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Groundwater Sampling, NAPL Monitoring/Recovery and Groundwater Treatment Performance Report for the First Quarter of 2013 (January - March 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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URS

September 2013

GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT FOR THE FIRST QUARTER OF 2013 (JANUARY – MARCH)

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 First Quarter (January, February, and March) 2013.

Groundwater monitoring and sampling was conducted on March 8 – March 20, 2013. This included measuring the depth to groundwater and NAPL thickness in approximately 53 wells. Groundwater samples were collected from 25 wells and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL monitoring and recovery was conducted on February 24 and March 17 for a total of two events in the First Quarter of 2013.

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

- The general direction of groundwater flow in the First 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 the shallow, intermediate, and deep water bearing zones.
- The 100 ug/L dissolved-phase plume extended approximately 1,125 ft south of the site boundary.
- Dense non-aqueous phase liquid (DNAPL) was detected in 14 of the existing 17 wells during the First Quarter. The wells were located within a parking lot immediately south of the site.
- NAPL recovery activities resumed in February 2013. Approximately 745 gallons of NAPL was recovered between April 2007 and July 2011. Approximately 22.11 gallons of NAPL were recovered during the First Quarter of 2013.

- Based on a comparison between the First Quarter 2013 and Fourth Quarter 2012 data and the previous 2012 data, the concentrations of total BTEX and total PAHs remained stable in most site monitoring wells, although reductions in PAH concentrations in well HIMW-20I reduced the estimated size of the groundwater plume.

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 First 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 First 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 First Quarter, F&N monitored System No. 1 and No. 2 during six events.

The reported dissolved oxygen concentrations that were collected during the Second, Third, and Fourth Quarter 2012 were much lower than part of the First Quarter 2013 or in 2011 with no other change in the operation of the oxygen delivery systems. This drop in reported dissolved oxygen concentrations is considered the result of the use of a faulty dissolved oxygen (DO) meter. URS does not consider this reported data valid and does not agree that it accurately represents dissolved oxygen conditions around the systems. F&N repaired the malfunctioning equipment so subsequent DO readings are considered valid. Based on supplemental data of groundwater sampling DO readings, well headspace readings, system operation and maintenance information, as well as the stable levels of contaminants in the groundwater sampling data, URS believes that the oxygen delivery systems have maintained DO concentrations suitable for aerobic biodegradation.

1.0 INTRODUCTION

This quarterly report summarizes the field activities, analytical results, and data interpretations associated with groundwater quality sampling, gauging, and recovery of NAPL, and the monitoring of the groundwater treatment systems at the Hempstead Intersection Street Former MGP site during the First Quarter 2013 (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 First Quarter of 2013:

- Measured the depth to groundwater and NAPL thickness in all accessible on site and off site monitoring wells (on March 8, 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 (February 24 and March 17, 2013), see Tables 1 and 3.
- Collected groundwater samples from 25 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 DO measurements with a DO meter (YSI 55A) on System No. 1 during six events and on System No. 2 during six events in First Quarter 2013. Monitoring is conducted bi-monthly to assess the performance of groundwater treatment systems for 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 First Quarter of 2013 included the measurement of the depth to groundwater and NAPL thickness in 53 monitoring wells, the collection of groundwater samples from 25 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. First 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 First 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 January 8, January 22, February 8, February 22, March 8, and March 21 and on System No. 2 on January 8, January 21, February 7, February 21, March 7, and March 20. 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 thicknesses and recovery amounts 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 in the earlier stages of the project for the office building property, where the majority of the NAPL recovery wells were located. However, the project sequencing changed and the ISS work for the 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.

NAPL levels were monitored in 17 wells and detected in 14 wells during the February 24 and March 17 events (Table 3). All measured NAPL consisted of dense non-aqueous phase liquid (DNAPL) located at the bottom of the wells. Recovery of NAPL was conducted using the appropriate personal protective equipment. First, 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. Water and product that were recovered were stored in 55-gallon steel drums for subsequent offsite disposal under hazardous waste manifest.

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 lists the measured DNAPL thicknesses and cumulative recovery amounts for each well during first quarter 2013.

2.3 Groundwater Sampling

Low-flow groundwater sampling methods were used to sample groundwater, which consisted of 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. $\pm$ 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 under a non-hazardous waste manifest. The Data Usability Summary Report is presented in Appendix A.

There were 25 monitoring wells sampled during the First Quarter March 8 – 20, 2013 groundwater sampling event. Results of this groundwater sampling event are presented in Table 4.

2.4 Groundwater Treatment System Operation

The 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 First 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 First Quarter for System No. 1 on January 8, January 22, February 8, February 22, March 8, and March 21 for a total of six events. System 2 measurements were collected on January 8, January 21, February 7, February 21, March 7, and March 20 for a total of six 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 First 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 1,125 feet south of the site boundary. This is 195 feet closer to the site boundary than in the Fourth Quarter 2012. Based on comparisons to previous quarterly groundwater monitoring data, the concentrations of total BTEX or PAHs in groundwater sampled during the First Quarter in most site monitoring wells remained relatively stable or decreased.

In March 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 19 μg/L for PAH (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 2,271 μg/L for PAH (intermediate well, HIMW-005I), see Figure 4.

The following are some wells showing changes during First Quarter 2013. Wells HIMW-013I , HIMW-020I, HIMW-024, and HIMW-025 are discussed below:

- For HIMW-013I, total BTEX concentrations increased from 7 μg/L in Fourth Quarter 2012 to 53 μg/L in March 2013. PAHs increased slightly from 8 μg/L in Fourth Quarter 2012 to 13 μg/L in March 2013.

- For HIMW-020I, total BTEX concentrations decreased from 130 μg/L to 6 μg/L, which is the fifth consecutive quarter that total BTEX concentrations decreased at this location. In First Quarter 2013 only xylenes were detected (6 μg/L) above laboratory reporting limits. Total PAH concentrations were also significantly lower going from 1,266 μg/L in Fourth Quarter 2012 to 9 μg/L in March 2013.

- For HIMW-024, total BTEX and total PAH concentrations increased from Fourth Quarter 2012 to First Quarter 2013. Total BTEX increased from 34 μg/L to 107 μg/L bringing it

above 100 µg/L threshold and the total PAH increased from 13 µg/L to 74 µg/L in the First Quarter 2013.

- For HIMW-025, BTEX concentrations were lower than the previous quarter, decreasing from 223 µg/L (above the 100 µg/L threshold) to "not detected" in First Quarter 2013. The PAHs continued to be "not detected" for the second consecutive quarter.

3.2 Potentiometric Heads and NAPL Thickness

Potentiometric heads and NAPL thickness measurements for First 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 First Quarter. The data for First 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 the shallow, intermediate, and deep water bearing zones. These values are historically consistent.

DNAPL was observed in 14 of the existing 17 wells during the First Quarter 2013. All of the wells where DNAPL was identified are within a parking lot that is immediately south of the site (Figure 8). Wells located within the property boundary of the site were 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 and Table 4 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 10.86 gallons during the February 24 event and 11.25 gallons during the March 17 event for a total of 22.11 gallons of NAPL recovered during the First Quarter 2013. Approximately 745 gallons of NAPL was recovered between April 2007 and July 2011. To date, a total of 767.11 gallons of NAPL have been recovered since April 2007. 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 First Quarter 2013, as collected and reported by F&N, is presented in Table 5.

An error was discovered regarding the monitoring of both groundwater treatment systems by F&N in 2012 and part of the First Quarter of 2013. The monitoring error is discussed at length in the 2012 Annual Groundwater Sampling, NAPL Monitoring, and Groundwater Treatment Performance Report (URS, 2013a). During January 2013, the data collected by F&N is not considered accurate by URS for the reasons discussed previously in the above referenced report. Equipment malfunctions during the monitoring events on February 7 and 8 prevented F&N from collecting DO readings in monitoring points for Systems No. 1 and 2.

F&N repaired the DO meter equipment malfunction so that starting with the second monitoring event in February 2013, DO readings in both systems collected by F&N are considered reliable measures of the system performance.

System No. 1

The average reported DO for System No. 1 from the last three monitoring events (February 22, March 8, and March 21) in the First Quarter 2013 was 27.81 mg/L. DO readings ranged from a low of 7.42 mg/L at MP-1-5 to a high of 56.27 mg/L at MP-1-3D, which is the deeper of the two monitoring points located near the middle of the delivery line closest to the Oxygen System enclosure. Based on the data collected during the First Quarter of 2013, System No. 1 is performing as expected and creating an aerobic environment in the aquifer.

System No. 2

The average reported DO for System No. 2 from the last three monitoring events (February 21, March 7, and March 20) in the First Quarter 2013 was 33.17 mg/L. DO readings during the last three monitoring events in the First Quarter ranged from a low of 11.68 mg/L at MP-2-4 to a high of 54.30 mg/L at MP-2-3S, which is the shallower of the two monitoring points located near the middle of the delivery line closest to the Oxygen System enclosure. Based on the data collected during the First 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 First Quarter 2013 groundwater sampling, NAPL monitoring and recovery data, and groundwater treatment performance presented in this report:

- The general direction of groundwater flow in shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 ft/ft for the shallow, intermediate, and deep water bearing zones.
- The 100 µg/L dissolved-phase plume extended up to approximately 1,125 feet south of the site boundary.
- DNAPL was detected in 14 of the existing 17 wells. The wells are located within a parking lot immediately south of the site.
- Approximately 745 gallons of NAPL was recovered between April 2007 and July 2011. Approximately 22.11 gallons of NAPL was recovered in the First Quarter 2013 in two events conducted on February 24 and March 17.
- Based on a comparison of the Third and Fourth Quarter 2012 data and the previous data, the concentrations of total BTEX and total PAHs remained stable for most site monitoring wells, although reductions in PAH concentrations in well HIMW-020I caused the reduction in the estimated size of the groundwater plume.
- 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 First Quarter, F&N monitored System No. 1 and No. 2 during six events. Both systems are performing as expected and creating an aerobic environment in the aquifer.

REFERENCES

URS, 2007. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Second and Third Quarters of 2007 (April 2007 and July-August 2007) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* November.

URS, 2008a. *2007 Annual Groundwater Sampling and NAPL Monitoring/Recovery Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* February.

URS, 2008b. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the First Quarter of 2008 (January – March 2008) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* June.

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.

URS, 2009a. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Third Quarter of 2008 (July - September 2008) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* January.

URS, 2009b. *2008 Annual Groundwater Sampling and NAPL Monitoring/Recovery Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* March.

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.

URS, 2010b. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the First Quarter of 2010 (January - March 2010) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* April.

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.

URS, 2010d. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Third Quarter of 2010 (July - September 2010) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* December.

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

URS, 2011a. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the First Quarter of 2011 (January - March 2011) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* July.

URS, 2011b. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Second Quarter of 2011 (April - June 2011) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* September.

URS, 2011c. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Third Quarter of 2011 (July- September 2011) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* December.

URS, 2012a. *2011 Annual Groundwater Sampling and NAPL Monitoring/Recovery Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* May.

URS, 2012b. *Groundwater Sampling and Groundwater Treatment Performance Report for the First Quarter of 2012 (January – March 2012) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* October.

URS, 2012c. *Groundwater Sampling and Groundwater Treatment Performance Report for the Second Quarter of 2012 (April - June 2012) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* December.

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

TABLES

Table 1

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

Well ID	First Quarter (March 8 - March 20, 2013)			NAPL Monitoring and DNAPL Recovery Events	
	Water Level	NAPL Thickness	Water Quality	February 24, 2013	March 17, 2013
HIMW-002S*					
HIMW-002I*					
HIMW-002D*					
HIMW-003S	X	X	X		
HIMW-003I	X	X	X		
HIMW-003D	X	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	X	X			
HIMW-011D	X	X			
HIMW-012S	X	X	X		
HIMW-012I	X	X	X		
HIMW-012D	X	X	X		
HIMW-013S	X	X	X		
HIMW-013I	X	X	X		
HIMW-013D	X	X	X		
HIMW-014I	X	X	X		
HIMW-014D	X	X	X		
HIMW-015I	X	X	X		
HIMW-015D	X	X	X		
HIMW-016S	X	X			
HIMW-016I	X	X			
HIMW-017S	X	X		X	
HIMW-20S	X	X	X		
HIMW-20I	X	X	X		
HIMW-21	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
First Quarter 2013 [(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter (March 8 - March 20, 2013)			NAPL Monitoring and DNAPL Recovery Events	
	Water Level	NAPL Thickness	Water Quality	February 24, 2013	March 17, 2013
IPR-14	X	X			
IPR-15	X	X			
IPR-16	X	X			X
IPR-17	X	X			
IPR-18	X	X			
IPR-19S***					
IPR-19D	X	X			
IPR-20	X	X			X
IPR-21	X	X			X
IPR-22	X	X		X	
IPR-23	X	X			
IPR-24	X	X			
IPR-29	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.

Table 2
Groundwater and NAPL Measurements
First 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	3/8/2013	73.82	NM	NM	NM	39.8	NM	NM	NM
HIMW-002I	3/8/2013	78.87	NM	NM	NM	88.8	NM	NM	NM
HIMW-002D	3/8/2013	74.13	NM	NM	NM	110.8	NM	NM	NM
HIMW-003S	3/8/2013	65.00	ND	17.93	ND	34.5	0	0.00	47.07
HIMW-003I	3/8/2013	64.94	ND	18.13	ND	85.3	0	0.00	46.81
HIMW-003D	3/8/2013	65.26	ND	18.63	ND	142.8	0	0.00	46.63
HIMW-004S	3/8/2013	72.74	ND	26.34	ND	41.6	0	0.00	46.40
HIMW-004I	3/8/2013	72.78	ND	26.42	ND	90.4	0	0.00	46.36
HIMW-004D	3/8/2013	72.65	ND	26.71	ND	177.1	0	0.00	45.94
HIMW-005S	3/8/2013	67.19	ND	20.68	ND	38.9	0	0.00	46.51
HIMW-005I	3/8/2013	67.22	ND	20.75	ND	91.9	0	0.00	46.47
HIMW-005D	3/8/2013	67.22	ND	21.28	ND	139.6	0	0.00	45.94
HIMW-008S	3/8/2013	65.04	ND	18.98	ND	37.0	0	0.00	46.06
HIMW-008I	3/8/2013	65.14	ND	19.06	ND	75.0	0	0.00	46.08
HIMW-008D	3/8/2013	64.93	ND	18.92	ND	114.6	0	0.00	46.01
HIMW-009S	3/8/2013	70.03	ND	23.42	ND	39.6	0	0.00	46.61
HIMW-009I	3/8/2013	69.93	ND	23.38	ND	80.5	0	0.00	46.55
HIMW-009D	3/8/2013	69.96	ND	23.48	ND	122.8	0	0.00	46.48
HIMW-010S	3/8/2013	71.60	ND	24.06	ND	39.1	0	0.00	47.54
HIMW-010I	3/8/2013	71.47	ND	23.82	ND	89.8	0	0.00	47.65
HIMW-010D[(2)]	3/8/2013	71.44	NM	NM	NM	136.0	0	0.00	NM
HIMW-011S	3/8/2013	71.62	22.75	24.45	ND	39.9	0	0.00	47.17
HIMW-011I	3/8/2013	71.43	ND	24.25	ND	93.0	0	0.00	47.18
HIMW-011D	3/8/2013	71.39	ND	24.27	ND	122.1	0	0.00	47.12
HIMW-012S	3/8/2013	61.58	ND	16.78	ND	33.0	0	0.00	44.80
HIMW-012I	3/8/2013	61.59	ND	18.63	ND	74.5	0	0.00	42.96
HIMW-012D	3/8/2013	61.82	ND	18.23	ND	128.3	0	0.00	43.59
HIMW-013S	3/8/2013	72.83	ND	30.07	ND	48.6	0	0.00	42.76
HIMW-013I	3/8/2013	72.60	ND	29.82	ND	81.5	0	0.00	42.78
HIMW-013D	3/8/2013	72.53	ND	29.57	ND	121.9	0	0.00	42.96
HIMW-014I	3/8/2013	71.71	ND	29.02	ND	96.5	0	0.00	42.69
HIMW-014D	3/8/2013	71.59	ND	30.73	ND	152.0	0	0.00	40.86
HIMW-015I	3/8/2013	64.18	ND	24.54	ND	92.5	0	0.00	39.64
HIMW-015D	3/8/2013	63.96	ND	25.64	ND	153.1	0	0.00	38.32
HIMW-016S	3/8/2013	67.45	ND	20.74	28.91	34.4	0	5.50	46.71
HIMW-016I	3/8/2013	67.50	ND	20.88	77.16	82.7	0	5.50	46.62
HIMW-017S	3/8/2013	65.96	ND	19.60	36.40	36.7	0	0.30	46.36
HIMW-020S	3/8/2013	70.43	ND	24.94	ND	36.6	0	0.00	45.49
HIMW-020I	3/8/2013	70.30	ND	24.78	ND	74.5	0	0.00	45.52

Table 2
Groundwater and NAPL Measurements
First 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	3/8/2013	NM	ND	19.24	42.1	45.3	0	3.20	NM
HIMW-022	3/8/2013	NM	ND	29.93	ND	64.4	0	0.00	NM
HIMW-023	3/8/2013	NM	ND	30.08	ND	75.6	0	0.00	NM
HIMW-024	3/8/2013	NM	ND	14.51	ND	55.0	0	0.00	NM
HIMW-025	3/8/2013	NM	ND	16.89	ND	52.3	0	0.00	NM
PZ-02	3/8/2013	72.96	NM	NM	NM	35.3	NM	NM	NM
PZ-03	3/8/2013	64.58	NM	NM	NM	29.5	NM	NM	NM
IPR-14	3/8/2013	66.93	ND	20.14	ND	44.4	0	0.50	46.79
IPR-15	3/8/2013	67.93	ND	21.11	ND	44.4	0	0.01	46.82
IPR-16	3/8/2013	69.49	ND	22.64	47.75	49.1	0	1.30	46.85
IPR-17	3/8/2013	70.60	ND	23.68	54.01	54.1	0	0.10	46.92
IPR-18	3/8/2013	66.87	ND	20.21	ND	50.0	0	0.00	46.66
IPR-19S(2)	3/8/2013	67.68	NM	NM	NM	45.1	NM	NM	NM
IPR-19D	3/8/2013	67.96	ND	21.21	ND	89.9	0	0.00	46.75
IPR-20	3/8/2013	66.70	ND	20.15	43.40	45.4	0	2.00	46.55
IPR-21	3/8/2013	67.67	ND	21.05	39.46	45.0	0	5.50	46.62
IPR-22	3/8/2013	66.33	ND	19.89	40.90	45.4	0	4.50	46.44
IPR-23	3/8/2013	66.67	ND	20.21	45.40	45.4	0	0.00	46.46
IPR-24	3/8/2013	65.88	ND	19.52	ND	44.4	0	2.30	46.36
IPR-29	3/8/2013	NM	ND	19.51	45.7	49.7	0	4.00	NM
IPR-30	3/8/2013	NM	ND	20.51	47.7	50.0	0	2.30	NM
OSMW-01	3/8/2013	71.12	NM	NM	NM	42.2	0	NM	NM
OSMW-02	3/8/2013	71.59	NM	NM	NM	45.1	0	NM	NM
OSMW-03	3/8/2013	71.39	NM	NM	NM	44.7	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.

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
First Quarter 2013
Hempstead Intersection Street Former MGP Site

Well ID	Well Diameter	February 24, 2013			March 17, 2013		
		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]
HIMW-016S	2	ND	5.50	0.00	ND	5.50	0.00
HIMW-016I	2	ND	5.50	0.00	ND	5.50	0.00
HIMW-017S	2	ND	2.10	0.36	ND	0.30	0.00
HIMW-021	6	ND	5.00	2.50	ND	1.0	0.00
IPR-14	6	ND	0.50	0.00	ND	0.5	0.00
IPR-15	6	ND	trace	0.00	ND	trace	0.00
IPR-16	5.75	ND	1.20	0.00	ND	1.4	2.10
IPR-17	5.75	ND	0.10	0.00	ND	0.1	0.00
IPR-18	6	ND	0.00	0.00	ND	0.00	0.00
IPR-19S[(1)]	6	NM	NM	0.00	NM	NM	0.00
IPR-19D	6	ND	0.00	0.00	ND	0.00	0.00
IPR-20	6	ND	1.90	0.00	ND	2.10	3.15
IPR-21	6	ND	5.20	0.00	ND	6.00	6.00
IPR-22	6	ND	5.50	3.00	ND	4.50	0.00
IPR-23	6	ND	0.00	0.00	ND	0.00	0.00
IPR-24	6	ND	2.30	0.00	ND	2.00	0.00
IPR-29	6	ND	9.00	5.00	ND	4.6	0.00
IPR-30	6	ND	2.50	0.00	ND	2.5	0.00
		Volume Removed		**10.86**	Volume Removed		**11.25**

Total volume recovered during the First Quarter 2013: 22.11
Total volume of NAPL recovered since April 2007: 767.11

Notes:

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

LNAPL Light Non-Aqueous Phase Liquid
DNAPL Dense Non-Aqueous Phase Liquid
ND NAPL Not Detected
NM Not Measured

Table 4

Dissolved-Phase Concentrations of Total BTEX and Total PAH Compounds First Quarter of 2013 Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2013 March 8 - March 20, 2013	
	BTEX [ug/L]	PAH [ug/L]
HIMW-002D		
HIMW-002I		
HIMW-002S		
HIMW-003D	ND	ND
HIMW-003I	ND	ND
HIMW-003S	ND	ND
HIMW-004D		
HIMW-004I		
HIMW-004S		
HIMW-005D	64	900
HIMW-005I	95 (DUP - 97)	2,271 (DUP - 2,041)
HIMW-005S	ND	1
HIMW-008D	ND	ND
HIMW-008I	ND	ND
HIMW-008S	27	3
HIMW-009D		
HIMW-009I		
HIMW-009S		
HIMW-010D		
HIMW-010I		
HIMW-010S		
HIMW-011D		
HIMW-011I		
HIMW-011S		
HIMW-012D	ND	ND
HIMW-012I	47	109
HIMW-012S	ND	ND
HIMW-013D	3	9
HIMW-013I	53	13
HIMW-013S	ND	ND
HIMW-014D	ND	ND
HIMW-014I	38	43
HIMW-015D	ND	ND
HIMW-015I	14	19
HIMW-016I		
HIMW-016S		
HIMW-017S		
HIMW-020I	6 (DUP - 6)	9 (DUP - 8)
HIMW-020S	ND	ND
HIMW-022	9	17
HIMW-023	ND	ND
HIMW-024	107	74
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
First Quarter 2013
Hempstead Intersection Street Former MGP Site

System #1

ID	January 8, 2013						January 22, 2013					
	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	NM	28.0	0.0	2.89	NM	NM	26.66	NM	0.0	10.07	NM	NM
MP-1-1D	NM	20.6	0.0	2.54	2.85	3.13	26.52	NM	0.0	18.70	18.01	17.40
MP-1-2S	NM	23.1	0.0	3.18	NM	NM	21.01	NM	0.0	9.46	NM	NM
MP-1-2D	NM	20.7	0.0	3.61	3.31	2.9	20.64	NM	0.0	11.14	9.00	7.79
MP-1-3S	NM	19.1	0.0	2.83	NM	NM	18.71	NM	0.0	8.07	NM	NM
MP-1-3D	NM	19.1	0.0	4.55	3.05	2.39	18.73	NM	0.0	12.71	10.11	9.01
MP-1-4S	NM	23.2	0.0	2.65	NM	NM	21.38	NM	0.0	7.00	NM	NM
MP-1-4D	NM	20.9	0.0	2.63	2.14	2.45	21.51	NM	0.3	7.11	7.69	8.40
MP-1-5	NM	19.3	0.0	3.09	NM	NM	26.03	NM	0.0	17.87	NM	NM
MP-1-6	NM	18.8	0.0	2.54	NM	NM	18.54	NM	0.0	6.19	NM	NM
MP-1-7	NM	19.0	0.0	2.17	NM	NM	21.85	NM	0.0	5.12	NM	NM
MP-1-8	NM	18.7	0.0	2.24	NM	NM	22.93	NM	0.0	4.97	NM	NM

ID	February 8, 2013						February 22, 2013					
	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	26.81	40.0	0.0	NM	NM	NM	26.69	40.0	0.2	16.98	NM	NM
MP-1-1D	26.62	22.7	0.0	NM	NM	NM	26.52	22.3	0.0	13.41	12.76	11.82
MP-1-2S	21.16	39.1	0.0	NM	NM	NM	21.05	38.3	0.6	28.50	NM	NM
MP-1-2D	20.75	21.0	0.0	NM	NM	NM	20.57	35.4	0.0	47.37	45.44	40.91
MP-1-3S	18.85	20.9	0.0	NM	NM	NM	18.77	23.7	0.0	25.47	NM	NM
MP-1-3D	18.82	20.9	0.3	NM	NM	NM	18.79	20.9	0.0	25.04	22.51	19.31
MP-1-4S	21.36	40.0	0.0	NM	NM	NM	21.34	20.9	0.0	23.14	NM	NM
MP-1-4D	21.52	32.2	0.5	NM	NM	NM	21.52	20.9	0.0	29.60	27.52	21.00
MP-1-5	26.30	21.6	0.0	NM	NM	NM	26.18	20.9	0.0	24.53	NM	NM
MP-1-6	18.59	20.9	0.0	NM	NM	NM	18.57	20.9	0.0	10.76	NM	NM
MP-1-7	21.88	20.9	0.0	NM	NM	NM	21.83	20.9	0.0	23.14	NM	NM
MP-1-8	22.98	30.0	0.0	NM	NM	NM	22.90	20.9	0.0	10.12	NM	NM

ID	March 8, 2013						March 21, 2013					
	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	26.49	40.1	0.0	22.87	NM	NM	26.24	39.7	0.0	24.78	NM	NM
MP-1-1D	26.33	23.8	0.1	42.41	21.12	19.18	26.11	23.7	0.0	49.45	21.82	19.17
MP-1-2S	20.94	37.5	0.4	29.95	NM	NM	20.53	40.0	0.0	30.31	NM	NM
MP-1-2D	20.4	35.9	0.0	46.77	33.41	30.01	20.01	25.4	0.0	42.12	37.19	21.79
MP-1-3S	18.57	22.5	0.2	28.68	NM	NM	18.28	27.7	0.0	38.71	NM	NM
MP-1-3D	18.61	21.1	0.0	35.21	31.35	29.18	18.32	24.5	0.0	56.27	42.47	39.00
MP-1-4S	21.15	22.7	0.0	29.60	NM	NM	20.83	25.8	0.0	43.75	NM	NM
MP-1-4D	21.33	22.9	0.0	32.79	23.37	20.11	21.03	24.7	0.0	27.82	40.20	49.14
MP-1-5	25.98	20.9	0.0	30.61	NM	NM	25.72	20.9	0.0	21.05	NM	NM
MP-1-6	18.40	20.9	0.0	8.89	NM	NM	18.09	20.9	0.0	7.42	NM	NM
MP-1-7	21.65	20.9	0.0	25.29	NM	NM	21.35	20.9	0.0	21.14	NM	NM
MP-1-8	22.77	20.9	0.0	17.93	NM	NM	18.09	20.9	0.0	9.11	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

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

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

System #2

	January 8, 2013					
ID	**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	NM	20.9	0.0	2.42	NM	NM
MP-2-2	NM	18.0	0.0	2.91	2.61	2.53
MP-2-3S	NM	18.5	0.0	3.08	3.17	3.11
MP-2-3D	NM	20.9	0.0	2.32	2.86	3.19
MP-2-4	NM	20.3	0.0	3.02	NM	NM
MP-2-5	NM	20.2	0.0	3.20	3.04	3.08

	January 21, 2013					
ID	**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	29.63	NM	0.0	12.18	NM	NM
MP-2-2	30.15	NM	0.0	15.05	9.48	8.30
MP-2-3S	30.82	NM	0.0	8.88	9.04	8.11
MP-2-3D	31.01	NM	0.3	9.74	9.11	8.89
MP-2-4	19.53	NM	0.0	11.10	NM	NM
MP-2-5	17.73	NM	0.0	8.12	12.68	9.43

	February 7, 2013					
ID	**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	29.82	21.4	0.0	NM	NM	NM
MP-2-2	30.91	21.9	0.0	NM	NM	NM
MP-2-3S	31.01	22.4	0.0	NM	NM	NM
MP-2-3D	31.22	40.0	0.5	NM	NM	NM
MP-2-4	19.68	23.9	0.0	NM	NM	NM
MP-2-5	17.85	21.3	0.0	NM	NM	NM

	February 21, 2013					
ID	**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	29.65	20.9	0.0	17.42	NM	NM
MP-2-2	30.71	20.9	0.0	35.41	33.39	23.12
MP-2-3S	30.82	23.4	0.5	51.21	45.36	44.14
MP-2-3D	31.01	40.0	0.0	47.37	45.91	41.14
MP-2-4	19.44	22.6	0.0	15.50	NM	NM
MP-2-5	17.63	20.9	0.0	31.39	38.56	28.21

	March 7, 2013						March 20, 2013					
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**
MP-2-1	29.51	20.9	0.0	17.35	NM	NM	29.28	20.9	0.0	22.67	NM	NM
MP-2-2	30.60	20.9	0.0	41.71	40.11	25.75	30.36	20.9	0.0	44.12	NM	NM
MP-2-3S	30.68	20.9	0.0	54.30	52.44	47.56	30.45	20.9	0.0	52.10	50.19	44.45
MP-2-3D	30.90	20.9	0.0	46.44	40.11	37.77	30.65	40.0	0.0	40.27	35.05	34.15
MP-2-4	19.34	20.9	0.0	11.68	NM	NM	19.06	22.9	0.0	19.55	NM	NM
MP-2-5	17.53	20.9	0.0	21.02	19.83	21.82	17.24	24.6	0.0	27.47	21.55	29.31

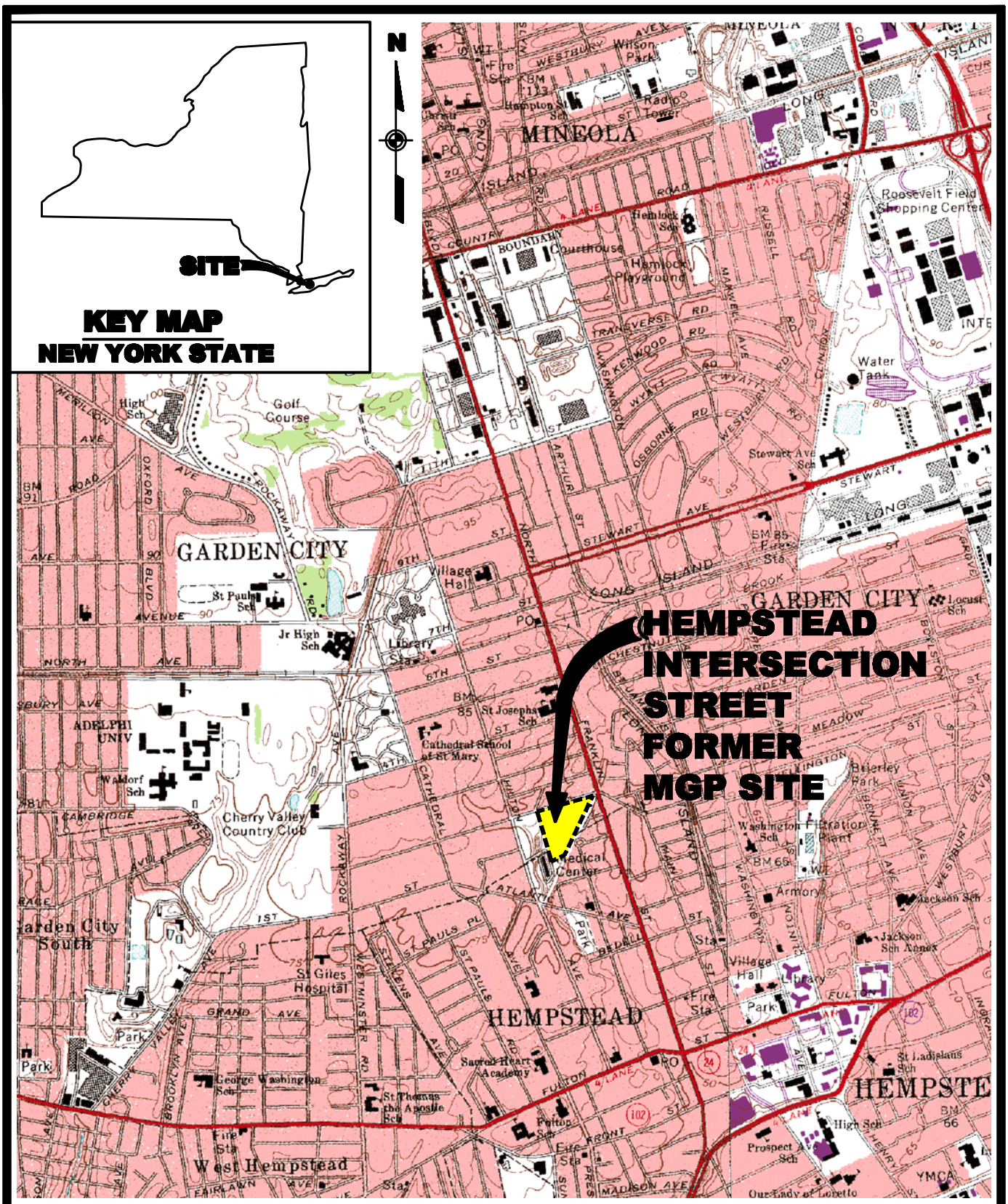
Abbreviations

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

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

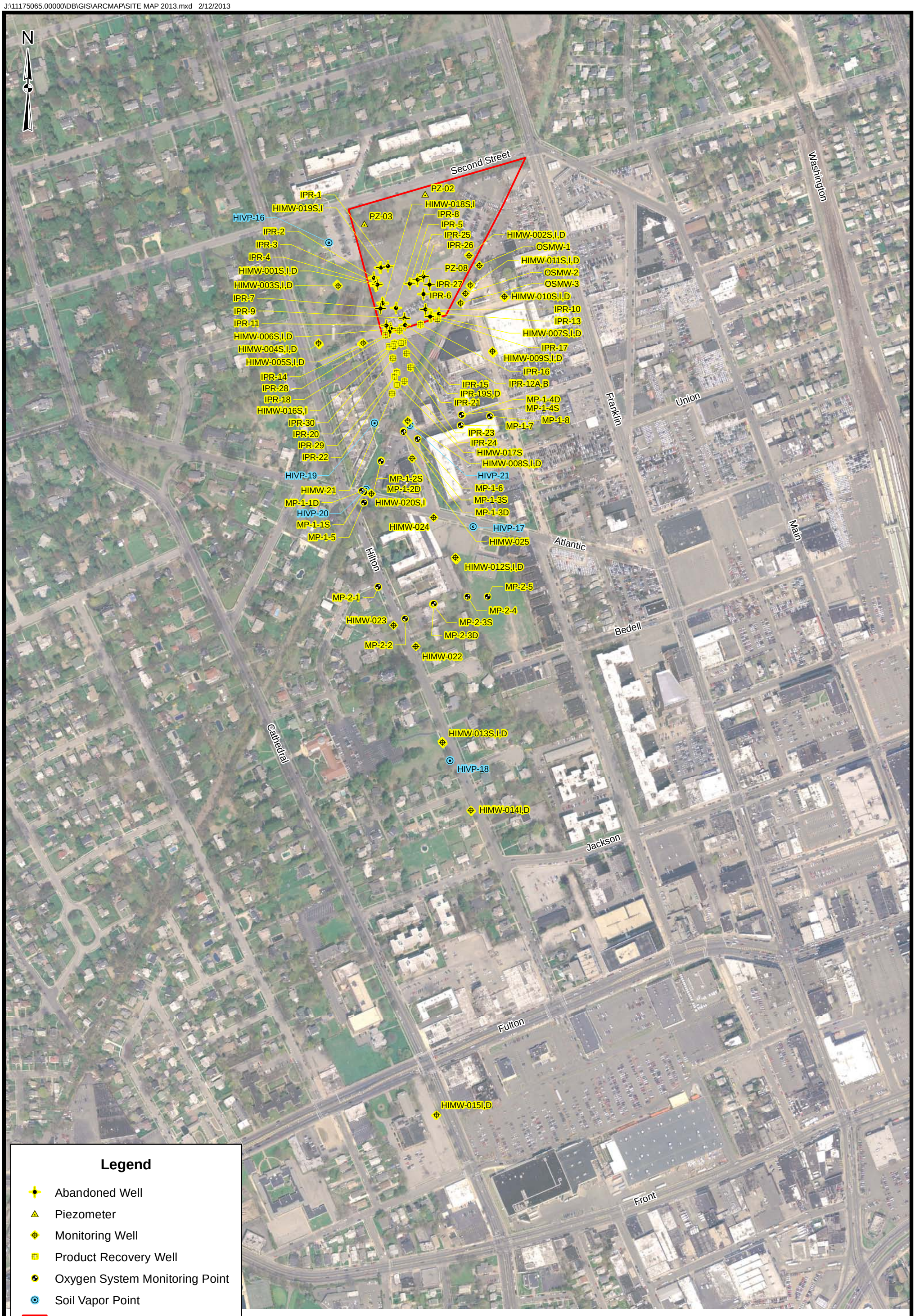
URS Corporation

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 2/12/2013

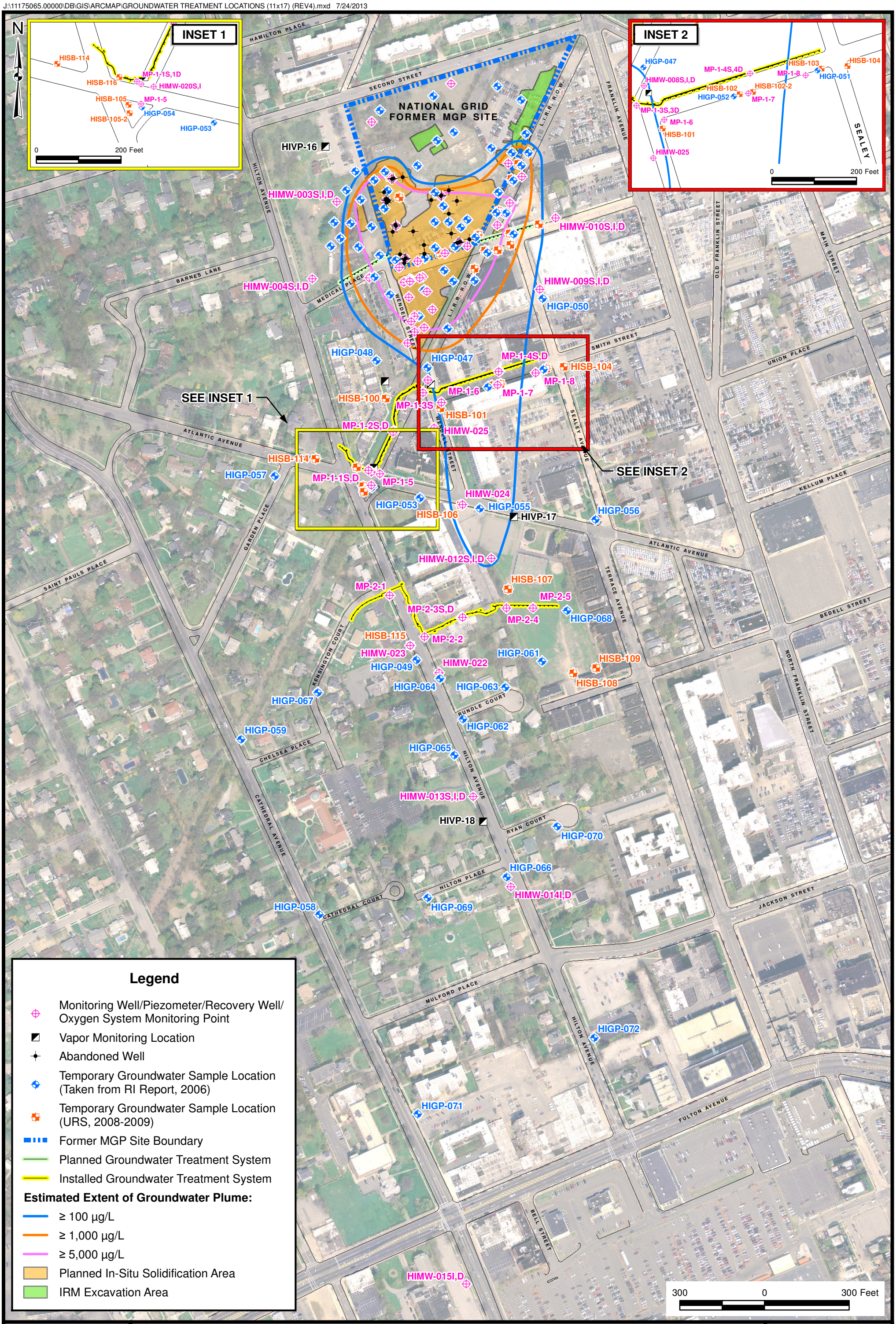


URS

NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY
SITE MAP - DECEMBER 2012

FIGURE 2

J:\11175065.00000\DB\GIS\ARCMAP\GROUNDWATER TREATMENT LOCATIONS (11x17) (REV4).mxd 7/24/2013



URS

NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NEW YORK
SOIL REMEDIATION AND GROUNDWATER TREATMENT LOCATIONS - MARCH 2013

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
38–40	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 (19)
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 (6)	ND–3,868 (9)

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
34–38	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)	ND (ND)
80.5–90.5	ND–13 (ND)	ND (ND)
133–143	ND–8.2 (ND)	ND–30 (ND)

HIMW-012S,I,D

DEPTH	TOT. BTEX	TOT. PAHs
22–32	ND–338.8 (ND)	ND–1,391 (ND)
63–73	29.2–256 (47)	65–527 (109)
117–127	ND–6 (ND)	ND–2 (ND)

HIMW-022

DEPTH	TOT. BTEX	TOT. PAHs
54–64	ND–83 (9)	ND–91 (17)

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)	ND (ND)
70–80	ND–313 (33)	5–156 (13)
110–120	2–30 (3)	ND–28 (9)

HIMW-023

DEPTH	TOT. BTEX	TOT. PAHs
66–76	1–43 (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

HITW-01 (9/21/01)

DEPTH	TOT. BTEX	TOT. PAHs
40–44	2	ND
54–58	3	6
70–74	95	278
82–86	293	274
90–94	45	44
109–113	210	1

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 (1)
80–90	95–439 (95)	1,454–5,337 (2,271)
130–140	ND–359 (66)	ND–2,698 (900)

HIMW-014 I,D

DEPTH	TOT. BTEX	TOT. PAHs
85–95	24–273 (38)	26–288 (43)
140–150	ND–15 (ND)	ND (ND)

HIMW-024

DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	30–900 (107)	13–1,020 (74)

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)

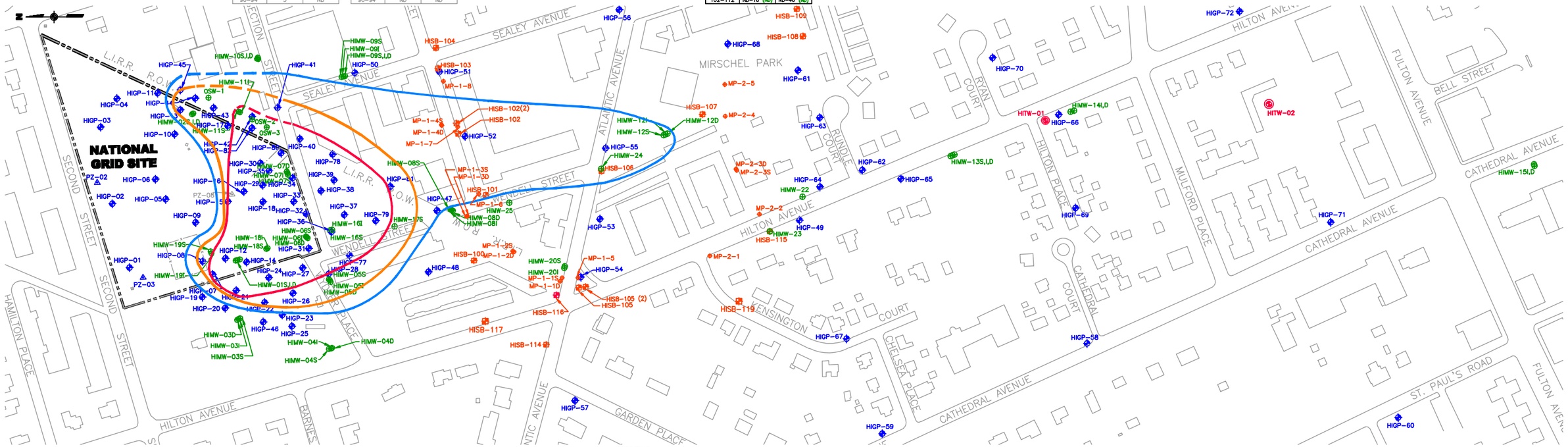
DEPTH	TOT. BTEX	TOT. PAHs
33–37	ND	ND
60–64	ND	ND
90–94	ND	ND

HIMW-008S,I,D

DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–8,240 (27)	ND–3,089 (3)
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 TEMPORARY GROUNDWATER MONITORING WELL (TAKEN FROM RI REPORT, 2006)

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

MP-2-1 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

LOCATION ID → HIMW-015 I,D

DEPTH (ft bgs) →

DEPTH	TOT. BTEX	TOT. PAHs
80–90	5–111 (12)	ND–273 (18)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

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

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

LEGEND:

EXISTING HOUSE OR BUILDING

NATIONAL GRID PROPERTY BOUNDARY

ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 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.

150' 0 150'
SCALE IN FEET

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\FIRST QUARTER 2013\FIGURE 4.dwg 7/24/13 - 5 RAL

URS Corporation

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

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

FIGURE 4

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\MARCH 2013\FIGURE 5.dwg 7/24/13 - 1 ELB

N

NATIONAL GRID
FORMER MGP SITE

PZ-02, NM
PZ-03, NM
HIMW-02S, NM
OSMW-1, NM
HIMW-11S, 47.18
HIMW-10S, 47.54
OSMW-2, NM
OSMW-3, NM
HIMW-09S, 46.61
HIMW-03S, 47.07
HIMW-04S, 46.40
HIMW-05S, 46.51
HIMW-016S, 46.71
IPR-20, 46.55
IPR-22, 46.44
IPR-14, 46.79
IPR-15, 46.82
IPR-19S, NM
IPR-21, 46.62
IPR-23, 46.46
IPR-24, 46.36
HIMW-17S, 46.36
HIMW-8S, 46.06
HIMW-20S, 45.49
HIMW-12S, 44.80
HIMW-13S, 42.76

47.5
47
46.5
46
45.5
45
44.5
44
43.5
43

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

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
△	PIEZOMETER
→	GROUNDWATER FLOW DIRECTION
44	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-8S, 45.66	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
MARCH 8, 2013

FIGURE 5

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\MARCH 2013\FIGURE 6.dwg 7/24/13 - 3 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-02I, NM
HIMW-11I, 47.18
HIMW-10I, 47.65
HIMW-03I, 46.81
HIMW-05I, 46.47
IPR-17, 46.92
IPR-16, 46.85
IPR-19D, 46.75
HIMW-04I, 46.36
HIMW-09I, 46.55
HIMW-16I, 46.62
IPR-18, 46.66
HIMW-08I, 46.08
HIMW-25, 45.86
HIMW-20I, 45.52
HIMW-24, 45.32
HIMW-12I, 42.96
HIMW-23, 43.33
HIMW-22, 44.14
HIMW-13I, 42.78
HIMW-14I, 42.69
HIMW-15I, 39.64

47
46
45
44
43
42
41
40

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

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
→	GROUNDWATER FLOW DIRECTION
44	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-08I, 45.64	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
MARCH 8, 2013

FIGURE 6

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\MARCH 2013\FIGURE 7.dwg 7/24/13 - 2 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-02D, NM
HIMW-03D, 46.63
HIMW-11D, 47.12
HIMW-10D, NM
HIMW-05D, 45.94
HIMW-04D, 45.94
HIMW-09D, 46.48
HIMW-8D, 46.01
HIMW-12D, 43.59
HIMW-13D, 42.96
HIMW-14D, 40.86
HIMW-15D, 37.32

46
45
44
43
42
41
40
39

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

LEGEND:

⊕	MONITORING WELL
→	GROUNDWATER FLOW DIRECTION
43	POTENTIOMETRIC SURFACE CONTOUR
- - -	FORMER MGP SITE BOUNDARY
HIMW-12D, 43.11	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

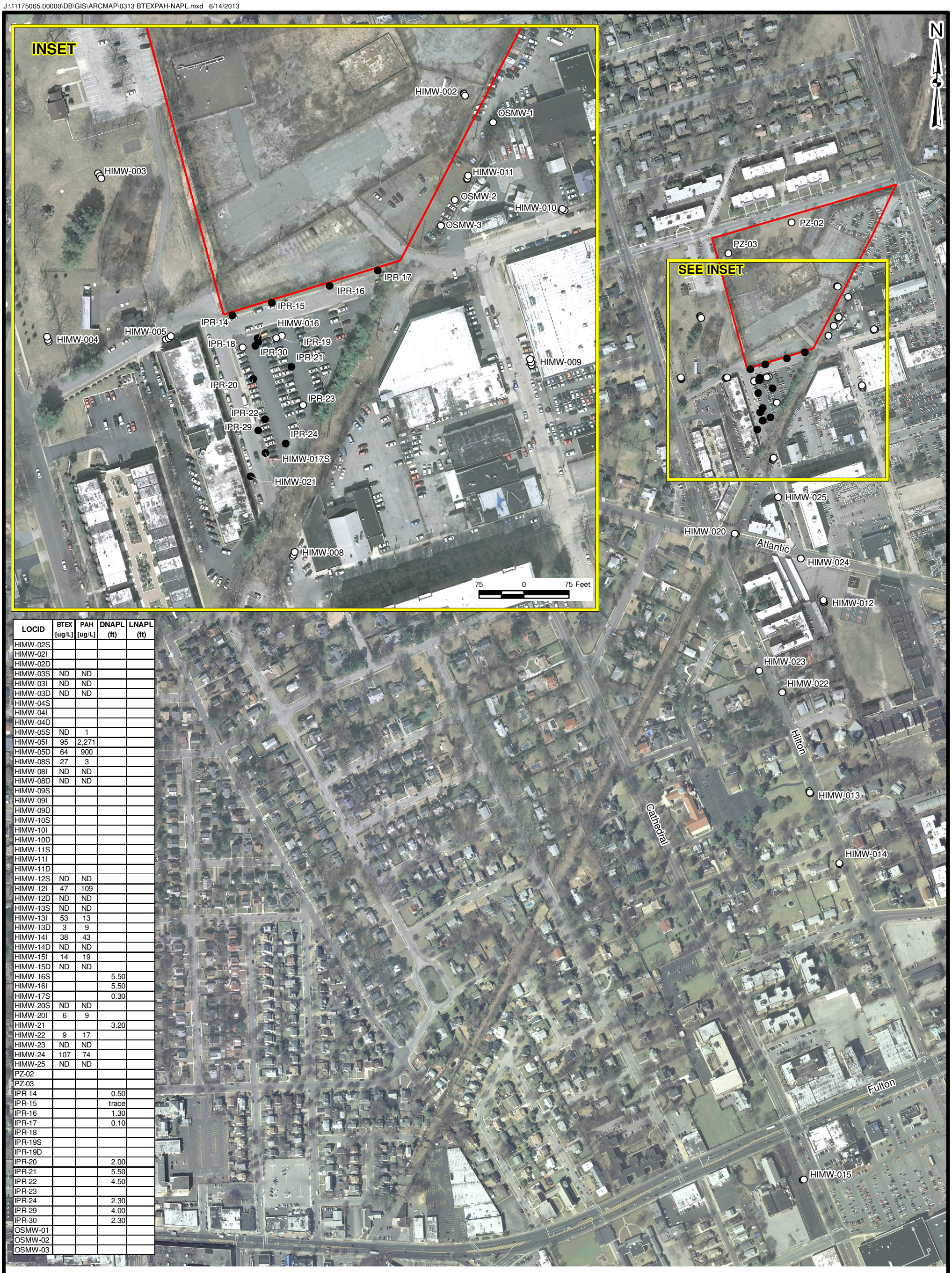
NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR DEEP GROUNDWATER
MARCH 8, 2013

FIGURE 7

J:\11175065.00000\DB\GIS\ARCMAP\0313 BTEXPAH-NAPL.mxd 6/14/2013



LOCID	BTEX [ug/L]	PAH [ug/L]	DNAPL (ft)	LNAPL (ft)
HIMW-02S				
HIMW-02I				
HIMW-02D				
HIMW-03S	ND	ND		
HIMW-03I	ND	ND		
HIMW-03D	ND	ND		
HIMW-04S				
HIMW-04I				
HIMW-04D				
HIMW-05S	ND	1		
HIMW-05I	95	2,271		
HIMW-05D	64	900		
HIMW-08S	27	3		
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	47	109		
HIMW-12D	ND	ND		
HIMW-13S	ND	ND		
HIMW-13I	53	13		
HIMW-13D	3	9		
HIMW-14I	38	43		
HIMW-14D	ND	ND		
HIMW-15I	14	19		
HIMW-15D	ND	ND		
HIMW-16S			5.50	
HIMW-16I			5.50	
HIMW-17S			0.30	
HIMW-20S	ND	ND		
HIMW-20I	6	9		
HIMW-21			3.20	
HIMW-22	9	17		
HIMW-23	ND	ND		
HIMW-24	107	74		
HIMW-25	ND	ND		
PZ-02				
PZ-03				
IPR-14			0.50	
IPR-15			trace	
IPR-16			1.30	
IPR-17			0.10	
IPR-18				
IPR-19S				
IPR-19D				
IPR-20			2.00	
IPR-21			5.50	
IPR-22			4.50	
IPR-23				
IPR-24			2.30	
IPR-29			4.00	
IPR-30			2.30	
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
FIRST QUARTER 2013

FIGURE 8

APPENDIX A

DATA USABILITY SUMMARY REPORT

(Provided in Electronic Format Only)

APPENDIX A
DATA USABILITY SUMMARY REPORT
FIRST 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

APRIL 2013

TABLE OF CONTENTS

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-five (25) 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 March 11-20, 2013. The samples were collected as part of the 2013 1st 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

The initial PAH analysis of sample HIMW-08S exhibited a low internal standard (IS) recovery for perylene-d12. The subsequent reanalysis exhibited a similar IS response, thus substantiating matrix interference. The associated PAH results from the initial analysis were qualified as estimated ('UJ').

Documentation supporting the qualification of data (i.e., Form 8) is presented in Attachment B.

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-05I and HIMW-20I, 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 Fairb **Date:** 4/26/13
Peter R. Fairbanks, Senior Chemist

Reviewed By: **Date:** 4-26-13
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-003D	HIMW-003I	HIMW-003S	HIMW-005D	HIMW-005I
Sample ID			HIMW-03D	HIMW-03I	HIMW-03S	HIMW-05D	DUP031913
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/18/13	03/18/13	03/19/13	03/19/13	03/19/13
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	3	3
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	2
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	1 U	61	92
Total BTEX	UG/L	100	ND	ND	ND	64	97
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	69	260 DJ
Acenaphthene	UG/L	-	10 U	10 U	10 U	1 J	10
Acenaphthylene	UG/L	-	10 U	10 U	10 U	27	140 DJ
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	1 J
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	3 J	19
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	800 D	1,600 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	10 U	11
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	900	2,041

*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.

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

Made By_PRF 04/19/13_; Checked By_AMK 04/22/13_

Detection Limits shown are PQL

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

Location ID			HIMW-005I	HIMW-005S	HIMW-008D	HIMW-008I	HIMW-008S
Sample ID			HIMW-05I	HIMW-05S	HIMW-08D	HIMW-08I	HIMW-08S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/19/13	03/19/13	03/20/13	03/20/13	03/20/13
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	3	1 U	1 U	1 U	16
Ethylbenzene	UG/L	-	3	1 U	1 U	1 U	2
Toluene	UG/L	-	1 U	1 U	1 U	1 U	3
Xylene (total)	UG/L	-	89	1 U	1 U	1 U	6
Total BTEX	UG/L	100	95	ND	ND	ND	27
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	270 DJ	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	10	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	-	160 DJ	10 U	10 U	10 U	2 J
Anthracene	UG/L	-	1 J	10 U	10 U	10 U	1 J
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 UJ
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
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 UJ
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	19	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 UJ
Naphthalene	UG/L	-	1,800 D	1 J	10 U	10 U	10 U
Phenanthrene	UG/L	-	11	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	2,271	1	ND	ND	3

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

J - The reported concentration is an estimated value.

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

Made By_PRF 04/19/13_; Checked By_AMK 04/22/13_

Detection Limits shown are PQL

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

Location ID			HIMW-012D	HIMW-012I	HIMW-012S	HIMW-013D	HIMW-013I
Sample ID			HIMW-12D	HIMW-12I	HIMW-12S	HIMW-13D	HIMW-13I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/14/13	03/14/13	03/14/13	03/12/13	03/12/13
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	44	1 U	3	46
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	3
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	1 U	3	1 U	1 U	4
Total BTEX	UG/L	100	ND	47	ND	3	53
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	1 J	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	36	10 U	3 J	10 U
Acenaphthylene	UG/L	-	10 U	35	10 U	6 J	7 J
Anthracene	UG/L	-	10 U	1 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	-	10 U	23	10 U	10 U	1 J
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	3 J	10 U	10 U	3 J
Phenanthrene	UG/L	-	10 U	10	10 U	10 U	2 J
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	109	ND	9	13

*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.

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

Made By_PRF 04/19/13_; Checked By_AMK 04/22/13_

Detection Limits shown are PQL

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

Location ID			HIMW-013S	HIMW-014D	HIMW-014I	HIMW-015D	HIMW-015I
Sample ID			HIMW-13S	HIMW-14D	HIMW-14I	HIMW-15D	HIMW-15I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/13/13	03/11/13	03/11/13	03/12/13	03/12/13
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	32	1 U	12
Ethylbenzene	UG/L	-	1 U	1 U	2	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	4	1 U	2
Total BTEX	UG/L	100	ND	ND	38	ND	14
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	15	10 U	4 J
Acenaphthylene	UG/L	-	10 U	10 U	19	10 U	13
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	5 J	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	-	10 U	10 U	4 J	10 U	2 J
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	43	ND	19

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

Flags assigned during chemistry validation are shown.

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

Made By_PRF 04/19/13_; Checked By_AMK 04/22/13_

Detection Limits shown are PQL

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

Location ID			HIMW-020I	HIMW-020I	HIMW-020S	HIMW-022	HIMW-023
Sample ID			DUP031513	HIMW-20I	HIMW-20S	HIMW-22	HIMW-23
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/15/13	03/15/13	03/15/13	03/13/13	03/13/13
Parameter	Units	Criteria*	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	5	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	-	6	6	1 U	4	1 U
Total BTEX	UG/L	100	6	6	ND	9	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	2 J	2 J	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	10 U	2 J	10 U
Acenaphthylene	UG/L	-	3 J	3 J	10 U	15	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	-	1 J	1 J	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	-	2 J	3 J	10 U	10 U	10 U
Phenanthrene	UG/L	-	10 U	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	8	9	ND	17	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.

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

Made By_PRF 04/19/13_; Checked By_AMK 04/22/13_

Detection Limits shown are PQL

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

Location ID			HIMW-024	HIMW-025
Sample ID			HIMW-24	HIMW-25
Matrix			Groundwater	Groundwater
Depth Interval (ft)			-	-
Date Sampled			03/15/13	03/20/13
Parameter	**Units**	**Criteria***		
Volatile Organic Compounds				
Benzene	UG/L	-	59	1 U
Ethylbenzene	UG/L	-	1	1 U
Toluene	UG/L	-	4	1 U
Xylene (total)	UG/L	-	43	1 U
Total BTEX	UG/L	100	107	ND
Semivolatile Organic Compounds				
2-Methylnaphthalene	UG/L	-	10 U	10 U
Acenaphthene	UG/L	-	10 U	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	-	67	10 U
Phenanthrene	UG/L	-	4 J	10 U
Pyrene	UG/L	-	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	74	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.

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

Made By_PRF 04/19/13_; Checked By_AMK 04/22/13_

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			TB031513	TB031913	FB032013	TB 032013
Matrix			Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)			-	-	-	-
Date Sampled			03/15/13	03/19/13	03/20/13	03/20/13
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 04/19/13_; Checked By_AMK 04/22/13_

Detection Limits shown are PQL

ATTACHMENT A

VALIDATED FORM 1'S

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-03D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18111.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-03I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18112.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-03S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18113.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18114.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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)	61	

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-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18115.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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	3	
1330-20-7	Xylene (total)	89	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP031913 (H1MW-05I)

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18117.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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	2	
1330-20-7	Xylene (total)	92	

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-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18116.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18101.

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: not dec. Date Analyzed: 03/21/13

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-URS161 S43

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18109.

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: not dec. Date Analyzed: 03/21/13

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-URS161 S44

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18102.

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: not dec. Date Analyzed: 03/21/13

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	16	
108-88-3	Toluene	3	
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	6	

KEY-URS161 S45

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18094.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S35

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18095.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/20/13

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	44	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	3	

KEY-URS161 S36

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18096.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S37

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18082.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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	U

KEY-URS161 S26

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18083.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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	46	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	3	
1330-20-7	Xylene (total)	4	

KEY-URS161 S27

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18084.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S28

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-14D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18087.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S29

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18088.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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	32	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	4	

KEY-URS161 S30

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18089.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S31

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18090.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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	12	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	2	

KEY-URS161 S32

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18099.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/21/13

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)	6	

KEY-URS161 S38

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP031513 (HIMW-20I)

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18098.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/21/13

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)	6	

KEY-URS161 S41

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18097.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/21/13

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-URS161 S39

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-22

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18091.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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	5	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	4	

KEY-URS161 S33

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-23

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18092.

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S34

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18100.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/21/13

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	59	
108-88-3	Toluene	4	
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene (total)	43	

KEY-URS161 S40

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18110.

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: not dec. Date Analyzed: 03/21/13

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-URS161 S46

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB031513

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18093.

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: not dec. Date Analyzed: 03/20/13

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-URS161 S42

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB031913

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18118.

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: not dec. Date Analyzed: 03/21/13

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB032013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18108.

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: not dec. Date Analyzed: 03/21/13

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-URS161 S47

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB 032013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G18107.

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: not dec. Date Analyzed: 03/21/13

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-URS161 S48

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-03D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14832.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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-03I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14833.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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-03S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14834.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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-05D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14835.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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	~~800~~ 680	~~E~~ D
91-57-6	2-Methylnaphthalene	69	
208-96-8	Acenaphthylene	27	
83-32-9	Acenaphthene	1	J
86-73-7	Fluorene	3	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

4/19/13

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05DDL

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-004BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 3\R14852.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

Injection Volume: 2 (µL) Dilution Factor: 20.00

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	800	D
91-57-6	2-Methylnaphthalene	74	DJ
208-96-8	Acenaphthylene	28	DJ
83-32-9	Acenaphthene	200	U
86-73-7	Fluorene	200	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) Cannot be separated from Diphenylamine

4/19/13

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-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14836.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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	1800 ~~1400~~	~~E~~ D
91-57-6	2-Methylnaphthalene	270 ~~240~~	~~E~~ DJ
208-96-8	Acenaphthylene	160 ~~140~~	~~E~~ DJ
83-32-9	Acenaphthene	10	
86-73-7	Fluorene	19	
85-01-8	Phenanthrene	11	
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

4/19/13

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-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-005BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 3\R14853.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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	1800	D
91-57-6	2-Methylnaphthalene	270	DJ
208-96-8	Acenaphthylene	160	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

4/14/13

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP031913 (HIMW-05I)

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-007B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14838.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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	1600 ~~1300~~	~~E~~ D
91-57-6	2-Methylnaphthalene	260 ~~230~~	~~E~~ DJ
208-96-8	Acenaphthylene	140 ~~130~~	~~E~~ DJ
83-32-9	Acenaphthene	10	
86-73-7	Fluorene	19	
85-01-8	Phenanthrene	11	
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

4/13/13

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP031913DL (HIMw-05I)

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-007BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 3\R14854.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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	260	DJ
208-96-8	Acenaphthylene	140	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

4/19/13

1C

SEMIVOLATILE 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-URS162

Matrix: (soil/water) WATER Lab Sample ID: 1303924-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\R14837.D

Level: (low/med) LOW Date Received: 03/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/22/13

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	1	J
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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56921.D

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/21/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/25/13

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

SEMIVOLATILE 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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56922.D

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/21/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/25/13

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	2	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 J
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

4/19/13

KEY-URS161 S67

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08SRE

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-003BRE

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56941.D

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/21/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/26/13

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	2	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

4/19/13

1C

SEMIVOLATILE 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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56832.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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-12I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56833.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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	3	J
91-57-6	2-Methylnaphthalene	1	J
208-96-8	Acenaphthylene	35	
83-32-9	Acenaphthene	36	
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.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-12S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56834.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-13D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56795.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/18/13

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	6	J
83-32-9	Acenaphthene	3	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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56796.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/18/13

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	3	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	7	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	1	J
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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56797.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/18/13

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	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-14D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56824.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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

KEY-URS161 S53

1C

SEMIVOLATILE 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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56825.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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	19	
83-32-9	Acenaphthene	15	
86-73-7	Fluorene	5	J
85-01-8	Phenanthrene	4	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

SEMIVOLATILE 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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56826.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-007B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56827.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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	13	
83-32-9	Acenaphthene	4	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

SEMIVOLATILE 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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-008B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56828.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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	15	
83-32-9	Acenaphthene	2	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-23

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303644-009B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56829.D

Level: (low/med) LOW Date Received: 03/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/14/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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-20I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56835.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/19/13

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	3	J
91-57-6	2-Methylnaphthalene	2	J
208-96-8	Acenaphthylene	3	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	1	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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP031513 (HIMW-20I)

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-007B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56838.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/20/13

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	2	J
91-57-6	2-Methylnaphthalene	2	J
208-96-8	Acenaphthylene	3	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	1	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

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-20S

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56836.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/20/13

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

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-24

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303787-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56837.D

Level: (low/med) LOW Date Received: 03/15/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/18/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/20/13

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	67	
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	4	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

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-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56923.D

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/21/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/25/13

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB032013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

Matrix: (soil/water) WATER Lab Sample ID: 1303A09-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N56924.D

Level: (low/med) LOW Date Received: 03/20/13

% Moisture: Decanted: (Y/N) N Date Extracted: 03/21/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 03/25/13

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

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42545 **EXTERNAL CHAIN OF CUSTODY**

CLIENT: URS Corporation | **H2M SDG NO:** KEY-URS 161

PROJECT NAME/NUMBER: National Grid Hempstead
11176098.00004

SAMPLERS: (signature)/Client: Megan Dascoli / URS Megan Dascoli

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES:

Project Contact: Peter Fairbanks

Phone Number: (716) 856-3656

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ANALYSIS REQUESTED: ORGANIC VOA (Sample Container Description: BTEX 8260B)	ORGANIC BNA (Sample Container Description: PAH 8270C)	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
3/12/13	1330	GW	H1MW-13I	4	X	X				1303644-002	
3/12/13	1205	GW	H1MW-13D	4	X	X				001	
3/11/13	1213	GW	H1MW-14I	4	X	X				005	
3/11/13	1453	GW	H1MW-14D	4	X	X				004	
3/12/13	1045	GW	H1MW-15I	4	X	X				007	
3/12/13	900	GW	H1MW-15D	4	X	X				006	
3/13/13	0920	GW	H1MW-13S	4	X	X					003
3/13/13	0920	GW	H1MW-13S MS/MSD	8	X	X				Cooler #1 - 3.4°C	003
3/13/13	1125	GW	H1MW-22	4	X	X				Cooler #2 - 4.0°C	008
3/13/13	1305	GW	H1MW-23	4	X	X				009	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Dascoli	3/13/13	1440	[signature]	3/13/13	1435
[signature]	3/13/13	1530	[signature]	3/13/13	1530

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled, Temp_____
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

KEY-URS161_S3

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

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42546 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp **H2M SDG NO:** KEY-URS161

PROJECT NAME/NUMBER: National Grid, Hempstead, NY
11176098.00004

SAMPLERS: (signature)/Client
Megan Dowd/URS
Robin Ashley/URS

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES:
Cooler temp 1.9/1.4°C
IR gun ~~111728524~~ 122076478
pH strips (HC256691) ≤2 3 9 ≥12
Free Cl2 strips(041912C) Present/Absent
Lot#

Project Contact: Peter Fairbanks
Phone Number: 716 856-5636
PIS/Quote #

Sample Container Description → BTEX 8260B; PAH 8270C

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
3/15/13	1330	W	TB031513	2	X					1303787-008	
3/15/13	1200	GW	DUP031513	4	X	X				-007	
3/15/13	0905	GW	HIMW-20S	4	X	X				-005	
3/15/13	1040	GW	HIMW-20I	4	X	X				-004	
3/15/13	1330	GW	HIMW-24	4	X	X				-006	
3/14/13	1320	GW	HIMW-12S	4	X	X				-003	
3/14/13	1210	GW	HIMW-12I	4	X	X				-002	
3/14/13	0953	GW	HIMW-12D	4	X	X				-001	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Dowd	3/15/13	14:05	Asha Gillilland	3/15/13	14:05
Asha Gillilland	3/15/13	15:05	Lisa Lee	3/15/13	15:05

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled, Temp_____
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

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H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42547 EXTERNAL CHAIN OF CUSTODY

CLIENT: **H2M SDG NO:** KEY-UBS161

PROJECT NAME/NUMBER: National Grid
1117 6098.00004

SAMPLERS: (signature)/Client: Megan Daniel / URS
Robin Hanley / URS

DELIVERABLES:

TURNAROUND TIME: Standard

Sample Container Description: BTEX 8260B 40 mL clear, HCl; PAH 8270C 1L amber

NOTES:
Cooler temp 0.7°C
IR gun 111728524 122076478
pH strips (HC256691) ≤2 3 9 ≥12
Free Cl2 strips(041912C) Present/Absent
Lot#

Project Contact: Peter Fairbanks
Phone Number: 716-856-5636
PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
3/20/13	0822	GW	H1MW-08S	4	X	X				1303A09 03	
3/20/13	0957	GW	H1MW-08I	4	X	X				-002	
3/20/13	1140	GW	H1MW-08D	4	X	X				-001	
3/20/13	1400	GW	H1MW-25	4	X	X				-004	
3/20/13	1400	W	TB032013	2	X					-006	
3/20/13	1430	W	FB032013	4	X	X				-005	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Daniel	3/20/13	14:50	[signature]	3/20/13	14:50
[signature]	3/20/13	15:30	[signature]	3/20/13	15:30

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled, Temp_____
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

KEY UBS161 815

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

H2M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLES RECEIVED: 3/13/13 – 3/20/13
SDG #: KEY-URS161

For Samples:

HIMW-13D	HIMW-15I	HIMW-20I	HIMW-08I
HIMW-13I	HIMW-22	HIMW-20S	HIMW-08S
HIMW-13S	HIMW-23	HIMW-24	HIMW-25
HIMW-14D	HIMW-12D	DUP031513	FB032013
HIMW-14I	HIMW-12I	TB031513	TB 032013
HIMW-15D	HIMW-12S	HIMW-08D	

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-13S was analyzed as matrix spike/ matrix spike duplicate (MS/MSD). All percent recoveries for the lab fortified blanks and recoveries and RPDs for the MS and MSD were within Q. C. limits.

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: April 2, 2013

****
* *
* *
****
Ursula Middel
Technical Manager

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR SEMIVOLATILE ORGANICS
SAMPLES RECEIVED: 3/13/13, 3/15/13 & 3/20/13
SDG #: KEY-URS161

For Samples:

HIMW-13D	HIMW-22	HIMW-24
HIMW-13I	HIMW-23	DUP031513
HIMW-13S	HIMW-12D	HIMW-08D
HIMW-14D	HIMW-12I	HIMW-08I
HIMW-14I	HIMW-12S	HIMW-08S
HIMW-15D	HIMW-20I	HIMW-25
HIMW-15I	HIMW-20S	FB032013

The above sample(s) was/were analyzed for a select list of semivolatile organic analytes by EPA method 8270C.

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

Sample HIMW-13S was analyzed as the matrix spike/matrix spike duplicate. All percent recoveries and RPD's were met. Lab fortified blanks were analyzed. All percent recoveries were within or above QC limits.

Sample HIMW-08S had low internal standard area counts for d12 perylene. The sample was re-injected with similar area counts. Both sets of data are submitted.

All CCC and SPCC calibration requirements were met. In the initial calibrations, average response factors were employed as applicable, and linear or quadratic regression functions were used for RSDs above 15%.

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: April 8, 2013

****
* *
* *
****

Joann M. Slavin
Senior Vice President

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

EPA Sample No.(SSTD050##): SSTD025 Date Analyzed: 03/25/13

Lab File ID (Standard): 3\N56917.D Time Analyzed: 17:41

Instrument ID: HP5973N GC Column: Rxi-5SIL ID: 0.25 (mm)

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	240499	13.09	205043	15.83	176454	17.19
	UPPER LIMIT	480998	13.59	410086	16.33	352908	17.69
	LOWER LIMIT	120250	12.59	102522	15.33	88227	16.69
	EPA SAMPLE NO.						
01	MB-38904	248679	13.09	163363	15.81	97368	17.18
02	LFB-38904	256071	13.09	170813	15.82	114870	17.18
03	HIMW-08D	258402	13.09	169996	15.80	104185	17.17
04	HIMW-08I	237553	13.09	155990	15.81	97477	17.17
05	HIMW-08S	200965	13.10	145593	15.82	65039*	17.19
06	HIMW-25	234269	13.09	153092	15.81	91436	17.18
07	FB032013	218710	13.09	147215	15.80	89223	17.16

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS161

EPA Sample No.(SSTD050##): SSTD025 Date Analyzed: 03/26/13

Lab File ID (Standard): 3\N56938.D Time Analyzed: 11:03

Instrument ID: HP5973N GC Column: Rxi-5SIL ID: 0.25 (mm)

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	244627	13.09	208661	15.82	173829	17.18
	UPPER LIMIT	489254	13.59	417322	16.32	347658	17.68
	LOWER LIMIT	122314	12.59	104331	15.32	86915	16.68
	EPA SAMPLE NO.						
01	HIMW-08SRE	225827	13.10	154713	15.83	64843*	17.19

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (631) 694-3040 Fax: (631) 420-8436

42550 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp. | **H2M SDG NO:** KEY-URS 162

PROJECT NAME/NUMBER: National Grid, Hempstead, NY
11176098.00004

SAMPLERS: (signature)/Client
Megan Daoud / URS
Robin Hanley / URS

DELIVERABLES:

TURNAROUND TIME: Standard

Sample Container Description: BTEX 8260B 6 VOAs HCl, 40mL; PAH 8270C Ster 2 amber 1L

NOTES:
Cooler temp 3.2-2.6C
IR gun (11728524) 122076478
pH strips (HC256691) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#_____

Project Contact: Peter Fairbanks
Phone Number: 716-856-5636
PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
3/18/13	1525	GW	HIMW-03I	4	X	X				1303924 002	
3/18/13	1158	GW	HIMW-03D	4	X	X				-001	
3/19/13	0758	GW	HIMW-05D	4	X	X				004	
3/19/13	0948	GW	HIMW-05I	4	X	X				005	
3/19/13	1100	GW	HIMW-05S	4	X	X				006	
3/19/13	1400	GW	HIMW-03S	4	X	X				003	
3/19/13	1400	GW	TB031913	2	X					008	
3/19/13	1200	GW	DUP031913	4	X	X				007	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Daoud	3/19/13	15:15		3/19/13	15:15
	3/19/13	16:02		3/19/13	16:02

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled, Temp_____
3. Received in good condition: Y or N
4. Properly preserved: Y or N

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

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

KEY-URS162 S3

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLES RECEIVED: 3/19/13
SDG #: KEY-URS162

For Samples:

HIMW-03D	HIMW-05I
HIMW-03I	HIMW-05S
HIMW-03S	DUP031913
HIMW-05D	TB031913

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:

No sample from this SDG was submitted for matrix spike/ matrix spike duplicate (MS/MSD) analysis. All percent recoveries for the lab fortified blank were within Q. C. limits.

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: April 2, 2013

****
* *
* *
****
Ursula Middel
Technical Manager

H 2 M labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR SEMIVOLATILE ORGANICS
SAMPLES RECEIVED: 3/19/13
SDG #: KEY-URS162

For Samples:

HIMW-03D	HIMW-05I
HIMW-03I	HIMW-05S
HIMW-03S	DUP031913
HIMW-05D	

The above water sample(s) was/were analyzed for a select list of semivolatile organic analytes by EPA method 8270C.

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

No matrix spike / matrix spike duplicate (MS/MSD) was submitted. A lab fortified blank was analyzed. All percent recoveries were within Q. C. limits.

Samples HIMW-05D, HIMW-05I and DUP031913 were reanalyzed at a dilution to keep the concentration of targeted analytes within the calibration range. Both sets of data are reported. No surrogate recoveries are reportable for two dilutions, because the surrogate compounds are "diluted out", i. e. below reportable level.

All CCC and SPCC calibration requirements were met. In the initial calibrations, average response factors were employed as applicable, and quadratic regression functions were used for RSDs above 15%, which applies to benzo(k)fluoranthene.

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: April 2, 2013

****
* *
* Middel *
* *
****
Ursula Middel
Technical Manager

APPENDIX B

OXYGEN SYSTEM OPERATION & MAINTENANCE MEASUREMENTS

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	1/8/2013
Time:	11:35
Weather:	Sunny
Outdoor Temperature:	~40° F
Inside Trailer Temperature:	~70° F
Performed By:	Matt Schieferstein

O_2 Generator (AirSep)

Hours	5,000.9	
Feed Air Pressure *	66	(psi)
Cycle Pressure *	50	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	98.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	115	(psi)
(readings below are made from control panel)		
Delivery Air	109	(psi)
Element Outlet Temperature	176	(oF)
Running Hours	5,856	(hours)
Loading Hours	3,688	(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	38	31	OW-1-5S	67.3	34	16	OW-1-9D	88.5	33	27
OW-1-2	96.5	38	31	OW-1-6S	67.0	30	17	OW-1-10D	87.2	28	27
OW-1-3	96.3	28	30	OW-1-7S	66.9	28	16	OW-1-11D	86.1	32	29
OW-1-4	95.0	25	29	OW-1-8S	66.7	16	17	OW-1-12D	85.3	35	28
OW-1-5D	93.9	22	29	OW-1-9S	66.0	27	18	OW-1-13D	84.7	30	28
OW-1-6D	92.4	23	28	OW-1-10S	54.6	26	12	OW-1-14D	84.1	34	29
OW-1-7D	91.1	15	28	OW-1-11S	54.1	30	14	OW-1-15D	83.3	37	29
OW-1-8D	89.6	12	28	OW-1-12S	53.6	26	15	OW-1-16D	82.5	31	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. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 1/8/2013

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	25	13	OW-1-17D	79.5	24	13	OW-1-21S	49.3	32	11
OW-1-14S	52.7	33	13	OW-1-18D	78.3	30	24	OW-1-22S	49.3	31	11
OW-1-15S	52.2	35	13	OW-1-19D	78.9	32	26	OW-1-23S	48.8	33	11
OW-1-16SR	51.8	20	26	OW-1-20D	79.5	30	27	OW-1-24S	48.4	35	11
OW-1-17S	50.7	30	19	OW-1-21D	79.5	28	26	OW-1-25S	48.8	30	12
OW-1-18S	50.2	30	12	OW-1-22D	79.5	32	25	OW-1-26SR	48.3	26	12
OW-1-19S	49.7	82	14	OW-1-23D	78.7	34	25	OW-1-27S	48.3	38	12
OW-1-20S	49.3	34	5	OW-1-24D	78.2	34	26	OW-1-28S	48.3	30	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. 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	37	26	OW-1-29S	48.5	32	12	OW-1-33D	83.2	44	28
OW-1-26D	78.1	27	27	OW-1-30S	48.8	30	13	OW-1-34D	84.5	37	30
OW-1-27D	77.9	27	27	OW-1-31S	49.3	27	13	OW-1-35D	85.0	33	28
OW-1-28D	78.0	26	26	OW-1-32S	49.3	31	12	OW-1-36D	85.0	27	29
OW-1-29D	78.4	52	25	OW-1-33S	49.7	27	13	OW-1-37D	84.0	30	28
OW-1-30D	79.0	48	28	OW-1-34S	50.1	28	12	OW-1-38D	82.0	37	32
OW-1-31D	80.5	42	9	OW-1-35S	50.3	29	13	OW-1-39D	78.0	34	26
OW-1-32D	81.6	33	28	OW-1-36S	50.3	23	13	OW-1-40D	76.0	26	25

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

Date: 1/8/2013

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	23	12	OW-1-41D	73.6	21	22	OW-1-43	67.4	25	19
OW-1-38S	50.6	30	12	OW-1-42D	71.0	25	20	OW-1-44	66.6	24	18
OW-1-39S	50.7	43	12	OW-1-45	65.7	28	19	OW-1-51R	60.6	38	16
OW-1-40S	51.1	21	13	OW-1-46	64.3	27	17	OW-1-52	59.3	27	16
OW-1-41S	51.5	32	13	OW-1-47	63.4	24	17	OW-1-53	60.0	25	16
OW-1-42S	51.3	38	13	OW-1-48	62.5	27	17	OW-1-54	60.0	32	17
				OW-1-49	61.5	27	16				
				OW-1-50	61.0	28	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	NM	20.6	2.54	0	MP-1-5	NM	19.3	3.09	0	MP-1-1D	2.85	3.13
MP-1-1S	NM	28.0	2.89	0	MP-1-6	NM	18.8	2.54	0	MP-1-2D	3.31	2.90
MP-1-2D	NM	20.7	3.61	0	MP-1-7	NM	19.0	2.17	0	MP-1-3D	3.05	2.39
MP-1-2S	NM	23.1	3.18	0	MP-1-8	NM	18.7	2.24	0	MP-1-4D	2.14	2.45
MP-1-3D	NM	19.1	4.55	0								
MP-1-3S	NM	19.1	2.83	0								
MP-1-4D	NM	20.9	2.63	0								
MP-1-4S	NM	23.2	2.65	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: 1/8/2013

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 No X

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No
2) Abnormal conditions observed (e.g. vandalism)
3) Other major activities completed
4) Supplies needed
5) Visitors

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

Found system in power failure alarm upon arrival. However, the system was running. Wiped down all equipment and cleaned up all garbage from around fence areas.

Since starting up all of the injection points, high pressure at the j-plugs has been noted at monitoring points MP-1-3S, MP-1-3D and MP-1-4D. This is a safety concern that has been previously mentioned and needs to be addressed.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	1/22/2013
Time:	10:15
Weather:	Snow
Outdoor Temperature:	~31° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	5,133.3	
Feed Air Pressure *	105	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	94.4	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	114	(psi)
Element Outlet Temperature	176	(oF)
Running Hours	6,004	(hours)
Loading Hours	3,779	(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	29	OW-1-5S	67.3	30	17	OW-1-9D	88.5	30	28
OW-1-2	96.5	40	31	OW-1-6S	67.0	30	18	OW-1-10D	87.2	40	28
OW-1-3	96.3	40	31	OW-1-7S	66.9	30	18	OW-1-11D	86.1	30	29
OW-1-4	95.0	50	30	OW-1-8S	66.7	30	19	OW-1-12D	85.3	30	29
OW-1-5D	93.9	65	29	OW-1-9S	66.0	35	18	OW-1-13D	84.7	30	28
OW-1-6D	92.4	30	29	OW-1-10S	54.6	30	12	OW-1-14D	84.1	30	29
OW-1-7D	91.1	40	28	OW-1-11S	54.1	40	13	OW-1-15D	83.3	35	29
OW-1-8D	89.6	30	28	OW-1-12S	53.6	45	14	OW-1-16D	82.5	25	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: 1/22/2013

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	13	OW-1-17D	79.5	30	13	OW-1-21S	49.3	30	12
OW-1-14S	52.7	40	14	OW-1-18D	78.3	30	27	OW-1-22S	49.3	30	11
OW-1-15S	52.2	30	13	OW-1-19D	78.9	30	27	OW-1-23S	48.8	40	12
OW-1-16SR	51.8	30	25	OW-1-20D	79.5	40	27	OW-1-24S	48.4	30	12
OW-1-17S	50.7	25	18	OW-1-21D	79.5	30	26	OW-1-25S	48.8	35	13
OW-1-18S	50.2	25	13	OW-1-22D	79.5	20	25	OW-1-26SR	48.3	25	13
OW-1-19S	49.7	30	14	OW-1-23D	78.7	30	24	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	20	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	35	12	OW-1-33D	83.2	40	28
OW-1-26D	78.1	45	28	OW-1-30S	48.8	45	13	OW-1-34D	84.5	50	31
OW-1-27D	77.9	55	28	OW-1-31S	49.3	30	12	OW-1-35D	85.0	30	29
OW-1-28D	78.0	50	27	OW-1-32S	49.3	30	12	OW-1-36D	85.0	30	29
OW-1-29D	78.4	40	26	OW-1-33S	49.7	30	12	OW-1-37D	84.0	30	28
OW-1-30D	79.0	30	30	OW-1-34S	50.1	35	12	OW-1-38D	82.0	30	32
OW-1-31D	80.5	30	27	OW-1-35S	50.3	35	13	OW-1-39D	78.0	30	27
OW-1-32D	81.6	30	28	OW-1-36S	50.3	40	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: 1/22/2013

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	12	OW-1-41D	73.6	45	24	OW-1-43	67.4	25	20
OW-1-38S	50.6	35	13	OW-1-42D	71.0	40	22	OW-1-44	66.6	20	18
OW-1-39S	50.7	20	13	OW-1-45	65.7	40	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	14	OW-1-47	63.4	30	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	35	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	26.52	NM	18.70	0	MP-1-5	26.03	NM	17.87	0	MP-1-1D	18.01	17.40
MP-1-1S	26.66	NM	10.07	0	MP-1-6	18.54	NM	6.19	0	MP-1-2D	9.00	7.79
MP-1-2D	20.64	NM	11.14	0	MP-1-7	21.85	NM	5.12	0	MP-1-3D	10.11	9.01
MP-1-2S	21.01	NM	9.46	0	MP-1-8	22.93	NM	4.97	0	MP-1-4D	7.69	8.40
MP-1-3D	18.73	NM	12.71	0								
MP-1-3S	18.71	NM	8.07	0								
MP-1-4D	21.51	NM	7.11	0.3								
MP-1-4S	21.38	NM	7.00	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: 1/22/2013

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 temperature inside shed too cold upon arrival. Made shields to seal up fresh air vents. Found site glass in compressor leaking. Drained oil and resealed site glass with Teflon tape. Found solenoid on Air Sep unit not closing. Took apart valve and cleaned out dust buildup and reinstalled. Found bad flow meter at flow meter #24 and replaced with a spare flow meter. Took apart auto drains and cleaned out silt buildup. 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.

Since starting up all of the injection points, high pressure at the j-plugs has been noted at monitoring points MP-1-3S, MP-1-3D and MP-1-4D. This is a safety concern that has been previously mentioned and needs to be addressed.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	2/8/2013
Time:	12:40
Weather:	Snow
Outdoor Temperature:	~31° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	5,314.7	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	105	(psi)
Oxygen Purity	95.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	115	(psi)
(readings below are made from control panel)		
Delivery Air	114	(psi)
Element Outlet Temperature	142	(oF)
Running Hours	6,205	(hours)
Loading Hours	3,905	(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	29	OW-1-6S	67.0	30	18	OW-1-10D	87.2	35	27
OW-1-3	96.3	40	31	OW-1-7S	66.9	25	18	OW-1-11D	86.1	35	29
OW-1-4	95.0	45	30	OW-1-8S	66.7	20	17	OW-1-12D	85.3	45	29
OW-1-5D	93.9	30	29	OW-1-9S	66.0	15	18	OW-1-13D	84.7	30	28
OW-1-6D	92.4	30	29	OW-1-10S	54.6	15	13	OW-1-14D	84.1	30	29
OW-1-7D	91.1	30	29	OW-1-11S	54.1	15	14	OW-1-15D	83.3	30	29
OW-1-8D	89.6	35	29	OW-1-12S	53.6	20	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: 2/8/2013

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	25	14	OW-1-17D	79.5	30	14	OW-1-21S	49.3	30	12
OW-1-14S	52.7	35	15	OW-1-18D	78.3	30	26	OW-1-22S	49.3	40	11
OW-1-15S	52.2	30	14	OW-1-19D	78.9	30	27	OW-1-23S	48.8	40	12
OW-1-16SR	51.8	30	27	OW-1-20D	79.5	35	28	OW-1-24S	48.4	45	12
OW-1-17S	50.7	30	25	OW-1-21D	79.5	30	27	OW-1-25S	48.8	55	13
OW-1-18S	50.2	30	13	OW-1-22D	79.5	40	27	OW-1-26SR	48.3	50	13
OW-1-19S	49.7	30	14	OW-1-23D	78.7	40	27	OW-1-27S	48.3	40	14
OW-1-20S	49.3	30	13	OW-1-24D	78.2	50	28	OW-1-28S	48.3	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 #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	12	OW-1-33D	83.2	25	28
OW-1-26D	78.1	40	29	OW-1-30S	48.8	40	13	OW-1-34D	84.5	20	31
OW-1-27D	77.9	30	28	OW-1-31S	49.3	55	13	OW-1-35D	85.0	30	29
OW-1-28D	78.0	30	27	OW-1-32S	49.3	65	13	OW-1-36D	85.0	30	29
OW-1-29D	78.4	30	25	OW-1-33S	49.7	80	13	OW-1-37D	84.0	30	28
OW-1-30D	79.0	20	28	OW-1-34S	50.1	30	12	OW-1-38D	82.0	30	32
OW-1-31D	80.5	15	27	OW-1-35S	50.3	30	13	OW-1-39D	78.0	40	27
OW-1-32D	81.6	20	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: 2/8/2013

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	11	OW-1-41D	73.6	25	24	OW-1-43	67.4	30	19
OW-1-38S	50.6	40	12	OW-1-42D	71.0	25	30	OW-1-44	66.6	30	18
OW-1-39S	50.7	30	11	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	45	18	OW-1-52	59.3	30	16
OW-1-41S	51.5	30	14	OW-1-47	63.4	40	18	OW-1-53	60.0	35	17
OW-1-42S	51.3	30	13	OW-1-48	62.5	30	17	OW-1-54	60.0	30	16
				OW-1-49	61.5	20	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	26.62	22.7	NM	0	MP-1-5	26.30	21.6	NM	0	MP-1-1D	NM	NM
MP-1-1S	26.81	40.0	NM	0	MP-1-6	18.59	20.9	NM	0	MP-1-2D	NM	NM
MP-1-2D	20.75	21.0	NM	0	MP-1-7	21.88	20.9	NM	0	MP-1-3D	NM	NM
MP-1-2S	21.16	39.1	NM	0	MP-1-8	22.98	30.0	NM	0	MP-1-4D	NM	NM
MP-1-3D	18.82	20.9	NM	0.3								
MP-1-3S	18.85	20.9	NM	0								
MP-1-4D	21.52	32.2	NM	0.5								
MP-1-4S	21.36	40.0	NM	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: 2/8/2013

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:

Found temperature inside shed too cold upon arrival. Adjusted temp setting on heat inside shed. Repaired copper line leaking off of low pressure oxygen tank. Adjusted tension on belt in booster pump. 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.

DO readings were not collected as the membrane tip on the DO probe was compromised providing faulty results.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	2/22/2013
Time:	13:21
Weather:	Sunny
Outdoor Temperature:	~39° F
Inside Trailer Temperature:	~62° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	5,456.9	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	95.4	(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	12	(oF)
Running Hours	6,362	(hours)
Loading Hours	4,003	(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	29	OW-1-5S	67.3	35	17	OW-1-9D	88.5	20	27
OW-1-2	96.5	30	29	OW-1-6S	67.0	45	17	OW-1-10D	87.2	15	27
OW-1-3	96.3	30	30	OW-1-7S	66.9	40	18	OW-1-11D	86.1	30	29
OW-1-4	95.0	30	30	OW-1-8S	66.7	40	17	OW-1-12D	85.3	30	29
OW-1-5D	93.9	40	30	OW-1-9S	66.0	30	18	OW-1-13D	84.7	30	28
OW-1-6D	92.4	30	29	OW-1-10S	54.6	30	13	OW-1-14D	84.1	35	29
OW-1-7D	91.1	30	28	OW-1-11S	54.1	30	14	OW-1-15D	83.3	40	28
OW-1-8D	89.6	40	28	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: 2/22/2013

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	13	OW-1-17D	79.5	40	14	OW-1-21S	49.3	30	11
OW-1-14S	52.7	30	14	OW-1-18D	78.3	30	27	OW-1-22S	49.3	30	11
OW-1-15S	52.2	30	13	OW-1-19D	78.9	30	27	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	30	23	OW-1-20D	79.5	50	27	OW-1-24S	48.4	45	12
OW-1-17S	50.7	30	22	OW-1-21D	79.5	40	26	OW-1-25S	48.8	45	13
OW-1-18S	50.2	30	13	OW-1-22D	79.5	40	25	OW-1-26SR	48.3	45	13
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	25	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	20	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	28	OW-1-29S	48.5	30	12	OW-1-33D	83.2	20	28
OW-1-26D	78.1	20	28	OW-1-30S	48.8	30	13	OW-1-34D	84.5	20	31
OW-1-27D	77.9	10	27	OW-1-31S	49.3	30	13	OW-1-35D	85.0	20	28
OW-1-28D	78.0	15	27	OW-1-32S	49.3	30	12	OW-1-36D	85.0	30	29
OW-1-29D	78.4	30	27	OW-1-33S	49.7	25	12	OW-1-37D	84.0	30	28
OW-1-30D	79.0	30	39	OW-1-34S	50.1	30	12	OW-1-38D	82.0	30	32
OW-1-31D	80.5	30	11	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	27
OW-1-32D	81.6	30	29	OW-1-36S	50.3	30	13	OW-1-40D	76.0	30	25

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

Date: 2/22/2013

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	30	23	OW-1-43	67.4	30	19
OW-1-38S	50.6	30	12	OW-1-42D	71.0	40	24	OW-1-44	66.6	30	18
OW-1-39S	50.7	30	12	OW-1-45	65.7	45	19	OW-1-51R	60.6	30	16
OW-1-40S	51.1	30	13	OW-1-46	64.3	55	18	OW-1-52	59.3	30	16
OW-1-41S	51.5	25	13	OW-1-47	63.4	30	18	OW-1-53	60.0	30	16
OW-1-42S	51.3	30	13	OW-1-48	62.5	60	18	OW-1-54	60.0	30	17
				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	26.52	22.3	13.41	0	MP-1-5	26.18	20.9	24.53	0	MP-1-1D	12.76	11.82
MP-1-1S	26.69	40.0	16.98	0.2	MP-1-6	18.57	20.9	10.76	0	MP-1-2D	45.44	40.91
MP-1-2D	20.57	35.4	47.37	0	MP-1-7	21.83	20.9	23.14	0	MP-1-3D	22.51	19.31
MP-1-2S	21.05	38.3	28.50	0.6	MP-1-8	22.90	20.9	10.12	0	MP-1-4D	27.52	21.00
MP-1-3D	18.79	20.9	25.04	0								
MP-1-3S	18.77	23.7	25.47	0								
MP-1-4D	21.52	20.9	29.60	0								
MP-1-4S	21.34	20.9	23.14	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: 2/22/2013

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 temperature inside shed too cold upon arrival. Sealed up vents to try and raise temperature inside shed. 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.

DO Meter membrane tip was replaced and meter was calibrated to 100% oxygen saturations. PID was span calibrated with fresh air and was reading 0.0 ppm. Calibrated with 100% 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 #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	3/8/2013
Time:	12:41
Weather:	Snow
Outdoor Temperature:	~29° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	5,606.9	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	86.6	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	113	(psi)
Element Outlet Temperature	124	(oF)
Running Hours	6,528	(hours)
Loading Hours	4,108	(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	60	28
OW-1-2	96.5	40	31	OW-1-6S	67.0	10	18	OW-1-10D	87.2	70	27
OW-1-3	96.3	30	31	OW-1-7S	66.9	10	17	OW-1-11D	86.1	30	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	15	17	OW-1-12D	85.3	30	29
OW-1-5D	93.9	30	29	OW-1-9S	66.0	30	18	OW-1-13D	84.7	30	29
OW-1-6D	92.4	35	29	OW-1-10S	54.6	30	13	OW-1-14D	84.1	40	29
OW-1-7D	91.1	35	29	OW-1-11S	54.1	35	14	OW-1-15D	83.3	35	29
OW-1-8D	89.6	30	29	OW-1-12S	53.6	45	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: 3/8/2013

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	14	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	27	OW-1-22S	49.3	35	11
OW-1-15S	52.2	30	13	OW-1-19D	78.9	40	27	OW-1-23S	48.8	25	11
OW-1-16SR	51.8	35	26	OW-1-20D	79.5	40	28	OW-1-24S	48.4	20	12
OW-1-17S	50.7	30	23	OW-1-21D	79.5	30	27	OW-1-25S	48.8	30	13
OW-1-18S	50.2	40	13	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	27	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	45	28	OW-1-30S	48.8	30	13	OW-1-34D	84.5	30	31
OW-1-27D	77.9	40	28	OW-1-31S	49.3	30	13	OW-1-35D	85.0	50	29
OW-1-28D	78.0	40	27	OW-1-32S	49.3	30	13	OW-1-36D	85.0	65	29
OW-1-29D	78.4	40	27	OW-1-33S	49.7	30	13	OW-1-37D	84.0	30	28
OW-1-30D	79.0	40	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	40	29	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: 3/8/2013

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	25	22	OW-1-43	67.4	30	20
OW-1-38S	50.6	30	13	OW-1-42D	71.0	25	21	OW-1-44	66.6	35	18
OW-1-39S	50.7	40	13	OW-1-45	65.7	30	19	OW-1-51R	60.6	35	17
OW-1-40S	51.1	30	13	OW-1-46	64.3	30	18	OW-1-52	59.3	35	15
OW-1-41S	51.5	40	14	OW-1-47	63.4	30	17	OW-1-53	60.0	40	16
OW-1-42S	51.3	40	13	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	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	26.33	23.8	42.41	0.1	MP-1-5	25.98	20.9	30.61	0	MP-1-1D	21.12	19.18
MP-1-1S	26.49	40.1	22.87	0	MP-1-6	18.40	20.9	8.89	0	MP-1-2D	33.41	30.01
MP-1-2D	20.40	35.9	46.77	0	MP-1-7	21.65	20.9	25.29	0	MP-1-3D	31.35	29.18
MP-1-2S	20.94	37.5	29.95	0.4	MP-1-8	22.77	20.9	17.93	0	MP-1-4D	23.37	20.11
MP-1-3D	18.61	21.1	35.21	0								
MP-1-3S	18.57	22.5	28.68	0.2								
MP-1-4D	21.33	22.9	32.79	0								
MP-1-4S	21.15	22.7	29.60	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: 3/8/2013

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:

Added small amount of cooling oil to compressor. Soaked up small amount of oil and water from separator for disposal. Found oxygen level low (86.6). During next O&M visit must go through the solenoid valves to clean and determine if one is bad. Wiped down all equipment and cleaned up all garbage from around fence areas.

DO Meter was calibrated to 100% oxygen saturations. PID was checked with 100ppm isobutylene prior to calibration and unit was reading 74.7 ppm. Zeroed unit with fresh air and reading was 0.0 ppm. Calibrated with 100ppm isobutylene and reading was 99.9 ppm.

Electric Meter # 96-934-323 tied into Pole #4

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	3/21/2013
Time:	13:07
Weather:	Snow
Outdoor Temperature:	~30° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	5,733.3	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	95	(psi)
Oxygen Purity	96.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	120	(psi)
(readings below are made from control panel)		
Delivery Air	112	(psi)
Element Outlet Temperature	178	(oF)
Running Hours	6,669	(hours)
Loading Hours	4,194	(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	40	28
OW-1-2	96.5	30	32	OW-1-6S	67.0	30	19	OW-1-10D	87.2	20	27
OW-1-3	96.3	40	31	OW-1-7S	66.9	30	17	OW-1-11D	86.1	15	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	17	OW-1-12D	85.3	35	29
OW-1-5D	93.9	35	29	OW-1-9S	66.0	30	18	OW-1-13D	84.7	30	29
OW-1-6D	92.4	30	30	OW-1-10S	54.6	30	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	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: 3/21/2013

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	40	27	OW-1-22S	49.3	30	11
OW-1-15S	52.2	40	13	OW-1-19D	78.9	40	28	OW-1-23S	48.8	35	12
OW-1-16SR	51.8	50	26	OW-1-20D	79.5	45	28	OW-1-24S	48.4	30	12
OW-1-17S	50.7	35	23	OW-1-21D	79.5	55	27	OW-1-25S	48.8	30	13
OW-1-18S	50.2	30	14	OW-1-22D	79.5	40	27	OW-1-26SR	48.3	35	13
OW-1-19S	49.7	30	15	OW-1-23D	78.7	40	27	OW-1-27S	48.3	35	13
OW-1-20S	49.3	30	13	OW-1-24D	78.2	35	26	OW-1-28S	48.3	40	14

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #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	15	28	OW-1-30S	48.8	30	13	OW-1-34D	84.5	30	32
OW-1-27D	77.9	30	29	OW-1-31S	49.3	40	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	35	27	OW-1-32S	49.3	40	13	OW-1-36D	85.0	30	29
OW-1-29D	78.4	30	27	OW-1-33S	49.7	45	13	OW-1-37D	84.0	30	28
OW-1-30D	79.0	30	36	OW-1-34S	50.1	30	12	OW-1-38D	82.0	35	30
OW-1-31D	80.5	30	25	OW-1-35S	50.3	35	13	OW-1-39D	78.0	40	27
OW-1-32D	81.6	30	30	OW-1-36S	50.3	30	13	OW-1-40D	76.0	45	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: 3/21/2013

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	40	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	13	OW-1-45	65.7	25	19	OW-1-51R	60.6	30	17
OW-1-40S	51.1	30	14	OW-1-46	64.3	25	18	OW-1-52	59.3	40	15
OW-1-41S	51.5	40	14	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	26.11	23.7	49.45	0	MP-1-5	25.72	20.9	21.05	0	MP-1-1D	21.82	19.17
MP-1-1S	26.24	39.7	24.78	0	MP-1-6	18.09	20.9	7.42	0	MP-1-2D	37.19	21.79
MP-1-2D	20.01	25.4	42.12	0	MP-1-7	21.35	20.9	21.14	0	MP-1-3D	42.47	39.00
MP-1-2S	20.53	40.0	30.31	0	MP-1-8	18.09	20.9	9.11	0	MP-1-4D	40.20	49.14
MP-1-3D	18.32	24.5	56.27	0								
MP-1-3S	18.28	27.7	38.71	0								
MP-1-4D	21.03	24.7	27.82	0								
MP-1-4S	20.83	25.8	43.75	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: 3/21/2013

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. Took apart all solenoid valves in air sep unit and found mud & silt buildup which was causing the low oxygen reading. Cleaned the valves and flushed out all tubing prior to reinstalling valves. Restarted unit and left running.

Added small amount of cooling oil to compressor and adjusted belt tension. 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 not opening all the way. Wiped down all equipment and cleaned up all garbage from around fence areas.

DO Meters membrane tip was replaced with a new unit and meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 110.1 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100.4 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:	1/8/2013
Time:	10:15
Weather:	Sunny
Outdoor Temperature:	~37° F
Inside Trailer Temperature:	~75° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	16,560	
Feed Air Pressure *	70	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(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	115	(psi)
Element Outlet Temperature	171	(^{o}F)
Running Hours	16,293	(hours)
Loading Hours	16,287	(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'	50	31	OW-2-9S	75'	33	20	OW-2-10D	97.2'	28	27
OW-2-3	94.3'	82	12	OW-2-10S	75'	30	30	OW-2-11D	100.8'	10	31
OW-2-4	94.7'	34	33	OW-2-11S	76.5'	35	21	OW-2-12	94'	32	18
OW-2-5	95.3'	32	30	OW-2-13S	75'	37	19	OW-2-13D	97'	60	15
OW-2-6	95.7'	28	30	OW-2-15S	75'	41	12	OW-2-14	96.4'	46	21
OW-2-7	96'	47	29	OW-2-16S	75.5'	22	19	OW-2-15D	94.6'	60	38
OW-2-8	96.3'	31	30	OW-2-18S	74.5'	29	19	OW-2-16D	94.1'	62	20
OW-2-9D	96.7'	34	29	OW-2-20S	79'	33	22	OW-2-17	95'	25	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: 1/8/2013

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'	72	16	OW-2-22S	76'	39	10	OW-2-26D	95'	34	34
OW-2-19	96.1'	28	29	OW-2-24S	77.8'	51	20	OW-2-27	93.5'	34	28
OW-2-20D	96.6'	26	30	OW-2-26S	74'	42	13	OW-2-28D	92.1'	32	27
OW-2-21	96.6'	36	28	OW-2-28S	76'	33	21	OW-2-29	92.2'	36	28
OW-2-22D	96.3'	35	27	OW-2-30S	67.8'	27	16	OW-2-30D	88'	36	26
OW-2-23	97.2'	56	26	OW-2-34	71'	28	19	OW-2-31	86'	40	33
OW-2-24D	97'	34	29	OW-2-35	69.2'	26	21	OW-2-32	84'	20	38
OW-2-25	96'	51	22	OW-2-36	64.8'	30	15	OW-2-33	82'	26	34

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	31	19	OW-2-45	61.1'	30	21	MP-2-1	NM	20.9	2.42	0
OW-2-38	62.1'	31	19	OW-2-46	61'	28	19	MP-2-2	NM	18.0	2.91	0
OW-2-39	60'	41	17	OW-2-47	60.5'	30	19	MP-2-3S	NM	18.5	3.08	0
OW-2-40	61.7'	34	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	NM	20.9	2.32	0
OW-2-41	61.7'	36	19	MP-2-2	2.61	2.53		MP-2-4	NM	20.3	3.02	0
OW-2-42	61.6'	34	19	MP-2-3S	3.17	3.11		MP-2-5	NM	20.2	3.20	0
OW-2-43	61.4'	33	20	MP-2-3D	2.86	3.19						
OW-2-44R	60.6'	36	19	MP-2-5	3.04	3.08						

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: 1/8/2013

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 No X

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)
   Yes X No
2) Abnormal conditions observed (e.g. vandalism)
3) Other major activities completed
4) Supplies needed
5) Visitors

Record routine activities such as any alarm/shutdowns, sampling, maintenance, material transported off-site, oil/filter/gasket and/or any other abnormal operating conditions:

Wiped down all equipment and cleaned up all garbage 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 fan motor in the air dryer unit was replaced on December 26, 2012 and is operating properly.

The solenoid valve at the location that was temporarily replaced needs to be replaced with a new solenoid valve.

Since starting up all of the injections points, high pressure at the j-plugs has been noted at monitoring points MP-2-3S and MP-2-3D. This is a safety concern that has been previously mentioned and needs to be addressed.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	1/21/2013
Time:	0:00
Weather:	Rain
Outdoor Temperature:	~36° F
Inside Trailer Temperature:	~70° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	16,709	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	105	(psi)
Oxygen Purity	92.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	111	(psi)
Element Outlet Temperature	127	(^{o}F)
Running Hours	16,850	(hours)
Loading Hours	16,437	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	33	OW-2-9S	75'	25	20	OW-2-10D	97.2'	30	28
OW-2-3	94.3'	30	30	OW-2-10S	75'	30	30	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	35	34	OW-2-11S	76.5'	30	21	OW-2-12	94'	30	20
OW-2-5	95.3'	50	30	OW-2-13S	75'	30	19	OW-2-13D	97'	35	31
OW-2-6	95.7'	35	30	OW-2-15S	75'	40	18	OW-2-14	96.4'	45	29
OW-2-7	96'	40	29	OW-2-16S	75.5'	45	19	OW-2-15D	94.6'	40	31
OW-2-8	96.3'	55	29	OW-2-18S	74.5'	45	19	OW-2-16D	94.1'	40	30
OW-2-9D	96.7'	50	30	OW-2-20S	79'	40	22	OW-2-17	95'	50	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: 1/21/2013

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'	30	20	OW-2-26D	95'	30	34
OW-2-19	96.1'	40	30	OW-2-24S	77.8'	35	28	OW-2-27	93.5'	40	28
OW-2-20D	96.6'	30	31	OW-2-26S	74'	35	19	OW-2-28D	92.1'	60	27
OW-2-21	96.6'	30	29	OW-2-28S	76'	40	21	OW-2-29	92.2'	65	28
OW-2-22D	96.3'	30	27	OW-2-30S	67.8'	30	17	OW-2-30D	88'	50	27
OW-2-23	97.2'	40	30	OW-2-34	71'	35	19	OW-2-31	86'	40	32
OW-2-24D	97'	45	29	OW-2-35	69.2'	30	22	OW-2-32	84'	35	37
OW-2-25	96'	40	28	OW-2-36	64.8'	30	20	OW-2-33	82'	30	33

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	21	MP-2-1	29.63	NM	12.18	0
OW-2-38	62.1'	30	19	OW-2-46	61'	30	19	MP-2-2	30.15	NM	15.05	0
OW-2-39	60'	35	18	OW-2-47	60.5'	35	19	MP-2-3S	30.82	NM	8.88	0
OW-2-40	61.7'	45	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	31.01	NM	9.74	0.3
OW-2-41	61.7'	30	19	MP-2-2	9.48	8.30		MP-2-4	19.53	NM	11.10	0
OW-2-42	61.6'	40	20	MP-2-3S	9.04	8.11		MP-2-5	17.73	NM	8.12	0
OW-2-43	61.4'	40	20	MP-2-3D	9.11	8.89						
OW-2-44R	60.6'	30	20	MP-2-5	12.68	9.43						

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: 1/21/2013

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_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 cooling oil in compressor low and added oil as needed to bring level to normal. Found leak at flow meter #17 and installed new o-rings to fix leak. Wiped down all equipment and cleaned up all garbage 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.

Since starting up all of the injections points, high pressure at the j-plugs has been noted at monitoring points MP-2-3S and MP-2-3D. This is a safety concern that has been previously mentioned and needs to be addressed.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	2/7/2013
Time:	13:18
Weather:	Sunny
Outdoor Temperature:	~31° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	16,935	
Feed Air Pressure *	90	(psi)
Cycle Pressure *	50	(psi)
Oxygen Receiver Pressure *	110	(psi)
Oxygen Purity	91.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	85	(psi)
(readings below are made from control panel)		
Delivery Air	95	(psi)
Element Outlet Temperature	169	(^{o}F)
Running Hours	17,084	(hours)
Loading Hours	16,664	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	30	OW-2-9S	75'	30	20	OW-2-10D	97.2'	30	28
OW-2-3	94.3'	30	28	OW-2-10S	75'	25	30	OW-2-11D	100.8'	45	32
OW-2-4	94.7'	35	32	OW-2-11S	76.5'	30	21	OW-2-12	94'	40	20
OW-2-5	95.3'	45	30	OW-2-13S	75'	30	19	OW-2-13D	97'	40	31
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	18	OW-2-14	96.4'	55	30
OW-2-7	96'	50	29	OW-2-16S	75.5'	40	19	OW-2-15D	94.6'	65	31
OW-2-8	96.3'	55	29	OW-2-18S	74.5'	40	19	OW-2-16D	94.1'	45	31
OW-2-9D	96.7'	40	30	OW-2-20S	79'	50	22	OW-2-17	95'	40	30

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 2/7/2013

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'	35	28	OW-2-22S	76'	40	20	OW-2-26D	95'	30	36
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	28	OW-2-27	93.5'	35	27
OW-2-20D	96.6'	30	30	OW-2-26S	74'	30	20	OW-2-28D	92.1'	30	28
OW-2-21	96.6'	30	29	OW-2-28S	76'	35	21	OW-2-29	92.2'	30	28
OW-2-22D	96.3'	30	27	OW-2-30S	67.8'	40	17	OW-2-30D	88'	30	26
OW-2-23	97.2'	40	28	OW-2-34	71'	30	18	OW-2-31	86'	40	28
OW-2-24D	97'	30	29	OW-2-35	69.2'	40	20	OW-2-32	84'	40	37
OW-2-25	96'	45	28	OW-2-36	64.8'	45	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'	20	20	OW-2-45	61.1'	30	21	MP-2-1	29.82	21.4	NM	0
OW-2-38	62.1'	30	19	OW-2-46	61'	30	19	MP-2-2	30.91	21.9	NM	0
OW-2-39	60'	30	18	OW-2-47	60.5'	30	19	MP-2-3S	31.01	22.4	NM	0
OW-2-40	61.7'	30	19	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	31.22	40.0	NM	0.5
OW-2-41	61.7'	15	19	MP-2-2	NM	NM		MP-2-4	19.68	23.9	NM	0
OW-2-42	61.6'	30	20	MP-2-3S	NM	NM		MP-2-5	17.85	21.3	NM	0
OW-2-43	61.4'	40	21	MP-2-3D	NM	NM						
OW-2-44R	60.6'	30	20	MP-2-5	NM	NM						

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: 2/7/2013

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:

Repired drain hose that pulled out of separator unit. Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and cleaned up all garbage 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.

DO readings were not collected as the membrane tip on the DO probe was compromised providing faulty readings.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	2/21/2013
Time:	13:21
Weather:	Sunny
Outdoor Temperature:	~38° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	17,108	
Feed Air Pressure *	80	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	91.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	80	(psi)
(readings below are made from control panel)		
Delivery Air	89	(psi)
Element Outlet Temperature	169	(^{o}F)
Running Hours	17,265	(hours)
Loading Hours	16,838	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	29	OW-2-9S	75'	35	20	OW-2-10D	97.2'	30	28
OW-2-3	94.3'	30	23	OW-2-10S	75'	45	30	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	30	32	OW-2-11S	76.5'	50	22	OW-2-12	94'	30	20
OW-2-5	95.3'	30	30	OW-2-13S	75'	50	19	OW-2-13D	97'	30	29
OW-2-6	95.7'	35	30	OW-2-15S	75'	40	18	OW-2-14	96.4'	40	28
OW-2-7	96'	35	29	OW-2-16S	75.5'	30	19	OW-2-15D	94.6'	30	29
OW-2-8	96.3'	30	29	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	35	34
OW-2-9D	96.7'	40	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: 2/21/2013

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'	30	20	OW-2-26D	95'	30	32
OW-2-19	96.1'	40	30	OW-2-24S	77.8'	30	30	OW-2-27	93.5'	45	28
OW-2-20D	96.6'	30	31	OW-2-26S	74'	30	19	OW-2-28D	92.1'	45	27
OW-2-21	96.6'	40	29	OW-2-28S	76'	30	21	OW-2-29	92.2'	40	28
OW-2-22D	96.3'	35	28	OW-2-30S	67.8'	30	17	OW-2-30D	88'	45	27
OW-2-23	97.2'	35	30	OW-2-34	71'	40	19	OW-2-31	86'	30	31
OW-2-24D	97'	40	29	OW-2-35	69.2'	30	21	OW-2-32	84'	30	36
OW-2-25	96'	30	28	OW-2-36	64.8'	50	20	OW-2-33	82'	30	33

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	21	MP-2-1	29.65	20.9	17.42	0
OW-2-38	62.1'	30	19	OW-2-46	61'	35	19	MP-2-2	30.71	20.9	35.41	0
OW-2-39	60'	30	18	OW-2-47	60.5'	30	19	MP-2-3S	30.82	23.4	51.21	0.5
OW-2-40	61.7'	35	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	31.01	40.0	47.37	0
OW-2-41	61.7'	40	19	MP-2-2	33.39	23.12		MP-2-4	19.44	22.6	15.50	0
OW-2-42	61.6'	30	19	MP-2-3S	45.36	44.14		MP-2-5	17.63	20.9	31.39	0
OW-2-43	61.4'	30	20	MP-2-3D	45.91	41.14						
OW-2-44R	60.6'	30	20	MP-2-5	38.56	28.21						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 2/21/2013

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:

Found temperature inside shed low and sealed up last lower fresh air vent in shed to try and raise temperature. After taking readings and adjusting flow a leak was detected in the flow meter at injection point 15D. The flow meter will need to be replaced with a new unit. Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and cleaned up all garbage 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.

DO Meter membrane tip was replaced and meter was calibrated to 100% oxygen saturation. PID was span calibrated with fresh air and was reading 0.0 ppm. Calibrated with 100% 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 #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	3/7/2013
Time:	13:00
Weather:	Snow
Outdoor Temperature:	~37° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	17,269	
Feed Air Pressure *	105	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	115	(psi)
Oxygen Purity	95.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	110	(psi)
Element Outlet Temperature	127	(^{o}F)
Running Hours	17,435	(hours)
Loading Hours	17,000	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	30	OW-2-9S	75'	30	20	OW-2-10D	97.2'	35	27
OW-2-3	94.3'	35	25	OW-2-10S	75'	30	30	OW-2-11D	100.8'	35	31
OW-2-4	94.7'	30	33	OW-2-11S	76.5'	30	21	OW-2-12	94'	45	20
OW-2-5	95.3'	30	30	OW-2-13S	75'	30	19	OW-2-13D	97'	30	30
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	18	OW-2-14	96.4'	30	28
OW-2-7	96'	40	29	OW-2-16S	75.5'	45	19	OW-2-15D	94.6'	Broken	29
OW-2-8	96.3'	35	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	34
OW-2-9D	96.7'	30	30	OW-2-20S	79'	35	23	OW-2-17	95'	30	30

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 3/7/2013

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'	30	20	OW-2-26D	95'	40	36
OW-2-19	96.1'	40	30	OW-2-24S	77.8'	30	29	OW-2-27	93.5'	40	28
OW-2-20D	96.6'	40	30	OW-2-26S	74'	30	19	OW-2-28D	92.1'	50	27
OW-2-21	96.6'	30	29	OW-2-28S	76'	30	21	OW-2-29	92.2'	50	28
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	35	18	OW-2-30D	88'	55	27
OW-2-23	97.2'	30	30	OW-2-34	71'	35	19	OW-2-31	86'	40	29
OW-2-24D	97'	35	29	OW-2-35	69.2'	30	21	OW-2-32	84'	30	37
OW-2-25	96'	30	28	OW-2-36	64.8'	30	20	OW-2-33	82'	30	34

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	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	29.51	20.9	17.35	0
OW-2-38	62.1'	30	19	OW-2-46	61'	35	19	MP-2-2	30.60	20.9	41.71	0
OW-2-39	60'	40	19	OW-2-47	60.5'	30	19	MP-2-3S	30.68	20.9	54.30	0
OW-2-40	61.7'	30	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.90	20.9	46.44	0
OW-2-41	61.7'	40	19	MP-2-2	40.11	25.75		MP-2-4	19.34	20.9	11.68	0
OW-2-42	61.6'	30	19	MP-2-3S	52.44	47.56		MP-2-5	17.53	20.9	21.02	0
OW-2-43	61.4'	30	20	MP-2-3D	40.11	37.77						
OW-2-44R	60.6'	30	19	MP-2-5	19.83	21.82						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 3/7/2013

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:

Repaired drain hose that blew out of separator. Secured hose with clamps to prevent future blow outs. Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and cleaned up all garbage from around fence areas. Installed new MGP locks on the doors of the shed as per request by National Grid.

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.

The flow meter at injection point 15D was found to be leaking during the 2-21-13 and needs to be replaced with a new unit.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100ppm isobutylene prior to calibration and unit was reading 74.7 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100ppm isobutylene and reading was 99.9 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	3/20/2013
Time:	12:37
Weather:	Sunny
Outdoor Temperature:	~51° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	17,415	
Feed Air Pressure *	90	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	96.5	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	95	(psi)
(readings below are made from control panel)		
Delivery Air	92	(psi)
Element Outlet Temperature	172	(^{o}F)
Running Hours	17,589	(hours)
Loading Hours	17,147	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	30	OW-2-9S	75'	30	20	OW-2-10D	97.2'	35	28
OW-2-3	94.3'	30	29	OW-2-10S	75'	30	30	OW-2-11D	100.8'	45	32
OW-2-4	94.7'	30	32	OW-2-11S	76.5'	30	21	OW-2-12	94'	40	20
OW-2-5	95.3'	45	30	OW-2-13S	75'	40	19	OW-2-13D	97'	30	30
OW-2-6	95.7'	45	30	OW-2-15S	75'	30	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'	45	29
OW-2-8	96.3'	35	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	55	33
OW-2-9D	96.7'	30	29	OW-2-20S	79'	30	22	OW-2-17	95'	50	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: 3/20/2013

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'	40	31	OW-2-22S	76'	30	21	OW-2-26D	95'	30	36
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	29	OW-2-27	93.5'	35	29
OW-2-20D	96.6'	30	30	OW-2-26S	74'	30	20	OW-2-28D	92.1'	35	27
OW-2-21	96.6'	20	29	OW-2-28S	76'	30	21	OW-2-29	92.2'	40	28
OW-2-22D	96.3'	25	28	OW-2-30S	67.8'	35	18	OW-2-30D	88'	40	27
OW-2-23	97.2'	30	30	OW-2-34	71'	30	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'	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'	40	20	MP-2-1	29.28	20.9	22.67	0
OW-2-38	62.1'	35	19	OW-2-46	61'	30	19	MP-2-2	30.36	20.9	44.12	0
OW-2-39	60'	45	19	OW-2-47	60.5'	30	19	MP-2-3S	30.45	20.9	52.10	0
OW-2-40	61.7'	40	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.65	40.0	40.27	0
OW-2-41	61.7'	40	19	MP-2-2	NM	NM		MP-2-4	19.06	22.9	19.55	0
OW-2-42	61.6'	30	19	MP-2-3S	50.19	44.45		MP-2-5	17.24	24.6	27.47	0
OW-2-43	61.4'	30	20	MP-2-3D	35.05	34.15						
OW-2-44R	60.6'	35	19	MP-2-5	21.55	29.31						

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.