-1-24D	78.2	40	26	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	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	29
OW-1-26D	78.1	30	29	OW-1-30S	48.8	30	13	OW-1-34D	84.5	30	32
OW-1-27D	77.9	30	31	OW-1-31S	49.3	50	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	30	29	OW-1-32S	49.3	30	13	OW-1-36D	85.0	30	29
OW-1-29D	78.4	30	26	OW-1-33S	49.7	40	13	OW-1-37D	84.0	30	29
OW-1-30D	79.0	35	37	OW-1-34S	50.1	30	13	OW-1-38D	82.0	30	31
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	28
OW-1-32D	81.6	30	30	OW-1-36S	50.3	30	13	OW-1-40D	76.0	35	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 5/3/2013

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	25	24	OW-1-43	67.4	45	21
OW-1-38S	50.6	30	13	OW-1-42D	71.0	35	21	OW-1-44	66.6	55	20
OW-1-39S	50.7	30	14	OW-1-45	65.7	30	20	OW-1-51R	60.6	60	17
OW-1-40S	51.1	35	14	OW-1-46	64.3	30	18	OW-1-52	59.3	30	15
OW-1-41S	51.5	35	15	OW-1-47	63.4	30	17	OW-1-53	60.0	20	17
OW-1-42S	51.3	35	14	OW-1-48	62.5	40	17	OW-1-54	60.0	30	15
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	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 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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.11	22.8	26.89	0.1	MP-1-5	25.77	21.6	35.39	0.2	MP-1-1D	14.33	16.51
MP-1-1S	26.28	39.9	21.07	0.1	MP-1-6	18.20	21.9	13.31	0	MP-1-2D	37.77	28.81
MP-1-2D	20.25	40.1	40.35	0	MP-1-7	21.48	20.9	42.12	0	MP-1-3D	35.38	29.11
MP-1-2S	20.67	38.1	26.14	0.4	MP-1-8	22.55	21.1	9.24	0	MP-1-4D	30.22	22.25
MP-1-3D	18.40	20.9	41.55	0								
MP-1-3S	18.38	22.7	37.12	0								
MP-1-4D	21.17	31.1	35.21	0.1								
MP-1-4S	20.96	27.7	49.04	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 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: 5/3/2013

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) 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:

On April 22, 2013 and April 24, 2013 all solenoid valves on the system were dismantled and cleaned with soap and water of a heavy silt buildup. Replaced the o-rings as needed and reinstalled valves. Took apart feeder valves on the air separator unit and cleaned heavy silt buildup with soap and water. Replaced filter on cooling side of air compressor. Restarted system and left running.

Added small amount of cooling oil to compressor. Soaked up small amount of oil and water from separator for disposal. Wiped down all equipment and cleaned up all garbage from around fence areas.

Found high pressure under monitoring point MP-1-2D, MP-1-3D and MP-1-4D. Monitoring points will be modified as soon as the backordered parts arrive to conduct the modifications.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 105.1 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100.5 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:	5/14/2013
Time:	12:25
Weather:	Sunny
Outdoor Temperature:	~58° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	18,031	
Feed Air Pressure *	105	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	98.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	85	(psi)
(readings below are made from control panel)		
Delivery Air	100	(psi)
Element Outlet Temperature	174	(^{o}F)
Running Hours	18,238	(hours)
Loading Hours	17,767	(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	32	OW-2-9S	75'	30	20	OW-2-10D	97.2'	30	29
OW-2-3	94.3'	30	19	OW-2-10S	75'	30	30	OW-2-11D	100.8'	35	32
OW-2-4	94.7'	35	35	OW-2-11S	76.5'	30	21	OW-2-12	94'	30	21
OW-2-5	95.3'	30	30	OW-2-13S	75'	35	19	OW-2-13D	97'	30	30
OW-2-6	95.7'	40	30	OW-2-15S	75'	35	17	OW-2-14	96.4'	35	29
OW-2-7	96'	45	29	OW-2-16S	75.5'	30	19	OW-2-15D	94.6'	45	29
OW-2-8	96.3'	40	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	50	33
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	OW-2-17	95'	40	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 5/14/2013

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	30	21	OW-2-26D	95'	45	34
OW-2-19	96.1'	40	30	OW-2-24S	77.8'	30	28	OW-2-27	93.5'	40	30
OW-2-20D	96.6'	30	29	OW-2-26S	74'	30	20	OW-2-28D	92.1'	30	27
OW-2-21	96.6'	35	28	OW-2-28S	76'	30	21	OW-2-29	92.2'	35	28
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	30	18	OW-2-30D	88'	30	27
OW-2-23	97.2'	30	31	OW-2-34	71'	30	18	OW-2-31	86'	30	29
OW-2-24D	97'	40	29	OW-2-35	69.2'	35	21	OW-2-32	84'	30	36
OW-2-25	96'	30	29	OW-2-36	64.8'	30	21	OW-2-33	82'	30	35

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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	29.23	23.5	20.78	0
OW-2-38	62.1'	30	20	OW-2-46	61'	35	20	MP-2-2	30.32	20.7	36.62	0
OW-2-39	60'	30	19	OW-2-47	60.5'	30	19	MP-2-3S	30.41	21.0	42.14	0
OW-2-40	61.7'	30	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.61	39.7	48.44	0
OW-2-41	61.7'	30	20	MP-2-2	32.41	25.18		MP-2-4	19.07	20.9	15.44	0
OW-2-42	61.6'	35	19	MP-2-3S	39.91	27.90		MP-2-5	17.25	23.5	45.28	0
OW-2-43	61.4'	30	20	MP-2-3D	40.61	39.11						
OW-2-44R	60.6'	40	20	MP-2-5	28.36	18.91						

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: 5/14/2013

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 X No
4) Oil changed Yes X No
5) Oil filter changed Yes X No
6) Air filter Changed Yes X No
7) Oil separator cleaned Yes X No
8) Terminal strips checked Yes X No

AS-80 O_3 Generator

1) Prefilter changed Yes X No
2) Coalescing changed Yes X No

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:

Performed 6-month O&M on all equipment between 5-14-13 and 5-17-13.

Took apart air compressor and changed filters and cooling oil. Found leak in brass fill stem and took apart to repair. Installed new belt on compressor. Cleaned out cooling canister of debris and emptied out oil and water from separator unit. Took apart auto drains on all units and cleaned out silt build up. Changed filters in water trap and replaced o-rings in unit. Flushed out oil building up in base of air separator unit and replaced filters. Greased all fittings on booster pump and changed belt. Changed all fresh air filters in shed. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 102.1 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 99.8 ppm.

Electric Meter # 96-929-544 tied into Pole #3

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	5/15/2013
Time:	10:15
Weather:	Light Rain
Outdoor Temperature:	~58° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,216.0	
Feed Air Pressure *	105	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	90	(psi)
Oxygen Purity	94.8	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	125	(psi)
Element Outlet Temperature	169	(oF)
Running Hours	7,206	(hours)
Loading Hours	4,526	(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	30	OW-1-5S	67.3	30	18	OW-1-9D	88.5	30	28
OW-1-2	96.5	30	32	OW-1-6S	67.0	35	19	OW-1-10D	87.2	65	27
OW-1-3	96.3	30	31	OW-1-7S	66.9	30	17	OW-1-11D	86.1	60	31
OW-1-4	95.0	40	30	OW-1-8S	66.7	30	17	OW-1-12D	85.3	30	30
OW-1-5D	93.9	30	29	OW-1-9S	66.0	30	20	OW-1-13D	84.7	30	29
OW-1-6D	92.4	40	30	OW-1-10S	54.6	30	13	OW-1-14D	84.1	30	30
OW-1-7D	91.1	35	30	OW-1-11S	54.1	30	14	OW-1-15D	83.3	35	30
OW-1-8D	89.6	30	29	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: 5/15/2013

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	14	OW-1-21S	49.3	30	11
OW-1-14S	52.7	30	16	OW-1-18D	78.3	30	29	OW-1-22S	49.3	30	11
OW-1-15S	52.2	40	15	OW-1-19D	78.9	35	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	30	26	OW-1-20D	79.5	30	28	OW-1-24S	48.4	30	12
OW-1-17S	50.7	30	25	OW-1-21D	79.5	35	28	OW-1-25S	48.8	30	14
OW-1-18S	50.2	35	13	OW-1-22D	79.5	40	27	OW-1-26SR	48.3	30	13
OW-1-19S	49.7	30	15	OW-1-23D	78.7	40	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	26	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	40	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	25	29
OW-1-26D	78.1	40	29	OW-1-30S	48.8	30	13	OW-1-34D	84.5	15	32
OW-1-27D	77.9	35	31	OW-1-31S	49.3	30	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	40	29	OW-1-32S	49.3	30	13	OW-1-36D	85.0	20	29
OW-1-29D	78.4	30	27	OW-1-33S	49.7	30	13	OW-1-37D	84.0	30	29
OW-1-30D	79.0	35	37	OW-1-34S	50.1	30	13	OW-1-38D	82.0	30	31
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	28
OW-1-32D	81.6	30	30	OW-1-36S	50.3	30	13	OW-1-40D	76.0	35	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 5/15/2013

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	25	13	OW-1-41D	73.6	30	24	OW-1-43	67.4	30	21
OW-1-38S	50.6	30	13	OW-1-42D	71.0	30	21	OW-1-44	66.6	30	20
OW-1-39S	50.7	30	14	OW-1-45	65.7	30	20	OW-1-51R	60.6	30	17
OW-1-40S	51.1	30	14	OW-1-46	64.3	35	18	OW-1-52	59.3	30	15
OW-1-41S	51.5	35	15	OW-1-47	63.4	30	17	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	15	OW-1-48	62.5	30	17	OW-1-54	60.0	30	16
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	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 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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.02	22.4	33.61	0.2	MP-1-5	25.65	21.2	34.12	0	MP-1-1D	24.01	17.11
MP-1-1S	26.16	39.9	22.04	0	MP-1-6	18.07	21.0	15.04	0	MP-1-2D	31.00	25.25
MP-1-2D	20.14	38.7	37.17	0	MP-1-7	21.35	20.4	39.51	0	MP-1-3D	39.35	34.00
MP-1-2S	20.58	37.0	28.11	0.3	MP-1-8	22.38	20.6	10.62	0	MP-1-4D	26.06	12.43
MP-1-3D	18.30	20.1	43.44	0								
MP-1-3S	18.27	23.4	35.41	0								
MP-1-4D	20.95	37.2	30.16	108								
MP-1-4S	20.80	39.7	36.82	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 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: 5/15/2013

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 X No
4) Oil changed Yes X No
5) Oil filter changed Yes X No
6) Air filter Changed Yes X No
7) Oil separator changed Yes X No
8) Terminal strips checked Yes X No

AS-80 O_2 Generator

1) Prefilter changed Yes X No
2) Coalescing changed Yes X No

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:

On May 10, 2013 at approximately 6:57 AM a compressor alarm was triggered and the system shut down. On Saturday, May 11, 2013, Mike Ryan found that the alarm was caused by a clog in the radiator that circulates the cooling oil through the compressor. Mike took apart the unit and cleaned out the build up and returned the system to normal operation. Total downtime for this alarm condition was approximately 26 hours.

Performed 12-month O&M on all equipment between 5-14-13 and 5-17-13.

Took apart air compressor and changed filters and cooling oil. Installed new belt on compressor. Cleaned out cooling canister of debris and emptied out oil and water from separator unit. Took apart auto drains on all units and cleaned out silt build up. Changed filters in water trap and replaced o-rings in unit. Flushed out oil building up in base of air separator unit and replaced filters. Greased all fittings on booster pump and changed belt. Changed all fresh air filters in shed. Wiped down all equipment and cleaned up all garbage & leaves from around fence areas.

Found high pressure under monitoring point MP-1-2D, MP-1-3D and MP-1-4D. Monitoring points will be modified as soon as the backordered parts arrive to conduct the modifications.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 102.1 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 99.8 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:	5/30/2013
Time:	12:40
Weather:	Sunny
Outdoor Temperature:	~74° F
Inside Trailer Temperature:	~62° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	18,228	
Feed Air Pressure *	85	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	97.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	90	(psi)
(readings below are made from control panel)		
Delivery Air	87	(psi)
Element Outlet Temperature	174	(^{o}F)
Running Hours	18,441	(hours)
Loading Hours	17,966	(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	35	OW-2-9S	75'	30	20	OW-2-10D	97.2'	30	29
OW-2-3	94.3'	30	19	OW-2-10S	75'	40	30	OW-2-11D	100.8'	30	32
OW-2-4	94.7'	40	34	OW-2-11S	76.5'	35	21	OW-2-12	94'	30	21
OW-2-5	95.3'	45	30	OW-2-13S	75'	30	19	OW-2-13D	97'	35	30
OW-2-6	95.7'	40	30	OW-2-15S	75'	30	19	OW-2-14	96.4'	30	29
OW-2-7	96'	30	29	OW-2-16S	75.5'	30	19	OW-2-15D	94.6'	35	30
OW-2-8	96.3'	30	29	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	32
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 5/30/2013

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	20	21	OW-2-26D	95'	30	34
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	25	29	OW-2-27	93.5'	35	31
OW-2-20D	96.6'	30	30	OW-2-26S	74'	35	20	OW-2-28D	92.1'	35	27
OW-2-21	96.6'	30	28	OW-2-28S	76'	30	21	OW-2-29	92.2'	35	28
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	30	18	OW-2-30D	88'	30	27
OW-2-23	97.2'	30	31	OW-2-34	71'	30	18	OW-2-31	86'	30	29
OW-2-24D	97'	30	30	OW-2-35	69.2'	30	21	OW-2-32	84'	40	36
OW-2-25	96'	30	29	OW-2-36	64.8'	30	21	OW-2-33	82'	30	35

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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	29.27	23.1	26.36	0
OW-2-38	62.1'	30	20	OW-2-46	61'	30	20	MP-2-2	30.33	21.6	47.43	0
OW-2-39	60'	30	19	OW-2-47	60.5'	30	18	MP-2-3S	30.43	24.2	28.10	0
OW-2-40	61.7'	35	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.45	40.3	46.77	0.2
OW-2-41	61.7'	35	20	MP-2-2	40.15	27.16		MP-2-4	19.93	20.9	20.51	0
OW-2-42	61.6'	30	19	MP-2-3S	30.42	33.11		MP-2-5	17.31	22.4	38.22	0
OW-2-43	61.4'	35	20	MP-2-3D	45.09	40.99						
OW-2-44R	60.6'	35	21	MP-2-5	29.39	17.54						

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: 5/30/2013

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) 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_3 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:

Soaked up small amount of oil and water from separator unit for disposal. Adjusted temperature setting on AC unit. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

DO Meter was calibrated to 100% oxygen saturation. 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 #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	5/31/2013
Time:	10:45
Weather:	Sunny
Outdoor Temperature:	~90° F
Inside Trailer Temperature:	~69° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,345.9	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	95.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	109	(psi)
Element Outlet Temperature	162	(oF)
Running Hours	7,352	(hours)
Loading Hours	4,616	(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	30	OW-1-5S	67.3	40	18	OW-1-9D	88.5	30	28
OW-1-2	96.5	30	32	OW-1-6S	67.0	20	19	OW-1-10D	87.2	25	27
OW-1-3	96.3	30	32	OW-1-7S	66.9	25	17	OW-1-11D	86.1	30	30
OW-1-4	95.0	35	30	OW-1-8S	66.7	20	17	OW-1-12D	85.3	30	30
OW-1-5D	93.9	35	29	OW-1-9S	66.0	30	21	OW-1-13D	84.7	30	29
OW-1-6D	92.4	35	30	OW-1-10S	54.6	30	13	OW-1-14D	84.1	35	30
OW-1-7D	91.1	30	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	30
OW-1-8D	89.6	30	29	OW-1-12S	53.6	30	15	OW-1-16D	82.5	35	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: 5/31/2013

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	14	OW-1-21S	49.3	30	11
OW-1-14S	52.7	30	15	OW-1-18D	78.3	30	28	OW-1-22S	49.3	25	11
OW-1-15S	52.2	30	15	OW-1-19D	78.9	30	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	40	26	OW-1-20D	79.5	30	29	OW-1-24S	48.4	25	12
OW-1-17S	50.7	40	25	OW-1-21D	79.5	30	27	OW-1-25S	48.8	30	14
OW-1-18S	50.2	35	14	OW-1-22D	79.5	35	28	OW-1-26SR	48.3	30	14
OW-1-19S	49.7	30	15	OW-1-23D	78.7	35	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	40	13	OW-1-24D	78.2	45	26	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	55	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	29
OW-1-26D	78.1	65	28	OW-1-30S	48.8	30	13	OW-1-34D	84.5	45	30
OW-1-27D	77.9	35	28	OW-1-31S	49.3	30	13	OW-1-35D	85.0	45	29
OW-1-28D	78.0	30	28	OW-1-32S	49.3	30	12	OW-1-36D	85.0	45	29
OW-1-29D	78.4	40	26	OW-1-33S	49.7	30	13	OW-1-37D	84.0	35	29
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	12	OW-1-38D	82.0	50	35
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	60	28
OW-1-32D	81.6	30	28	OW-1-36S	50.3	30	13	OW-1-40D	76.0	30	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 5/31/2013

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	45	23	OW-1-43	67.4	30	19
OW-1-38S	50.6	30	13	OW-1-42D	71.0	35	21	OW-1-44	66.6	30	18
OW-1-39S	50.7	35	12	OW-1-45	65.7	30	19	OW-1-51R	60.6	30	17
OW-1-40S	51.1	30	13	OW-1-46	64.3	30	18	OW-1-52	59.3	30	16
OW-1-41S	51.5	30	13	OW-1-47	63.4	40	18	OW-1-53	60.0	30	16
OW-1-42S	51.3	30	13	OW-1-48	62.5	30	18	OW-1-54	60.0	30	15
				OW-1-49	61.5	30	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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.12	21.6	32.12	0	MP-1-5	25.80	20.9	41.55	0.1	MP-1-1D	24.19	17.18
MP-1-1S	26.30	39.5	25.46	0	MP-1-6	18.23	22.2	39.12	0	MP-1-2D	13.14	27.77
MP-1-2D	20.29	31.9	39.19	0	MP-1-7	21.55	20.4	40.39	0	MP-1-3D	46.90	46.47
MP-1-2S	20.68	39.7	25.50	0	MP-1-8	22.54	19.6	16.44	0	MP-1-4D	31.75	24.68
MP-1-3D	18.47	19.4	56.52	0								
MP-1-3S	18.43	23.7	39.12	0								
MP-1-4D	21.17	40.0	39.58	0								
MP-1-4S	20.98	37.8	40.90	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 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: 5/31/2013

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* — Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded — Low (red) ____ Normal (green) 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) 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:

Soaked up small amount of oil and water from separator for disposal. Wiped down all equipment and cleaned up all garbage from around fence areas.

Found high pressure under monitoring point MP-1-2D, MP-1-3D and MP-1-4D. Monitoring points will be modified as soon as the backordered parts arrive to conduct the modifications.

DO Meter was calibrated to 100% oxygen saturation. 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:	6/18/2013
Time:	13:51
Weather:	Sunny
Outdoor Temperature:	~72° F
Inside Trailer Temperature:	~60° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	18,451	
Feed Air Pressure *	120	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	98.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	119	(psi)
Element Outlet Temperature	163	(^{o}F)
Running Hours	18,670	(hours)
Loading Hours	18,191	(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	35	OW-2-9S	75'	30	20	OW-2-10D	97.2'	30	30
OW-2-3	94.3'	30	20	OW-2-10S	75'	30	30	OW-2-11D	100.8'	30	32
OW-2-4	94.7'	30	34	OW-2-11S	76.5'	30	21	OW-2-12	94'	35	22
OW-2-5	95.3'	35	31	OW-2-13S	75'	30	20	OW-2-13D	97'	45	29
OW-2-6	95.7'	30	31	OW-2-15S	75'	45	19	OW-2-14	96.4'	45	29
OW-2-7	96'	30	29	OW-2-16S	75.5'	40	19	OW-2-15D	94.6'	35	30
OW-2-8	96.3'	30	29	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	32
OW-2-9D	96.7'	30	30	OW-2-20S	79'	35	22	OW-2-17	95'	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 6/18/2013

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	30	OW-2-22S	76'	35	21	OW-2-26D	95'	30	34
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	40	29	OW-2-27	93.5'	35	31
OW-2-20D	96.6'	30	31	OW-2-26S	74'	40	21	OW-2-28D	92.1'	35	28
OW-2-21	96.6'	30	28	OW-2-28S	76'	30	21	OW-2-29	92.2'	35	28
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	40	19	OW-2-30D	88'	40	27
OW-2-23	97.2'	30	31	OW-2-34	71'	35	18	OW-2-31	86'	35	30
OW-2-24D	97'	30	30	OW-2-35	69.2'	35	21	OW-2-32	84'	40	35
OW-2-25	96'	30	30	OW-2-36	64.8'	30	21	OW-2-33	82'	50	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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	28.05	22.6	25.14	0
OW-2-38	62.1'	30	20	OW-2-46	61'	30	20	MP-2-2	29.37	21.0	45.41	0
OW-2-39	60'	25	19	OW-2-47	60.5'	30	18	MP-2-3S	29.19	25.5	29.99	0
OW-2-40	61.7'	30	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	29.30	39.1	45.14	0.3
OW-2-41	61.7'	35	20	MP-2-2	48.19	49.95		MP-2-4	17.83	20.9	18.16	0
OW-2-42	61.6'	30	20	MP-2-3S	31.13	33.38		MP-2-5	15.96	22.5	35.55	0
OW-2-43	61.4'	30	20	MP-2-3D	40.11	40.57						
OW-2-44R	60.6'	30	20	MP-2-5	30.01	21.12						

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: 6/18/2013

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) 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_3 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:

Modified monitoring points with new valves between June 3 & 4, 2013.

Soaked up small amount of oil and water from separator unit for disposal. Repaired leak in air separator water bowl. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

DO Meter was calibrated to 100% oxygen saturation. 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 #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	6/19/2013
Time:	12:49
Weather:	Sunny
Outdoor Temperature:	~70° F
Inside Trailer Temperature:	~64° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,346.0	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	95	(psi)
Oxygen Purity	96.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	120	(psi)
Element Outlet Temperature	171	(oF)
Running Hours	7,352	(hours)
Loading Hours	4,616	(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	35	30	OW-1-5S	67.3	45	18	OW-1-9D	88.5	30	28
OW-1-2	96.5	35	31	OW-1-6S	67.0	55	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	30	32	OW-1-7S	66.9	50	17	OW-1-11D	86.1	35	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	35	17	OW-1-12D	85.3	30	30
OW-1-5D	93.9	20	28	OW-1-9S	66.0	30	20	OW-1-13D	84.7	35	29
OW-1-6D	92.4	30	30	OW-1-10S	54.6	30	13	OW-1-14D	84.1	35	30
OW-1-7D	91.1	30	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	31
OW-1-8D	89.6	30	29	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: 6/19/2013

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	14	OW-1-21S	49.3	30	11
OW-1-14S	52.7	30	15	OW-1-18D	78.3	25	28	OW-1-22S	49.3	30	11
OW-1-15S	52.2	30	16	OW-1-19D	78.9	30	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	30	26	OW-1-20D	79.5	45	29	OW-1-24S	48.4	30	12
OW-1-17S	50.7	30	25	OW-1-21D	79.5	30	28	OW-1-25S	48.8	30	14
OW-1-18S	50.2	30	15	OW-1-22D	79.5	30	28	OW-1-26SR	48.3	30	14
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	35	13	OW-1-24D	78.2	30	26	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	20	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	29
OW-1-26D	78.1	20	29	OW-1-30S	48.8	30	13	OW-1-34D	84.5	40	31
OW-1-27D	77.9	30	29	OW-1-31S	49.3	30	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	25	28	OW-1-32S	49.3	30	13	OW-1-36D	85.0	30	30
OW-1-29D	78.4	35	26	OW-1-33S	49.7	30	13	OW-1-37D	84.0	30	29
OW-1-30D	79.0	30	38	OW-1-34S	50.1	30	12	OW-1-38D	82.0	35	35
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	29
OW-1-32D	81.6	30	28	OW-1-36S	50.3	35	13	OW-1-40D	76.0	30	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 6/19/2013

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	35	23	OW-1-43	67.4	30	19
OW-1-38S	50.6	30	14	OW-1-42D	71.0	35	21	OW-1-44	66.6	30	19
OW-1-39S	50.7	30	13	OW-1-45	65.7	35	19	OW-1-51R	60.6	30	17
OW-1-40S	51.1	30	13	OW-1-46	64.3	35	18	OW-1-52	59.3	40	16
OW-1-41S	51.5	30	13	OW-1-47	63.4	30	18	OW-1-53	60.0	40	16
OW-1-42S	51.3	30	13	OW-1-48	62.5	30	18	OW-1-54	60.0	30	15
				OW-1-49	61.5	30	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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	25.07	21.6	34.51	0	MP-1-5	24.86	19.3	38.54	0.2	MP-1-1D	30.31	24.12
MP-1-1S	25.12	39.2	27.61	0	MP-1-6	17.05	20.9	39.51	0	MP-1-2D	24.44	21.12
MP-1-2D	19.39	39.7	38.91	0.2	MP-1-7	20.27	20.9	38.13	0	MP-1-3D	35.12	34.02
MP-1-2S	19.62	38.8	25.78	0.3	MP-1-8	21.78	17.6	15.61	0	MP-1-4D	52.00	48.88
MP-1-3D	17.54	20.4	44.12	0								
MP-1-3S	17.42	20.9	36.66	0								
MP-1-4D	20.22	40.0	44.13	0								
MP-1-4S	20.26	38.8	37.71	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 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: 6/19/2013

OPERATIONAL NOTES

GA5 Air Compressor

1) Oil Level Checked with system unloaded* Yes ____ No X
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) ____ Normal (green) 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) 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:

Modified montioring points with new valves between June 3 & 4, 2013.

Soaked up small amount of oil and water from separator for disposal. Repaired check valve on onxygen storage tank #2 that was found not holding pressure. Wiped down all equipment and cleaned up all garbage from around fence areas.

DO Meter was calibrated to 100% oxygen saturation. 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:	6/28/2013
Time:	12:21
Weather:	Sunny
Outdoor Temperature:	~85° F
Inside Trailer Temperature:	~67° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	18,559	
Feed Air Pressure *	80	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	96.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	85	(psi)
(readings below are made from control panel)		
Delivery Air	87	(psi)
Element Outlet Temperature	174	(^{o}F)
Running Hours	18,781	(hours)
Loading Hours	18,300	(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	34	OW-2-9S	75'	30	20	OW-2-10D	97.2'	45	30
OW-2-3	94.3'	30	20	OW-2-10S	75'	30	29	OW-2-11D	100.8'	40	32
OW-2-4	94.7'	35	34	OW-2-11S	76.5'	30	21	OW-2-12	94'	30	22
OW-2-5	95.3'	30	31	OW-2-13S	75'	35	20	OW-2-13D	97'	30	30
OW-2-6	95.7'	30	30	OW-2-15S	75'	35	19	OW-2-14	96.4'	30	29
OW-2-7	96'	40	29	OW-2-16S	75.5'	30	19	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	45	29	OW-2-18S	74.5'	40	20	OW-2-16D	94.1'	35	32
OW-2-9D	96.7'	55	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	29

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 6/28/2013

O_2 Injection System #2

Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	35	21	OW-2-26D	95'	20	34
OW-2-19	96.1'	30	31	OW-2-24S	77.8'	35	29	OW-2-27	93.5'	25	31
OW-2-20D	96.6'	35	31	OW-2-26S	74'	35	21	OW-2-28D	92.1'	30	28
OW-2-21	96.6'	30	28	OW-2-28S	76'	30	21	OW-2-29	92.2'	35	28
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	30	19	OW-2-30D	88'	20	27
OW-2-23	97.2'	30	31	OW-2-34	71'	30	18	OW-2-31	86'	30	30
OW-2-24D	97'	30	30	OW-2-35	69.2'	30	21	OW-2-32	84'	30	35
OW-2-25	96'	30	30	OW-2-36	64.8'	30	21	OW-2-33	82'	30	32

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	27.75	23.3	21.54	0
OW-2-38	62.1'	30	20	OW-2-46	61'	30	20	MP-2-2	29.11	18.8	43.30	0
OW-2-39	60'	30	19	OW-2-47	60.5'	30	19	MP-2-3S	28.95	23.6	31.44	0
OW-2-40	61.7'	35	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	29.07	39.2	41.25	0.4
OW-2-41	61.7'	30	21	MP-2-2	39.11	25.15		MP-2-4	17.71	21.2	22.97	0
OW-2-42	61.6'	35	20	MP-2-3S	28.95	33.65		MP-2-5	15.84	22.4	31.13	0
OW-2-43	61.4'	30	20	MP-2-3D	40.02	36.71						
OW-2-44R	60.6'	30	20	MP-2-5	33.39	38.77						

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: 6/28/2013

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_3 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:

Soaked up small amount of oil and water from separator unit for disposal. Repaired leak in air line hose leaving the booster pump. Wiped down all equipment and cleaned up all garbage, leaves and weeds from around fence areas.

The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 99 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 #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	7/1/2013
Time:	13:15
Weather:	Rain
Outdoor Temperature:	~79° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,432.5	
Feed Air Pressure *	85	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	98.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	106	(psi)
Element Outlet Temperature	117	(oF)
Running Hours	7,450	(hours)
Loading Hours	4,676	(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	40	29	OW-1-5S	67.3	30	19	OW-1-9D	88.5	30	28
OW-1-2	96.5	30	31	OW-1-6S	67.0	30	19	OW-1-10D	87.2	50	27
OW-1-3	96.3	35	32	OW-1-7S	66.9	30	17	OW-1-11D	86.1	40	31
OW-1-4	95.0	30	30	OW-1-8S	66.7	35	17	OW-1-12D	85.3	30	31
OW-1-5D	93.9	30	28	OW-1-9S	66.0	45	20	OW-1-13D	84.7	30	29
OW-1-6D	92.4	30	30	OW-1-10S	54.6	30	14	OW-1-14D	84.1	30	29
OW-1-7D	91.1	40	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	31
OW-1-8D	89.6	30	29	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: 7/1/2013

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	14	OW-1-21S	49.3	40	11
OW-1-14S	52.7	30	16	OW-1-18D	78.3	30	28	OW-1-22S	49.3	40	11
OW-1-15S	52.2	30	16	OW-1-19D	78.9	30	29	OW-1-23S	48.8	45	12
OW-1-16SR	51.8	30	26	OW-1-20D	79.5	30	29	OW-1-24S	48.4	30	12
OW-1-17S	50.7	40	25	OW-1-21D	79.5	30	28	OW-1-25S	48.8	30	14
OW-1-18S	50.2	30	15	OW-1-22D	79.5	30	28	OW-1-26SR	48.3	30	15
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	14
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	26	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	25	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	40	29
OW-1-26D	78.1	20	29	OW-1-30S	48.8	25	13	OW-1-34D	84.5	45	30
OW-1-27D	77.9	30	29	OW-1-31S	49.3	30	13	OW-1-35D	85.0	45	30
OW-1-28D	78.0	35	28	OW-1-32S	49.3	30	13	OW-1-36D	85.0	35	30
OW-1-29D	78.4	30	26	OW-1-33S	49.7	30	13	OW-1-37D	84.0	30	29
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	12	OW-1-38D	82.0	30	35
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	29
OW-1-32D	81.6	30	28	OW-1-36S	50.3	30	13	OW-1-40D	76.0	35	28

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.

Date: 7/1/2013

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	23	OW-1-43	67.4	25	19
OW-1-38S	50.6	30	14	OW-1-42D	71.0	30	21	OW-1-44	66.6	25	19
OW-1-39S	50.7	30	13	OW-1-45	65.7	35	19	OW-1-51R	60.6	30	18
OW-1-40S	51.1	20	13	OW-1-46	64.3	45	18	OW-1-52	59.3	30	16
OW-1-41S	51.5	30	14	OW-1-47	63.4	50	18	OW-1-53	60.0	20	16
OW-1-42S	51.3	30	13	OW-1-48	62.5	40	18	OW-1-54	60.0	30	15
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	30	17				

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	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	24.89	18.1	32.14	0	MP-1-5	24.67	18.7	39.19	0	MP-1-1D	28.11	30.64
MP-1-1S	24.95	39.6	25.88	0	MP-1-6	16.95	21.7	16.15	0	MP-1-2D	31.00	29.55
MP-1-2D	19.25	35.5	36.11	0.3	MP-1-7	20.22	20.6	46.21	0	MP-1-3D	50.51	52.39
MP-1-2S	19.48	32.9	26.17	0.3	MP-1-8	21.74	16.6	13.41	0	MP-1-4D	8.17	8.08
MP-1-3D	17.45	19.8	52.19	0								
MP-1-3S	17.29	36.6	33.39	0								
MP-1-4D	20.15	40.0	48.98	0								
MP-1-4S	20.20	36.3	23.06	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/1/2013

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) 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:

Soaked up small amount of oil and water from separator for disposal. Changed belt on booster pump. Wiped down all equipment and cleaned up all garbage from around fence areas.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 99 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: