

**Groundwater Sampling, NAPL
Monitoring/Recovery and Groundwater
Treatment Performance Report for the
Third Quarter of 2013 (July - September 2013)
for the Hempstead Intersection Street
Former Manufactured Gas Plant Site
Villages of Hempstead & Garden City
Nassau County, New York**



Prepared for:

National Grid

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Prepared by:

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**GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND
GROUNDWATER TREATMENT PERFORMANCE REPORT
FOR THE THIRD QUARTER OF 2013 (JULY - SEPTEMBER)**

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

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March 2014

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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
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
ISS	In Situ Solidification
LNAPL	light non-aqueous phase liquid
MGP	manufactured gas plant
µg/L	micrograms per liter
MP	monitoring points
NAPL	non-aqueous phase liquid
NYSDEC	New York State Department of Environmental Conservation
ORP	oxidation-reduction potential
PAHs	polycyclic aromatic hydrocarbons
PID	photo ionization detector
QC	quality control
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 Third Quarter (July, August, and September) 2013.

Groundwater monitoring and sampling were conducted on September 16 – September 26, 2013. This included measuring the depth to groundwater and NAPL thickness in approximately 41 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 October 7 for a total of one event in the Third Quarter of 2013.

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

- The general direction of groundwater flow in the Third Quarter 2013 in the shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per foot (ft/ft) for shallow, intermediate, and deep water bearing zones.
- The 100 µg/L dissolved-phase plume extended approximately 2,000 ft south of the site boundary.
- Dense non-aqueous phase liquid (DNAPL) was detected in one existing well during the Third Quarter. The well (HIMW-21), is located along the west side of Wendell Street. Thirteen recovery wells were decommissioned in mid to late June in this same general area.
- NAPL recovery activities were resumed in February 2013 on a monthly basis. During the Third quarter product was recovered from one well (HIMW-21).

- Approximately 4 gallons of NAPL were recovered during the Third Quarter of 2013. A total of 812.9 gallons of NAPL have been recovered from all recovery wells between April 2007 through Third Quarter 2013
- Based on a comparison between the Second Quarter 2013 and Third Quarter 2013 data and the previous 2012 data, the concentrations of total BTEX and total PAHs remained stable. One monitoring well (HIMW-24) showed a significant decrease in both BTEX and PAH concentrations.

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

1.0 INTRODUCTION

This quarterly report summarizes the field activities, analytical results, and data interpretations associated with groundwater sampling, gauging and recovery of NAPL and the monitoring of the groundwater treatment systems during the Third Quarter of 2013 at the Hempstead Intersection Street Former MGP site (refer to Figures 1 and 2).

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

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

- Measured the depth to groundwater and NAPL thickness in HIMW-21 (on September 16, 2013), see Tables 1 and 2 and Figure 2.
- Recovered NAPL from HIMW-21 on October 7, 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 dissolved oxygen (DO) measurements with a DO meter (YSI 55A) on System No. 1 during six events and on System No. 2 during six events in the Third Quarter 2013. Monitoring is conducted bi-monthly to assess the performance of groundwater treatment System No. 1 and System No. 2. This data is presented in Table 5.

2.0 FIELD ACTIVITIES

The field activities performed by URS during the Third Quarter of 2013 included the measurement of the depth to groundwater and NAPL thickness in 41 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. Third 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 Third 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 July 12, July 26, August 12, August 22, September 6, and September 23, 2013 and on System No. 2 on July 11, July 25, August 9, August 22, September 5, and September 20, 2013. This data is presented in Table 5.

2.1 Groundwater Depth and NAPL Thickness Measurements

Depths to groundwater and NAPL thickness measurements are listed in Table 2. NAPL 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 at the Professional Office Building property, where the majority of the NAPL recovery wells were located. However, the project sequencing changed and the ISS work for the Professional Office Building property ultimately occurred at the end of the project and therefore NAPL recovery resumed during the first and second quarters of 2013. During the Third Quarter of 2013, ISS work began on the Professional Office Building property, and thus NAPL recovery stopped for all but one well, HIMW-21, which is located near the Professional Office Building, but outside the ISS area.

NAPL levels were monitored in well HIMW-21 during two events on September 16 and October 7, 2013. DNAPL was observed in the well. No LNAPL was observed. Recovery of NAPL was conducted on October 7, 2013. HIMW-21 was 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. The well was then gauged with a weighted cotton string to measure the DNAPL thickness. The DNAPL was recovered using a dedicated bailer and recovered water and product was placed in a 55-gallon steel drum for subsequent offsite hazardous waste disposal.

The quantity of recovered DNAPL was estimated based on gallon markings on the side of the purge bucket used to collect the purged liquids during recovery. Table 3 presents Third Quarter NAPL thickness and NAPL recovery amounts from HIMW-21, located south of the site in the sidewalk of the Professional Office Building.

2.3 Groundwater Sampling

Low-flow groundwater sampling methods were used to sample groundwater, which included purging groundwater at a rate of between 100 and 500 milliliters per minute. The water was pumped through a flow-through cell and monitored for pH, conductivity, turbidity, DO, temperature, and oxidation-reduction potential (ORP). Purging was continued until stable conditions were achieved (defined as three consecutive stable readings [i.e. ± 10 percent] over a 15 minute period). Groundwater samples were collected afterwards and shipped under chain-of-

custody procedures to H2M laboratories, Inc. for analysis of BTEX (United States Environmental Protection Agency [USEPA] Method 8260B) and PAHs (USEPA Method 8270C). Purge water is stored in an onsite storage tank for subsequent offsite disposal. The Data Usability Summary Report is presented in Appendix A.

There were 25 monitoring wells sampled during the Third Quarter September 16 – September 26, 2013 groundwater sampling event. Results of this groundwater sampling event are presented in Table 4.

2.4 Groundwater Treatment System Operation

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

The performance of System No. 1 and System No. 2 was monitored by F&N during the Third 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 Third Quarter and were taken for System No. 1 on July 12, July 26, August 12, August 22, September 6, and September 23, 2013 and on System No. 2 on July 11, July 25, August 9, August 22, September 5, and September 20, 2013. 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 Third Quarter 2013 are shown in Figure 4. The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100 µg/L, extends approximately 2,000 feet south of the site boundary. Based on comparisons to previous quarterly groundwater monitoring

data, the concentrations of total BTEX or PAHs in groundwater sampled during the Third Quarter in most site monitoring wells remained relatively stable, while a few wells showed modest changes, and one well showed a significant decrease of BTEX and PAH concentrations.

In September 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 9 µg/L for BTEX and 27 µg/L for PAHs (intermediate well, HIMW-015I). The concentrations of total BTEX or total PAHs in wells located between the site and the HIMW-015 cluster varied from “not detected” to 3,385 µg/L (intermediate well, HIMW-005I) for PAHs, see Figure 4.

The following are some wells showing notable changes during Third Quarter 2013. Wells HIMW-5D, HIMW-005I, HIMW-013I, HIMW-014I, and HIMW-024 are discussed below:

- For HIMW-005D, total BTEX concentrations decreased from 23 µg/L in the Second Quarter to 19 µg/L in the Third Quarter. PAH concentrations decreased from 508 µg/L in the Second Quarter to 146 µg/L in the Third Quarter. This is consistent with the downward trend of PAH values for this well.
- For HIMW-005I, total BTEX concentrations decreased slightly from 96 ug/L in the Second Quarter to 85 ug/L in the Third Quarter. PAH concentrations increased for the second consecutive quarter from 2,155 ug/L in the Second Quarter to 3,385 ug/L in the Third Quarter.
- For HIMW-013I, total BTEX concentrations increased from 83 µg/L in the Second Quarter to 153 µg/L in the Third Quarter. PAH concentrations increased from 60 µg/L in the Second Quarter to 113 µg/L in the Third Quarter.
- For HIMW-014I, total BTEX concentrations decreased from 45 ug/L in the Second Quarter to 12 ug/L in the Third Quarter. PAH concentrations decreased from 103 µg/L in the Second Quarter to 34 µg/L in the Third Quarter.
- For HIMW-024, total BTEX concentrations decreased significantly from 226 µg/L in the Second Quarter to 13 µg/L in the Third Quarter. PAH concentrations decreased from 126 µg/L in the Second Quarter to 7 µg/L in the Third Quarter.

3.2 Potentiometric Heads and NAPL Thickness

Potentiometric heads and NAPL thickness measurements for Third 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 Third Quarter 2013. The data for Third Quarter 2013 indicates that the direction of groundwater flow within the well field was south at an average gradient of approximately 0.002 ft/ft for shallow, intermediate, and deep water bearing zone. These values are historically consistent.

DNAPL was observed in the one well monitored during the Third Quarter 2013. The well (HIMW-021) is located along the west side of Wendell Street near the Professional Office Building located south of the site (Figure 8). All wells in the parking lot of the POB were decommissioned in late June 2013 during ISS work. Wells located within the property boundary of the site were previously decommissioned in Fourth Quarter 2011 with the start of the ISS remediation project.

3.3 Groundwater Analytical Results

Groundwater analytical results are summarized in Section 3.1, Table 4, and Appendix A and are illustrated on 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

ISS work in the parking lot of the POB was ongoing through the Third Quarter of 2013. As a result, all recovery wells in the POB parking lot were decommissioned leaving a single recovery well remaining (HIMW-021). Four gallons of NAPL were recovered at the beginning of the Fourth Quarter (October 7) following completion of ISS work in the parking lot. A total of 812.9 gallons of NAPL have been recovered from all of the recovery wells for the period of April 2007 through Third Quarter 2013 (Table 3).

3.5 Groundwater Treatment System Performance

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

System No. 1

System No. 1 was down between the dates of August 13, 2013 and September 9, 2013 due to a malfunctioning fan. Because of this shutdown, DO readings reported during monitoring events on August 22 and September 6, 2013 are considerably lower than recorded in recent quarters and during the four other monitoring events conducted during the Third Quarter. This lower DO indicates that oxygen is being consumed, providing an indication of robust biological activity in the groundwater. DO readings reported in the Third Quarter 2013 during events when the system was operating ranged from a low of 7.16 mg/L at MP-1-8 to a high of 52.66 mg/L at MP-1-3D. The wells MP-1-2D and MP-1-3D had consistently high dissolved oxygen concentrations during the Third Quarter prior to system shutdown. In the Third Quarter, there were no PID headspace readings above 1 ppm.

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

System No. 2

System No. 2 DO readings reported in the Third Quarter 2013 ranged from 13.54 mg/L at MP-2-4 to 50.05 mg/L at MP-2-3S, middle of water column. The wells with more consistently

high dissolved oxygen concentrations (over 40 mg/L) were MP-2-2 and MP-2-3S. There were no PID headspace readings above 1 ppm for System No. 2 in the Third Quarter.

Based on the data collected during the Third 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 Third Quarter 2013 groundwater sampling, NAPL monitoring and recovery data, and groundwater treatment performance presented in this report:

- The general direction of groundwater flow in the Third Quarter 2013 in the shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per foot (ft/ft) for shallow, intermediate, and deep water bearing zones.
- The 100 µg/L dissolved-phase plume extended approximately 2,000 ft south of the site boundary.
- DNAPL was detected in the one existing well (HIMW-021) monitored during the Third Quarter. The well (HIMW-21) was located immediately south of the site along the west side of Wendell Street near the POB. Four gallons of NAPL was recovered from this well on October 7, 2013.
- Approximately 812.9 gallons of NAPL has been recovered from all the recovery wells for the period of April 2007 through the Third Quarter 2013.
- Based on a comparison between the Second Quarter 2013 and Third Quarter 2013 data and previous data, the concentrations of total BTEX and total PAHs remained stable.
- 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 Third 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.
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- 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.
- URS, 2013b. *Groundwater Sampling and Groundwater Treatment Performance Report for the First Quarter of 2013 (January – March 2013) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* September.
- URS, 2013c. *Groundwater Sampling and Groundwater Treatment Performance Report for the Second Quarter of 2013 (April – June 2013) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.*

TABLES

Table 1
Thickness Measurements, NAPL Recovery, and Water Quality
Sampling
Third Quarter 2013 ^{(1), (2)}
Hempstead Intersection Street Former MGP Site

Well ID	Third Quarter (September 16 to 26, 2013)			Monitoring and DNAPL Recovery
	Water Level	NAPL Thickness	Water Quality	October 7, 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	Decommissioned, June 2013			
HIMW-016I	Decommissioned, June 2013			
HIMW-017S	Decommissioned, June 2013			
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	X	X		
PZ-03	X	X		

Table 1
Thickness Measurements, NAPL Recovery, and Water Quality
Sampling
Third Quarter 2013 ^{(1), (2)}
Hempstead Intersection Street Former MGP Site

Well ID	Third Quarter (September 16 to 26, 2013)			Monitoring and DNAPL Recovery
	Water Level	NAPL Thickness	Water Quality	October 7, 2013
IPR-18	Decommissioned, June 2013			
IPR-19S	Decommissioned, June 2013			
IPR-19D	Decommissioned, June 2013			
IPR-20	Decommissioned, June 2013			
IPR-21	Decommissioned, June 2013			
IPR-22	Decommissioned, June 2013			
IPR-23	Decommissioned, June 2013			
IPR-24	Decommissioned, June 2013			
IPR-29	Decommissioned, June 2013			
IPR-30	Decommissioned, June 2013			
OSMW-01***				
OSMW-02	X	X		
OSMW-03	X	X		

Notes:

- 1 Field marked with "X" indicates that the activity was performed.
- 2 Blank field indicates that the activity was not performed.
- * 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.
- *** Location of well OSMW-01 was not found.

Shaded cell indicates well was abandoned in June 2013.

Table 2
Groundwater and NAPL Measurements
Third 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	9/16/2013	73.82	NM	NM	NM	39.80	NM	NM	NM
HIMW-002I	9/16/2013	78.87	NM	NM	NM	88.80	NM	NM	NM
HIMW-002D	9/16/2013	74.13	NM	NM	NM	110.80	NM	NM	NM
HIMW-003S	9/16/2013	65.00	ND	18.13	ND	34.51	0	0.00	46.87
HIMW-003I	9/16/2013	64.94	ND	18.17	ND	85.31	0	0.00	46.77
HIMW-003D	9/16/2013	65.26	ND	19.17	ND	142.76	0	0.00	46.09
HIMW-004S	9/16/2013	72.74	ND	26.51	ND	41.61	0	0.00	46.23
HIMW-004I	9/16/2013	72.78	ND	26.69	ND	90.40	0	0.00	46.09
HIMW-004D	9/16/2013	72.65	ND	27.48	ND	177.09	0	0.00	45.17
HIMW-005S	9/16/2013	67.19	ND	20.84	ND	38.91	0	0.00	46.35
HIMW-005I	9/16/2013	67.22	ND	21.08	ND	91.92	0	0.00	46.14
HIMW-005D	9/16/2013	67.22	ND	21.85	ND	139.60	0	0.00	45.37
HIMW-008S	9/16/2013	65.04	ND	19.16	ND	36.96	0	0.00	45.88
HIMW-008I	9/16/2013	65.14	ND	19.31	ND	75.02	0	0.00	45.83
HIMW-008D	9/16/2013	64.93	ND	19.12	ND	114.63	0	0.00	45.81
HIMW-009S	9/16/2013	70.03	ND	23.64	ND	39.61	0	0.00	46.39
HIMW-009I	9/16/2013	69.93	ND	23.62	ND	80.45	0	0.00	46.31
HIMW-009D	9/16/2013	69.96	ND	23.74	ND	122.80	0	0.00	46.22
HIMW-010S	9/16/2013	71.60	ND	24.28	ND	39.10	0	0.00	47.32
HIMW-010I	9/16/2013	71.47	ND	24.07	ND	89.77	0	0.00	47.40
HIMW-010D ⁽²⁾	9/16/2013	71.44	NM	NM	NM	136.02	0	0.00	NM
HIMW-011S	9/16/2013	71.62	ND	24.69	ND	39.85	0	0.00	46.93
HIMW-011I	9/16/2013	71.43	ND	24.53	ND	92.95	0	0.00	46.90
HIMW-011D	9/16/2013	71.39	ND	24.54	ND	122.10	0	0.00	46.85
HIMW-012S	9/16/2013	61.58	ND	16.86	ND	32.95	0	0.00	44.72
HIMW-012I	9/16/2013	61.59	ND	16.75	ND	74.50	0	0.00	44.84
HIMW-012D	9/16/2013	61.82	ND	19.63	ND	128.31	0	0.00	42.19
HIMW-013S	9/16/2013	72.83	ND	29.92	ND	48.57	0	0.00	42.91
HIMW-013I	9/16/2013	72.60	ND	29.7	ND	81.52	0	0.00	42.90
HIMW-013D	9/16/2013	72.53	ND	29.72	ND	121.93	0	0.00	42.81
HIMW-014I	9/16/2013	71.71	ND	28.81	ND	96.54	0	0.00	42.90
HIMW-014D	9/16/2013	71.59	ND	32.82	ND	152.04	0	0.00	38.77
HIMW-015I	9/16/2013	64.18	ND	24.72	ND	92.45	0	0.00	39.46
HIMW-015D	9/16/2013	63.96	ND	27.89	ND	153.14	0	0.00	36.07
HIMW-016S	Decommissioned in June 2013								
HIMW-016I	Decommissioned in June 2013								
HIMW-017S	Decommissioned in June 2013								
HIMW-020S	9/16/2013	70.43	ND	25.01	ND	36.61	0	0.00	45.42
HIMW-020I	9/16/2013	70.30	ND	24.86	ND	74.51	0	0.00	45.44

Table 2
Groundwater and NAPL Measurements
Third 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	9/16/2013	NM	ND	19.99	41.6	45.30	0	3.70	NM
HIMW-022	9/16/2013	NM	ND	29.91	ND	64.41	0	0.00	NM
HIMW-023	9/16/2013	NM	ND	30.07	ND	75.56	0	0.00	NM
HIMW-024	9/16/2013	NM	ND	14.62	ND	55.01	0	0.00	NM
HIMW-025	9/16/2013	NM	ND	17.03	ND	52.29	0	0.00	NM
PZ-02	9/16/2013	72.96	NM	25.26	NM	35.25	0	0.00	47.70
PZ-03	9/16/2013	64.58	NM	17.22	NM	29.49	0	0.00	47.36
IPR-18	Decommissioned in June 2013								
IPR-19S ⁽²⁾	Decommissioned in June 2013								
IPR-19D	Decommissioned in June 2013								
IPR-20	Decommissioned in June 2013								
IPR-21	Decommissioned in June 2013								
IPR-22	Decommissioned in June 2013								
IPR-23	Decommissioned in June 2013								
IPR-24	Decommissioned in June 2013								
IPR-29	Decommissioned in June 2013								
IPR-30	Decommissioned in June 2013								
OSMW-01	9/16/2013	71.12	NM	NM	NM	42.15	0	NM	NM
OSMW-02	9/16/2013	71.59	NM	24.78	NM	45.06	0	NM	46.81
OSMW-03	9/16/2013	71.39	NM	24.65	NM	44.73	0	NM	46.74

Notes:

- (1) Potentiometric heads in wells containing LNAPL are corrected using a specific gravity = 0.96
- (2) HIMW-010D was destroyed in Third Quarter 2011. HIMW-019S is covered with cold patch and inaccessible.

Shaded cell indicates well was decommissioned in June 2013.

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

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

Well ID	Well Diameter	October 7, 2013		
		Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed
		[ft]	[ft]	[gal]
HIMW-016S	2	Decommissioned in June 2013		
HIMW-016I	2	Decommissioned in June 2013		
HIMW-017S	2	Decommissioned in June 2013		
HIMW-021	6	ND	3.70	4.00
IPR-18	6	Decommissioned in June 2013		
IPR-19S	6	Decommissioned in June 2013		
IPR-19D	6	Decommissioned in June 2013		
IPR-20	6	Decommissioned in June 2013		
IPR-21	6	Decommissioned in June 2013		
IPR-22	6	Decommissioned in June 2013		
IPR-23	6	Decommissioned in June 2013		
IPR-24	6	Decommissioned in June 2013		
IPR-29	6	Decommissioned in June 2013		
IPR-30	6	Decommissioned in June 2013		
Volume Removed				4.00

Total volume recovered during the Third Quarter 2013:

4.00

Total volume of NAPL recovered since April 2007:

812.93

Notes:

	Shaded cell indicates well was decommissioned in June 2013.
LNAPL	Light Non-Aqueous Phase Liquid
DNAPL	Dense Non-Aqueous Phase Liquid
ND	NAPL Not Detected
NM	Not Measured

Table 4

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

Well ID	Third Quarter 2013 September 16 - September 26, 2013	
	Total BTEX [ug/L]	Total 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	19	146
HIMW-005I	85	3,385
HIMW-005S	ND	ND
HIMW-008D	ND	ND
HIMW-008I	ND	ND
HIMW-008S	32	4
HIMW-009D		
HIMW-009I		
HIMW-009S		
HIMW-010D		
HIMW-010I		
HIMW-010S		
HIMW-011D		
HIMW-011I		
HIMW-011S		
HIMW-012D	ND	ND
HIMW-012I	33	107
HIMW-012S	ND (DUP - ND)	ND (DUP - ND)
HIMW-013D	3	14
HIMW-013I	153	113
HIMW-013S	ND	ND
HIMW-014D	ND	ND
HIMW-014I	12	34
HIMW-015D	ND	ND
HIMW-015I	9	27
HIMW-016I		
HIMW-016S		
HIMW-017S		
HIMW-020I	3 (DUP - 3)	5 (DUP - 4)
HIMW-020S	ND	5
HIMW-021		
HIMW-022	ND	ND
HIMW-023	ND	ND
HIMW-024	13	7
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
DUP	indicates a duplicate sample

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

System #1

Well ID ⁽²⁾	July 12, 2013						July 26, 2013						August 12, 2013						August 22, 2013 ³					
	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1S	24.98	38.6	0.0	18.27	NM	NM	25.19	40.0	0.0	21.11	NM	NM	25.48	39.8	0.2	18.68	NM	NM	25.64	39.5	0.1	9.87	NM	NM
MP-1-1D	24.92	21.2	0.4	20.6	17.41	9.91	25.12	20.9	0.5	19.91	15.14	12.27	25.40	20.9	0.6	22.12	21.77	19.10	25.55	20.0	0.5	14.58	5.38	2.10
MP-1-2S	19.44	39.7	0.1	20.88	NM	NM	19.67	39.6	0.2	23.66	NM	NM	19.97	39.2	0.1	38.11	NM	NM	20.15	39.9	0.0	9.87	NM	NM
MP-1-2D	19.19	38.1	0.0	47.29	42.14	39	19.42	38.1	0.0	45.79	40.11	39.95	19.62	39.4	0.3	37.17	35.99	34.07	19.92	38.5	0.2	11.88	9.10	4.11
MP-1-3S	17.32	37.6	0.0	20.83	NM	NM	17.50	39.9	0.3	34.39	NM	NM	17.77	39.0	0.4	23.89	NM	NM	17.94	39.3	0.0	19.49	NM	NM
MP-1-3D	17.45	20.9	0.0	37.83	37.17	36.21	17.61	19.4	0.0	42.12	40.55	39.00	17.86	18.9	0.0	52.66	45.11	41.14	18.09	19.1	0.0	8.31	7.70	5.14
MP-1-4S	20.19	21.9	0.0	32.77	NM	NM	20.37	32.4	0.0	35.37	NM	NM	20.72	40.0	0.0	23.29	NM	NM	20.72	40.0	0.0	5.35	NM	NM
MP-1-4D	20.13	39.7	0.5	29.12	33.78	35.11	20.35	39.3	0.4	39.38	37.61	35.38	20.61	36.2	0.5	37.39	38.77	35.41	20.75	38.9	0.4	8.66	9.12	6.60
MP-1-5	24.71	20.2	0.0	21.44	NM	NM	24.93	19.9	0.0	32.77	NM	NM	25.21	16.6	0.0	29.64	NM	NM	25.37	16.5	0.0	22.27	NM	NM
MP-1-6	16.97	21.7	0.0	14.62	NM	NM	17.09	20.9	0.0	10.50	NM	NM	17.47	20.9	0.0	11.62	NM	NM	17.62	18.3	0.0	6.03	NM	NM
MP-1-7	20.23	20.9	0.0	21.49	NM	NM	20.40	19.9	0.0	32.40	NM	NM	20.75	18.8	0.0	39.37	NM	NM	20.89	18.8	0.0	31.60	NM	NM
MP-1-8	21.75	17.6	0.0	7.16	NM	NM	21.91	37.5	0.2	9.45	NM	NM	22.26	28.7	0.0	12.22	NM	NM	22.41	23.6	0.0	12.90	NM	NM

Well ID ⁽²⁾	September 6, 2013 ³						September 23, 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	26.07	39.3	0.1	9.08	NM	NM	26.44	39.7	0.1	11.11	NM	NM
MP-1-1D	26.00	20.9	0.3	3.71	1.84	1.12	26.36	20.9	0.1	14.45	15.00	13.27
MP-1-2S	20.58	39.6	0.0	9.31	NM	NM	20.93	39.0	0.0	12.27	NM	NM
MP-1-2D	20.35	36.1	0.4	14.47	10.15	6.52	20.71	34.5	0.4	16.77	9.75	10.12
MP-1-3S	18.45	31.4	0.2	16.67	NM	NM	18.70	30.2	0.0	21.12	NM	NM
MP-1-3D	18.56	19.8	0.0	7.20	5.11	4.77	18.85	19.7	0.0	14.45	12.29	9.97
MP-1-4S	21.35	36.5	0.0	1.70	NM	NM	21.61	36.0	0.0	7.01	NM	NM
MP-1-4D	21.33	24.8	0.3	2.22	1.40	0.98	21.55	25.1	0.2	5.51	7.11	8.87
MP-1-5	25.81	25.8	0.0	21.50	NM	NM	26.18	17.1	0.0	24.19	NM	NM
MP-1-6	18.09	18.1	0.0	4.23	NM	NM	18.40	15.4	0.0	9.37	NM	NM
MP-1-7	21.38	21.4	0.0	34.60	NM	NM	21.64	20.3	0.0	33.39	NM	NM
MP-1-8	22.92	19.0	0.0	9.14	NM	NM	22.18	19.0	0.0	12.29	NM	NM

Abbreviations

- DTW: Depth to water (feet)
- O₂: Oxygen measurement of well headspace (percent oxygen)
- PID: Photoionization Detector measurement of well headspace (parts per million)
- DO: Dissolved Oxygen concentration (percent or milligrams per liter)
- NA: Not Accessible
- NM: Not Measured

Notes

- (1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%
- (2) DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).
- (3) DO readings reported on August 22, 2013 and September 6, 2013 were collected while System No. 1 was not running due to a broken fan.

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

System #2

	July 11, 2013						July 25, 2013						August 9, 2013						August 22, 2013					
Well ID	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-2-1	27.82	22.4	0.0	21.71	NM	NM	28.11	23.6	0.0	17.71	NM	NM	28.26	22.8	0.0	21.91	NM	NM	28.51	22.6	0.4	24.39	NM	NM
MP-2-2	29.15	19.9	0.0	37.41	30.12	33.51	29.47	20.2	0.0	26.83	25.19	20.11	29.62	19.2	0.1	41.11	36.29	27.61	29.86	19.6	0.4	40.07	38.11	35.00
MP-2-3S	29.05	19.5	0.0	47.52	47.98	49.61	29.36	26.6	0.0	45.41	46.25	41.99	29.48	23.1	0.2	47.17	50.05	48.88	29.72	24.6	0.5	45.59	46.77	44.01
MP-2-3D	29.16	38.9	0.5	40.11	37.17	35.14	29.48	40.0	0.4	37.88	35.13	34.00	29.59	40.0	0.5	39.81	40.07	39.79	29.87	39.7	0.0	41.12	38.81	35.14
MP-2-4	17.76	24.6	0.2	20.69	NM	NM	18.06	23.3	0.3	13.54	NM	NM	18.20	23.7	0.2	17.81	NM	NM	18.45	21.7	0.3	16.77	NM	NM
MP-2-5	15.93	21.2	0.0	20.44	22.62	27.37	16.22	22.5	0.0	17.44	15.49	16.12	16.35	20.9	0.0	25.83	21.70	20.83	16.61	20.9	0.0	23.84	21.19	18.88

	September 5, 2013						September 20, 2013					
Well ID	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O ₂ Head-space (%O ₂) ⁽¹⁾	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-2-1	28.87	21.9	0.3	21.33	NM	NM	29.35	22.5	0.2	28.55	NM	NM
MP-2-2	30.23	19.6	0.5	43.27	30.13	29.99	30.66	19.4	0.2	46.86	40.12	37.77
MP-2-3S	30.13	25.1	0.5	46.44	41.12	37.74	30.56	25.1	0.5	42.55	33.13	30.74
MP-2-3D	30.25	38.4	0.0	34.99	31.48	30.99	30.70	38.7	0.0	40.12	19.19	26.16
MP-2-4	18.86	22.4	0.4	17.63	NM	NM	19.29	20.9	0.2	17.88	NM	NM
MP-2-5	17.02	20.9	0.1	38.17	21.11	16.68	17.47	20.9	0.0	46.81	21.12	11.07

Abbreviations

- DTW: Depth to water (feet)
- O₂: 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

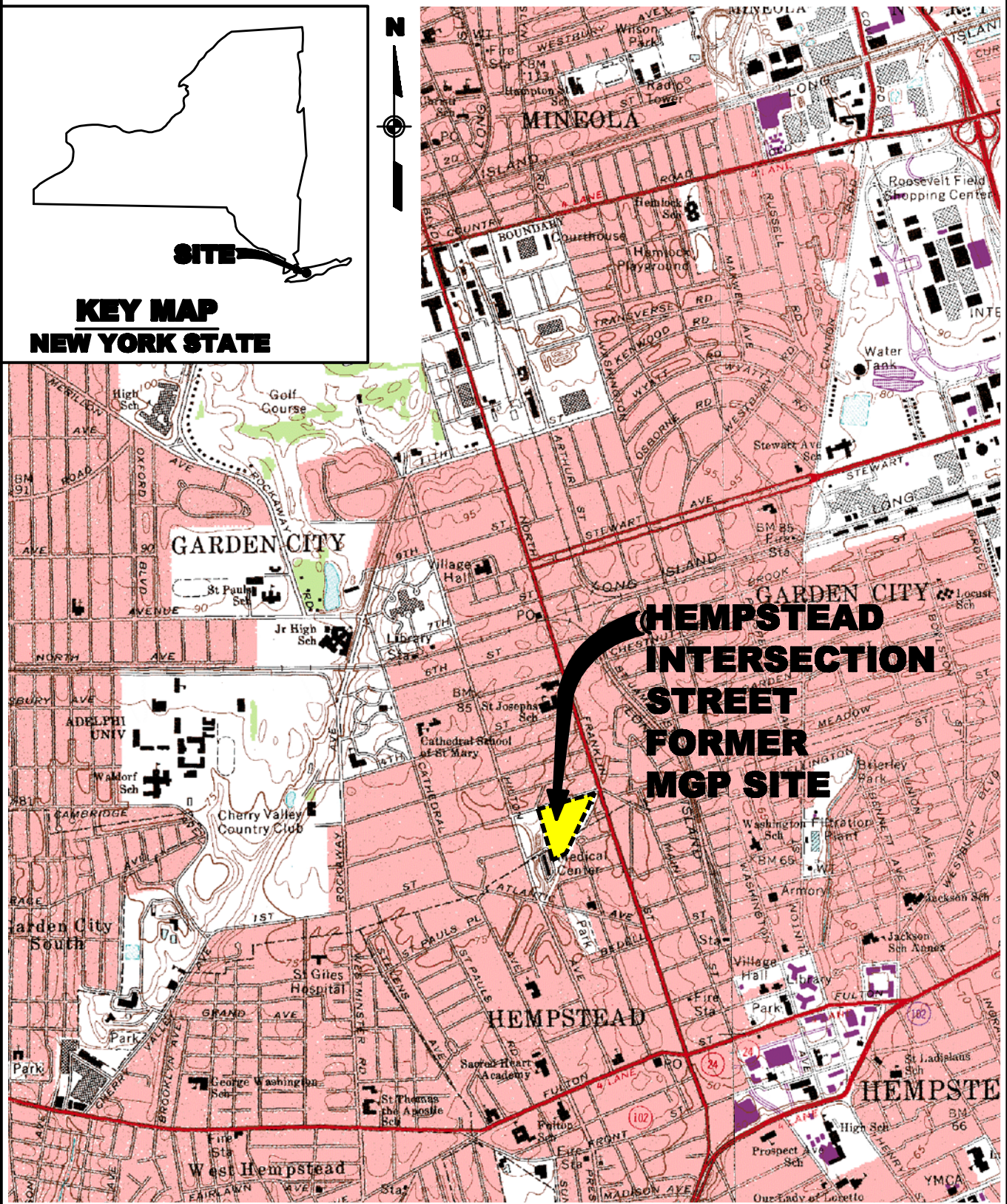
(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%

FIGURES

J:\1175065.0000\CAD\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\FIGURE-1.dwg 3/13/09 - 1 RAL



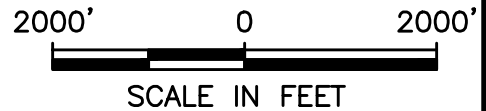
KEY MAP
NEW YORK STATE



HEMPSTEAD
INTERSECTION
STREET
FORMER
MGP SITE

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

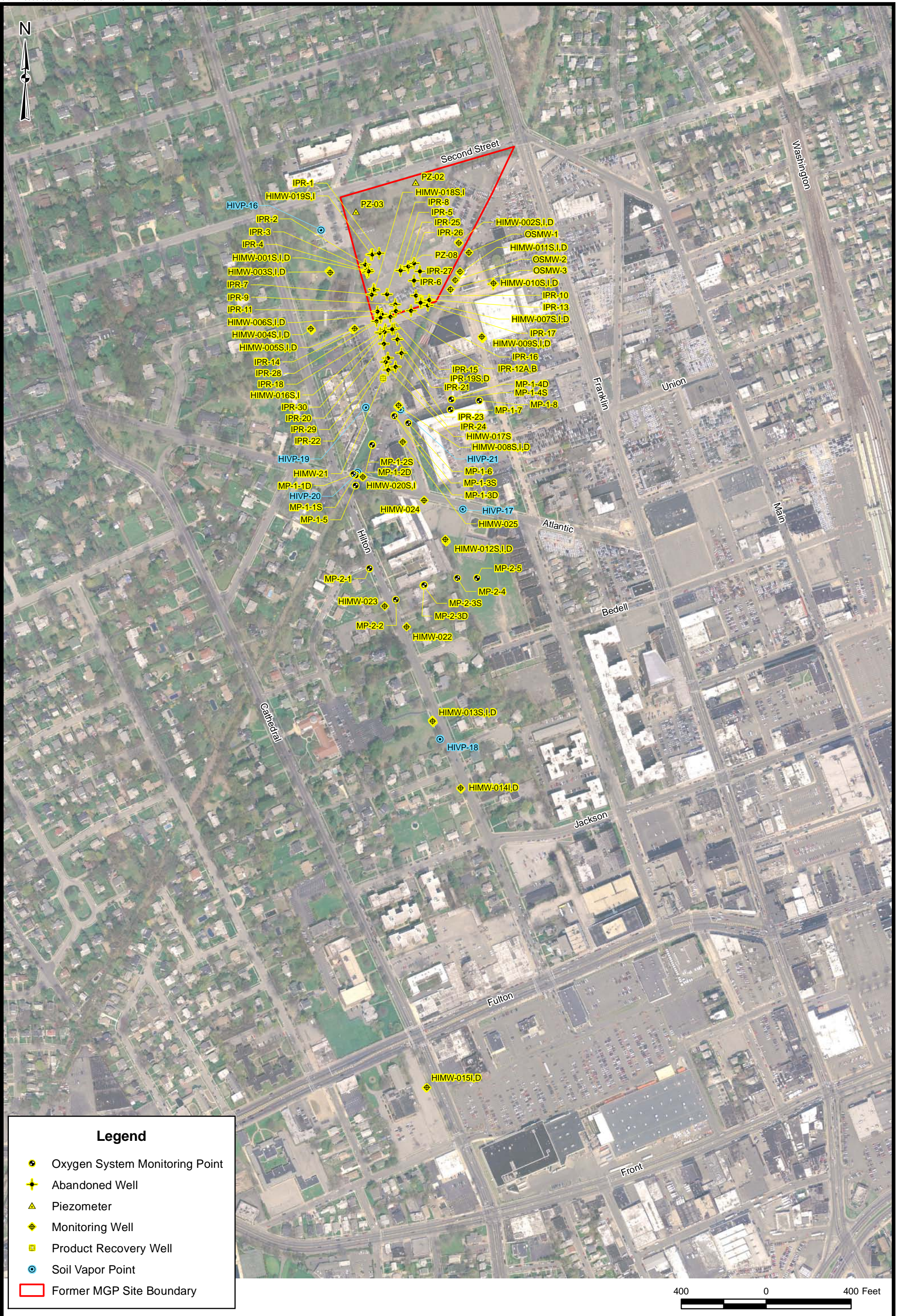
SOURCE:
USGS 7.5 MINUTE SERIES
TOPOGRAPHICAL QUADRANGLES:
FREEPORT, NY (1969)
LYNDBROOK, NY (1969)



URS Corporation

LOCATION MAP

FIGURE 1



Legend

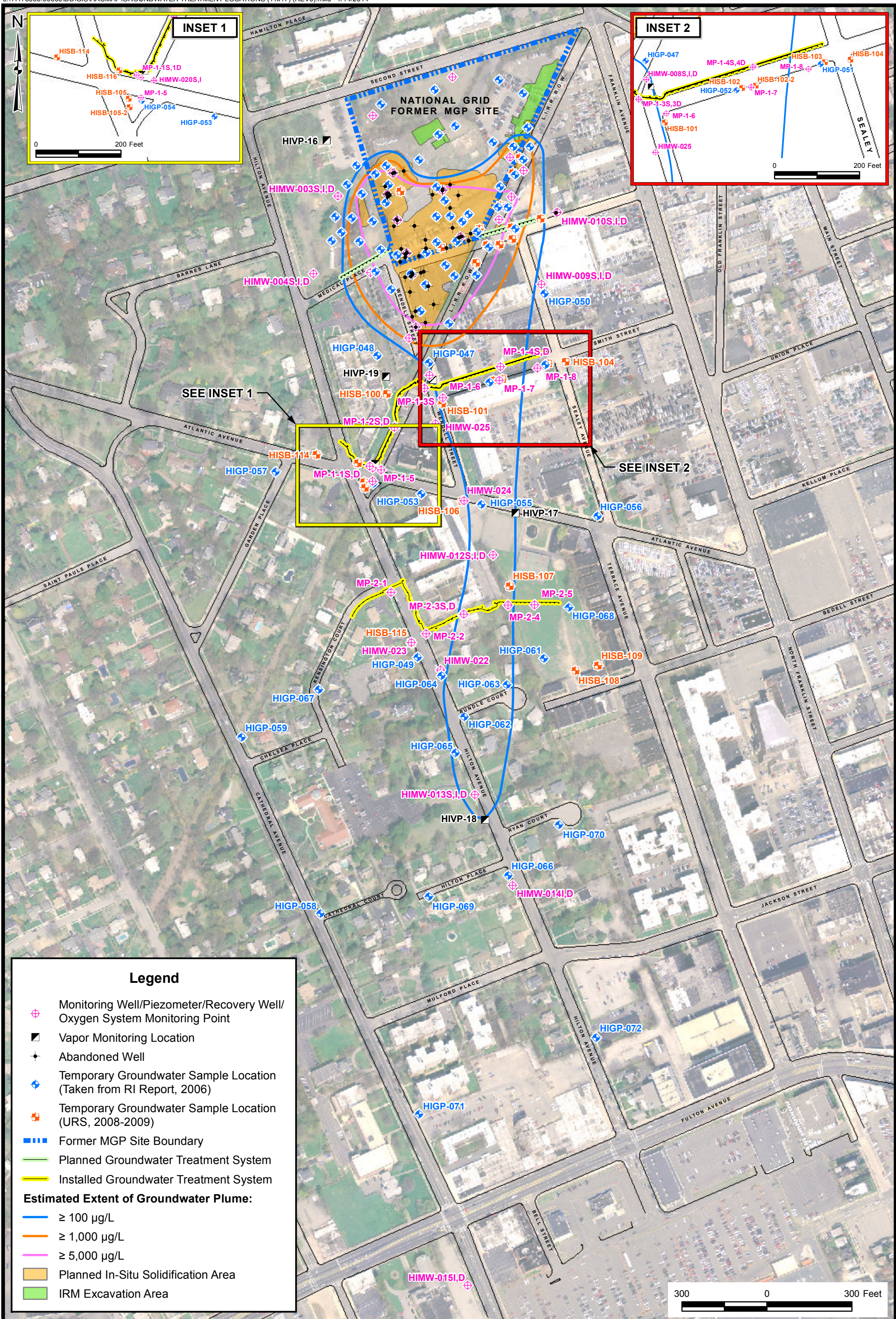
- Oxygen System Monitoring Point
- Abandoned Well
- Piezometer
- Monitoring Well
- Product Recovery Well
- Soil Vapor Point
- Former MGP Site Boundary

400 0 400 Feet



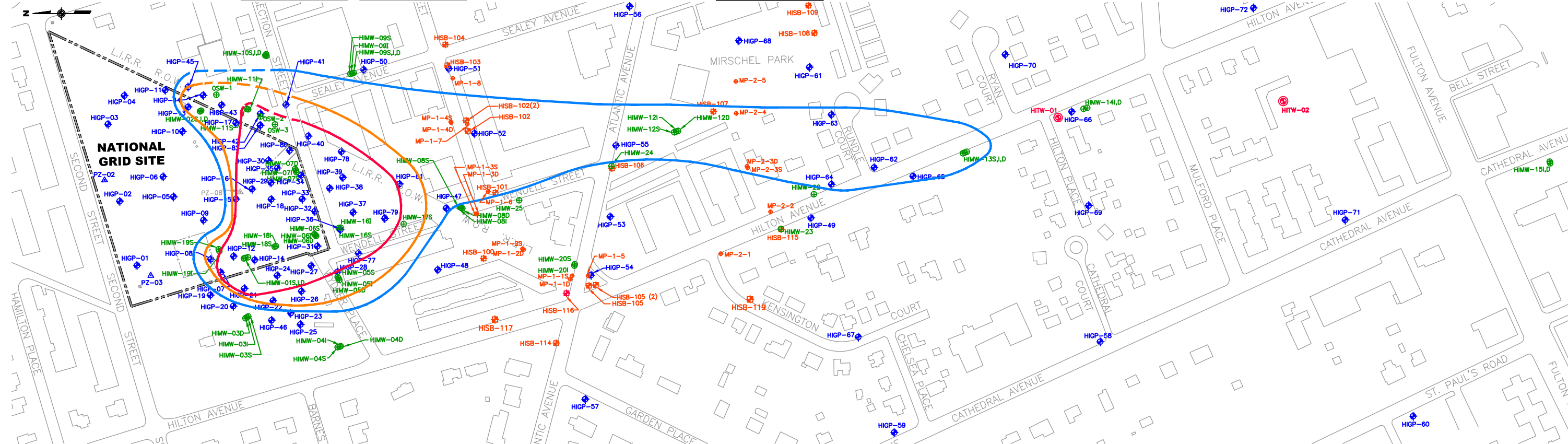
NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY
SITE MAP - SEPTEMBER 2013

FIGURE 2



J:\1175065.0000\CAD\DRAWING\THIRD QUARTER 2013\FIGURE 4.dwg 1/8/14 - 5 RAL

<table border="1"> <tr><th colspan="4">DGP-209 (11/11/08)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>34-38</td><td>1,709</td><td>1,066</td><td></td></tr> <tr><td>40-44</td><td>4,980</td><td>645</td><td></td></tr> <tr><td>50-54</td><td>3,859</td><td>1,297</td><td></td></tr> <tr><td>70-74</td><td>2</td><td>3</td><td></td></tr> </table>	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		<table border="1"> <tr><th colspan="4">HIGP-40 (8/7/00)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>30-34</td><td>4,166</td><td>9,815</td><td></td></tr> <tr><td>56-60</td><td>4</td><td>112</td><td></td></tr> </table>	HIGP-40 (8/7/00)				DEPTH	TOT. BTEX	TOT. PAHs		30-34	4,166	9,815		56-60	4	112		<table border="1"> <tr><th colspan="4">HIGP-49 (10/16/00)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>36-40</td><td>ND</td><td>ND</td><td></td></tr> <tr><td>60-64</td><td>7</td><td>63</td><td></td></tr> <tr><td>90-94</td><td>ND</td><td>16</td><td></td></tr> </table>	HIGP-49 (10/16/00)				DEPTH	TOT. BTEX	TOT. PAHs		36-40	ND	ND		60-64	7	63		90-94	ND	16		<table border="1"> <tr><th colspan="4">HIGP-55 (9/7/00)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>23-27</td><td>31</td><td>244</td><td></td></tr> <tr><td>60-64</td><td>69</td><td>532</td><td></td></tr> <tr><td>80-84</td><td>2</td><td>ND</td><td></td></tr> </table>	HIGP-55 (9/7/00)				DEPTH	TOT. BTEX	TOT. PAHs		23-27	31	244		60-64	69	532		80-84	2	ND		<table border="1"> <tr><th colspan="4">HIGP-61 (11/8/00)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>26-30</td><td>ND</td><td>ND</td><td></td></tr> <tr><td>60-64</td><td>30</td><td>39</td><td></td></tr> <tr><td>90-94</td><td>2</td><td>2</td><td></td></tr> </table>	HIGP-61 (11/8/00)				DEPTH	TOT. BTEX	TOT. PAHs		26-30	ND	ND		60-64	30	39		90-94	2	2		<table border="1"> <tr><th colspan="4">HIGP-66 (12/14/00)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>40-44</td><td>ND</td><td>1</td><td></td></tr> <tr><td>56-60</td><td>8</td><td>60</td><td></td></tr> <tr><td>72-76</td><td>398</td><td>787</td><td></td></tr> <tr><td>90-94</td><td>12,970</td><td>259</td><td></td></tr> </table>	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		<table border="1"> <tr><th colspan="4">HIGP-71 (11/6/01)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>46-50</td><td>ND</td><td>ND</td><td></td></tr> <tr><td>54-58</td><td>ND</td><td>ND</td><td></td></tr> <tr><td>62-66</td><td>1</td><td>7</td><td></td></tr> <tr><td>72-76</td><td>29</td><td>84</td><td></td></tr> <tr><td>81-85</td><td>126</td><td>95</td><td></td></tr> </table>	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		<table border="1"> <tr><th colspan="4">HIMW-009S,I,D</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>28-38</td><td>ND-16</td><td>ND-8</td><td></td></tr> <tr><td>70-80</td><td>ND-2</td><td>ND</td><td></td></tr> <tr><td>113-123</td><td>ND-16</td><td>ND-10</td><td></td></tr> </table>	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		<table border="1"> <tr><th colspan="4">HIMW-015 I,D</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. 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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		<table border="1"> <tr><th colspan="4">HISB-104 (9/24/08)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. PAHs</th><th></th></tr> <tr><td>30-34</td><td>ND</td><td>ND</td><td></td></tr> <tr><td>45-49</td><td>ND</td><td>ND</td><td></td></tr> <tr><td>55-59</td><td>ND</td><td>ND</td><td></td></tr> </table>	HISB-104 (9/24/08)				DEPTH	TOT. BTEX	TOT. PAHs		30-34	ND	ND		45-49	ND	ND		55-59	ND	ND		<table border="1"> <tr><th colspan="4">HISB-108 (12/9/08)</th></tr> <tr><th>DEPTH</th><th>TOT. BTEX</th><th>TOT. 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LEGEND:

- HITW-02 (red circle with cross) TEMPORARY GROUNDWATER MONITORING WELL (TAKEN FROM RI REPORT, 2006)
- HIGP-03 (blue circle with cross) TEMPORARY GROUNDWATER SAMPLE LOCATION (TAKEN FROM RI REPORT, 2006)
- MP-2-1 (orange circle with cross) OXYGEN SYSTEM MONITORING WELL
- HIMW-13 (green circle with cross) MONITORING WELL
- PZ-02 (blue triangle) PIEZOMETER
- PZ-08 (grey triangle) ABANDONED PIEZOMETER
- HISB-114 (red star) TEMPORARY GROUNDWATER SAMPLE LOCATION (URS, 2008-2009)
- ND NOT DETECTED

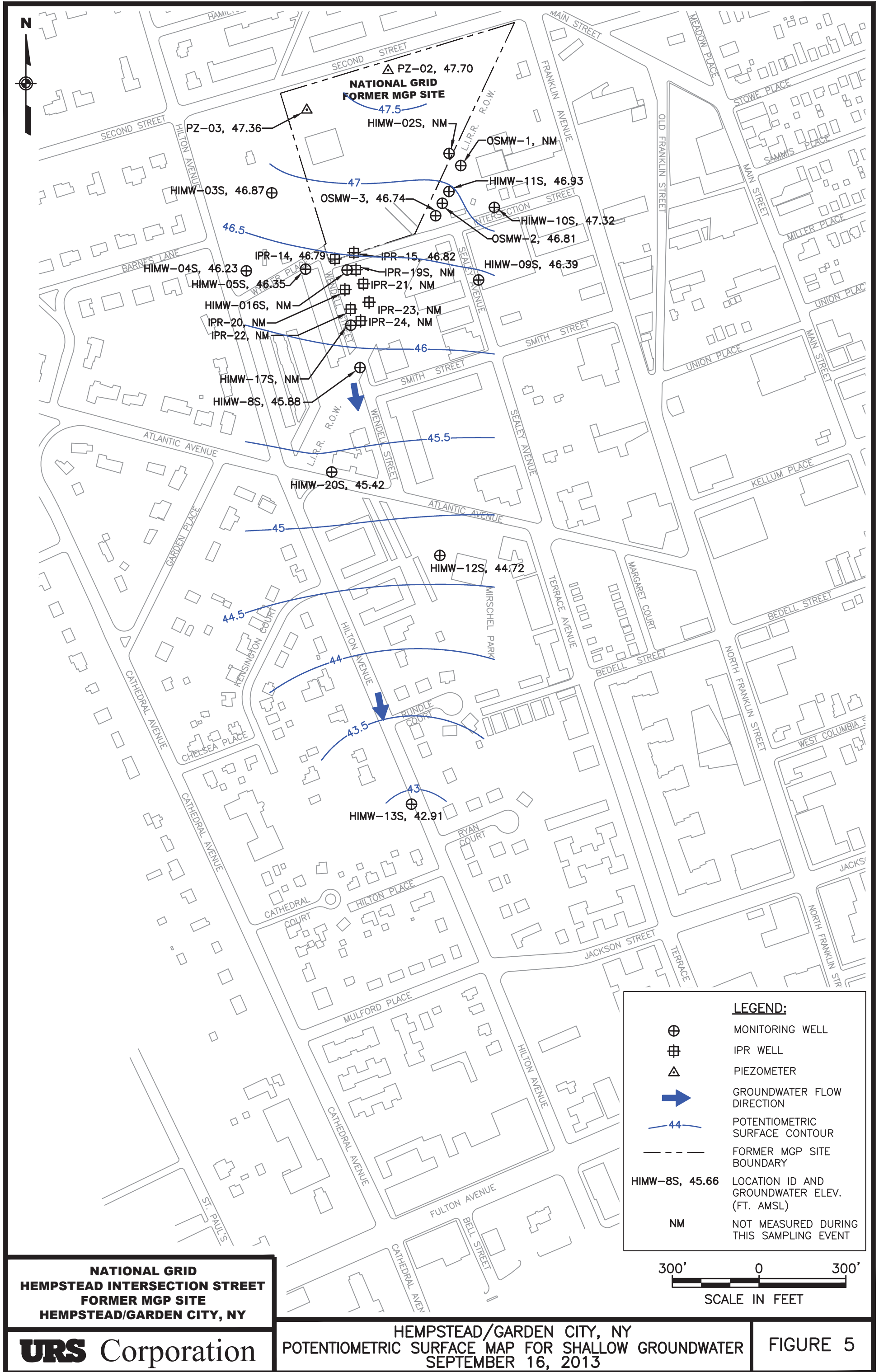
CONCENTRATION UNITS ARE ug/L (SEPTEMBER 2013 CONCENTRATION)

HIMW-015 I,D			
DEPTH	TOT. BTEX	TOT. PAHs	
80-90	5-111 (9)	ND-273 (27)	
141.5-151.5	ND-84 (ND)	ND-1 (ND)	

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

- EXISTING HOUSE OR BUILDING (grey rectangle)
- NATIONAL GRID PROPERTY BOUNDARY (dashed line)
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 5,000 ug/L (thick red line)
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 1,000 ug/L (thick blue line)
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 100 ug/L (thin blue line)
- CONCENTRATION UNITS ARE ug/L (SEPTEMBER 2013 CONCENTRATION) (text)
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 1,000 ug/L (text)
- ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS THAT ARE LIKELY INFLUENCED BY THIRD PARTY SOURCES. DASHED LINES (dashed line)

SCALE IN FEET: 150' 0 150'



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

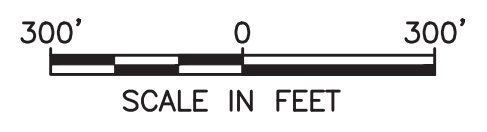
URS Corporation

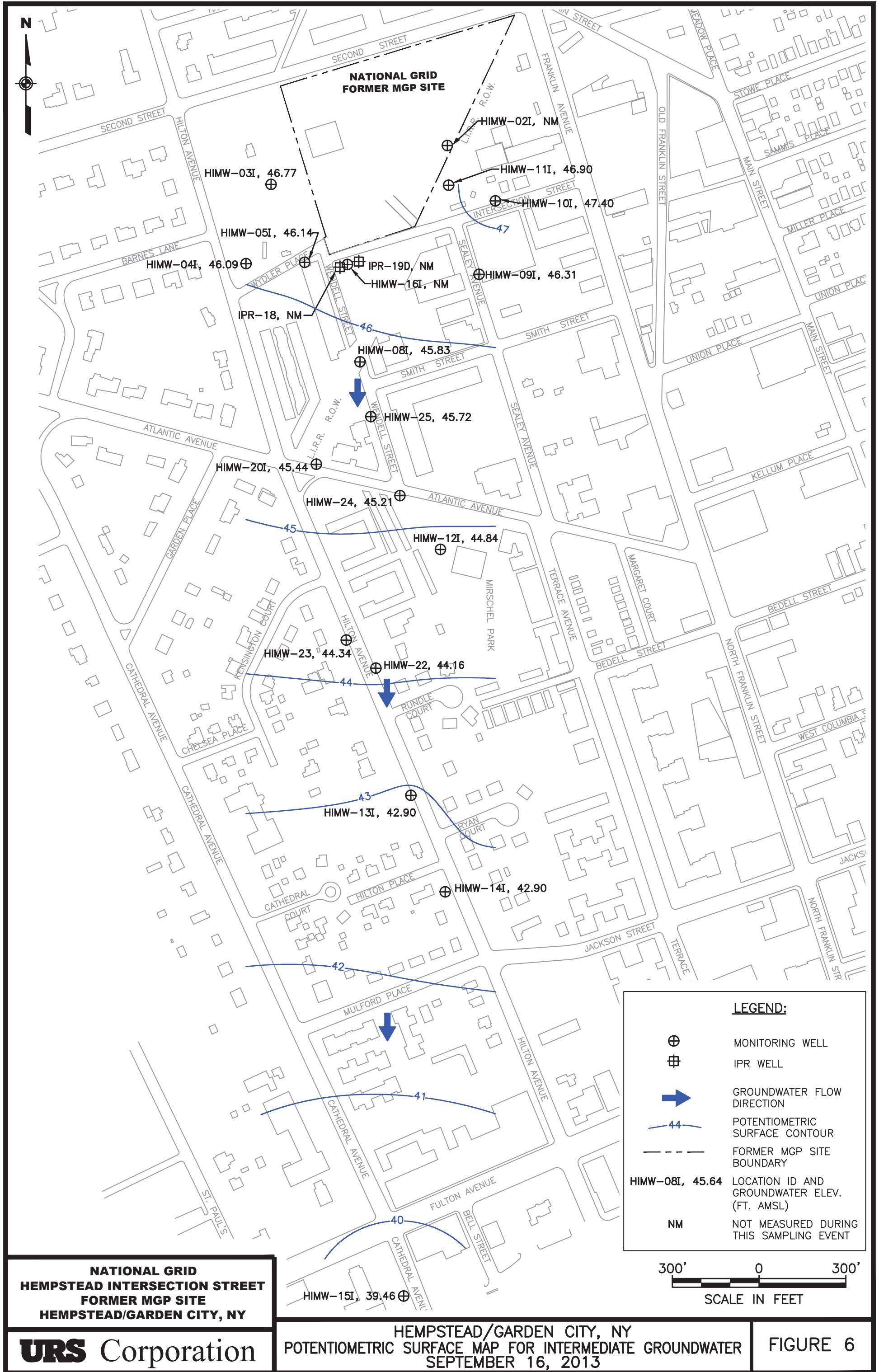
**HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR SHALLOW GROUNDWATER
SEPTEMBER 16, 2013**

FIGURE 5

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





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

URS Corporation

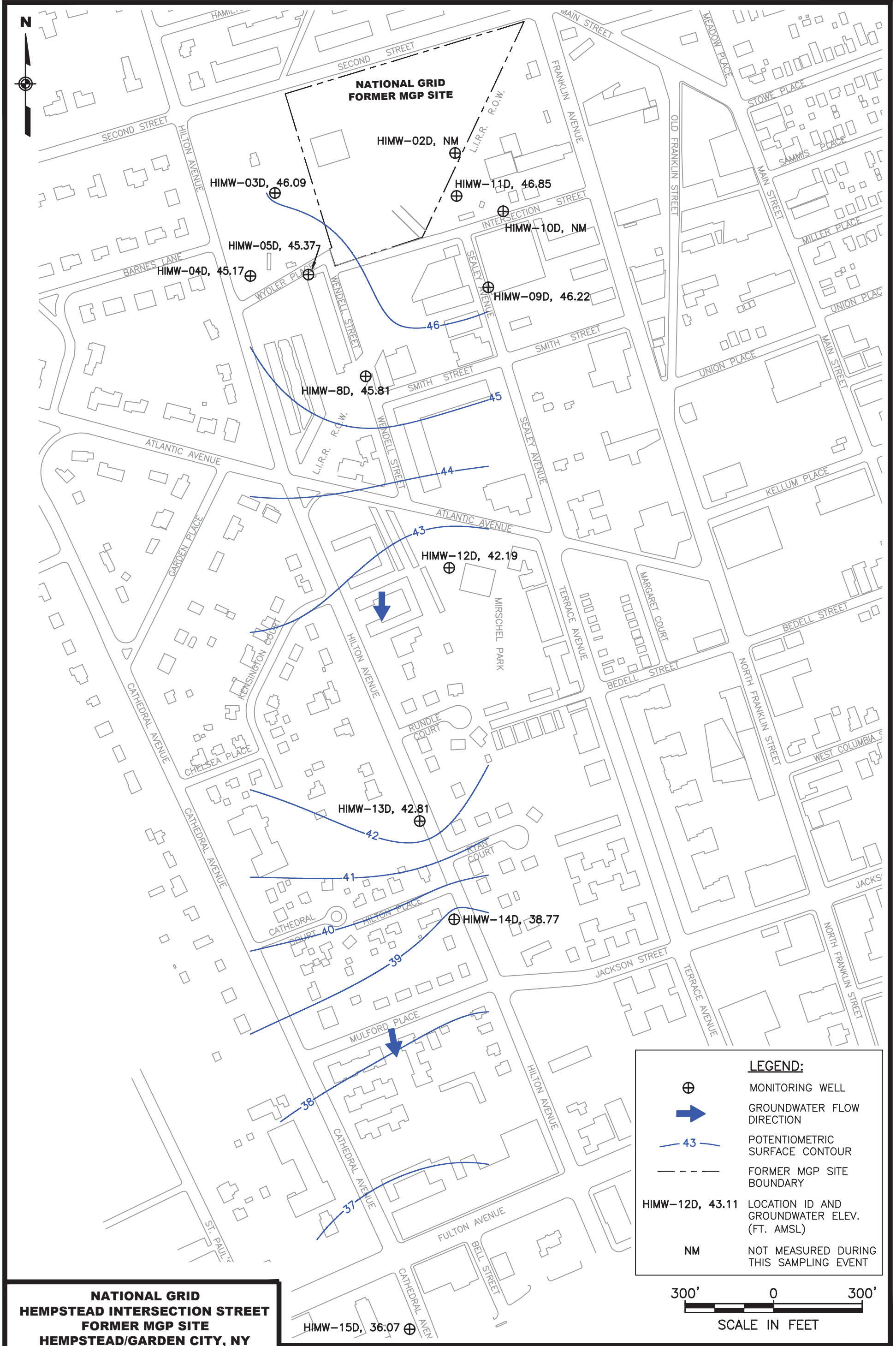
**HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE GROUNDWATER
SEPTEMBER 16, 2013**

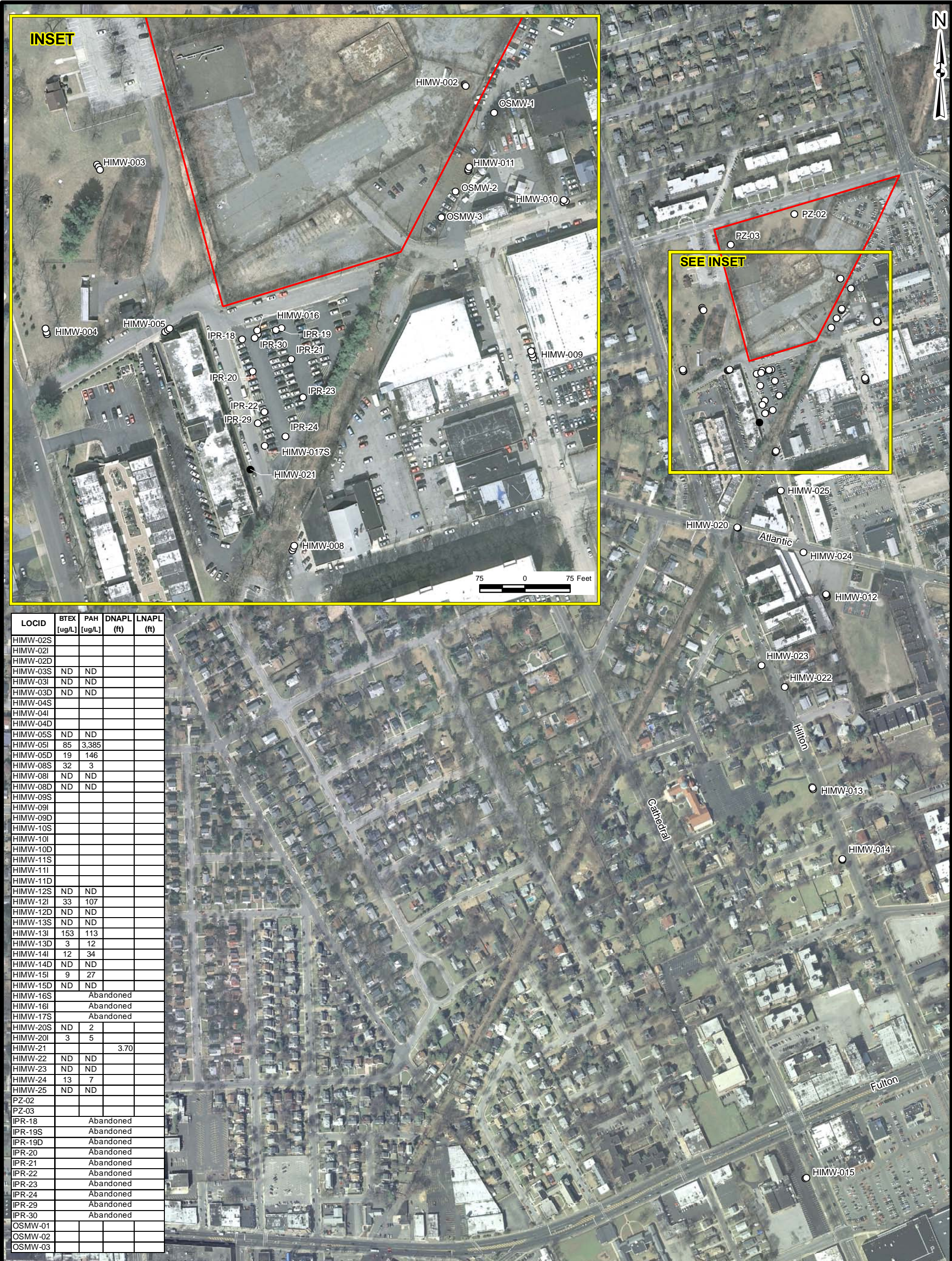
FIGURE 6

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





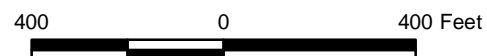


LOCID	BTEX [ug/L]	PAH [ug/L]	DNAPL (ft)	LNAPL (ft)
HIMW-02S				
HIMW-02I				
HIMW-02D				
HIMW-03S	ND	ND		
HIMW-03I	ND	ND		
HIMW-03D	ND	ND		
HIMW-04S				
HIMW-04I				
HIMW-04D				
HIMW-05S	ND	ND		
HIMW-05I	85	3,385		
HIMW-05D	19	146		
HIMW-08S	32	3		
HIMW-08I	ND	ND		
HIMW-08D	ND	ND		
HIMW-09S				
HIMW-09I				
HIMW-09D				
HIMW-10S				
HIMW-10I				
HIMW-10D				
HIMW-11S				
HIMW-11I				
HIMW-11D				
HIMW-12S	ND	ND		
HIMW-12I	33	107		
HIMW-12D	ND	ND		
HIMW-13S	ND	ND		
HIMW-13I	153	113		
HIMW-13D	3	12		
HIMW-14I	12	34		
HIMW-14D	ND	ND		
HIMW-15I	9	27		
HIMW-15D	ND	ND		
HIMW-16S			Abandoned	
HIMW-16I			Abandoned	
HIMW-17S			Abandoned	
HIMW-20S	ND	2		
HIMW-20I	3	5		
HIMW-21				3.70
HIMW-22	ND	ND		
HIMW-23	ND	ND		
HIMW-24	13	7		
HIMW-25	ND	ND		
PZ-02				
PZ-03				
IPR-18			Abandoned	
IPR-19S			Abandoned	
IPR-19D			Abandoned	
IPR-20			Abandoned	
IPR-21			Abandoned	
IPR-22			Abandoned	
IPR-23			Abandoned	
IPR-24			Abandoned	
IPR-29			Abandoned	
IPR-30			Abandoned	
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
 ug/L - Micrograms per Liter
 ft - Feet of Product Thickness
 ND - Non Detect



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

FIGURE 8

APPENDIX A

DATA USABILITY SUMMARY REPORT

**APPENDIX A
DATA USABILITY SUMMARY REPORT
THIRD 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**

NOVEMBER 2013

TABLE OF CONTENTS

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II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION	A-1
III. DATA DELIVERABLE COMPLETENESS	A-2
IV. SAMPLE RECEIPT/HOLDING TIMES	A-2
V. NON-CONFORMANCES	A-2
VI. SAMPLE RESULTS AND REPORTING	A-3
VII. SUMMARY	A-3

TABLES (Following Text)

Table A-1	Validated Groundwater Sample Analytical Results
Table A-2	Validated Field QC Sample Analytical Results

APPENDICES (Following Tables)

Attachment A	Validated Form 1's
Attachment B	Support Documentation

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, two (2) matrix spike/matrix spike duplicate (MS/MSD) pairs, one (1) field blank, and four (4) trip blanks collected by URS personnel on September 17-26, 2013. The samples were collected as part of the 2013 3rd 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, except for the PAH re-extractions of samples HIMW-08I, -13D, and -20S. The PAH results for these samples were qualified 'J' or 'UJ' (see the Section V – Non-Conformances for further discussion). Documentation supporting the qualification of data (i.e., extraction log) is presented in Attachment B.

V. NON-CONFORMANCES

Surrogate Recoveries

The initial PAH analyses for samples HIMW-08I, -13D, and -20S exhibited poor surrogate percent recoveries (%R) (i.e., <10%), thus the initial analysis data was deemed unusable (Form 1s crossed out). The subsequent re-extractions/reanalyses exhibited compliant surrogate recoveries, but the re-extractions were performed 3-5 days outside holding time. Consequently, the PAH results for these samples were qualified 'J' or 'UJ' as previously noted above.

Documentation supporting the qualification of data (i.e., Form 2) is presented in Attachment B.

Internal Standard Recoveries

The initial PAH analysis for sample HIMW-08S exhibited a low internal standard (IS) %R for perylene-d12. The subsequent reanalysis exhibited similar IS results, thus substantiating matrix interference. The PAH results associated with this IS outlier were qualified 'UJ'.

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

Matrix Spike Recoveries

The BTEX MS/MSD analyses of sample HIMW-05D exhibited high/low %Rs, as well as high relative percent differences (RPDs). The laboratory believes these outliers may possibly be due to particulate matter present in the sample. The BTEX results for this sample were qualified 'J' or 'UJ'.

Documentation supporting the qualification of data (i.e., Form 3) 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-12S 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, except for those results qualified 'J' or 'UJ' during the data validation, which should be considered conditionally usable. URS does not recommend the re-collection of any samples at this time.

Prepared By: 
Peter R. Fairbanks, Senior Chemist

Date: 11/22/13

Reviewed By: 
George E. Kisluk, Senior Chemist

Date: 11/22/13

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	HIMW-5I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/24/13	09/24/13	09/24/13	09/25/13	09/26/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	1 UJ	3
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 UJ	1
Toluene	UG/L	-	1 U	1 U	1 U	1 UJ	1 U
Xylene (total)	UG/L	-	1 U	1 U	1 U	19 J	81
Total BTEX	UG/L	100	ND	ND	ND	19	85
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	15	510 D
Acenaphthene	UG/L	-	10 U	10 U	10 U	10 U	15
Acenaphthylene	UG/L	-	10 U	10 U	10 U	9 J	220 DJ
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	2 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	2 J	25
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	120 D	2,600 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	10 U	13
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	146	3,385

*Criteria- Groundwater 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. D - Result reported from a secondary dilution analysis.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

Detection Limits shown are PQL

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

Location ID			HIMW-005S	HIMW-008D	HIMW-008I	HIMW-008S	HIMW-012D
Sample ID			HIMW-05S	HIMW-08D	HIMW-08I	HIMW-08S	HIMW-12D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/25/13	09/18/13	09/18/13	09/18/13	09/23/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	32	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	1 U	1 U	1 U
Total BTEX	UG/L	100	ND	ND	ND	32	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Acenaphthylene	UG/L	-	10 U	10 U	10 UJ	2 J	10 U
Anthracene	UG/L	-	10 U	10 U	10 UJ	2 J	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 UJ	10 UJ	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 UJ	10 UJ	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 UJ	10 UJ	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 UJ	10 UJ	10 U
Chrysene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 UJ	10 UJ	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 UJ	10 UJ	10 U
Naphthalene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Phenanthrene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	4	ND

*Criteria- Groundwater 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 quantitative limit. J - The reported concentration is an estimated value.

UJ - Not detected. The reported quantitative limit is an estimated value, D - Result reported from a secondary dilution analysis.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

Detection Limits shown are PQL

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

Location ID			HIMW-012I	HIMW-012S	HIMW-012S	HIMW-013D	HIMW-013I
Sample ID			HIMW-12I	DUP092313	HIMW-12S	HIMW-13D	HIMW-13I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/23/13	09/23/13	09/23/13	09/19/13	09/20/13
Parameter	Units	Criteria*	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	31	1 U	1 U	3	140
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	-	2	1 U	1 U	1 U	11
Total BTEX	UG/L	100	33	ND	ND	3	153
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Acenaphthene	UG/L	-	36	10 U	10 U	4 J	7 J
Acenaphthylene	UG/L	-	34	10 U	10 U	10 J	74
Anthracene	UG/L	-	1 J	10 U	10 U	10 UJ	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Fluorene	UG/L	-	22	10 U	10 U	10 UJ	13
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Naphthalene	UG/L	-	2 J	10 U	10 U	10 UJ	9 J
Phenanthrene	UG/L	-	12	10 U	10 U	10 UJ	10
Pyrene	UG/L	-	10 U	10 U	10 U	10 UJ	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	107	ND	ND	14	113

*Criteria- Groundwater 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. D - Result reported from a secondary dilution analysis.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

Detection Limits shown are PQL

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

Location ID			HIMW-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			09/20/13	09/19/13	09/17/13	09/17/13	09/17/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	10	1 U	7
Ethylbenzene	UG/L	-	1 U	1 U	1	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	1	1 U	2
Total BTEX	UG/L	100	ND	ND	12	ND	9
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	9 J	10 U	8 J
Acenaphthylene	UG/L	-	10 U	10 U	12	10 U	16
Anthracene	UG/L	-	10 U	10 U	1 J	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	7 J	10 U	3 J
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	34	ND	27

*Criteria- Groundwater 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.

UU - Not detected. The reported quantitation limit is an estimated value. D - Result reported from a secondary dilution analysis.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

Detection Limits shown are PQL

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

Location ID			HIMW-0201	HIMW-0201	HIMW-020S	HIMW-022	HIMW-023
Sample ID			DUP-092013	HIMW-201	HIMW-20S	HIMW-22	HIMW-23
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			09/20/13	09/20/13	09/20/13	09/25/13	09/23/13
Parameter	Units	Criteria*	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	3	3	1 U	1 U	1 U
Total BTEX	UG/L	100	3	3	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Acenaphthylene	UG/L	-	2 J	3 J	10 UJ	10 U	10 U
Anthracene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Naphthalene	UG/L	-	2 J	2 J	3 J	10 U	10 U
Phenanthrene	UG/L	-	10 U	10 U	2 J	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 UJ	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	4	5	5	ND	ND

*Criteria- Groundwater 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. D - Result reported from a secondary dilution analysis.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

Detection Limits shown are PQL

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

Location ID			HIMW-024	HIMW-025
Sample ID			HIMW-24	HIMW-25
Matrix			Groundwater	Groundwater
Depth Interval (ft)			-	-
Date Sampled			09/26/13	09/25/13
Parameter	Units	Criteria*		
Volatile Organic Compounds				
Benzene	UG/L	-	11	1 U
Ethylbenzene	UG/L	-	1 U	1 U
Toluene	UG/L	-	1 U	1 U
Xylene (total)	UG/L	-	2	1 U
Total BTEX	UG/L	100	13	ND
Semivolatile Organic Compounds				
2-Methylnaphthalene	UG/L	-	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U
Acenaphthylene	UG/L	-	1 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	-	4 J	10 U
Phenanthrene	UG/L	-	2 J	10 U
Pyrene	UG/L	-	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	7	ND

*Criteria- Groundwater 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. D - Result reported from a secondary dilution analysis.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

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	FIELDQC
Sample ID		TB 091913	TB 092013	TB 092413	FB092613	HS-FB092613
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		09/19/13	09/20/13	09/24/13	09/26/13	09/26/13
Parameter	Units	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)	Field Blank (1-1)
Volatile Organic Compounds						
Benzene	UG/L	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	UG/L	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	1 U	1 U	1 U	1 U	1 U
Total BTEX	UG/L	ND	ND	ND	ND	ND
Semivolatile Organic Compounds						
2-Methylnaphthalene	UG/L	NA	NA	NA	10 U	10 U
Acenaphthene	UG/L	NA	NA	NA	10 U	10 U
Acenaphthylene	UG/L	NA	NA	NA	10 U	10 U
Anthracene	UG/L	NA	NA	NA	10 U	10 U
Benzo(a)anthracene	UG/L	NA	NA	NA	10 U	10 U
Benzo(a)pyrene	UG/L	NA	NA	NA	10 U	10 U
Benzo(b)fluoranthene	UG/L	NA	NA	NA	10 U	10 U
Benzo(g,h,i)perylene	UG/L	NA	NA	NA	10 U	10 U
Benzo(k)fluoranthene	UG/L	NA	NA	NA	10 U	10 U
Chrysene	UG/L	NA	NA	NA	10 U	10 U
Dibenz(a,h)anthracene	UG/L	NA	NA	NA	10 U	10 U
Fluoranthene	UG/L	NA	NA	NA	10 U	10 U
Fluorene	UG/L	NA	NA	NA	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	NA	NA	NA	10 U	10 U
Naphthalene	UG/L	NA	NA	NA	10 U	10 U
Phenanthrene	UG/L	NA	NA	NA	10 U	10 U
Pyrene	UG/L	NA	NA	NA	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	NA	NA	NA	ND	ND

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit.
NA - The sample was not analyzed for this parameter.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

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
Sample ID		TB 092613
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		09/26/13
Parameter	Units	Trip Blank (1-1)
Volatile Organic Compounds		
Benzene	UG/L	1 U
Ethylbenzene	UG/L	1 U
Toluene	UG/L	1 U
Xylene (total)	UG/L	1 U
Total BTEX	UG/L	ND
Semivolatile Organic Compounds		
2-Methylnaphthalene	UG/L	NA
Acenaphthene	UG/L	NA
Acenaphthylene	UG/L	NA
Anthracene	UG/L	NA
Benzo(a)anthracene	UG/L	NA
Benzo(a)pyrene	UG/L	NA
Benzo(b)fluoranthene	UG/L	NA
Benzo(g,h,i)perylene	UG/L	NA
Benzo(k)fluoranthene	UG/L	NA
Chrysene	UG/L	NA
Dibenz(a,h)anthracene	UG/L	NA
Fluoranthene	UG/L	NA
Fluorene	UG/L	NA
Indeno(1,2,3-cd)pyrene	UG/L	NA
Naphthalene	UG/L	NA
Phenanthrene	UG/L	NA
Pyrene	UG/L	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	NA

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit.

NA - The sample was not analyzed for this parameter.

Made By_PRF 11/15/13_; Checked By_AMK 11/18/13_

Detection Limits shown are PQL

ATTACHMENT A

VALIDATED FORM 1'S

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-03S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21521.

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: not dec. Date Analyzed: 10/02/13

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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-03I

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309D88-002A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21474
 Level: (low/med) LOW Date Received: 09/24/13
 % Moisture: not dec. Date Analyzed: 09/28/13
 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

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-03D

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21473

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: not dec. Date Analyzed: 09/28/13

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) <u>UG/L</u>	<u>Q</u>
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05S

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309F64-002A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21531.
 Level: (low/med) LOW Date Received: 09/26/13
 % Moisture: not dec. Date Analyzed: 10/02/13
 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) <u>UG/L</u>	<u>Q</u>
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-5I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309F64-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21534.

Level: (low/med) LOW Date Received: 09/26/13

% Moisture: not dec. Date Analyzed: 10/02/13

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
71-43-2	Benzene	3	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene (total)	81	

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05D

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309F64-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21528.

Level: (low/med) LOW Date Received: 09/26/13

% Moisture: not dec. Date Analyzed: 10/02/13

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 J
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	19	U

11/15/13

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-URS173
 Matrix: (soil/water) WATER Lab Sample ID: 1309B92-003A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21458
 Level: (low/med) LOW Date Received: 09/19/13
 % Moisture: not dec. Date Analyzed: 09/27/13
 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	1	U
1330-20-7	Xylene (total)	1	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-08I

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS173

Matrix: (soil/water) WATER Lab Sample ID: 1309B92-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21457

Level: (low/med) LOW Date Received: 09/19/13

% Moisture: not dec. Date Analyzed: 09/27/13

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) <u>UG/L</u>	<u>Q</u>
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-URS173
 Matrix: (soil/water) WATER Lab Sample ID: 1309B92-001A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21456
 Level: (low/med) LOW Date Received: 09/19/13
 % Moisture: not dec. Date Analyzed: 09/27/13
 GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00
 Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21524.

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: not dec. Date Analyzed: 10/02/13

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
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP092313

(H.I.M.W. -125)

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21526.

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: not dec. Date Analyzed: 10/02/13

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-12I

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309D88-005A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21523.
 Level: (low/med) LOW Date Received: 09/24/13
 % Moisture: not dec. Date Analyzed: 10/02/13
 GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00
 Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	31	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	2	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12D

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21522.

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: not dec. Date Analyzed: 10/02/13

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
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-13S

Lab Name: H2M LABS INC Contract: _____
 Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS173
 Matrix: (soil/water) WATER Lab Sample ID: 1309C54-002A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21466
 Level: (low/med) LOW Date Received: 09/20/13
 % Moisture: not dec. Date Analyzed: 09/27/13
 GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00
 Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-13I

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS SAS No.: _____SDG No.: KEY-URS173

Matrix: (soil/water)

WATERLab Sample ID: 1309C54-001ASample wt/vol: 5(g/mL) MLLab File ID: 713\G21465

Level: (low/med)

LOWDate Received: 09/20/13

% Moisture: not dec.

Date Analyzed: 09/27/13GC Column: Rtx-624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (µL)

Soil Aliquot Volume _____ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(µg/L or µg/Kg) <u>UG/L</u>	<u>Q</u>
71-43-2	Benzene	140	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	11	

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-URS173
 Matrix: (soil/water) WATER Lab Sample ID: 1309B92-004A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21459
 Level: (low/med) LOW Date Received: 09/19/13
 % Moisture: not dec. Date Analyzed: 09/27/13
 GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00
 Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:
(µg/L or µg/Kg) UG/L Q

CAS NO.	COMPOUND		
71-43-2	Benzene	3	
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-141

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2M

Case No.: KEY-URS SAS No.: _____

SDG No.: KEY-URS173

Matrix: (soil/water)

WATER

Lab Sample ID: 1309B92-006A

Sample wt/vol: 5

(g/mL) ML

Lab File ID: 713\G21461

Level: (low/med)

LOW

Date Received: 09/19/13

% Moisture: not dec.

Date Analyzed: 09/27/13

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: _____ (µL)

Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	10	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene (total)	1	

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-14D

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS173

Matrix: (soil/water) WATER Lab Sample ID: 1309B92-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21460

Level: (low/med) LOW Date Received: 09/19/13

% Moisture: not dec. Date Analyzed: 09/27/13

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) <u>UG/L</u>	<u>Q</u>
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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-15I

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS SAS No.: _____SDG No.: KEY-URS173

Matrix: (soil/water)

WATERLab Sample ID: 1309B92-008ASample wt/vol: 5(g/mL) MLLab File ID: 713\G21463

Level: (low/med)

LOWDate Received: 09/19/13

% Moisture: not dec.

Date Analyzed: 09/27/13GC Column: Rtx-624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____

(µL)

Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS SAS No.: _____SDG No.: KEY-URS173

Matrix: (soil/water)

WATERLab Sample ID: 1309B92-007ASample wt/vol: 5(g/mL) MLLab File ID: 713\G21462

Level: (low/med)

LOWDate Received: 09/19/13

% Moisture: not dec.

Date Analyzed: 09/27/13GC Column: Rtx-624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____

(µL)

Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

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-URS173
 Matrix: (soil/water) WATER Lab Sample ID: 1309C54-004A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21470
 Level: (low/med) LOW Date Received: 09/20/13
 % Moisture: not dec. Date Analyzed: 09/27/13
 GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00
 Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-201

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS SAS No.: _____SDG No.: KEY-URS173

Matrix: (soil/water)

WATERLab Sample ID: 1309C54-003ASample wt/vol: 5(g/mL) MLLab File ID: 713\G21469

Level: (low/med) ,

LOWDate Received: 09/20/13

% Moisture: not dec.

Date Analyzed: 09/27/13GC Column: Rtx-624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____

(µL)

Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP-092013

(H1Mw-020I)

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS SAS No.: _____SDG No.: KEY-URS173

Matrix: (soil/water)

WATERLab Sample ID: 1309C54-006ASample wt/vol: 5(g/mL) MLLab File ID: 713\G21472

Level: (low/med)

LOWDate Received: 09/20/13

% Moisture: not dec.

Date Analyzed: 09/28/13GC Column: Rtx-624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____

(µL)

Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-22

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309F64-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21532.

Level: (low/med) LOW Date Received: 09/26/13

% Moisture: not dec. Date Analyzed: 10/02/13

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
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-23

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309D88-007A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21525.
 Level: (low/med) LOW Date Received: 09/24/13
 % Moisture: not dec. Date Analyzed: 10/02/13
 GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00
 Soil Extract Volume: _____ (µL) Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-24

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS SAS No.: _____SDG No.: KEY-URS174

Matrix: (soil/water)

WATERLab Sample ID: 1309F64-004ASample wt/vol: 5(g/mL) MLLab File ID: 13\G21520.

Level: (low/med)

LOWDate Received: 09/26/13

% Moisture: not dec.

Date Analyzed: 10/02/13GC Column: Rtx-624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (µL)

Soil Aliquot Volume _____ (µL)

CONCENTRATION UNITS:

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-25

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309F64-005A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21533.
 Level: (low/med) LOW Date Received: 09/26/13
 % Moisture: not dec. Date Analyzed: 10/02/13
 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) <u>UG/L</u>	<u>Q</u>
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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-03S

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309D88-003BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61088.DLevel: (low/med) LOWDate Received: 09/24/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/25/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/02/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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: 10478

Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174

Matrix: (soil/water) WATER

Lab Sample ID: 1309D88-002B

Sample wt/vol: 1000 (g/mL) ml

Lab File ID: 3\N61087.D

Level: (low/med) LOW

Date Received: 09/24/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/25/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 10/02/13

Injection Volume: 2 (µL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-03D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309D88-001BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61086.DLevel: (low/med) LOWDate Received: 09/24/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/25/13Concentrated Extract Volume: 1000 (μ L)Date Analyzed: 10/02/13Injection Volume: 2 (μ L)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μ g/L or μ g/Kg) <u>UG/L</u>	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-05S

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-002BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61168.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-5I

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-006BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61172.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
91-20-3	Naphthalene	2600 <u>930</u>		E-D
91-57-6	2-Methylnaphthalene	510 <u>310</u>		E-D
208-96-8	Acenaphthylene	220 <u>170</u>		E-DJ
83-32-9	Acenaphthene		15	
86-73-7	Fluorene		25	
85-01-8	Phenanthrene		13	
120-12-7	Anthracene		2	J
206-44-0	Fluoranthene		10	U
129-00-0	Pyrene		10	U
56-55-3	Benzo(a)anthracene		10	U
218-01-9	Chrysene		10	U
205-99-2	Benzo(b)fluoranthene		10	U
207-08-9	Benzo(k)fluoranthene		10	U
50-32-8	Benzo(a)pyrene		10	U
193-39-5	Indeno(1,2,3-cd)pyrene		10	U
53-70-3	Dibenzo(a,h)anthracene		10	U
191-24-2	Benzo(g,h,i)perylene		10	U

(1) Cannot be separated from Diphenylamine

11/15/13

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-5IDL

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATER

Lab Sample ID:

1309F64-006BDL

Sample wt/vol:

1000(g/mL) ML

Lab File ID:

3\N61227.D

Level: (low/med)

LOW

Date Received:

09/26/13

% Moisture:

Decanted: (Y/N) N

Date Extracted:

09/30/13Concentrated Extract Volume: 1000 (µL)

Date Analyzed:

10/08/13

Injection Volume:

2

(µL)

Dilution Factor:

40.00GPC Cleanup: (Y/N) N

pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
91-20-3	Naphthalene	2600		D
91-57-6	2-Methylnaphthalene	510		D
208-96-8	Acenaphthylene	220		DJ
83-32-9	Acenaphthene	400		U
86-73-7	Fluorene	400		U
85-01-8	Phenanthrene	400		U
120-12-7	Anthracene	400		U
206-44-0	Fluoranthene	400		U
129-00-0	Pyrene	400		U
56-55-3	Benzo(a)anthracene	400		U
218-01-9	Chrysene	400		U
205-99-2	Benzo(b)fluoranthene	400		U
207-08-9	Benzo(k)fluoranthene	400		U
50-32-8	Benzo(a)pyrene	400		U
193-39-5	Indeno(1,2,3-cd)pyrene	400		U
53-70-3	Dibenzo(a,h)anthracene	400		U
191-24-2	Benzo(g,h,i)perylene	400		U

(1) Cannot be separated from Diphenylamine

11/15/13
a

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-001BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61165.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	<u>100</u> 100	E-1
91-57-6	2-Methylnaphthalene	15	
208-96-8	Acenaphthylene	9	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	2	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

11/15/13
a

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05DDL

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478

Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174

Matrix: (soil/water) WATER

Lab Sample ID: 1309F64-001BDL

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 3\N61226.D

Level: (low/med) LOW

Date Received: 09/26/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/30/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 10/08/13

Injection Volume: 2 (µL)

Dilution Factor: 2.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

10/15/13
M

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08S

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-003BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60963.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/28/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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	2		J
206-44-0	Fluoranthene	10		U
129-00-0	Pyrene	10		U
56-55-3	Benzo (a) anthracene	10		U
218-01-9	Chrysene	10		U
205-99-2	Benzo (b) fluoranthene	10		U 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

11/1/13
~

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-08SRE

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-003BRESample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61321.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/11/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N

pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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

11/13
12

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-08IRE

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-002BRESample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61162.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U 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

10/1/13
M

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-08I

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-002BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60948.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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

11/1/13
P

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-08D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-001BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60947.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

(µg/L or µg/Kg) UG/L Q

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

(1) Cannot be separated from Diphenylamine

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N61091.D

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: Decanted: (Y/N) N Date Extracted: 09/25/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 10/02/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____ Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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.

DUP092313

(HEMW-125)

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309D88-008BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61093.DLevel: (low/med) LOWDate Received: 09/24/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/25/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/02/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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: 10478

Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174

Matrix: (soil/water) WATER

Lab Sample ID: 1309D88-005B

Sample wt/vol: 1000 (g/mL) ml

Lab File ID: 3\N61090.D

Level: (low/med) LOW

Date Received: 09/24/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/25/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 10/02/13

Injection Volume: 2 (µL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	34	
83-32-9	Acenaphthene	36	
86-73-7	Fluorene	22	
85-01-8	Phenanthrene	12	
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-12D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309D88-004BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61089.DLevel: (low/med) LOWDate Received: 09/24/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/25/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/02/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-13S

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309C54-002BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60955.DLevel: (low/med) LOWDate Received: 09/20/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-13I

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309C54-001BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60954.D

Level: (low/med)

LOWDate Received: 09/20/13

% Moisture:

Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N

pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
91-20-3	Naphthalene	9		J
91-57-6	2-Methylnaphthalene	10		U
208-96-8	Acenaphthylene	74		
83-32-9	Acenaphthene	7		J
86-73-7	Fluorene	13		
85-01-8	Phenanthrene	10		
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-13DRE

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-004BRESample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61163.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
91-20-3	Naphthalene	10	U	J
91-57-6	2-Methylnaphthalene	10	U	J
208-96-8	Acenaphthylene	10		
83-32-9	Acenaphthene	4	J	
86-73-7	Fluorene	10	U	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

11/13

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-13D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-004BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60949.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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	4		J
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

n/1/13

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-URS173

Matrix: (soil/water) WATER

Lab Sample ID: 1309B92-006B

Sample wt/vol: 1000 (g/mL) ml

Lab File ID: 3\N60951.D

Level: (low/med) LOW

Date Received: 09/19/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/23/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 09/27/13

Injection Volume: 2 (µL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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	12		
83-32-9	Acenaphthene	9		J
86-73-7	Fluorene	5		J
85-01-8	Phenanthrene	7		J
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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-14D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-005BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60950.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-URS173

Matrix: (soil/water) WATER Lab Sample ID: 1309B92-008E

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N60953.D

Level: (low/med) LOW Date Received: 09/19/13

% Moisture: Decanted: (Y/N) N Date Extracted: 09/23/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 09/27/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____ Extraction: (Type) SEPF

CONCENTRATION UNITS:
(µg/L or µg/Kg) UG/L Q

CAS NO.	COMPOUND	UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	16	
83-32-9	Acenaphthene	8	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	3	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo (a) anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo (b) fluoranthene	10	U
207-08-9	Benzo (k) fluoranthene	10	U
50-32-8	Benzo (a) pyrene	10	U
193-39-5	Indeno (1,2,3-cd) pyrene	10	U
53-70-3	Dibenzo (a, h) anthracene	10	U
191-24-2	Benzo (g, h, i) perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-15D

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309B92-007BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60952.DLevel: (low/med) LOWDate Received: 09/19/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-20SRE

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478

Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173

Matrix: (soil/water) WATER

Lab Sample ID: 1309C54-004BRE

Sample wt/vol: 1000 (g/mL) ml

Lab File ID: 3\N61164.D

Level: (low/med) LOW

Date Received: 09/20/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/30/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 10/04/13

Injection Volume: 2 (µL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
91-20-3	Naphthalene	3		J
91-57-6	2-Methylnaphthalene	10		U J
208-96-8	Acenaphthylene	10		U
83-32-9	Acenaphthene	10		U
86-73-7	Fluorene	10		U
85-01-8	Phenanthrene	2		J
120-12-7	Anthracene	10		U 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

11/1/13

1C
SEMIVOLATILE 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-URS173

Matrix: (soil/water) WATER

Lab Sample ID: 1309C54-004B

Sample wt/vol: 1000 (g/mL) ml

Lab File ID: 3\N60959.D

Level: (low/med) LOW

Date Received: 09/20/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/23/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 09/27/13

Injection Volume: 2 (µL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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

af/els

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-20I

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309C54-003ESample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60958.DLevel: (low/med) LOWDate Received: 09/20/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 09/27/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP-092013

(HIMW) - 207

Lab Name: H2M LABS INC

Contract: _____

Lab Code: H2MCase No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173Matrix: (soil/water) WATERLab Sample ID: 1309C54-006BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N60961.DLevel: (low/med) LOWDate Received: 09/20/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/23/13Concentrated Extract Volume: 1000 (μ L)Date Analyzed: 09/28/13Injection Volume: 2 (μ L)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μ g/L or μ g/Kg)	UG/L	Q
91-20-3	Naphthalene	2		J
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	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-22

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-003BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61169.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (μ L)Date Analyzed: 10/04/13Injection Volume: 2 (μ L)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μ g/L or μ g/Kg) <u>UG/L</u>	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-23

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478

Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174

Matrix: (soil/water) WATER

Lab Sample ID: 1309D88-007B

Sample wt/vol: 1000 (g/mL) ml

Lab File ID: 3\N61092.D

Level: (low/med) LOW

Date Received: 09/24/13

% Moisture: Decanted: (Y/N) N

Date Extracted: 09/25/13

Concentrated Extract Volume: 1000 (µL)

Date Analyzed: 10/02/13

Injection Volume: 2 (µL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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-24

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309F64-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: 3\N61170.D

Level: (low/med) LOW Date Received: 09/26/13

% Moisture: Decanted: (Y/N) N Date Extracted: 09/30/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 10/04/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____ Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	<u>Q</u>
91-20-3	Naphthalene	4	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	1	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-25

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-005BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61171.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (μ L)Date Analyzed: 10/04/13Injection Volume: 2 (μ L)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μ g/L or μ g/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

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB 091913

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS173

Matrix: (soil/water) WATER Lab Sample ID: 1309B92-014A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21454

Level: (low/med) LOW Date Received: 09/19/13

% Moisture: not dec. Date Analyzed: 09/27/13

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
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB 092013

Lab Name: H2M LABS INC Contract: _____

Lab Code: H2M Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS173

Matrix: (soil/water) WATER Lab Sample ID: 1309C54-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 713\G21455

Level: (low/med) LOW Date Received: 09/20/13

% Moisture: not dec. Date Analyzed: 09/27/13

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) <u>UG/L</u>	<u>Q</u>
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB 092413

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309D88-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21527.

Level: (low/med) LOW Date Received: 09/24/13

% Moisture: not dec. Date Analyzed: 10/02/13

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.

FB092613

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174

Matrix: (soil/water) WATER Lab Sample ID: 1309F64-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21537.

Level: (low/med) LOW Date Received: 09/26/13

% Moisture: not dec. Date Analyzed: 10/02/13

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

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

CONCENTRATION UNITS:

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HS-FB092613

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309F64-010A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21538.
 Level: (low/med) LOW Date Received: 09/26/13
 % Moisture: not dec. Date Analyzed: 10/02/13
 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
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.

TB 092613

Lab Name: H2M LABS INC Contract: _____
 Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS174
 Matrix: (soil/water) WATER Lab Sample ID: 1309F64-011A
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G21539.
 Level: (low/med) LOW Date Received: 09/26/13
 % Moisture: not dec. Date Analyzed: 10/02/13
 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

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FB092613

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-009BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61175.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HS-FB092613

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS174Matrix: (soil/water) WATERLab Sample ID: 1309F64-010BSample wt/vol: 1000 (g/mL) mlLab File ID: 3\N61176.DLevel: (low/med) LOWDate Received: 09/26/13% Moisture: Decanted: (Y/N) NDate Extracted: 09/30/13Concentrated Extract Volume: 1000 (µL)Date Analyzed: 10/04/13Injection Volume: 2 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: _____Extraction: (Type) SEPF

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(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



labs

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

03665

EXTERNAL CHAIN OF CUSTODY

PROJECT NAME/NUMBER National Grid Hempstead 11176098,00004		CLIENT: URS Corporation		H2M SDG NO: KEY-URS173	
SAMPLERS: (Signature)/Client Cory Friedman/URS Megan Dascoli/URS		NOTES: Cooler temp 33.28C 122336969 (22076478) pH strips (10BDDH0431) ≤ 3 9 ≥ 12 Free Cl2 strips (042912C) Present/Absent HNO3: 52159 H2SO4 52171 HCl: 5231 Na2SO3: 22800123 NH4Cl: 47072741 ZnAc: 2107346 NaOH: B0694769		Project Contact: Jon Sundqvist Phone Number: (716) 723-1207 PIS/Quote #	
DELIVERABLES: AT-70		40 mL Amles, HCl 1st amber			
TURNAROUND TIME: Standard		ANALYSIS REQUESTED			
DATE	TIME	MATRIX	FIELD I.D.	LAB I.D. NO.	REMARKS:
9/17/13	835	GW	HIMW-15I	1309B92-008	
9/17/13	1000	GW	HIMW-15D	007	
9/17/13	1200	GW	HIMW-14I	000	
9/18/13	1335	GW	HIMW-08S	003	
9/18/13	0830	GW	HIMW-08I	002	
9/18/13	1025	GW	HIMW-08D	1309B92-001	
9/18/13	1050	GW	HS-HIMW-08S	009	
9/19/13	855	GW	HIMW-14D	005	
9/19/13	1110	GW	HIMW-13D	004	
			TRB	010	
Relinquished by: (Signature) <i>Cory Friedman</i>		Received by: (Signature) <i>[Signature]</i>		Date: 9/19/13 Time: 11:20	
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: 9/19/13 Time: 1330	
Relinquished by: (Signature)		Received by: (Signature)		Date: Time:	
Relinquished by: (Signature)		Received by: (Signature)		Date: Time:	

LABORATORY USE ONLY

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

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

WHITE COPY - ORIGINAL
KEY-URS173 S3

YELLOW COPY - CLIENT

PINK COPY - LABORATORY



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www.h2miabs.com

03664

EXTERNAL CHAIN OF CUSTODY

PROJECT NAME/NUMBER National Grid Hempstead 11176098.0004		CLIENT: URS Corp.		H2M SDG NO: KEY-URS173	
SAMPLERS: (Signature)/Client Cary Friedman/URS Megan Dascoli/URS		Project Contact: Jon Sundqvist		Phone Number: 716-923-1207	
DELIVERABLES: AT-70		PIS/Quote #			
TURNAROUND TIME: Standard		NOTES: 1 & number form & number, HCl			
ANALYSIS REQUESTED		LAB I.D. NO.		REMARKS:	
DATE	TIME	MATRIX	FIELD I.D.		
9/20/13	805	GW	H1MW-13I	1309C59-001	
9/20/13	920	GW	H1MW-13S	2	
9/20/13	925	GW	H1MW-13S MS/MSD	3	
9/20/13	1155	GW	H1MW-20I	5	Delete line
9/20/13	1015	GW	HS-H1MW-20I	6	
9/20/13		GW	H1MW-20S	7	
9/20/13	1200	GW	DUP-092013	4	
9/20/13		GW	TB092013		
9/20/13	1315	GW	H1MW-20S		

LABORATORY USE ONLY

Samples were:
 1. Shipped _____ or Hand Delivered _____ Airbill # _____
 COC Tape _____
 1. Present Cooler temp 1.8 °C 122336969 (22076478)
 2. Unbroke pH strips (10BDH0431) 52 3 9 212
 Free Cl2 strips (041912C) Present/Absent
 HNO3: 52159 H2SO4 52171 HCl: 5231
 Na2S2O3: 22800123 NH4Cl: 47072741
 ZnAc: 2107346 NaOH: B0694769

Relinquished by: (Signature) Megan Dascoli	Received by: (Signature) John Sundqvist	Date: 9/20/13	Time: 1445
Relinquished by: (Signature) John Sundqvist	Received by: (Signature) Megan Dascoli	Date: 9/20/13	Time: 1510
Relinquished by: (Signature) John Sundqvist	Received by: (Signature) Megan Dascoli	Date: 9/20/13	Time: 1510
Relinquished by: (Signature) John Sundqvist	Received by: (Signature) Megan Dascoli	Date: 9/20/13	Time: 1510

WHITE COPY - ORIGINAL
KEY-URS173 S9

YELLOW COPY - CLIENT

PINK COPY - LABORATORY



575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLE(S) RECEIVED: 9/19/13 & 9/20/13
SDG #: KEY-URS173

For Sample(s):

HIMW-08D	HIMW-15D	HIMW-20I
HIMW-08I	HIMW-15I	HIMW-20S
HIMW-08S	HS-HIMW-08S	HS-HIMW-20I
HIMW-13D	TB 091913	DUP-092013
HIMW-14D	HIMW-13I	TB 092013
HIMW-14I	HIMW-13S	

The above water sample(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 submitted for matrix spike/matrix spike duplicate analysis (MS/MSD). All percent recoveries and RPDs for the MS and MSD, as well as recoveries for the lab fortified blank, were within Q. C. limits.

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

In the continuing calibration verifications (CCV) some compounds had %Ds above 15%. These compounds are noted on Form VII. Results for these analytes are flagged with a "Z" qualifier in the spiked analyses (none were found in the samples), indicating that they are regarded estimated.

The variability for two surrogate compounds, DCA and BFB, also exceeded 15% with responses being low. As a result, reported recoveries for the two surrogates are "estimated" and may be biased low.

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: October 16, 2013

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

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Ursula Middel
Technical Manager

KEY-URS173 S16



labs

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLE(S) RECEIVED: 9/19/13 & 9/20/13
SDG #: KEY-URS173

For Sample(s):

HIMW-08D	HIMW-14I	HIMW-13S
HIMW-08I	HIMW-15D	HIMW-20I
HIMW-08S	HIMW-15I	HIMW-20S
HIMW-13D	HS-HIMW-08S	HS-HIMW-20I
HIMW-14D	HIMW-13I	DUP-092013

11/1/13

The above water sample(s) was/were analyzed for a select list of base/neutral- ~~acid~~ extractables by EPA method 8270D.

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

Sample HIMW-13S was submitted for matrix spike/matrix spike duplicate analysis (MS/MSD). All percent recoveries and RPDs for the MS and MSD, as well as recoveries for the lab fortified blank, were within Q. C. limits. Note that the MS and MSD were only spiked with a solution containing representative compounds, whereas the LFB was spiked with all targeted analytes.

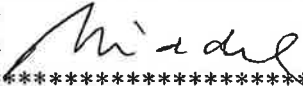
Surrogate recoveries were very low for three surrogate compounds in samples HIMW-08I, HIMW-20S, and HIMW-13D. The samples were re-extracted out of holding time, and both sets of data are submitted. Surrogate recoveries in the re-extracts were acceptable.

Sample HIMW-08S was re-injected due to a low internal standard area for perylene-d12. The area was again below the acceptance limit confirming matrix interference.

In the initial calibrations, average response factors were employed as applicable, and regression functions were used for RSDs above 20%.

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: October 16, 2013

 *  *

Ursula Middel
Technical Manager

KEY-URS173 S17

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: H2M LABS INC

Contract: _____

Lab Code: 10478

Case No.: KEY-URS

SAS No.: _____

SDG No.: KEY-URS173

	EPA SAMPLE NO.	S1 NBZ#	S2 FBP#	S3 TPH #	S4 DCB#					TOT OUT
01	LFB-41427	75	75	111	63					0
02	MB-41427	79	75	121	68					0
03	HIMW-08D	73	70	108	66					0
04	HIMW-08I	2 *	6 *	94	1 *					3
05	HIMW-13D	6 *	18 *	93	2 *					3
06	HIMW-14D	71	70	93	57					0
07	HIMW-14I	73	70	103	59					0
08	HIMW-15D	72	68	85	59					0
09	HIMW-15I	74	72	112	62					0
10	HIMW-13I	72	71	92	63					0
11	HIMW-13S	74	72	106	67					0
12	HIMW-13SMS	74	70	115	59					0
13	HIMW-13SMSD	76	72	110	64					0
14	HIMW-20I	74	70	101	60					0
15	HIMW-20S	0 *	3 *	90	1 *					3
16	HS-HIMW-20I	75	73	110	64					0
17	DUP-092013	70	69	99	62					0
18	HS-HIMW-08S	74	69	65	59					0
19	HIMW-08S	70	68	91	59					0
20	MB-41525	84	78	123	73					0
21	LFB-41525	85	81	112	71					0
22	HIMW-08IRE	80	77	116	73					0
23	HIMW-13DRE	79	76	112	67					0
24	HIMW-20SRE	62	57	84	52					0
25	HIMW-08SRE	73	66	108	59					0

QC LIMITS

S 1 NBZ = Nitrobenzene-d5 (35-114)
 S 2 FBP = 2-Fluorobiphenyl (43-116)
 S 3 TPH = 4-Terphenyl-d14 (33-141)
 S 4 DCB = 1,2-Dichlorobenzene-d4 (16-110)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate diluted out

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-URS173
 EPA Sample No.(SSTD050##): SSTD025 Date Analyzed: 09/27/13
 Lab File ID (Standard): 3N60943.D Time Analyzed: 15:43
 Instrument ID: HP5973N GC Column: Rxi-5SIL ID: 0.25 (mm)

	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	353499	12.01	366757	15.06	323290	16.18
UPPER LIMIT	706998	12.51	733514	15.56	646580	16.68
LOWER LIMIT	176750	11.51	183379	14.56	161645	15.68
EPA SAMPLE NO.						
01 LFB-41427	357910	12.01	375953	15.06	358686	16.17
02 MB-41427	332689	12.00	320190	15.05	302129	16.16
03 HIMW-08D	332508	12.00	338172	15.05	311338	16.18
04 HIMW-08I	358790	12.00	352402	15.06	330539	16.19
05 HIMW-13D	367511	12.00	375217	15.06	358474	16.21
06 HIMW-14D	343950	12.00	357635	15.06	343021	16.18
07 HIMW-14I	345855	12.01	366431	15.06	353767	16.18
08 HIMW-15D	370807	12.00	373439	15.05	351375	16.17
09 HIMW-15I	338853	12.01	351265	15.06	342421	16.17
10 HIMW-13I	335225	12.01	361597	15.06	343392	16.19
11 HIMW-13S	343984	12.00	361385	15.06	339775	16.19
12 HIMW-13SMS	363235	12.01	380992	15.06	351298	16.18
13 HIMW-13SMSD	340820	12.01	343327	15.06	318525	16.18
14 HIMW-20I	332288	12.00	338373	15.06	321779	16.19
15 HIMW-20S	327816	12.00	353369	15.06	330373	16.19
16 HS-HIMW-20I	340092	12.00	348968	15.06	332904	16.18
17 DUP-092013	341964	12.00	363587	15.06	329737	16.18
18 HS-HIMW-08S	324243	12.01	371961	15.07	228650	16.18
19 HIMW-08S	333640	12.02	343948	15.07	148900*	16.18

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: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS173
 EPA Sample No.(SSTD050##): SSTD025 Date Analyzed: 10/11/13
 Lab File ID (Standard): W61302R.D Time Analyzed: 2:32
 Instrument ID: HP5973N GC Column: Rxi-5SIL ID: 0.25 (mm)

	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
12 HOUR STD	290506	11.87	325866	14.97	277259	16.06
UPPER LIMIT	581012	12.37	651732	15.47	554518	16.56
LOWER LIMIT	145253	11.37	162933	14.47	138630	15.56
EPA SAMPLE NO.						
01 HIMW-08SRE	397848	11.87	372975	14.99	130172*	16.06

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

PREP BATCH REPORT

Page 1 of 2

Prep Start Date: 9/30/2013 12:46:57

Prep End Date: 10/1/2013 5:32:23 P

Prep Batch ID: 41525 Prep Code: 3520_B

Initial Temp: °C Final Temp °C

Prep Factor Units:

mL / mL

Technician: Matthew DiStasi

Sample ID	ClientSampleID	Matrix	pH1	pH2	SampAmt	Fin Vol	factor	GPC	Acid	Sulfur	Florisil	PrepStart	PrepEnd
1309B92-002B	HIMW-081	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
		Prep hold time was exceeded by 5.178 day(s)											
1309B92-004B	HIMW-13D	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
		Prep hold time was exceeded by 4.067 day(s)											
LCS-41525		Aqueous	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
LFB-41525		Aqueous	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
MB-41525		Aqueous	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309C54-004B	HIMW-20S	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
		Prep hold time was exceeded by 2.981 day(s)											
1309F64-001B	HIMW-05D	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-001BMS		Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-001BMSD		Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-002B	HIMW-05S	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-003B	HIMW-22	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-004B	HIMW-24	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-005B	HIMW-25	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-006B	HIMW-5I	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-007B	HS-HIMW-22	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-008B	HS-HIMW-05D	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-009B	FB092613	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013
1309F64-010B	HS-FB092613	Groundwater	2		1000	1	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2013	10/1/2013

Type Chemical / Reagent ID Chemical / Reagent Name Container# Container I Amount Added Unit

Cleanups:
 GPC = Method EPA3640A
 Acid = Method EPA3665A
 Sulfur = Method EPA3660B
 Florisil = Method-EPA3620B

KEY-URS173 B186



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03666

EXTERNAL CHAIN OF CUSTODY

PROJECT NAME/NUMBER: National Grid Hempstead 1176098.00004		CLIENT: VRS Corp.		H2M SDG NO: Key-URS 174	
SAMPLERS: (Signature)/Client Megan Dascoli/URS Robin Hurley/URS		Project Contact: Jon Sundquist Peter Fairbanks		Phone Number: 716-856-5636	
DELIVERABLES:		PIS/Quote #			
TURNAROUND TIME: Standard		ANALYSIS REQUESTED		REMARKS:	
DATE	TIME	MATRIX	FIELD I.D.	LAB I.D. NO.	REMARKS:
9/23/13	1220	GW	H1MW-12S	1309088-006	
9/23/13	1045	GW	H1MW-12I	-005	
9/23/13	855	GW	H1MW-12D	-004	
9/23/13	1455	GW	H1MW-23	-007	
9/23/13	1200	GW	DVPO92-313	-008	
9/24/13	0745	GW	H1MW-03D	-001	
9/24/13	1015	GW	H1MW-03I	-002	
9/24/13	1220	GW	H1MW-03S	-003	
9/24/13			TB092-413	-009	

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
<i>Megan Dascoli</i>	9/24/13	1255	<i>Jon Sundquist</i>	9/24/13	1225
<i>Jon Sundquist</i>	9/24/13	1345	<i>Peter Fairbanks</i>	9/24/13	1345
<i>Robin Hurley</i>					
<i>Megan Dascoli</i>					

LABORATORY USE ONLY	
Samples were:	1. Shipped ___ or Hand Delivered ___ Airbill # _____
COC Tape was:	1. Present on outer package: Y or N
	2. Unbroken on outer package: Y or N
Cooler temp. 3.3 °C	122336969/122076478
pH strips (10BDH0431)	≤ 3 y 212
Free Cl2 strips(041912C)	Present/Absent
HNO3:52159	H2SO4 52171
Na2S2O3: 22800123	NH4Cl:47072741
ZnAc:2107346	NaOH: B0694769

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KEY-URS174 S3

YELLOW COPY - CLIENT

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03660

EXTERNAL CHAIN OF CUSTODY

p 1 of 1

PROJECT NAME/NUMBER
National Grid Hempstead
1176098.00004
SAMPLERS: (Signature)/Client
Megan Dascoli/URS
Robin Hurley/URS
DELIVERABLES:

TURNAROUND TIME: Standard

DATE	TIME	MATRIX	FIELD I.D.
9/25/13	0745	GW	H1MW-055
9/25/13	0930	GW	H1MW-05D
9/25/13	0945	GW	H1MW-05D MS/MSD
9/25/13	0800	GW	HS-H1MW-05D
9/25/13	1255	GW	H1MW-22
9/25/13	1100	GW	HS-H1MW-22
9/25/13	1458	GW	H1MW-25
9/26/13	1100	GW	H1MW-5I
9/26/13	1220	GW	H1MW-24
9/26/13		GW	T6092613

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Megan Dascoli	9/26/13	1325	K. P. [Signature]	9/26/13	13:21
M. Hurley	9/26/13	15:15	[Signature]	9/26/13	15:15

CLIENT: URS Corporation

Project Contact: JON SUNDQUIST
Phone Number: 716-856-5636
PIS/Quote #

H2M SDG NO: H2MURSI7A

NOTES: 18 amber glass, 40ml amber glass, 12 amber glass

ANALYSIS REQUESTED	LAB I.D. NO.	REMARKS:
	1307164-005	-002
	004	-001
	004	-009
	001	-003
	006	-007
	003	-005
	005	-006
	002	-004
	000	-011

LABORATORY USE ONLY

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill # _____
COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N

Cooler temp: °C 122336969/122076478
pH strips (10BDH0431) ≤ 3 9 ≥ 12
Free Cl2 strips(041912C) Present/Absent
HNO3:52159 H2SO4 52171 HCl:5231
Na2S2O3:22800123 NH4Cl:47072741
ZnAc:2107346 NaOH: B0694769

2-6-12 3-2-9

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KEY-URS174 S9

YELLOW COPY - CLIENT

ORY



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03659

EXTERNAL CHAIN OF CUSTODY

p2 of 2

PROJECT NAME/NUMBER
N.G. & Hempstead
1176098.00004

SAMPLERS: (Signature)/Client

DELIVERABLES:

TURNAROUND TIME: Standard

DATE	TIME	MATRIX	FIELD I.D.
9/26/13	1320	W	FB092613
9/26/13	1310	W	HS-FB092613

CLIENT: VRS Corporation

H2M SDG NO.:

NOTES:

Project Contact: _____
Phone Number: _____
PIS/Quote #: _____

ANALYSIS REQUESTED		LAB I.D. NO.	REMARKS:
4	PAH	008-309FC4-009	
4	PAH	009-010	

Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)	Date:	Time:
[Signature]		9/26/13	1325	[Signature]	9/26/13	1322
[Signature]		9/26/13	15:15	[Signature]	9/26/13	15:15
[Signature]						
[Signature]						

LABORATORY USE ONLY

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill # _____
COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N

S.9°C 2.9°C
6.4°C



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Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLE(S) RECEIVED: 9/24/13 & 9/26/13
SDG #: KEY-URS174

For Sample(s):

HIMW-03D	DUP092313	HIMW-5I
HIMW-03I	TB 092413	HS-HIMW-22
HIMW-03S	HIMW-05D	HS-HIMW-05D
HIMW-12D	HIMW-05S	FB092613
HIMW-12I	HIMW-22	HS-FB092613
HIMW-12S	HIMW-24	TB 092613
HIMW-23	HIMW-25	

'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, unless discussed below, and no problems were encountered with sample analysis. The following should be noted:

10/1/13 PC
Sample ~~HS~~-HIMW-05D was submitted for matrix spike/matrix spike duplicate (MS/MSD) analysis. Recoveries for the MS were high, with two compounds above Q. C. limit, whereas in the MSD three analytes had recoveries below the limits, and all RPDs exceeded the limits. These large differences have been observed in the past with other samples that also contained particulates. The cause is under investigation.

The results for the two lab fortified blanks indicate good method efficiency.

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

In the continuing calibration verifications (CCV) toluene had a %Ds above 15%. The analyte was not found in the samples, but results for the LFBs and the matrix spikes are flagged with a "Z" qualifier, indicating that they are regarded estimated.

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: October 17, 2013

*  *

Ursula Middel
Technical Manager

KEY-URS174 S17

3A
 WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-U SAS No.: _____ SDG No.: KEY-URS17

Matrix Spike - EPA Sample No.: HIMW-05D

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	MS CONCENTRATION (µg/L)	MS % REC #	QC LIMITS REC.
Benzene	50	0	64	128*	50-127
Toluene	50	0	65	130*	70-125
Ethylbenzene	50	0	60	120	68-128
Xylene (total)	150	19	200	121	70-125

COMPOUND	SPIKE ADDED (µg/L)	MSD CONCENTRATION (µg/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Benzene	50	29	58	75*	30	50-127
Toluene	50	29	58*	77*	30	70-125
Ethylbenzene	50	27	54*	76*	30	68-128
Xylene (total)	150	100	54*	77*	30	70-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 4 out of 4 outside limits

Spike Recovery: 5 out of 8 outside limits

COMMENTS: _____



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SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLE(S) RECEIVED: 9/24/13 & 9/26/13
SDG #: KEY-URS174

For Sample(s):

HIMW-03D	HIMW-23	HIMW-25
HIMW-03I	DUP092313	HIMW-5I
HIMW-03S	HIMW-05D	HS-HIMW-22
HIMW-12D	HIMW-05S	HS-HIMW-05D
HIMW-12I	HIMW-22	FB092613
HIMW-12S	HIMW-24	HS-FB092613

The above water sample(s) and blank(s) was/were analyzed for a select list of base/neutral- acid extractables by EPA method 8270D.

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

Sample ~~HS~~-HIMW-05D was submitted for matrix spike/matrix spike duplicate (MS/MSD) analysis. Very low recoveries were obtained for both extracts. A spiking error is suspected because the surrogate recoveries do not indicate matrix interference but are consistent with the LFB recoveries. Along with good surrogate recoveries, the LFBs also showed good extraction efficiency for all targeted analytes. The MS solution was checked but had correct concentrations. Data for a matrix spike blank (LCS) spiked with the MS solution is included for documentation.

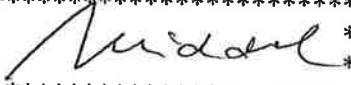
Two dilutions had surrogate recoveries for one surrogate above Q. C. limits. Recoveries for HIMW-24 are overall low but only one surrogate did not meet the limits.

Three samples were reanalyzed at dilutions due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted.

In the initial calibrations, average response factors were employed for all targeted analytes, and variability criteria for the continuous calibration checks (CCV) were met.

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: October 17, 2013

*  *

Ursula Middel
Technical Manager

KEY-URS174 S18

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:	7/12/2013
Time:	13:02
Weather:	Rain
Outdoor Temperature:	~83° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	6,522.3	Compressor Tank *	110 (psi)
Feed Air Pressure *	70 (psi)	(readings below are made from control panel)	
Cycle Pressure *	60 (psi)	Delivery Air	109 (psi)
Oxygen Receiver Pressure *	105 (psi)	Element Outlet Temperature	151 (oF)
Oxygen Purity	98.0 (percent)	Running Hours	7,552 (hours)
		Loading Hours	4,739 (hours)
* maximum reading during loading cycle		* 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	25	19	OW-1-9D	88.5	30	28
OW-1-2	96.5	30	32	OW-1-6S	67.0	20	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	30	32	OW-1-7S	66.9	15	18	OW-1-11D	86.1	30	31
OW-1-4	95.0	40	30	OW-1-8S	66.7	15	18	OW-1-12D	85.3	35	31
OW-1-5D	93.9	30	28	OW-1-9S	66.0	25	20	OW-1-13D	84.7	30	30
OW-1-6D	92.4	30	30	OW-1-10S	54.6	35	14	OW-1-14D	84.1	30	29
OW-1-7D	91.1	35	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	31
OW-1-8D	89.6	30	29	OW-1-12S	53.6	30	15	OW-1-16D	82.5	30	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 times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/12/2013

O₂ Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	15	OW-1-17D	79.5	30	15	OW-1-21S	49.3	30	11
OW-1-14S	52.7	20	16	OW-1-18D	78.3	30	28	OW-1-22S	49.3	30	12
OW-1-15S	52.2	20	17	OW-1-19D	78.9	35	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	30	26	OW-1-20D	79.5	35	29	OW-1-24S	48.4	30	12
OW-1-17S	50.7	30	24	OW-1-21D	79.5	45	29	OW-1-25S	48.8	30	1
OW-1-18S	50.2	30	15	OW-1-22D	79.5	35	28	OW-1-26SR	48.3	30	15
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	14
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	26	OW-1-28S	48.3	30	13

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O₂ 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	30	30
OW-1-26D	78.1	30	28	OW-1-30S	48.8	30	13	OW-1-34D	84.5	30	30
OW-1-27D	77.9	30	29	OW-1-31S	49.3	30	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	30	29	OW-1-32S	49.3	40	13	OW-1-36D	85.0	20	30
OW-1-29D	78.4	50	26	OW-1-33S	49.7	30	13	OW-1-37D	84.0	25	30
OW-1-30D	79.0	35	37	OW-1-34S	50.1	40	13	OW-1-38D	82.0	25	35
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	30
OW-1-32D	81.6	30	28	OW-1-36S	50.3	30	13	OW-1-40D	76.0	30	28

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

Date: 7/12/2013

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	14	OW-1-41D	73.6	20	23	OW-1-43	67.4	30	19
OW-1-38S	50.6	30	14	OW-1-42D	71.0	15	22	OW-1-44	66.6	30	18
OW-1-39S	50.7	30	13	OW-1-45	65.7	30	19	OW-1-51R	60.6	30	18
OW-1-40S	51.1	30	13	OW-1-46	64.3	35	18	OW-1-52	59.3	30	18
OW-1-41S	51.5	30	14	OW-1-47	63.4	35	18	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	13	OW-1-48	62.5	40	18	OW-1-54	60.0	35	16
				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 (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	24.92	21.2	20.60	0.4	MP-1-5	24.71	20.2	21.44	0	MP-1-1D	17.41	9.91
MP-1-1S	24.98	38.6	18.27	0	MP-1-6	16.97	21.7	14.62	0	MP-1-2D	42.14	39.00
MP-1-2D	19.19	38.1	47.29	0	MP-1-7	20.23	20.9	21.49	0	MP-1-3D	37.17	36.21
MP-1-2S	19.44	39.7	20.88	0.1	MP-1-8	21.75	17.6	7.16	0	MP-1-4D	33.78	35.11
MP-1-3D	17.45	20.9	37.83	0								
MP-1-3S	17.32	37.6	20.83	0								
MP-1-4D	20.13	39.7	29.12	0.5								
MP-1-4S	20.19	21.9	32.77	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/12/2013

OPERATIONAL NOTES

GA5 Air Compressor

- | | | | | |
|--|-----------|----------|----------------|----------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | Low (red) | _____ | Normal (green) | <u>X</u> |
| | | | High (orange) | _____ |
| 3) Oil added | Yes | _____ | No | <u>X</u> |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator changed | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O₂ Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator for disposal. Greased the booster pump motor shaft. Wiped down all equipment and cleaned up all garbage from around fence areas. The newly installed monitoring point cap and valve assembly as well as the manhole bolts were missing from monitoring point MP-1-5.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 96 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	<u>7/26/2013</u>
Time:	<u>13:18</u>
Weather:	<u>Sunny</u>
Outdoor Temperature:	<u>~81° F</u>
Inside Trailer Temperature:	<u>~70° F</u>
Performed By:	<u>Mike Ryan</u>

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	<u>6,638.0</u>	Compressor Tank *	<u>115</u> (psi)
Feed Air Pressure *	<u>110</u> (psi)	(readings below are made from control panel)	
Cycle Pressure *	<u>60</u> (psi)	Delivery Air	<u>113</u> (psi)
Oxygen Receiver Pressure *	<u>105</u> (psi)	Element Outlet Temperature	<u>178</u> (oF)
Oxygen Purity	<u>93.7</u> (percent)	Running Hours	<u>7,684</u> (hours)
		Loading Hours	<u>4,825</u> (hours)
* maximum reading during loading cycle		* 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	19	OW-1-9D	88.5	30	27
OW-1-2	96.5	50	31	OW-1-6S	67.0	35	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	30	32	OW-1-7S	66.9	35	18	OW-1-11D	86.1	30	30
OW-1-4	95.0	35	29	OW-1-8S	66.7	35	17	OW-1-12D	85.3	30	31
OW-1-5D	93.9	30	29	OW-1-9S	66.0	35	19	OW-1-13D	84.7	35	30
OW-1-6D	92.4	30	30	OW-1-10S	54.6	40	14	OW-1-14D	84.1	30	28
OW-1-7D	91.1	30	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	35	31
OW-1-8D	89.6	30	29	OW-1-12S	53.6	30	15	OW-1-16D	82.5	25	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 times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/26/2013

O₂ 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	55	12
OW-1-14S	52.7	30	15	OW-1-18D	78.3	30	28	OW-1-22S	49.3	35	13
OW-1-15S	52.2	40	14	OW-1-19D	78.9	30	28	OW-1-23S	48.8	40	12
OW-1-16SR	51.8	50	17	OW-1-20D	79.5	30	29	OW-1-24S	48.4	40	12
OW-1-17S	50.7	30	13	OW-1-21D	79.5	30	29	OW-1-25S	48.8	30	13
OW-1-18S	50.2	20	14	OW-1-22D	79.5	35	28	OW-1-26SR	48.3	25	15
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	28	OW-1-27S	48.3	30	14
OW-1-20S	49.3	30	13	OW-1-24D	78.2	35	26	OW-1-28S	48.3	30	13

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O₂ Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	30	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	29
OW-1-26D	78.1	30	27	OW-1-30S	48.8	30	13	OW-1-34D	84.5	30	29
OW-1-27D	77.9	30	29	OW-1-31S	49.3	30	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	30	29	OW-1-32S	49.3	30	13	OW-1-36D	85.0	50	30
OW-1-29D	78.4	30	28	OW-1-33S	49.7	30	13	OW-1-37D	84.0	60	30
OW-1-30D	79.0	25	36	OW-1-34S	50.1	30	14	OW-1-38D	82.0	60	34
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	30
OW-1-32D	81.6	35	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: 7/26/2013

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O₂ 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	14	OW-1-41D	73.6	30	24	OW-1-43	67.4	30	20
OW-1-38S	50.6	30	15	OW-1-42D	71.0	30	22	OW-1-44	66.6	30	19
OW-1-39S	50.7	30	13	OW-1-45	65.7	35	20	OW-1-51R	60.6	30	18
OW-1-40S	51.1	20	13	OW-1-46	64.3	30	18	OW-1-52	59.3	30	18
OW-1-41S	51.5	30	13	OW-1-47	63.4	30	18	OW-1-53	60.0	40	17
OW-1-42S	51.3	30	13	OW-1-48	62.5	40	18	OW-1-54	60.0	40	16
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	30	18				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O₂ Injection System #1												
Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O₂)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O₂)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	25.12	20.9	19.91	0.5	MP-1-5	24.93	19.9	32.77	0	MP-1-1D	15.14	12.27
MP-1-1S	25.19	40.0	21.11	0	MP-1-6	17.09	20.9	10.50	0	MP-1-2D	40.11	39.95
MP-1-2D	19.42	38.1	45.79	0	MP-1-7	20.40	19.9	32.40	0	MP-1-3D	40.55	39.00
MP-1-2S	19.67	39.6	23.66	0.2	MP-1-8	21.91	37.5	9.45	0.2	MP-1-4D	37.61	35.38
MP-1-3D	17.61	19.4	42.12	0								
MP-1-3S	17.50	39.9	34.39	0.3								
MP-1-4D	20.35	39.3	39.38	0.4								
MP-1-4S	20.37	32.4	35.37	0								

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/26/2013

OPERATIONAL NOTES

GAS Air Compressor

- | | | | | |
|--|-----------|----------|----------------|----------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | Low (red) | _____ | Normal (green) | <u>X</u> |
| | | | High (orange) | _____ |
| 3) Oil added | Yes | _____ | No | <u>X</u> |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator changed | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O₂ Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator for disposal. Wiped down all equipment and cleaned up all garbage from around fence areas. Cut down heavy weed, brush and vine growth around shed.

DO Meter probe tip was replaced and was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 95 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	8/12/2013
Time:	13:13
Weather:	Rain
Outdoor Temperature:	~80° F
Inside Trailer Temperature:	~85° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	6,783.7	Compressor Tank *	115 (psi)
Feed Air Pressure *	105 (psi)	(readings below are made from control panel)	
Cycle Pressure *	60 (psi)	Delivery Air	109 (psi)
Oxygen Receiver Pressure *	105 (psi)	Element Outlet Temperature	180 (oF)
Oxygen Purity	97.8 (percent)	Running Hours	7,848 (hours)
		Loading Hours	4,929 (hours)
* maximum reading during loading cycle		* maximum reading during loading cycle	

O ₂ Injection System #1											
Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	35	29	OW-1-5S	67.3	25	19	OW-1-9D	88.5	30	27
OW-1-2	96.5	35	30	OW-1-6S	67.0	30	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	45	33	OW-1-7S	66.9	30	18	OW-1-11D	86.1	30	31
OW-1-4	95.0	30	29	OW-1-8S	66.7	30	18	OW-1-12D	85.3	30	31
OW-1-5D	93.9	30	29	OW-1-9S	66.0	25	19	OW-1-13D	84.7	30	30
OW-1-6D	92.4	30	30	OW-1-10S	54.6	35	14	OW-1-14D	84.1	30	28
OW-1-7D	91.1	35	30	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	31
OW-1-8D	89.6	30	29	OW-1-12S	53.6	20	14	OW-1-16D	82.5	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 times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/12/2013

O₂ 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	35	12
OW-1-14S	52.7	40	15	OW-1-18D	78.3	30	28	OW-1-22S	49.3	30	13
OW-1-15S	52.2	30	15	OW-1-19D	78.9	35	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	30	17	OW-1-20D	79.5	30	29	OW-1-24S	48.4	30	12
OW-1-17S	50.7	50	13	OW-1-21D	79.5	35	29	OW-1-25S	48.8	30	13
OW-1-18S	50.2	55	14	OW-1-22D	79.5	40	28	OW-1-26SR	48.3	35	15
OW-1-19S	49.7	40	15	OW-1-23D	78.7	40	28	OW-1-27S	48.3	35	14
OW-1-20S	49.3	35	14	OW-1-24D	78.2	30	27	OW-1-28S	48.3	35	14

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O₂ Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	45	27	OW-1-29S	48.5	20	13	OW-1-33D	83.2	30	29
OW-1-26D	78.1	50	28	OW-1-30S	48.8	15	13	OW-1-34D	84.5	30	30
OW-1-27D	77.9	35	28	OW-1-31S	49.3	30	13	OW-1-35D	85.0	30	30
OW-1-28D	78.0	30	29	OW-1-32S	49.3	25	13	OW-1-36D	85.0	40	30
OW-1-29D	78.4	30	28	OW-1-33S	49.7	30	14	OW-1-37D	84.0	40	30
OW-1-30D	79.0	30	36	OW-1-34S	50.1	30	14	OW-1-38D	82.0	30	34
OW-1-31D	80.5	35	25	OW-1-35S	50.3	20	13	OW-1-39D	78.0	40	30
OW-1-32D	81.6	30	28	OW-1-36S	50.3	20	13	OW-1-40D	76.0	35	29

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

Date: 8/12/2013

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	14	OW-1-41D	73.6	30	24	OW-1-43	67.4	30	20
OW-1-38S	50.6	35	15	OW-1-42D	71.0	30	23	OW-1-44	66.6	40	20
OW-1-39S	50.7	30	14	OW-1-45	65.7	40	20	OW-1-51R	60.6	35	19
OW-1-40S	51.1	30	14	OW-1-46	64.3	30	18	OW-1-52	59.3	35	18
OW-1-41S	51.5	35	13	OW-1-47	63.4	30	18	OW-1-53	60.0	45	17
OW-1-42S	51.3	40	13	OW-1-48	62.5	30	18	OW-1-54	60.0	40	16
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	40	18				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O ₂ Injection System #1												
Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	25.40	20.9	22.12	0.6	MP-1-5	25.21	16.6	29.64	0	MP-1-1D	21.77	19.10
MP-1-1S	25.48	39.8	18.68	0.2	MP-1-6	17.47	20.9	11.62	0	MP-1-2D	35.99	34.07
MP-1-2D	19.62	39.4	37.17	0.3	MP-1-7	20.75	18.8	39.37	0	MP-1-3D	45.11	41.14
MP-1-2S	19.97	39.2	38.11	0.1	MP-1-8	22.26	28.7	12.22	0	MP-1-4D	38.77	35.41
MP-1-3D	17.86	18.9	52.66	0								
MP-1-3S	17.77	39.0	23.89	0.4								
MP-1-4D	20.61	36.2	37.39	0.5								
MP-1-4S	20.72	40.0	23.29	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: 8/12/2013

OPERATIONAL NOTES

GAS Air Compressor

- | | | | | |
|--|-----|-------------------------|----|---------------------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | | | | |
| Low (red) _____ | | Normal (green) <u>X</u> | | High (orange) _____ |
| 3) Oil added | Yes | _____ | No | _____ |
| 4) Oil changed | Yes | _____ | No | _____ |
| 5) Oil filter changed | Yes | _____ | No | _____ |
| 6) Air filter Changed | Yes | _____ | No | _____ |
| 7) Oil separator changed | Yes | _____ | No | _____ |
| 8) Terminal strips checked | Yes | _____ <u>X</u> | No | _____ |

AS-80 O, Generator

- | | | | | |
|-----------------------|-----|-------|----|----------------|
| 1) Prefilter changed | Yes | _____ | No | _____ <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | _____ <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator for disposal. Found loud vibration coming from compressor. Opened compressor and found base of unit covered with small plastic shavings from fan blade. System was running and building pressure. Wiped down all equipment and cleaned up all garbage from around fence areas. Cut down heavy weed, brush and vine growth around shed.

At approximately 2:45 pm on August 12, 2013 the system went into alarm for a compressor fault. Responded to alarm on August 13, 2013 and found compressor in overload. Took apart air compressor and found motor blower wheel broken off end of motor along with fan ring and wheel. Took apart broken fan and tested compressor for operation. Compressor was running at the correct amperage and no faults were occurring. Need to call Kaeser and order replacement parts for broken fan. System was left off until parts can be ordered.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 97 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	8/22/2013
Time:	11:40
Weather:	Rain
Outdoor Temperature:	~80° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)	Compressor (Kaesar Rotary Screw)
Hours _____	Compressor Tank * _____ (psi)
Feed Air Pressure * _____ (psi)	(readings below are made from control panel)
Cycle Pressure * _____ (psi)	Delivery Air _____ (psi)
Oxygen Receiver Pressure * _____ (psi)	Element Outlet Temperature _____ (oF)
Oxygen Purity _____ (percent)	Running Hours _____ (hours)
	Loading Hours _____ (hours)
<small>* maximum reading during loading cycle</small>	<small>* maximum reading during loading cycle</small>

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			OW-1-5S	67.3			OW-1-9D	88.5		
OW-1-2	96.5			OW-1-6S	67.0			OW-1-10D	87.2		
OW-1-3	96.3			OW-1-7S	66.9			OW-1-11D	86.1		
OW-1-4	95.0			OW-1-8S	66.7			OW-1-12D	85.3		
OW-1-5D	93.9			OW-1-9S	66.0			OW-1-13D	84.7		
OW-1-6D	92.4			OW-1-10S	54.6			OW-1-14D	84.1		
OW-1-7D	91.1			OW-1-11S	54.1			OW-1-15D	83.3		
OW-1-8D	89.6			OW-1-12S	53.6			OW-1-16D	82.5		

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/22/2013

O₂ 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			OW-1-17D	79.5			OW-1-21S	49.3		
OW-1-14S	52.7			OW-1-18D	78.3			OW-1-22S	49.3		
OW-1-15S	52.2			OW-1-19D	78.9			OW-1-23S	48.8		
OW-1-16SR	51.8			OW-1-20D	79.5			OW-1-24S	48.4		
OW-1-17S	50.7			OW-1-21D	79.5			OW-1-25S	48.8		
OW-1-18S	50.2			OW-1-22D	79.5			OW-1-26SR	48.3		
OW-1-19S	49.7			OW-1-23D	78.7			OW-1-27S	48.3		
OW-1-20S	49.3			OW-1-24D	78.2			OW-1-28S	48.3		

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.

O₂ 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			OW-1-29S	48.5			OW-1-33D	83.2		
OW-1-26D	78.1			OW-1-30S	48.8			OW-1-34D	84.5		
OW-1-27D	77.9			OW-1-31S	49.3			OW-1-35D	85.0		
OW-1-28D	78.0			OW-1-32S	49.3			OW-1-36D	85.0		
OW-1-29D	78.4			OW-1-33S	49.7			OW-1-37D	84.0		
OW-1-30D	79.0			OW-1-34S	50.1			OW-1-38D	82.0		
OW-1-31D	80.5			OW-1-35S	50.3			OW-1-39D	78.0		
OW-1-32D	81.6			OW-1-36S	50.3			OW-1-40D	76.0		

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

Date: 8/22/2013

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			OW-1-41D	73.6			OW-1-43	67.4		
OW-1-38S	50.6			OW-1-42D	71.0			OW-1-44	66.6		
OW-1-39S	50.7			OW-1-45	65.7			OW-1-51R	60.6		
OW-1-40S	51.1			OW-1-46	64.3			OW-1-52	59.3		
OW-1-41S	51.5			OW-1-47	63.4			OW-1-53	60.0		
OW-1-42S	51.3			OW-1-48	62.5			OW-1-54	60.0		
				OW-1-49	61.5						
				OW-1-50	61.0						

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 (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	25.55	20.0	14.58	0.5	MP-1-5	25.37	16.5	22.27	0	MP-1-1D	5.38	2.10
MP-1-1S	25.64	39.5	9.87	0.1	MP-1-6	17.62	18.3	6.03	0	MP-1-2D	9.10	4.11
MP-1-2D	19.92	38.5	11.88	0.2	MP-1-7	20.89	18.8	31.60	0	MP-1-3D	7.70	5.14
MP-1-2S	20.15	39.9	9.87	0	MP-1-8	22.41	23.6	12.90	0	MP-1-4D	9.12	6.60
MP-1-3D	18.09	19.1	8.31	0								
MP-1-3S	17.94	39.3	19.49	0								
MP-1-4D	20.75	38.9	8.66	0.4								
MP-1-4S	20.72	40.0	5.35	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: 8/22/2013

OPERATIONAL NOTES

GAS Air Compressor

- | | | | | |
|--|-----------|-------|----------------|-------|
| 1) Oil Level Checked with system unloaded* | Yes | _____ | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | | | | |
| | Low (red) | _____ | Normal (green) | _____ |
| | | | High (orange) | _____ |
| 3) Oil added | Yes | _____ | No | _____ |
| 4) Oil changed | Yes | _____ | No | _____ |
| 5) Oil filter changed | Yes | _____ | No | _____ |
| 6) Air filter Changed | Yes | _____ | No | _____ |
| 7) Oil separator changed | Yes | _____ | No | _____ |
| 8) Terminal strips checked | Yes | _____ | No | _____ |

AS-80 O, Generator

- | | | | | |
|-----------------------|-----|-------|----|-------|
| 1) Prefilter changed | Yes | _____ | No | _____ |
| 2) Coalescing changed | Yes | _____ | No | _____ |

GENERAL SYSTEM NOTES

Trailer

- | | | | | | |
|----|---|-------|----------|----|-------|
| 1) | Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) | Yes | <u>X</u> | 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:

System OFF since August 13, 2013 dur to broken fan in Kaeser compressor. Parts were ordered week of August 19th and are expected arrive during the week of August 26th.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 101 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:	9/6/2013
Time:	11:10
Weather:	Sunny
Outdoor Temperature:	~75° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)	Compressor (Kaesar Rotary Screw)
Hours _____	Compressor Tank * _____ (psi)
Feed Air Pressure * _____ (psi)	(readings below are made from control panel)
Cycle Pressure * _____ (psi)	Delivery Air _____ (psi)
Oxygen Receiver Pressure * _____ (psi)	Element Outlet Temperature _____ (oF)
Oxygen Purity _____ (percent)	Running Hours _____ (hours)
	Loading Hours _____ (hours)
<small>* maximum reading during loading cycle</small>	<small>* maximum reading during loading cycle</small>

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			OW-1-5S	67.3			OW-1-9D	88.5		
OW-1-2	96.5			OW-1-6S	67.0			OW-1-10D	87.2		
OW-1-3	96.3			OW-1-7S	66.9			OW-1-11D	86.1		
OW-1-4	95.0			OW-1-8S	66.7			OW-1-12D	85.3		
OW-1-5D	93.9			OW-1-9S	66.0			OW-1-13D	84.7		
OW-1-6D	92.4			OW-1-10S	54.6			OW-1-14D	84.1		
OW-1-7D	91.1			OW-1-11S	54.1			OW-1-15D	83.3		
OW-1-8D	89.6			OW-1-12S	53.6			OW-1-16D	82.5		

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/6/2013

O₂ 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			OW-1-17D	79.5			OW-1-21S	49.3		
OW-1-14S	52.7			OW-1-18D	78.3			OW-1-22S	49.3		
OW-1-15S	52.2			OW-1-19D	78.9			OW-1-23S	48.8		
OW-1-16SR	51.8			OW-1-20D	79.5			OW-1-24S	48.4		
OW-1-17S	50.7			OW-1-21D	79.5			OW-1-25S	48.8		
OW-1-18S	50.2			OW-1-22D	79.5			OW-1-26SR	48.3		
OW-1-19S	49.7			OW-1-23D	78.7			OW-1-27S	48.3		
OW-1-20S	49.3			OW-1-24D	78.2			OW-1-28S	48.3		

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.

O₂ 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			OW-1-29S	48.5			OW-1-33D	83.2		
OW-1-26D	78.1			OW-1-30S	48.8			OW-1-34D	84.5		
OW-1-27D	77.9			OW-1-31S	49.3			OW-1-35D	85.0		
OW-1-28D	78.0			OW-1-32S	49.3			OW-1-36D	85.0		
OW-1-29D	78.4			OW-1-33S	49.7			OW-1-37D	84.0		
OW-1-30D	79.0			OW-1-34S	50.1			OW-1-38D	82.0		
OW-1-31D	80.5			OW-1-35S	50.3			OW-1-39D	78.0		
OW-1-32D	81.6			OW-1-36S	50.3			OW-1-40D	76.0		

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

Date: 9/6/2013

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			OW-1-41D	73.6			OW-1-43	67.4		
OW-1-38S	50.6			OW-1-42D	71.0			OW-1-44	66.6		
OW-1-39S	50.7			OW-1-45	65.7			OW-1-51R	60.6		
OW-1-40S	51.1			OW-1-46	64.3			OW-1-52	59.3		
OW-1-41S	51.5			OW-1-47	63.4			OW-1-53	60.0		
OW-1-42S	51.3			OW-1-48	62.5			OW-1-54	60.0		
				OW-1-49	61.5						
				OW-1-50	61.0						

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 (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.00	20.9	3.71	0.3	MP-1-5	25.81	19.1	21.50	0	MP-1-1D	1.84	1.12
MP-1-1S	26.07	39.3	9.08	0.1	MP-1-6	18.09	16.9	4.23	0	MP-1-2D	10.15	6.52
MP-1-2D	20.35	36.1	14.47	0.4	MP-1-7	21.38	20.3	34.60	0	MP-1-3D	5.11	4.77
MP-1-2S	20.58	39.6	9.31	0	MP-1-8	22.92	19.0	9.14	0	MP-1-4D	1.40	0.98
MP-1-3D	18.56	19.8	7.20	0								
MP-1-3S	18.45	31.4	16.67	0.2								
MP-1-4D	21.33	24.8	2.22	0.3								
MP-1-4S	21.35	36.5	1.70	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: 9/6/2013

OPERATIONAL NOTES

GAS Air Compressor

- | | | |
|--|----------------------|---------------------|
| 1) Oil Level Checked with system unloaded* | Yes _____ | No _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | |
| 2) Oil Level with system unloaded | | |
| Low (red) _____ | Normal (green) _____ | High (orange) _____ |
| 3) Oil added | Yes _____ | No _____ |
| 4) Oil changed | Yes _____ | No _____ |
| 5) Oil filter changed | Yes _____ | No _____ |
| 6) Air filter Changed | Yes _____ | No _____ |
| 7) Oil separator changed | Yes _____ | No _____ |
| 8) Terminal strips checked | Yes _____ | No _____ |

AS-80 O, Generator

- | | | |
|-----------------------|-----------|----------|
| 1) Prefilter changed | Yes _____ | No _____ |
| 2) Coalescing changed | Yes _____ | No _____ |

GENERAL SYSTEM NOTES

Trailer

- | | | | |
|----|---|------------------|----------|
| 1) | Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) | Yes <u> X </u> | 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:

System OFF since August 13, 2013 due to broken fan in Kaeser compressor. Parts were ordered week of August 19th and are expected arrive during the week of August 26th. Started to install new fan and guard on September 6, 2013. Fan blades were hitting the outside wall and required adjustments. Completed installation of fan on September 9, 2013 and repaired leak in oil line that was damaged when fan broke apart. Wiped down all equipment and restarted system. Waited on-site for tanks to be filled with oxygen before starting the injection banks. Left system running and injecting oxygen at the end of the day. Total down time for repair 28 days.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 101 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:	9/23/2013
Time:	11:10
Weather:	Sunny
Outdoor Temperature:	~48° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	6,786.1	Compressor Tank *	110 (psi)
Feed Air Pressure *	110 (psi)	(readings below are made from control panel)	
Cycle Pressure *	60 (psi)	Delivery Air	107 (psi)
Oxygen Receiver Pressure *	85 (psi)	Element Outlet Temperature	179 (oF)
Oxygen Purity	97.5 (percent)	Running Hours	7,851 (hours)
		Loading Hours	4,931 (hours)
* maximum reading during loading cycle		* 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	20	OW-1-9D	88.5	30	28
OW-1-2	96.5	35	32	OW-1-6S	67.0	25	19	OW-1-10D	87.2	40	28
OW-1-3	96.3	35	33	OW-1-7S	66.9	25	18	OW-1-11D	86.1	30	32
OW-1-4	95.0	30	30	OW-1-8S	66.7	25	18	OW-1-12D	85.3	50	30
OW-1-5D	93.9	40	28	OW-1-9S	66.0	30	20	OW-1-13D	84.7	55	29
OW-1-6D	92.4	50	30	OW-1-10S	54.6	30	14	OW-1-14D	84.1	45	31
OW-1-7D	91.1	55	29	OW-1-11S	54.1	30	14	OW-1-15D	83.3	35	31
OW-1-8D	89.6	50	29	OW-1-12S	53.6	30	16	OW-1-16D	82.5	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 times at Bank #1 and Bank #3 were set at 3 minutes.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/23/2013

O₂ Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	15	OW-1-17D	79.5	30	15	OW-1-21S	49.3	30	11
OW-1-14S	52.7	20	17	OW-1-18D	78.3	30	28	OW-1-22S	49.3	25	12
OW-1-15S	52.2	20	17	OW-1-19D	78.9	40	29	OW-1-23S	48.8	30	12
OW-1-16SR	51.8	30	25	OW-1-20D	79.5	35	29	OW-1-24S	48.4	35	12
OW-1-17S	50.7	30	24	OW-1-21D	79.5	35	29	OW-1-25S	48.8	30	12
OW-1-18S	50.2	30	15	OW-1-22D	79.5	45	29	OW-1-26SR	48.3	40	15
OW-1-19S	49.7	30	15	OW-1-23D	78.7	40	27	OW-1-27S	48.3	30	14
OW-1-20S	49.3	30	14	OW-1-24D	78.2	30	26	OW-1-28S	48.3	30	13

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection times at Bank #5 were set at 3 minutes.

O₂ Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	40	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	30
OW-1-26D	78.1	40	29	OW-1-30S	48.8	35	13	OW-1-34D	84.5	35	30
OW-1-27D	77.9	30	29	OW-1-31S	49.3	35	13	OW-1-35D	85.0	45	30
OW-1-28D	78.0	30	29	OW-1-32S	49.3	40	13	OW-1-36D	85.0	40	31
OW-1-29D	78.4	30	28	OW-1-33S	49.7	30	13	OW-1-37D	84.0	30	30
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	13	OW-1-38D	82.0	30	35
OW-1-31D	80.5	30	26	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	30
OW-1-32D	81.6	40	28	OW-1-36S	50.3	30	13	OW-1-40D	76.0	25	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: 9/23/2013

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O₂ 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	14	OW-1-41D	73.6	30	23	OW-1-43	67.4	30	19
OW-1-38S	50.6	40	15	OW-1-42D	71.0	25	24	OW-1-44	66.6	30	19
OW-1-39S	50.7	40	13	OW-1-45	65.7	20	19	OW-1-51R	60.6	30	18
OW-1-40S	51.1	30	13	OW-1-46	64.3	15	19	OW-1-52	59.3	30	18
OW-1-41S	51.5	30	14	OW-1-47	63.4	15	18	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	14	OW-1-48	62.5	30	18	OW-1-54	60.0	30	16
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	30	18				

Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.

O₂ 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	26.36	20.9	14.45	0.1	MP-1-5	26.18	17.1	24.19	0	MP-1-1D	15.00	13.27
MP-1-1S	26.44	39.7	11.11	0.1	MP-1-6	18.40	15.4	9.37	0	MP-1-2D	9.75	10.12
MP-1-2D	20.71	34.5	16.77	0.4	MP-1-7	21.64	20.3	33.39	0	MP-1-3D	12.29	9.97
MP-1-2S	20.93	39.0	12.27	0	MP-1-8	22.18	19.0	12.29	0	MP-1-4D	7.11	8.87
MP-1-3D	18.85	19.7	14.45	0								
MP-1-3S	18.70	30.2	21.12	0								
MP-1-4D	21.55	25.1	5.51	0.2								
MP-1-4S	21.61	36.0	7.01	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: 9/23/2013

OPERATIONAL NOTES

GAS Air Compressor

- | | | | | |
|--|-----------|----------|----------------|----------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | | | | |
| | Low (red) | <u>X</u> | Normal (green) | _____ |
| 3) Oil added | Yes | <u>X</u> | No | _____ |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator changed | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O, Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

- | | | | | | |
|----|---|-------|----------|----|-------|
| 1) | Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) | Yes | <u>X</u> | 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 alarm for a low oil level in the compressor. Alarm condition was not sent out over the notification system. Investigated cable for notification system and found a bad connection on the outside of the trailer. Repaired bad connection in the cable on the remote notification system. Added oil to compressor and restarted system.

After departing the site on September 23rd, the system went into alarm and shutdown the compressor. We checked the system on September 24th and found a large amount of debris inside the oil filter from when the compressor fan motor broke. Drained the oil from the system and replaced the oil filter. Restarted system and left running. Shortly after departure on September 24th the system went into alarm again and shutdown the compressor. We check the system on September 25th and found a buildup of rust and silt in the cooling system. Took apart cooling system and flushed lines and coils. Cleaned all filters and added oil to the proper levels. Restarted system and left running.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	<u>7/11/2013</u>
Time:	<u>12:35</u>
Weather:	<u>Rain</u>
Outdoor Temperature:	<u>~85° F</u>
Inside Trailer Temperature:	<u>~65° F</u>
Performed By:	<u>Mike Ryan</u>

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	<u>18,695</u>	Compressor Tank *	<u>105</u> (psi)
Feed Air Pressure *	<u>70</u> (psi)	(readings below are made from control panel)	
Cycle Pressure *	<u>60</u> (psi)	Delivery Air	<u>102</u> (psi)
Oxygen Receiver Pressure *	<u>120</u> (psi)	Element Outlet Temperature	<u>174</u> (°F)
Oxygen Purity	<u>96.7</u> (percent)	Running Hours	<u>18,922</u> (hours)
* maximum reading during loading cycle		Loading Hours	<u>18,438</u> (hours)
		* maximum reading during loading cycle	

O ₂ Injection System #2											
Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	32	OW-2-9S	75'	40	20	OW-2-10D	97.2'	30	30
OW-2-3	94.3'	40	25	OW-2-10S	75'	40	29	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	20	34	OW-2-11S	76.5'	45	21	OW-2-12	94'	35	22
OW-2-5	95.3'	25	30	OW-2-13S	75'	30	20	OW-2-13D	97'	30	30
OW-2-6	95.7'	20	31	OW-2-15S	75'	30	19	OW-2-14	96.4'	30	29
OW-2-7	96'	30	30	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	30	31
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	23	OW-2-17	95'	30	29

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/11/2013

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

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

O ₂ Injection System #2												
Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	27.82	22.4	21.71	0
OW-2-38	62.1'	30	21	OW-2-46	61'	30	20	MP-2-2	29.15	19.9	37.41	0
OW-2-39	60'	40	20	OW-2-47	60.5'	30	19	MP-2-3S	29.05	19.5	47.52	0
OW-2-40	61.7'	40	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	29.16	38.9	40.11	0.5
OW-2-41	61.7'	30	21	MP-2-2	30.12	33.51		MP-2-4	17.76	24.6	20.69	0.2
OW-2-42	61.6'	30	20	MP-2-3S	47.98	49.61		MP-2-5	15.93	21.2	20.44	0
OW-2-43	61.4'	30	20	MP-2-3D	37.17	35.14						
OW-2-44R	60.6'	30	20	MP-2-5	22.62	27.37						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/11/2013

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) _____	High (orange) _____
	<u>X</u>	
- 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 O₂ Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Repaired leak at flow meter #16D. Wiped down all equipment and cleaned up all garbage, leaves and weeds from around fence areas.

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

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 96 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	<u>7/25/2013</u>
Time:	<u>11:45</u>
Weather:	<u>Light Rain</u>
Outdoor Temperature:	<u>~80° F</u>
Inside Trailer Temperature:	<u>~70° F</u>
Performed By:	<u>Mike Ryan</u>

O ₂ Generator (AirSep)				Compressor (Kaesar Rotary Screw)			
Hours	<u>18,836</u>			Compressor Tank *	<u>105</u>		(psi)
Feed Air Pressure *	<u>90</u>	(psi)		(readings below are made from control panel)			
Cycle Pressure *	<u>65</u>	(psi)		Delivery Air	<u>120</u>		(psi)
Oxygen Receiver Pressure *	<u>115</u>	(psi)		Element Outlet Temperature	<u>171</u>		(°F)
Oxygen Purity	<u>93.2</u>	(percent)		Running Hours	<u>19,067</u>		(hours)
				Loading Hours	<u>18,580</u>		(hours)
* maximum reading during loading cycle				* maximum reading during loading cycle			

O ₂ Injection System #2											
Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	35	32	OW-2-9S	75'	40	21	OW-2-10D	97.2'	45	31
OW-2-3	94.3'	30	26	OW-2-10S	75'	30	30	OW-2-11D	100.8'	50	30
OW-2-4	94.7'	30	34	OW-2-11S	76.5'	30	22	OW-2-12	94'	50	22
OW-2-5	95.3'	45	30	OW-2-13S	75'	30	20	OW-2-13D	97'	30	30
OW-2-6	95.7'	40	31	OW-2-15S	75'	30	19	OW-2-14	96.4'	25	29
OW-2-7	96'	30	31	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	35	30
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	25	20	OW-2-16D	94.1'	30	30
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	23	OW-2-17	95'	30	29

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/25/2013

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

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

O ₂ Injection System #2												
Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	22	MP-2-1	28.11	23.6	17.71	0
OW-2-38	62.1'	35	20	OW-2-46	61'	25	20	MP-2-2	29.47	20.2	26.83	0
OW-2-39	60'	45	19	OW-2-47	60.5'	30	20	MP-2-3S	29.36	26.6	45.41	0
OW-2-40	61.7'	35	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	29.48	40.0	37.88	0.4
OW-2-41	61.7'	30	20	MP-2-2	25.19	20.11		MP-2-4	18.06	23.3	13.54	0.3
OW-2-42	61.6'	30	20	MP-2-3S	46.25	41.99		MP-2-5	16.22	22.5	17.44	0
OW-2-43	61.4'	30	20	MP-2-3D	35.13	34.00						
OW-2-44R	60.6'	30	20	MP-2-5	15.49	16.12						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 7/25/2013

OPERATIONAL NOTES

GA5 Air Compressor

- | | | | | |
|--|-----------|----------|----------------|----------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | Low (red) | _____ | Normal (green) | <u>X</u> |
| | | | High (orange) | _____ |
| 3) Oil added | Yes | _____ | No | <u>X</u> |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator cleaned | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O₂ Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and cleaned up all garbage, leaves and weeds from around fence areas. During monitoring found a trace amount of product floating on MP-2-4.

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

DO Meter probe tip was replaced and was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 95 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	8/9/2013
Time:	0:44
Weather:	Cloudy
Outdoor Temperature:	~79° F
Inside Trailer Temperature:	~82° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	19,014	Compressor Tank *	110 (psi)
Feed Air Pressure *	100 (psi)	(readings below are made from control panel)	
Cycle Pressure *	60 (psi)	Delivery Air	113 (psi)
Oxygen Receiver Pressure *	102 (psi)	Element Outlet Temperature	145 (°F)
Oxygen Purity	96.5 (percent)	Running Hours	19,250 (hours)
* maximum reading during loading cycle		Loading Hours	18,760 (hours)
		* maximum reading during loading cycle	

O ₂ Injection System #2											
Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	32	OW-2-9S	75'	35	22	OW-2-10D	97.2'	25	31
OW-2-3	94.3'	35	26	OW-2-10S	75'	35	30	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	30	34	OW-2-11S	76.5'	35	22	OW-2-12	94'	35	22
OW-2-5	95.3'	30	29	OW-2-13S	75'	30	20	OW-2-13D	97'	30	30
OW-2-6	95.7'	40	31	OW-2-15S	75'	30	18	OW-2-14	96.4'	45	30
OW-2-7	96'	30	30	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	30	30
OW-2-9D	96.7'	35	30	OW-2-20S	79'	40	23	OW-2-17	95'	30	29

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/9/2013

O ₂ Injection System #2											
Injection Bank D				Injection Bank E				Injection Bank F			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	30	21	OW-2-26D	95'	30	35
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	27	OW-2-27	93.5'	30	29
OW-2-20D	96.6'	45	30	OW-2-26S	74'	30	21	OW-2-28D	92.1'	45	29
OW-2-21	96.6'	45	29	OW-2-28S	76'	30	21	OW-2-29	92.2'	55	29
OW-2-22D	96.3'	40	28	OW-2-30S	67.8'	30	17	OW-2-30D	88'	55	28
OW-2-23	97.2'	30	30	OW-2-34	71'	35	20	OW-2-31	86'	50	31
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	21	OW-2-32	84'	30	36
OW-2-25	96'	30	30	OW-2-36	64.8'	30	20	OW-2-33	82'	35	32

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

O ₂ Injection System #2												
Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	21	MP-2-1	28.26	22.8	21.91	0
OW-2-38	62.1'	20	20	OW-2-46	61'	30	20	MP-2-2	29.62	19.2	41.11	0.1
OW-2-39	60'	30	20	OW-2-47	60.5'	30	20	MP-2-3S	29.48	23.1	47.17	0.2
OW-2-40	61.7'	30	20	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	29.59	40.0	39.81	0.5
OW-2-41	61.7'	40	20	MP-2-2	36.29	27.61		MP-2-4	18.20	23.7	17.81	0.2
OW-2-42	61.6'	30	21	MP-2-3S	50.05	48.88		MP-2-5	16.35	20.9	25.83	0
OW-2-43	61.4'	35	20	MP-2-3D	40.07	39.79						
OW-2-44R	60.6'	45	20	MP-2-5	21.70	20.83						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/9/2013

OPERATIONAL NOTES

GA5 Air Compressor

- | | | | | |
|--|-----------|----------|----------------|---------------------------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | Low (red) | <u>X</u> | Normal (green) | _____ High (orange) _____ |
| 3) Oil added | Yes | <u>X</u> | No | _____ |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator cleaned | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O₂ Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Added small amount of oil to compressor. Repaired 3/8" drain hose from auto drain which blew out of top of separator unit. Secured with zip ties and turned auto drain pressure down. Changed air filters on compressor intake due to heavy dust buildup. Wiped down all equipment and cleaned up all garbage, leaves and weeds from around fence areas.

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

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 97 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	8/22/2013
Time:	14:20
Weather:	Rain
Outdoor Temperature:	~80° F
Inside Trailer Temperature:	~74° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)				Compressor (Kaesar Rotary Screw)			
Hours	19,169			Compressor Tank *	120		(psi)
Feed Air Pressure *	100	(psi)		(readings below are made from control panel)			
Cycle Pressure *	60	(psi)		Delivery Air	115		(psi)
Oxygen Receiver Pressure *	120	(psi)		Element Outlet Temperature	165		(°F)
				Running Hours	19,408		(hours)
				Loading Hours	18,915		(hours)
Oxygen Purity	97.8	(percent)					
* maximum reading during loading cycle				* maximum reading during loading cycle			

O ₂ Injection System #2											
Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	32	OW-2-9S	75'	30	22	OW-2-10D	97.2'	30	30
OW-2-3	94.3'	40	26	OW-2-10S	75'	30	30	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	30	34	OW-2-11S	76.5'	30	23	OW-2-12	94'	30	22
OW-2-5	95.3'	25	28	OW-2-13S	75'	30	21	OW-2-13D	97'	30	31
OW-2-6	95.7'	20	32	OW-2-15S	75'	30	18	OW-2-14	96.4'	30	30
OW-2-7	96'	25	30	OW-2-16S	75.5'	40	20	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	30	31	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	30	31
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	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: 8/22/2013

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'	45	31	OW-2-22S	76'	30	22	OW-2-26D	95'	30	35
OW-2-19	96.1'	35	31	OW-2-24S	77.8'	20	27	OW-2-27	93.5'	30	29
OW-2-20D	96.6'	30	30	OW-2-26S	74'	10	21	OW-2-28D	92.1'	30	29
OW-2-21	96.6'	30	30	OW-2-28S	76'	15	21	OW-2-29	92.2'	30	30
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	20	17	OW-2-30D	88'	30	30
OW-2-23	97.2'	35	30	OW-2-34	71'	30	20	OW-2-31	86'	30	30
OW-2-24D	97'	30	30	OW-2-35	69.2'	25	21	OW-2-32	84'	30	36
OW-2-25	96'	30	30	OW-2-36	64.8'	25	21	OW-2-33	82'	30	32

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

O ₂ Injection System #2												
Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	21	MP-2-1	28.51	22.6	24.39	0.4
OW-2-38	62.1'	30	20	OW-2-46	61'	25	20	MP-2-2	29.86	19.6	40.07	0.4
OW-2-39	60'	40	20	OW-2-47	60.5'	25	20	MP-2-3S	29.72	24.6	45.59	0.5
OW-2-40	61.7'	30	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	29.87	39.7	41.12	0
OW-2-41	61.7'	35	20	MP-2-2	38.11	35.00		MP-2-4	18.45	21.7	16.77	0.3
OW-2-42	61.6'	40	21	MP-2-3S	46.77	44.01		MP-2-5	16.61	20.9	23.84	0
OW-2-43	61.4'	30	20	MP-2-3D	38.81	35.14						
OW-2-44R	60.6'	30	20	MP-2-5	21.19	18.88						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 8/22/2013

OPERATIONAL NOTES

GA5 Air Compressor

- | | | | | |
|--|-----------|----------|----------------|---------------------------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | Low (red) | <u>X</u> | Normal (green) | _____ High (orange) _____ |
| 3) Oil added | Yes | <u>X</u> | No | _____ |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator cleaned | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O₂ Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Added small amount of oil to compressor. Replaced 60 watt light bulb in shed. Wiped down all equipment and cleaned up all garbage, leaves and weeds from around fence areas.

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

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 101 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	9/5/2013
Time:	11:48
Weather:	Sunny
Outdoor Temperature:	~78° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	19,333	Compressor Tank *	105 (psi)
Feed Air Pressure *	100 (psi)	(readings below are made from control panel)	
Cycle Pressure *	60 (psi)	Delivery Air	109 (psi)
Oxygen Receiver Pressure *	120 (psi)	Element Outlet Temperature	156 (°F)
Oxygen Purity	94.9 (percent)	Running Hours	19,577 (hours)
<small>* maximum reading during loading cycle</small>		Loading Hours	19,080 (hours)
		<small>* maximum reading during loading cycle</small>	

O ₂ Injection System #2											
Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	32	OW-2-9S	75'	30	22	OW-2-10D	97.2'	15	30
OW-2-3	94.3'	30	25	OW-2-10S	75'	30	29	OW-2-11D	100.8'	15	32
OW-2-4	94.7'	30	33	OW-2-11S	76.5'	30	24	OW-2-12	94'	30	23
OW-2-5	95.3'	40	28	OW-2-13S	75'	35	22	OW-2-13D	97'	35	31
OW-2-6	95.7'	45	32	OW-2-15S	75'	30	19	OW-2-14	96.4'	25	30
OW-2-7	96'	45	30	OW-2-16S	75.5'	25	20	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	30	33	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	30	32
OW-2-9D	96.7'	30	31	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: 9/5/2013

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

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

O ₂ Injection System #2												
Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	21	MP-2-1	28.87	21.9	21.33	0.3
OW-2-38	62.1'	30	20	OW-2-46	61'	20	20	MP-2-2	30.23	19.6	43.27	0.5
OW-2-39	60'	35	20	OW-2-47	60.5'	30	21	MP-2-3S	30.13	25.1	46.44	0.5
OW-2-40	61.7'	35	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.25	38.4	34.99	0
OW-2-41	61.7'	35	20	MP-2-2	30.13	29.99		MP-2-4	18.86	22.4	17.63	0.4
OW-2-42	61.6'	35	21	MP-2-3S	41.12	37.74		MP-2-5	17.02	20.9	38.17	0.1
OW-2-43	61.4'	30	21	MP-2-3D	31.48	30.99						
OW-2-44R	60.6'	30	21	MP-2-5	21.11	16.68						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/5/2013

OPERATIONAL NOTES

GA5 Air Compressor

- 1) Oil Level Checked with system unloaded* Yes X No
* Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded Low (red) 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 O2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Found booster pump going on and off repeatedly. Inspected unit and found that the shaft on the pressure switch was worn out and needed to be replaced. Wiped down all equipment and cleaned up all garbage, leaves and weeds from around fence areas.
On September 6, 2013 replaced the bad pressure switch shaft and left system running. Checked repair on Monday, September 9, 2013 and made adjustment in valve to stop unit from shutting off at 120 psi.
The threads on the bolt holes of monitoring points MP-2-1, MP-2-3D and MP-2-3S manholes can no longer be serviced and need to be replaced.
DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 101 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:	<u>9/20/2013</u>
Time:	<u>10:55</u>
Weather:	<u>Sunny</u>
Outdoor Temperature:	<u>~75° F</u>
Inside Trailer Temperature:	<u>~67° F</u>
Performed By:	<u>Mike Ryan</u>

O ₂ Generator (AirSep)		Compressor (Kaesar Rotary Screw)	
Hours	<u>19,538</u>	Compressor Tank *	<u>70</u> (psi)
Feed Air Pressure *	<u>70</u> (psi)	(readings below are made from control panel)	
Cycle Pressure *	<u>60</u> (psi)	Delivery Air	<u>75</u> (psi)
Oxygen Receiver Pressure *	<u>120</u> (psi)	Element Outlet Temperature	<u>171</u> (°F)
Oxygen Purity	<u>97.7</u> (percent)	Running Hours	<u>19,787</u> (hours)
* maximum reading during loading cycle		Loading Hours	<u>19,287</u> (hours)
		* maximum reading during loading cycle	

O ₂ Injection System #2											
Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	31	OW-2-9S	75'	30	22	OW-2-10D	97.2'	20	30
OW-2-3	94.3'	30	25	OW-2-10S	75'	30	30	OW-2-11D	100.8'	25	31
OW-2-4	94.7'	35	33	OW-2-11S	76.5'	30	23	OW-2-12	94'	35	23
OW-2-5	95.3'	45	28	OW-2-13S	75'	30	22	OW-2-13D	97'	30	30
OW-2-6	95.7'	30	32	OW-2-15S	75'	35	19	OW-2-14	96.4'	30	30
OW-2-7	96'	30	31	OW-2-16S	75.5'	35	20	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	25	31	OW-2-18S	74.5'	35	20	OW-2-16D	94.1'	30	31
OW-2-9D	96.7'	25	30	OW-2-20S	79'	30	23	OW-2-17	95'	30	31

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/20/2013

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

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

O ₂ Injection System #2												
Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O ₂)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	35	20	MP-2-1	29.35	22.5	28.55	0.2
OW-2-38	62.1'	35	20	OW-2-46	61'	35	22	MP-2-2	30.66	19.4	46.86	0.2
OW-2-39	60'	45	21	OW-2-47	60.5'	35	20	MP-2-3S	30.56	25.1	42.55	0.5
OW-2-40	61.7'	45	21	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.70	38.7	40.12	0
OW-2-41	61.7'	30	20	MP-2-2	40.12	37.77		MP-2-4	19.29	20.9	17.88	0.2
OW-2-42	61.6'	30	21	MP-2-3S	33.13	30.74		MP-2-5	17.47	20.9	46.81	0
OW-2-43	61.4'	30	20	MP-2-3D	19.19	26.16						
OW-2-44R	60.6'	30	20	MP-2-5	21.12	11.07						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 9/20/2013

OPERATIONAL NOTES

GA5 Air Compressor

- | | | | | |
|--|-----------|----------|----------------|---------------------------|
| 1) Oil Level Checked with system unloaded* | Yes | <u>X</u> | No | _____ |
| * Unload system, wait until Delivery Air Pressure is less than 9 psi | | | | |
| 2) Oil Level with system unloaded | Low (red) | <u>X</u> | Normal (green) | _____ High (orange) _____ |
| 3) Oil added | Yes | <u>X</u> | No | _____ |
| 4) Oil changed | Yes | _____ | No | <u>X</u> |
| 5) Oil filter changed | Yes | _____ | No | <u>X</u> |
| 6) Air filter Changed | Yes | _____ | No | <u>X</u> |
| 7) Oil separator cleaned | Yes | _____ | No | <u>X</u> |
| 8) Terminal strips checked | Yes | <u>X</u> | No | _____ |

AS-80 O₂ Generator

- | | | | | |
|-----------------------|-----|-------|----|----------|
| 1) Prefilter changed | Yes | _____ | No | <u>X</u> |
| 2) Coalescing changed | Yes | _____ | No | <u>X</u> |

GENERAL SYSTEM NOTES

Trailer

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

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

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

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

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items: