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2013 Annual Groundwater Sampling, NAPL Monitoring/ Recovery, and Groundwater Treatment Performance Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site

Villages of Hempstead & Garden City
Nassau County, New York

Prepared for:

National Grid
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Hicksville, New York 11801

Prepared by:

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URS

September 2014

2013 ANNUAL GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT

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

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BTEX	benzene, toluene, ethylbenzene, xylenes
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DTW	depth to water
DUSR	data usability summary report
ft	foot (feet)
ft/ft	feet per feet
HIMW	Hempstead Intersection (Street) monitoring well
IPR	Intersection (Street) Product Recovery well
ISS	In Situ Solidification
LNAPL	light non-aqueous phase liquid
LOCID	Location Identifier
MGP	manufactured gas plant
µg/L	micrograms per liter
MP	monitoring points
NA	not accessible
NAPL	non-aqueous phase liquid
ND	not detected
NM	not measured
NYSDEC	New York State Department of Environmental Conservation
OSMW	Oswego Monitoring Well
PAHs	polycyclic aromatic hydrocarbons
PID	photo ionization detector
PZ	piezometer
QC	quality control
TOR	top of riser
URS	URS Corporation
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

This annual report provides a summary of field activities, analytical results, and data interpretations associated with groundwater sampling, gauging, and recovery of non-aqueous phase liquid (NAPL) and with the groundwater treatment systems at the Hempstead Intersection Street Former Manufactured Gas Plant (MGP) site in 2013.

Groundwater monitoring and sampling was conducted on March 8 – March 20, June 4 – June 14, September 16 – 26 and December 2 – 17, 2013. This included measuring the depth to groundwater and NAPL thickness in 53 wells in the First Quarter, decreasing to 41 wells by the Fourth Quarter. Groundwater samples were collected from 25 wells in the First Quarter, 20 wells in the Second Quarter, 25 wells in the Third Quarter, and 30 wells in the Fourth Quarter and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL monitoring and recovery was conducted during eight events in 2013. The NAPL recovery program was suspended from August 2011 to February 2013 and from July to October 2013 during the site wide In-Situ Solidification (ISS) program. NAPL recovery wells located within the Intersection Street site property boundaries were decommissioned on November 10-11, 2011 in accordance with the well abandonment plan approved by NYSDEC. The following additional wells were decommissioned using this plan: four wells in the First Quarter 2013 and 17 in the Second Quarter 2013 in the parking lot immediately south of the Intersection Street site property, and three remaining on-site wells in August 2013. There is one remaining product recovery well as of the Third Quarter 2013, this well (HIMW-021) is located along the west side of Wendell Street.

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

- The general direction of groundwater flow in shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per feet (ft/ft).

- The 100 µg/L dissolved-phase plume extended approximately 2,300 ft south of the site boundary.
- Dense non-aqueous phase liquid (DNAPL) was detected in one existing well (HIMW-021) during the Third and Fourth Quarter of 2013, in 13 of 17 wells during the Second Quarter, and in 14 of 17 wells during the First Quarter. The wells were located within a parking lot immediately south of the site.
- Based on a comparison between the Third Quarter 2013 data and the previous data, the concentrations of total BTEX and total PAHs remained stable in most site monitoring wells.
- NAPL recovery occurred between 2007 and the Third Quarter of 2011 up to the start of the ISS remediation, and from February 2013 to June 2013, and October 2013 to the present. NAPL recovery was suspended during most of the ISS remediation project. Approximately 821 gallons of NAPL were recovered between 2007 and December 2013. In 2013, a pproximately eight gallons of NAPL were recovered during the Fourth Quarter, four gallons were recovered during the Third Quarter, 42 gallons were recovered during the Second Quarter, and 22 gallons were recovered during the First Quarter for a total of approximately 76 gallons.

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

Bimonthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by Island Pump & Tank Corporation (formerly Fenley & Nicol Environmental, Inc.). They monitored System No. 1 and No. 2 during six events during the First Quarter, seven events during the Second Quarter, six events during the Third Quarter, and six events during the Fourth Quarter. The headspace monitoring with the multigas meter was performed by URS (URS Corporation) during one event in December 2013.

1.0 INTRODUCTION

This annual report summarizes field activities, analytical results, and data interpretations associated with groundwater sampling, gauging and recovery of NAPL, and the monitoring of groundwater treatment systems performed during the First, Second, Third, and Fourth Quarters of 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 in 2013:

- Measured the depth to groundwater and NAPL thickness in all accessible on site and off site monitoring wells (March 8, June 4, September 16, and December 2, 2013).
- Collected groundwater samples from a select set of monitoring wells for laboratory analysis. There were 25 wells sampled on March 8 – March 20; 20 wells sampled on June 4 – June 14; 25 wells sampled on September 16 – 26; and 30 wells sampled on December 2 – 17, 2013.
- Recovered NAPL from accessible monitoring wells and piezometers for a total of 8 events in 2013 (February 24, March 17, April 14, May 19, June 2, October 7, November 7, and December 3).

Bimonthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by Island Pump & Tank Corporation (Island Pump & Tank) (formerly Fenley & Nicol Environmental, Inc.). They monitored System No. 1 and No. 2 during six events during the First Quarter, seven events during the Second Quarter, six events during the Third Quarter, and six events during the Fourth Quarter. The headspace monitoring with the multigas meter was performed by URS (URS Corporation) during one event in December 2013.

2.0 FIELD ACTIVITIES

The field activities performed by URS during the Fourth Quarter of 2013 are summarized below:

- Measurement of the depth to groundwater and NAPL thickness in 41 monitoring wells.
- Collection of groundwater samples from 30 monitoring wells.
- NAPL recovery occurred during two events for a total of 8 gallons recovered from one product recovery well (HIMW-021).
- Headspace monitoring at the groundwater treatment Systems No. 1 and No. 2 during one event.

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

Island Pump & Tank performed measurements to monitor the performance of the groundwater treatment Systems No. 1 and No. 2 approximately twice monthly during the Fourth Quarter of 2013. Island Pump & Tank collected water level measurements with an electronic oil/water interface probe, well headspace monitoring data with an RKI Eagle Multigas meter and PID, and dissolved oxygen measurements with a YSI 55A dissolved oxygen meter for System No. 1 on October 4, October 18, November 5, November 20, December 6, and December 26, a total of 6 events; and were taken for System No. 2 on October 3, October 17, November 4, November 19, December 5, and December 24, for a total of 6 events. In December 2013, Island Pump & Tank suspended bimonthly headspace monitoring with the multi-gas meter. The data from these activities in 2013 are presented in Table 5.

URS performed well headspace monitoring data with an RKI Eagle Multigas meter and PID for System No. 1 and No. 2 during one event, on December 2, 2013. This data is also presented in Table 5.

2.1 Groundwater Depth and NAPL Thickness Measurements

An electronic oil/water interface probe was used to measure the depth to groundwater and check for the presence of light non-aqueous phase liquid. DNAPL thickness was measured using a weighted cotton string that absorbs oil. Depths to groundwater and NAPL thickness measurements for 2013 are listed in Table 2. NAPL thickness and recovery amounts are listed in Table 3.

2.2 NAPL Recovery

As of December 2013, approximately 821 gallons have been recovered since product recovery began in April 2007. Approximately 745 gallons of NAPL were recovered between April 2007 and July 2011. NAPL was not recovered from August 2011 to February 2013 and in the Third Quarter 2013, due to ISS activities. Approximately 22 gallons were recovered during the First Quarter, 42 gallons were recovered during the Second Quarter, four gallons were recovered during the Third Quarter, and eight gallons of NAPL were recovered during the Fourth Quarter, for a total of approximately 76 gallons in 2013, see Table 3.

All accessible wells included in the recovery program were gauged using an oil/water interface probe to determine the depth to water and the depth and thickness to any possible LNAPL at the top of the water column. Wells were then gauged with a weighted cotton string to measure the DNAPL thickness. The DNAPL was recovered using a dedicated bailer or a Waterra inertial lift pump. Recovered water and product were stored in 55-gallon steel drums for subsequent offsite hazardous waste disposal.

The quantity of recovered DNAPL was estimated based on gallon markings on the side of the bucket used to collect the purged liquids during recovery. Table 3 presents four quarters of NAPL thicknesses and NAPL recovery amounts from 2013 from recovery wells located south of the site in the parking lot of the Professional Office Building.

2.3 Groundwater Sampling

Low-flow groundwater sampling methods were used to sample groundwater, which included purging groundwater at a rate of between 100 and 500 milliliters per minute. The water

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

There were 25 wells sampled during the First Quarter on March 8 – March 20; 20 wells sampled during the Second Quarter on June 4 – June 14; 25 wells sampled during the Third Quarter on September 16 – 26; and 30 monitoring wells sampled during the Fourth Quarter December 2-17, 2013 groundwater sampling event. Results of these groundwater sampling events 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 Island Pump & Tank during the Fourth Quarter 2013 through the measurement of water levels, headspace gas, and water quality parameters in the groundwater approximately twice per month, see Table 5. Island Pump & Tank performed water level measurements with an electronic oil/water interface probe, well headspace monitoring with a multi-gas meter (RKI Eagle MultiGas meter) and a PID, and dissolved oxygen measurements with a DO meter (YSI 55A). These measurements were collected during the Fourth Quarter and were taken for System No. 1 on October 4, October 18, November 5, November 20, December 6, and December 26, 2013 for a total of six events. System No. 2 measurements were collected on October 3, October 17, November 4, November 19, December 5, and December 24, 2013 for a total of six events. The December 2013 monitoring

events conducted by Island Pump & Tank did not include use of the multi-gas meter. URS conducted headspace monitoring using a multi-gas meter (RKI Eagle MultiGas meter) and a PID in the Fourth Quarter on December 2. The reported groundwater treatment performance monitoring data for the four quarters of 2013 is presented in Table 5. The full system operation and maintenance measurements are 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 Fourth 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, extended approximately 2,300 feet south of the site boundary. Based on comparisons with previous quarterly groundwater monitoring data, the concentrations of total BTEX or PAHs in groundwater sampled during the Fourth Quarter in most site monitoring wells remained relatively stable, while a few wells showed modest changes.

Additional monitoring wells were added to the sampling plan during the Fourth Quarter to better define and confirm plume contour lines and to gather information near the corner of Intersection Street and Sealey Avenue. The analytical results from additional wells HIMW-004S, HIMW-004I, HIMW-010S and HIMW-010I were non-detect for BTEX and PAHs. The analytical results from HIMW-011S, I, and D; OSMW-02; and OSMW-03 ranged from non-detect to 4,031 µg/L (OSMW-03).

In December 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 24 µg/L (intermediate well, HIMW-015I). The concentrations of total BTEX or total PAHs in wells located between the site and the HIMW-015 cluster varied from "not detected" to 2,115 µg/L (intermediate well, HIMW-005I), of the monitoring wells in the typical sampling plan.

Following are some wells showing changes during Fourth Quarter 2013. Monitoring wells HIMW-008I, HIMW-020I, and HIMW-025 are discussed below:

- For HIMW-008I, total BTEX concentrations increased from non-detect in the Third Quarter to 457 µg/L in the Fourth Quarter. The PAH concentrations increased from non-detect in the Third Quarter to 85 µg/L in the Fourth Quarter. This constitutes an increase in BTEX and PAHs; the historic value has been primarily non-detect for BTEX and PAHs.

- For HIMW-020I, total BTEX concentrations increased from 3 µg/L in the Third Quarter to 36 µg/L in the Fourth Quarter. PAH concentrations increased from 5 µg/L in the Third Quarter to 84 µg/L in the Fourth Quarter. Though these values represent a slight increase in BTEX and PAH from Third to Fourth Quarter, the values in Fourth Quarter 2012 were 130 µg/L and 1,266 µg/L for BTEX and PAH, respectively, which is higher than Fourth Quarter 2013 values.

- For HIMW-025, total BTEX concentrations increased from non-detect in the Third Quarter to 86 µg/L in the Fourth Quarter. PAH concentrations increased from non-detect in the Third Quarter to 9 µg/L in the Fourth Quarter. Though these values represent a slight increase in BTEX and PAH from Third to Fourth Quarter, the values in Fourth Quarter 2012 were 223 µg/L and non-detect for BTEX and PAH, respectively, higher than the Fourth Quarter 2013 values.

3.2 Potentiometric Heads and NAPL Thickness

Potentiometric heads and NAPL thickness measurements for 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, respectively, for Fourth Quarter 2013. The data for Fourth Quarter 2013 indicates that the direction of groundwater flow within the well field was south at an average gradient that ranged from approximately 0.002 ft/ft. These values are historically consistent. Potentiometric surface maps for the First Quarter, Second Quarter, and Third Quarter 2013 are provided in the previous quarterly reports (URS 2013b, 2013c, 2014a).

DNAPL was detected in the one existing product recovery well (HIMW-021) during the Fourth and Third Quarters, 13 of 17 wells in the Second Quarter, and 14 of 17 wells in the First Quarter 2013 (Table 3). All of the wells where DNAPL was identified in 2013 are within or adjacent to the Professional Office Building parking lot that is immediately south of the site.

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 the Fourth Quarter 2011 with the start of the ISS remediation project. There is one remaining product recovery well as of the Third Quarter 2013. This well (HIMW-021) is

located along the west side of Wendell Street near the Professional Office Building located south of the site (Figure 8).

3.3 Groundwater Analytical Results

Groundwater analytical results are summarized in Section 3.1, Table 4, and Appendix A and illustrated on Figures 4 and 8.

A Data Usability Summary Report (DUSR) was prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B – Guidance for the Development of Data Usability Summary Reports, May 2010. 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 at the site (HIMW-021). A total of 7.75 gallons of NAPL were recovered during the Fourth Quarter 2013 from HIMW-021. The volume of NAPL recovered was four gallons during the November 7 event and 3.75 gallons in the December 3 event.

A total of approximately 821 gallons of NAPL have been recovered from all of the recovery wells for the period of April 2007 through December 2013 (Table 3). Approximately 745 gallons of NAPL was recovered between April 2007 and July 2011. NAPL was not recovered from August 2011 to February 2013 and for much of the Third Quarter 2013 during the site wide

ISS activities. Approximately 22 gallons were recovered during the First Quarter, 42 gallons were recovered during the Second Quarter, four gallons were recovered during the Third Quarter, and eight gallons of NAPL were recovered during the Fourth Quarter for a total of 76 gallons in 2013. Table 3 lists the amount of DNAPL gauged in each well and the total amount recovered during each event.

3.5 Groundwater Treatment System Performance

Groundwater treatment system performance data for the First through Fourth Quarters 2013 was collected and report by Island Pump & Tank. Groundwater treatment system headspace monitoring was performed by URS with a multi-gas meter and a PID during one event in the Fourth Quarter. These data are presented in Table 5.

System No. 1

The groundwater treatment System No. 1 started operation on April 27, 2011. Island Pump & Tank conducted bimonthly monitoring including measurement of water depth, dissolved oxygen concentration, and headspace vapors by multi-gas meter and PID six times during the Fourth Quarter. Data was collected on October 4, October 18, November 5, November 20, December 6, and December 26, 2013. A summary of the data collected from the monitoring points is presented on Table 5.

System No. 1 DO readings reported in the Fourth Quarter 2013 ranged from a low of 5.07 mg/L at MP-1-6 to a high of 51.12 mg/L at MP-1-3D. The reported DO was averaged for System No. 1 and calculated to be 24.91 mg/L. The wells with some high dissolved oxygen concentrations (over 40 mg/L) throughout the quarter were MP-1-2S and MP-1-3D. In the Fourth Quarter, there were no recorded PID headspace readings over 1 ppm.

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

System No. 2

The groundwater treatment System No. 2 started operation on October 11, 2010. Island Pump & Tank conducted bimonthly monitoring including measurement of water depth, dissolved

oxygen concentration, and headspace vapors by multi-gas meter and PID six times during the Fourth Quarter. Data was collected on October 3, October 17, November 4, November 19, December 5, and December 24, 2013. A summary of the data collected by Island Pump & Tank from the monitoring points is presented on Table 5.

System No. 2 DO readings reported in the Second Quarter 2013 ranged from a low of 7.55 mg/L at MP-2-4 to a high of 50.14 mg/L at MP-2-3S, top of water column. The reported DO was averaged for System No. 2 and was calculated to be 29.93 mg/L. The wells with the most consistently high dissolved oxygen concentrations (over 40 mg/L) were MP-2-2, MP-2-3S, and MP-2-3D. There were no PID headspace readings recorded over 1 ppm at System No. 2 in the Fourth Quarter.

Based on the data collected during the Fourth 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 Fourth 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 Fourth Quarter 2013 in the shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per feet (ft/ft).
- The 100 ug/L dissolved-phase plume contour is approximately 2,300 ft south of the site boundary.
- DNAPL was detected in the one existing product recovery well (HIMW-021) during the Fourth Quarter. HIMW-021 was located immediately south of the site along the west side of Wendell Street near the Professional Office Building. DNAPL was detected in 14 wells during the First Quarter, 13 wells during the Second Quarter, and in one well during the Third and Fourth Quarters of 2013. The wells were within or adjacent to a parking lot immediately south of the site.
- Approximately 821 gallons of NAPL were recovered between 2007 and December 2013. NAPL recovery occurred between 2007 and the Third Quarter of 2011 and from February 2013 to June 2013 and October 2013 to the present. NAPL recovery was suspended at times during the ISS remediation project.
- NAPL monitoring and recovery was conducted during eight events in 2013. Approximately 22 gallons were recovered during the First Quarter, 42 gallons were recovered during the Second Quarter, and four gallons of NAPL were recovered during the Third Quarter. Approximately eight gallons of DNAPL were recovered during the Fourth Quarter of 2013 in two events conducted November 7 and December 3. There is one remaining product recovery well as of the Third Quarter 2013.
- Twenty-eight NAPL recovery wells were abandoned within the Intersection Street site property boundaries on November 10-11, 2011 in accordance with the well abandonment plan approved by NYSDEC. Additional wells were decommissioned using these techniques as follows: four wells in the First Quarter 2013 and 17 in the

Second Quarter 2013 in the parking lot immediately south of the Intersection Street site property, and three remaining on-site wells in August 2013. The abandoned wells were located in the footprint of the in-situ solidification of the delineated MGP free product plume.

- Based on a comparison between the Third Quarter 2013 data and the 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 increased 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 increased aerobic conditions in the aquifer near the system.
- Bimonthly headspace and water quality parameters were collected from the monitoring points for System No. 1 and No. 2 by Island Pump & Tank. Monitoring was performed six times during the First Quarter, seven times during the Second Quarter, six events during the Third Quarter, and six events during the Fourth Quarter. Both systems are performing as expected and are creating an aerobic environment in the aquifer.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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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.* December.

URS, 2014a. *Groundwater Sampling and NAPL Monitoring/Recovery Report for the Third Quarter of 2013 (July- September 2013) for the Hempstead Intersection Street Former Manufactured Gas Plant Site.* March.

TABLES

Table 1A

Summary of 2013 Field Activities:

Water Level Measurements, NAPL Thickness Measurements, and Water Quality Sampling[(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2013			Second Quarter 2013			Third Quarter 2013			Fourth Quarter 2013		
	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality
HIMW-002S	Abandoned, August 2013											
HIMW-002I	Abandoned, August 2013											
HIMW-002D	Abandoned, August 2013											
HIMW-003S	X	X	X	X	X		X	X	X	X	X	
HIMW-003I	X	X	X	X	X		X	X	X	X	X	
HIMW-003D	X	X	X	X	X		X	X	X	X	X	
HIMW-004S	X	X		X	X		X	X		X	X	X
HIMW-004I	X	X		X	X		X	X		X	X	X
HIMW-004D	X	X		X	X		X	X		X	X	
HIMW-005S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-005I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-005D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-008S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-008I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-008D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-009S	X	X		X	X		X	X		X	X	
HIMW-009I	X	X		X	X		X	X		X	X	
HIMW-009D	X	X		X	X		X	X		X	X	
HIMW-010S	X	X		X	X		X	X		X	X	X
HIMW-010I	X	X		X	X		X	X		X	X	X
HIMW-010D*	Destroyed, Fourth Quarter 2011											
HIMW-011S	X	X		X	X		X	X		X	X	X
HIMW-011I	X	X					X	X		X	X	X
HIMW-011D	X	X		X	X		X	X		X	X	X
HIMW-012S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-012I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-012D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-013S	X	X	X	X	X		X	X	X	X	X	
HIMW-013I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-013D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-014I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-014D	X	X	X	X	X		X	X	X	X	X	
HIMW-015I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-015D	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-016S	X	X		X	X		Abandoned, June 2013					
HIMW-016I	X	X		X	X		Abandoned, June 2013					
HIMW-017S	X	X		X	X		Abandoned, June 2013					
HIMW-020S	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-020I	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-21	X	X		X	X		X	X		X	X	
HIMW-22	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-23	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-24	X	X	X	X	X	X	X	X	X	X	X	X
HIMW-25	X	X	X	X	X	X	X	X	X	X	X	X
PZ-02							X	X		X	X	
PZ-03							X	X		X	X	

Table 1A

Summary of 2013 Field Activities:

Water Level Measurements, NAPL Thickness Measurements, and Water Quality Sampling[(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2013			Second Quarter 2013			Third Quarter 2013			Fourth Quarter 2013		
	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality	Water Level	NAPL Thickness	Water Quality
IPR-14	X	X		Abandoned, May 2013								
IPR-15	X	X		Abandoned, May 2013								
IPR-16	X	X		Abandoned, May 2013								
IPR-17	X	X		Abandoned, May 2013								
IPR-18	X	X		X	X		Abandoned, June 2013					
IPR-19S							Abandoned, June 2013					
IPR-19D	X	X		X	X		Abandoned, June 2013					
IPR-20	X	X		X	X		Abandoned, June 2013					
IPR-21	X	X		X	X		Abandoned, June 2013					
IPR-22	X	X		X	X		Abandoned, June 2013					
IPR-23	X	X		X	X		Abandoned, June 2013					
IPR-24	X	X		X	X		Abandoned, June 2013					
IPR-29	X	X		X	X		Abandoned, June 2013					
IPR-30	X	X		X	X		Abandoned, June 2013					
OSMW-01*										Destroyed, 4Q 2013		
OSMW-02							X	X		X	X	X
OSMW-03							X	X		X	X	X

Notes:

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

(2) Blank field indicates that the activity was not performed.

* HIMW-10D was destroyed by sidewalk/driveway construction in Fourth Quarter 2011. OSMW-01 was destroyed when the area was paved over in the Fourth Quarter 2013.

Shaded cell indicates abandoned or destroyed well.

Table 1B

Summary of 2013 Field Activities:

NAPL Product Recovery[(1), (2)]

Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2013		Second Quarter 2013			Third Quarter	Fourth Quarter 2013	
	February 24, 2013	March 17, 2013	April 14, 2013	May 19, 2013	June 2, 2013	October 7, 2013	November 7, 2013	December 3, 2013
HIMW-002S						Abandoned, August 2013		
HIMW-002I						Abandoned, August 2013		
HIMW-002D						Abandoned, August 2013		
HIMW-003S								
HIMW-003I								
HIMW-003D								
HIMW-004S								
HIMW-004I								
HIMW-004D								
HIMW-005S								
HIMW-005I								
HIMW-005D								
HIMW-008S								
HIMW-008I								
HIMW-008D								
HIMW-009S								
HIMW-009I								
HIMW-009D								
HIMW-010S								
HIMW-010I								
HIMW-010D*	Destroyed, Fourth Quarter 2011							
HIMW-011S								
HIMW-011I								
HIMW-011D								
HIMW-012S								
HIMW-012I								
HIMW-012D								
HIMW-013S								
HIMW-013I								
HIMW-013D								
HIMW-014I								
HIMW-014D								
HIMW-015I								
HIMW-015D								
HIMW-016S					X		Abandoned, June 2013	
HIMW-016I					X		Abandoned, June 2013	
HIMW-017S	X		X				Abandoned, June 2013	
HIMW-020S								
HIMW-020I								
HIMW-021	x		X	x		X	X	X
HIMW-022								
HIMW-023								
HIMW-024								
HIMW-025								
PZ-02								
PZ-03								

Table 1B

Summary of 2013 Field Activities:
NAPL Product Recovery[(1), (2)]
Hempstead Intersection Street Former MGP Site

Well ID	First Quarter 2013		Second Quarter 2013			Third Quarter	Fourth Quarter 2013	
	February 24, 2013	March 17, 2013	April 14, 2013	May 19, 2013	June 2, 2013	October 7, 2013	November 7, 2013	December 3, 2013
IPR-14				Abandoned, May 2013				
IPR-15				Abandoned, May 2013				
IPR-16		X		Abandoned, May 2013				
IPR-17				Abandoned, May 2013				
IPR-18						Abandoned, June 2013		
IPR-19S						Abandoned, June 2013		
IPR-19D						Abandoned, June 2013		
IPR-20		X		X	X	Abandoned, June 2013		
IPR-21		X	X		X	Abandoned, June 2013		
IPR-22	X			X	X	Abandoned, June 2013		
IPR-23						Abandoned, June 2013		
IPR-24			X			Abandoned, June 2013		
IPR-29	X		X	X		Abandoned, June 2013		
IPR-30						Abandoned, June 2013		
OSMW-01							Destroyed, 4Q 2013	
OSMW-02								
OSMW-03								

Notes:

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

2 Blank field indicates that the activity was not performed.

* HIMW-10D was destroyed by sidewalk/driveway construction in Fourth Quarter 2011. OSMW-01 was destroyed when the area was paved over in the Fourth Quarter 2013.

Shaded cell indicates abandoned or destroyed well.

Table 2
Groundwater and NAPL Measurements
Fourth 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	Abandoned in August 2013								
HIMW-002I	Abandoned in August 2013								
HIMW-002D	Abandoned in August 2013								
HIMW-003S	12/2/2013	65.00	ND	19.55	ND	34.30	0	0.00	45.45
HIMW-003I	12/2/2013	64.94	ND	19.30	ND	84.72	0	0.00	45.64
HIMW-003D	12/2/2013	65.26	ND	20.48	ND	145.00	0	0.00	44.78
HIMW-004S	12/2/2013	72.74	ND	27.94	ND	41.54	0	0.00	44.80
HIMW-004I	12/2/2013	72.78	ND	28.12	ND	91.10	0	0.00	44.66
HIMW-004D	12/2/2013	72.65	ND	28.59	ND	177.11	0	0.00	44.06
HIMW-005S	12/2/2013	67.19	ND	22.25	ND	38.90	0	0.00	44.94
HIMW-005I	12/2/2013	67.22	ND	22.58	ND	90.50	0	0.00	44.64
HIMW-005D	12/2/2013	67.22	ND	23.08	ND	142.00	0	0.00	44.14
HIMW-008S	12/2/2013	65.04	ND	20.62	ND	37.00	0	0.00	44.42
HIMW-008I	12/2/2013	65.14	ND	20.82	ND	74.90	0	0.00	44.32
HIMW-008D	12/2/2013	64.93	ND	20.62	ND	115.60	0	0.00	44.31
HIMW-009S	12/2/2013	70.03	ND	25.18	ND	39.65	0	0.00	44.85
HIMW-009I	12/2/2013	69.93	ND	25.12	ND	81.25	0	0.00	44.81
HIMW-009D	12/2/2013	69.96	ND	25.22	ND	124.90	0	0.00	44.74
HIMW-010S	12/2/2013	71.60	ND	25.81	ND	38.72	0	0.00	45.79
HIMW-010I	12/2/2013	71.47	ND	25.62	ND	90.10	0	0.00	45.85
HIMW-010D (2)	Destroyed in Fourth Quarter 2011								
HIMW-011S	12/2/2013	71.62	ND	26.18	ND	40.01	0	0.00	45.44
HIMW-011I	12/2/2013	71.43	ND	26.04	ND	94.15	0	0.00	45.39
HIMW-011D	12/2/2013	71.39	ND	26.04	ND	122.33	0	0.00	45.35
HIMW-012S	12/2/2013	61.58	ND	18.46	ND	32.50	0	0.00	43.12
HIMW-012I	12/2/2013	61.59	ND	18.33	ND	74.58	0	0.00	43.26
HIMW-012D	12/2/2013	61.82	ND	20.25	ND	129.95	0	0.00	41.57
HIMW-013S	12/2/2013	72.83	ND	31.70	ND	48.75	0	0.00	41.13
HIMW-013I	12/2/2013	72.60	ND	31.51	ND	81.69	0	0.00	41.09
HIMW-013D	12/2/2013	72.53	ND	31.48	ND	122.48	0	0.00	41.05
HIMW-014I	12/2/2013	71.71	ND	30.66	ND	96.11	0	0.00	41.05
HIMW-014D	12/2/2013	71.59	ND	32.67	ND	154.35	0	0.00	38.92
HIMW-015I	12/2/2013	64.18	ND	25.98	ND	92.85	0	0.00	38.20
HIMW-015D	12/2/2013	63.96	ND	27.44	ND	154.20	0	0.00	36.52
HIMW-016S	Abandoned in June 2013								
HIMW-016I	Abandoned in June 2013								
HIMW-017S	Abandoned in June 2013								
HIMW-020S	12/2/2013	70.43	ND	26.60	ND	36.75	0	0.00	43.83
HIMW-020I	12/2/2013	70.30	ND	26.45	ND	74.89	0	0.00	43.85

Table 2
Groundwater and NAPL Measurements
Fourth 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	12/2/2013	NM	ND	20.85	42.5	45.00	SHEEN	2.50	NM
HIMW-022	12/2/2013	74.07	ND	31.61	ND	64.50	0	0.00	42.46
HIMW-023	12/2/2013	74.41	ND	31.71	ND	75.63	0	0.00	42.70
HIMW-024	12/2/2013	59.83	ND	16.18	ND	55.10	0	0.00	43.65
HIMW-025	12/2/2013	62.75	ND	18.58	ND	52.10	0	0.00	44.17
PZ-02	12/2/2013	72.96	NM	26.88	NM	35.43	0	0.00	46.08
PZ-03	12/2/2013	64.58	NM	18.76	NM	29.88	0	0.00	45.82
IPR-14	Abandoned in May 2013								
IPR-15	Abandoned in May 2013								
IPR-16	Abandoned in May 2013								
IPR-17	Abandoned in May 2013								
IPR-18	Abandoned in June 2013								
IPR-19S	Abandoned in June 2013								
IPR-19D	Abandoned in June 2013								
IPR-20	Abandoned in June 2013								
IPR-21	Abandoned in June 2013								
IPR-22	Abandoned in June 2013								
IPR-23	Abandoned in June 2013								
IPR-24	Abandoned in June 2013								
IPR-29	Abandoned in June 2013								
IPR-30	Abandoned in June 2013								
OSMW-01 (2)	Destroyed in Fourth Quarter 2013								
OSMW-02	12/2/2013	71.59	NM	26.28	NM	45.11	0	NM	45.31
OSMW-03	12/2/2013	71.39	NM	26.15	NM	44.65	0	NM	45.24

Notes:

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

(2) HIMW-010D was destroyed by sidewalk/driveway construction in Third Quarter 2011. OSMW-01 was destroyed when the area was paved in Fourth Quarter 2013.

Shaded cell indicates abandoned or destroyed well.

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
Summary of 2013
Hempstead Intersection Street Former MGP Site

Well ID	Well Diameter	First Quarter 2013						Second Quarter 2013								
		February 24, 2013			March 17, 2013			April 14, 2013			May 19, 2013			June 2, 2013		
		Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed(1)	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed(1)	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed(1)	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed(1)	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed(1)
		[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]
HIMW-016S	2	ND	5.50	0.00	ND	5.50	0.00	ND	5.00	0.00	ND	5.00	0.00	ND	5.00	0.85
HIMW-016I	2	ND	5.50	0.00	ND	5.50	0.00	ND	5.00	0.00	ND	5.50	0.00	ND	5.50	0.94
HIMW-017S	2	ND	2.10	0.36	ND	0.30	0.00	ND	1.00	0.17	ND	0.50	0.00	ND	0.20	0.00
HIMW-021	6	ND	5.00	2.50	ND	1.0	0.00	ND	4.0	5.00	ND	3.00	2.00	ND	2.1	0.00
IPR-14	6	ND	0.50	0.00	ND	0.5	0.00	ND	0.0	0.00	Abandoned in May 2013					
IPR-15	6	ND	trace	0.00	ND	trace	0.00	ND	trace	0.00	Abandoned in May 2013					
IPR-16	5.75	ND	1.20	0.00	ND	1.4	2.10	ND	trace	0.00	Abandoned in May 2013					
IPR-17	5.75	ND	0.10	0.00	ND	0.1	0.00	ND	trace	0.00	Abandoned in May 2013					
IPR-18	6	ND	0.00	0.00	ND	0.00	0.00	ND	trace	0.00	ND	0.00	0.00	ND	0.00	0.00
IPR-19S(1)	6	NM	NM	0.00	NM	NM	0.00	NM	NM	0.00	NM	NM	0.00	NM	NM	0.00
IPR-19D	6	ND	0.00	0.00	ND	0.00	0.00	ND	0.00	0.00	ND	trace	0.00	ND	trace	0.00
IPR-20	6	ND	1.90	0.00	ND	2.10	3.15	ND	0.00	0.00	ND	1.50	2.25	ND	1.50	2.18
IPR-21	6	ND	5.20	0.00	ND	6.00	6.00	ND	1.00	1.50	ND	3.20	0.00	ND	3.00	4.50
IPR-22	6	ND	5.50	3.00	ND	4.50	0.00	ND	4.00	0.00	ND	3.80	5.50	ND	1.30	1.95
IPR-23	6	ND	0.00	0.00	ND	0.00	0.00	ND	0.00	0.00	ND	0.00	0.00	ND	0.00	0.00
IPR-24	6	ND	2.30	0.00	ND	2.00	0.00	ND	2.00	3.00	ND	0.50	0.00	ND	1.50	0.00
IPR-29	6	ND	9.00	5.00	ND	4.6	0.00	ND	6.5	7.00	ND	5.50	5.00	ND	0.2	0.00
IPR-30	6	ND	2.50	0.00	ND	2.5	0.00	ND	2.0	0.00	ND	2.60	0.00	ND	2.8	0.00
		Volume Removed		**10.86**	Volume Removed		**11.25**	Volume Removed		**16.67**	Volume Removed		**14.75**	Volume Removed		**10.41**

Total volume recovered during the First Quarter 2013:	**22.11**
Total volume recovered during the Second Quarter 2013:	**41.83**

Notes:
(1) Volume of product recovered was estimated by using the markings on a five gallon bucket.
(2) HIMW-019S was covered with cold patch and was inaccessible until abandoned in June 2013.

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

Table 3
NAPL Recovery
Summary of 2013
Hempstead Intersection Street Former MGP Site

Well ID	Well Diameter	Third Quarter 2013			Fourth Quarter 2013					
		October 7, 2013			November 7, 2013			December 3, 2013		
		Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed[1]	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed[1]	Thickness of LNAPL	Thickness of DNAPL	Volume of NAPL Removed[1]
		[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]
HIMW-016	2	Abandoned in June 2013								
HIMW-016	2	Abandoned in June 2013								
HIMW-017	2	Abandoned in June 2013								
HIMW-021	6	ND	3.70	4.00	ND	3.00	4.00	ND	2.50	3.75
IPR-14	6	Abandoned in May 2013								
IPR-15	6	Abandoned in May 2013								
IPR-16	5.75	Abandoned in May 2013								
IPR-17	5.75	Abandoned in May 2013								
IPR-18	6	Abandoned in June 2013								
IPR-19S[2]	6	Abandoned in June 2013								
IPR-19D	6	Abandoned in June 2013								
IPR-20	6	Abandoned in June 2013								
IPR-21	6	Abandoned in June 2013								
IPR-22	6	Abandoned in June 2013								
IPR-23	6	Abandoned in June 2013								
IPR-24	6	Abandoned in June 2013								
IPR-29	6	Abandoned in June 2013								
IPR-30	6	Abandoned in June 2013								
		Volume Removed		**4.00**	Volume Removed		**4.00**	Volume Removed		**3.75**
		Total volume recovered during the Third Quarter 2013:		**4.00**	**Total volume recovered during the Fourth Quarter 2013:**					**7.75**

Total volume of NAPL recovered in 2013: 75.7

Total volume of NAPL recovered since April 2007: 820.7

Notes:
(1) Volume of product recovered was estimated by using the markings on a five gallon bucket.
(2) HIMW-019S was covered with cold patch and was inaccessible until abandoned 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
Data Collected in 2013
Hempstead Intersection Street Former MGP Site

Well ID	Fourth Quarter 2013 December 3 - December 17, 2013		Third Quarter 2013 September 16 - September 26, 2013		Second Quarter 2013 June 4- June 14, 2013		First Quarter 2013 March 8 - March 20, 2013	
	Total BTEX [ug/L]	Total PAH [ug/L]	Total BTEX [ug/L]	Total PAH [ug/L]	Total BTEX [ug/L]	Total PAH [ug/L]	BTEX [ug/L]	PAH [ug/L]
HIMW-003S			ND	ND			ND	ND
HIMW-003I			ND	ND			ND	ND
HIMW-003D			ND	ND			ND	ND
HIMW-004S	ND	ND						
HIMW-004I	ND	ND						
HIMW-004D								
HIMW-005S	ND (DUP-ND)	ND (DUP-ND)	ND	ND	ND	ND	ND	1
HIMW-005I	70	2,115	85	3,385	96	2,155	95 (DUP - 97)	2,271 (DUP - 2,041)
HIMW-005D	36	489	19	146	23	508	64	900
HIMW-008S	48	6	32	3	ND	ND	27	3
HIMW-008I	457	85	ND	ND	ND	ND	ND	ND
HIMW-008D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-009S								
HIMW-009I								
HIMW-009D								
HIMW-010S	ND	ND						
HIMW-010I	ND	ND						
HIMW-011S	603	2,813						
HIMW-011I	ND	ND						
HIMW-011D	ND	ND						
HIMW-012S	ND	ND	ND (DUP - ND)	ND (DUP - ND)	ND	ND	ND	ND
HIMW-012I	20	115	33	107	41 (DUP-40)	115 (DUP-108)	47	109
HIMW-012D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-013S			ND	ND			ND	ND
HIMW-013I	188	84	153	113	83	60	53	13
HIMW-013D	2	8	3	12	4 (DUP-3.9)	15 (DUP-16)	3	9
HIMW-014I	12	34	12	34	45	103	38	43
HIMW-014D			ND	ND			ND	ND
HIMW-015I	11	24	9	27	14	27	14	19
HIMW-015D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-020S	ND	ND	ND	2	ND	ND	ND	ND
HIMW-020I	36	84	3 (DUP - 3)	5 (DUP - 4)	1	3	6 (DUP - 6)	9 (DUP - 8)
HIMW-021								
HIMW-022	ND (DUP-ND)	ND (DUP-ND)	ND	ND	ND	ND	9	17
HIMW-023	1	1	ND	ND	ND	ND	ND	ND
HIMW-024	ND	ND	13	7	226	126	107	74
HIMW-025	86	9	ND	ND	ND	ND	ND	ND
OSMW-02	2,604	3,517						
OSMW-03	4,031	2,911						
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
First Quarter 2013
Hempstead Intersection Street Former MGP Site

System #1

	January 8, 2013						January 22, 2013						February 8, 2013						February 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-1-1S	NM	28.0	0.0	2.89	NM	NM	26.66	NM	0.0	10.07	NM	NM	26.81	40.0	0.0	NM	NM	NM	26.69	40.0	0.2	16.98	NM	NM
MP-1-1D	NM	20.6	0.0	2.54	2.85	3.13	26.52	NM	0.0	18.70	18.01	17.40	26.62	22.7	0.0	NM	NM	NM	26.52	22.3	0.0	13.41	12.76	11.82
MP-1-2S	NM	23.1	0.0	3.18	NM	NM	21.01	NM	0.0	9.46	NM	NM	21.16	39.1	0.0	NM	NM	NM	21.05	38.3	0.6	28.50	NM	NM
MP-1-2D	NM	20.7	0.0	3.61	3.31	2.9	20.64	NM	0.0	11.14	9.00	7.79	20.75	21.0	0.0	NM	NM	NM	20.57	35.4	0.0	47.37	45.44	40.91
MP-1-3S	NM	19.1	0.0	2.83	NM	NM	18.71	NM	0.0	8.07	NM	NM	18.85	20.9	0.0	NM	NM	NM	18.77	23.7	0.0	25.47	NM	NM
MP-1-3D	NM	19.1	0.0	4.55	3.05	2.39	18.73	NM	0.0	12.71	10.11	9.01	18.82	20.9	0.3	NM	NM	NM	18.79	20.9	0.0	25.04	22.51	19.31
MP-1-4S	NM	23.2	0.0	2.65	NM	NM	21.38	NM	0.0	7.00	NM	NM	21.36	40.0	0.0	NM	NM	NM	21.34	20.9	0.0	23.14	NM	NM
MP-1-4D	NM	20.9	0.0	2.63	2.14	2.45	21.51	NM	0.3	7.11	7.69	8.40	21.52	32.2	0.5	NM	NM	NM	21.52	20.9	0.0	29.60	27.52	21.00
MP-1-5	NM	19.3	0.0	3.09	NM	NM	26.03	NM	0.0	17.87	NM	NM	26.30	26.3	0.0	NM	NM	NM	26.18	20.9	0.0	24.53	NM	NM
MP-1-6	NM	18.8	0.0	2.54	NM	NM	18.54	NM	0.0	6.19	NM	NM	18.59	18.6	0.0	NM	NM	NM	18.57	20.9	0.0	10.76	NM	NM
MP-1-7	NM	19.0	0.0	2.17	NM	NM	21.85	NM	0.0	5.12	NM	NM	21.88	21.9	0.0	NM	NM	NM	21.83	20.9	0.0	23.14	NM	NM
MP-1-8	NM	18.7	0.0	2.24	NM	NM	22.93	NM	0.0	4.97	NM	NM	22.98	23.0	0.0	NM	NM	NM	22.90	20.9	0.0	10.12	NM	NM

	March 8, 2013						March 21, 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-1-1S	26.49	40.1	0.0	22.87	NM	NM	26.24	39.7	0.0	24.78	NM	NM
MP-1-1D	26.33	23.8	0.1	42.41	21.12	19.18	26.11	23.7	0.0	49.45	21.82	19.17
MP-1-2S	20.94	37.5	0.4	29.95	NM	NM	20.53	40.0	0.0	30.31	NM	NM
MP-1-2D	20.4	35.9	0.0	46.77	33.41	30.01	20.01	25.4	0.0	42.12	37.19	21.79
MP-1-3S	18.57	22.5	0.2	28.68	NM	NM	18.28	27.7	0.0	38.71	NM	NM
MP-1-3D	18.61	21.1	0.0	35.21	31.35	29.18	18.32	24.5	0.0	56.27	42.47	39.00
MP-1-4S	21.15	22.7	0.0	29.60	NM	NM	20.83	25.8	0.0	43.75	NM	NM
MP-1-4D	21.33	22.9	0.0	32.79	23.37	20.11	21.03	24.7	0.0	27.82	40.20	49.14
MP-1-5	25.98	26.0	0.0	30.61	NM	NM	25.72	20.9	0.0	21.05	NM	NM
MP-1-6	18.40	18.4	0.0	8.89	NM	NM	18.09	20.9	0.0	7.42	NM	NM
MP-1-7	21.65	21.7	0.0	25.29	NM	NM	21.35	20.9	0.0	21.14	NM	NM
MP-1-8	22.77	22.8	0.0	17.93	NM	NM	18.09	20.9	0.0	9.11	NM	NM

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

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

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

System #2

	January 8, 2013						January 21, 2013						February 7, 2013						February 21, 2013					
ID	DTW (ft)	O_2 Head-space ($\%O_2$)(1)	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	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	NM	20.9	0.0	2.42	NM	NM	29.63	NM	0.0	12.18	NM	NM	29.82	21.4	0.0	NM	NM	NM	29.65	20.9	0.0	17.42	NM	NM
MP-2-2	NM	18.0	0.0	2.91	2.61	2.53	30.15	NM	0.0	15.05	9.48	8.30	30.91	21.9	0.0	NM	NM	NM	30.71	20.9	0.0	35.41	33.39	23.12
MP-2-3S	NM	18.5	0.0	3.08	3.17	3.11	30.82	NM	0.0	8.88	9.04	8.11	31.01	22.4	0.0	NM	NM	NM	30.82	23.4	0.5	51.21	45.36	44.14
MP-2-3D	NM	20.9	0.0	2.32	2.86	3.19	31.01	NM	0.3	9.74	9.11	8.89	31.22	40.0	0.5	NM	NM	NM	31.01	40.0	0.0	47.37	45.91	41.14
MP-2-4	NM	20.3	0.0	3.02	NM	NM	19.53	NM	0.0	11.10	NM	NM	19.68	23.9	0.0	NM	NM	NM	19.44	22.6	0.0	15.50	NM	NM
MP-2-5	NM	20.2	0.0	3.20	3.04	3.08	17.73	NM	0.0	8.12	12.68	9.43	17.85	21.3	0.0	NM	NM	NM	17.63	20.9	0.0	31.39	38.56	28.21

	March 7, 2013						March 20, 2013					
ID	DTW (ft)	O_2 Head-space ($\%O_2$)(1)	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)(1)	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-2-1	29.51	20.9	0.0	17.35	NM	NM	29.28	20.9	0.0	22.67	NM	NM
MP-2-2	30.60	20.9	0.0	41.71	40.11	25.75	30.36	20.9	0.0	44.12	NM	NM
MP-2-3S	30.68	20.9	0.0	54.30	52.44	47.56	30.45	20.9	0.0	52.10	50.19	44.45
MP-2-3D	30.90	20.9	0.0	46.44	40.11	37.77	30.65	40.0	0.0	40.27	35.05	34.15
MP-2-4	19.34	20.9	0.0	11.68	NM	NM	19.06	22.9	0.0	19.55	NM	NM
MP-2-5	17.53	20.9	0.0	21.02	19.83	21.82	17.24	24.6	0.0	27.47	21.55	29.31

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

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

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

System #1

	April 5, 2013						April 19, 2013						May 3, 2013						May 15, 2013					
Well ID[2]	DTW (ft)	O_2 Head-space (%O_2)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space (%O_2)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space (%O_2)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space (%O_2)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1S	26.13	39.9	0.0	36.9	NM	NM	25.98	40.0	0.0	26.81	NM	NM	26.28	39.9	0.1	21.07	NM	NM	26.16	39.9	0.0	22.04	NM	NM
MP-1-1D	26.41	22.8	0.0	48.69	19.94	15.27	25.83	22.9	0.0	41.85	16.03	11.07	26.11	22.8	0.1	26.89	14.33	16.51	26.02	22.4	0.2	33.61	24.01	17.11
MP-1-2S	20.42	40.0	0.9	42.70	NM	NM	20.36	39.7	0.5	33.10	NM	NM	20.67	38.1	0.4	26.14	NM	NM	20.58	37.0	0.3	28.11	NM	NM
MP-1-2D	19.98	24.1	0.0	41.77	40.11	32.12	19.89	38.1	0.0	38.41	35.34	28.18	20.25	40.1	0.0	40.35	37.77	28.81	20.14	38.7	0.0	37.17	31.00	25.25
MP-1-3S	18.22	40.0	0.0	37.4	NM	NM	18.09	23.8	0.0	36.99	NM	NM	18.38	22.7	0.0	37.12	NM	NM	18.27	23.4	0.0	35.41	NM	NM
MP-1-3D	17.97	20.9	0.0	51.96	40.51	38.37	18.11	20.7	0.0	38.24	33.35	27.75	18.40	20.9	0.3	41.55	35.38	29.11	18.30	20.1	0.0	43.44	39.35	34.00
MP-1-4S	20.77	36.7	0.0	44.69	NM	NM	20.64	38.2	0.0	41.10	NM	NM	20.96	27.7	0.0	49.04	NM	NM	20.80	39.7	0.0	36.82	NM	NM
MP-1-4D	20.98	27.5	0.0	45.41	41.05	37.17	20.83	39.7	0.0	36.54	31.19	29.14	21.17	31.1	0.1	35.21	30.22	22.25	20.95	37.2	108	30.16	26.06	12.43
MP-1-5	25.62	21.2	0.0	34.72	NM	NM	25.42	21.4	0.0	29.37	NM	NM	25.77	21.6	0.2	35.39	NM	NM	25.65	21.2	0.0	34.12	NM	NM
MP-1-6	18.04	20.9	0.0	16.15	NM	NM	17.88	22.4	0.0	14.31	NM	NM	18.20	21.9	0.0	13.31	NM	NM	18.07	21.0	0.0	15.04	NM	NM
MP-1-7	21.31	20.9	0.0	40.50	NM	NM	21.13	20.9	0.0	40.39	NM	NM	21.48	20.9	0.0	42.12	NM	NM	21.35	20.4	0.0	39.51	NM	NM
MP-1-8	22.33	20.9	0.0	19.43	NM	NM	22.21	24.1	0.0	12.95	NM	NM	22.55	21.1	0.0	9.24	NM	NM	22.38	20.6	0.0	10.62	NM	NM

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

Abbreviations

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

Notes

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

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

System #2

	April 4, 2013						April 18, 2013						May 2, 2013						May 14, 2013					
Well ID	**DTW (ft)**	**O_2 Head-space (%O_2)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space (%O_2)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space (%O_2)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space (%O_2)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**
MP-2-1	29.23	20.9	0.0	24.87	NM	NM	29.07	20.9	0.0	23.27	NM	NM	29.26	20.9	0.2	22.87	NM	NM	29.23	23.5	0.0	20.78	NM	NM
MP-2-2	30.31	19.3	0.0	43.78	41.14	29.91	30.23	19.2	0.0	44.45	46.41	47.05	30.36	20.9	0.0	40.71	34.80	28.17	30.32	20.7	0.0	36.62	32.41	24.18
MP-2-3S	30.44	20.9	0.0	45.44	41.25	39.11	30.35	20.9	0.0	41.11	37.75	33.31	30.47	20.9	0.0	41.14	36.88	34.50	30.41	21.0	0.0	42.14	39.91	27.90
MP-2-3D	30.62	40.0	0.0	46.70	44.77	40.89	30.41	40.0	0.0	35.12	31.13	32.17	30.68	39.7	0.0	33.12	30.01	24.14	30.61	39.7	0.0	48.44	40.61	39.11
MP-2-4	19.08	20.9	0.0	19.98	NM	NM	18.87	21.1	0.0	21.23	NM	NM	19.12	21.8	0.0	21.17	NM	NM	19.07	20.9	0.0	15.44	NM	NM
MP-2-5	17.26	22.5	0.0	32.92	20.75	24.53	17.06	22.8	0.0	39.27	33.47	32.12	17.33	23.6	0.0	44.41	31.12	33.62	17.25	23.5	0.0	45.28	28.36	18.91

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

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

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

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

System #1

Well ID[2]	July 12, 2013 DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	July 26, 2013 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
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
MP-1-2S	19.44	39.7	0.1	20.88	NM	NM	19.67	39.6	0.2	23.66	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
MP-1-3S	17.32	37.6	0.0	20.83	NM	NM	17.50	39.9	0.3	34.39	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
MP-1-4S	20.19	21.9	0.0	32.77	NM	NM	20.37	32.4	0.0	35.37	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
MP-1-5	24.71	20.2	0.0	21.44	NM	NM	24.93	19.9	0.0	32.77	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
MP-1-7	20.23	20.9	0.0	21.49	NM	NM	20.40	19.9	0.0	32.40	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

Well ID[2]	August 12, 2013 DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	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
MP-1-1S	25.48	39.8	0.2	18.68	NM	NM	25.64	39.5	0.1	9.87	NM	NM
MP-1-1D	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	19.97	39.2	0.1	38.11	NM	NM	20.15	39.9	0.0	9.87	NM	NM
MP-1-2D	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	17.77	39.0	0.4	23.89	NM	NM	17.94	39.3	0.0	19.49	NM	NM
MP-1-3D	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	20.72	40.0	0.0	23.29	NM	NM	20.72	40.0	0.0	5.35	NM	NM
MP-1-4D	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	25.21	16.6	0.0	29.64	NM	NM	25.37	16.5	0.0	22.27	NM	NM
MP-1-6	17.47	20.9	0.0	11.62	NM	NM	17.62	18.3	0.0	6.03	NM	NM
MP-1-7	20.75	18.8	0.0	39.37	NM	NM	20.89	18.8	0.0	31.60	NM	NM
MP-1-8	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] DTW (ft)	O_2 Head-space ($\%O_2$)[1]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	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
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)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
NA: Not Accessible
NM: Not Measured

Notes
(1) DO Headspace monitor oxygen detection limit is 40.0%; normal oxygen level in air is 20.9%
(2) DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (96 feet), MP-1-2S (46 feet), MP-1-2D (81 feet), MP-1-3S (49 feet), MP-1-3D (79 feet), MP-1-4S (53 feet), MP-1-4D (83 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).
(3) 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					
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**
MP-2-1	27.82	22.4	0.0	21.71	NM	NM
MP-2-2	29.15	19.9	0.0	37.41	30.12	33.51
MP-2-3S	29.05	19.5	0.0	47.52	47.98	49.61
MP-2-3D	29.16	38.9	0.5	40.11	37.17	35.14
MP-2-4	17.76	24.6	0.2	20.69	NM	NM
MP-2-5	15.93	21.2	0.0	20.44	22.62	27.37

	July 25, 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**
MP-2-1	28.11	23.6	0.0	17.71	NM	NM
MP-2-2	29.47	20.2	0.0	26.83	25.19	20.11
MP-2-3S	29.36	26.6	0.0	45.41	46.25	41.99
MP-2-3D	29.48	40.0	0.4	37.88	35.13	34.00
MP-2-4	18.06	23.3	0.3	13.54	NM	NM
MP-2-5	16.22	22.5	0.0	17.44	15.49	16.12

	August 9, 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**
MP-2-1	28.26	22.8	0.0	21.91	NM	NM
MP-2-2	29.62	19.2	0.1	41.11	36.29	27.61
MP-2-3S	29.48	23.1	0.2	47.17	50.05	48.88
MP-2-3D	29.59	40.0	0.5	39.81	40.07	39.79
MP-2-4	18.20	23.7	0.2	17.81	NM	NM
MP-2-5	16.35	20.9	0.0	25.83	21.70	20.83

	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**
MP-2-1	28.51	22.6	0.4	24.39	NM	NM
MP-2-2	29.86	19.6	0.4	40.07	38.11	35.00
MP-2-3S	29.72	24.6	0.5	45.59	46.77	44.01
MP-2-3D	29.87	39.7	0.0	41.12	38.81	35.14
MP-2-4	18.45	21.7	0.3	16.77	NM	NM
MP-2-5	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)
O_2: Oxygen measurement of well headspace (percent oxygen)
PID: Photoionization Detector measurement of well headspace (parts per million)
DO: Dissolved Oxygen concentration (percent or milligrams per liter)
NA: Not Accessible
NM: Not Measured

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

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

System #1

	October 4, 2013						October 18, 2013						November 5, 2013						November 20, 2013					
Well ID[(2)]	DTW (ft)	O_2 Head-space ($\%O_2$)[(1)]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[(1)]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[(1)]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top	DTW (ft)	O_2 Head-space ($\%O_2$)[(1)]	PID (ppm)	DO (mg/L) Bottom	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1S	26.57	34.1	0.1	16.39	NM	NM	27.06	40.0	0.0	31.14	NM	NM	27.58	39.1	0.1	28.18	NM	NM	27.92	38.7	0.0	26.11	NM	NM
MP-1-1D	26.52	20.4	0.4	18.85	12.1	10.02	27.02	20.7	0.0	23.68	19.11	14.00	27.51	20.4	0.2	27.75	20.88	15.14	27.90	20.9	0.1	28.25	25.00	19.18
MP-1-2S	20.98	32.2	0.2	21.11	NM	NM	21.61	38.7	0.0	19.27	NM	NM	22.11	36.0	0.0	18.8	NM	NM	22.44	23.7	0.0	20.18	NM	NM
MP-1-2D	20.60	40.0	0.3	24.45	21.28	19.55	21.38	36.6	0.0	49.12	41.14	39.77	21.87	35.5	0.0	45.15	37.51	20.95	22.2	30.3	0.0	42.55	44.77	40.38
MP-1-3S	19.10	23.1	0.2	18.21	NM	NM	19.45	23.4	0.4	27.40	NM	NM	19.95	26.5	0.0	30.11	NM	NM	20.24	24.2	0.0	29.14	NM	NM
MP-1-3D	19.24	19.2	0.0	51.12	48.11	40.09	19.60	20.6	0.0	32.79	27.15	20.75	20.02	20.9	0.0	40.25	38.81	31.12	20.20	20.9	0.0	41.55	40.02	34.47
MP-1-4S	22.08	26.3	0.0	17.18	NM	NM	22.36	27.7	0.2	35.50	NM	NM	22.92	22.5	0.0	36.76	NM	NM	23.20	32.1	0.2	34.47	NM	NM
MP-1-4D	22.03	27.5	0.4	19.15	14.48	11.25	22.21	30.2	0.0	40.02	32.22	25.54	22.86	25.3	0.2	34.15	30.07	24.17	23.16	34.8	0.0	35.51	30.35	24.11
MP-1-5	26.48	16.2	0.0	29.11	NM	NM	26.81	18.3	0.0	23.87	NM	NM	27.33	18.8	0.0	21.14	NM	NM	27.66	22.9	0.1	23.13	NM	NM
MP-1-6	18.79	20.1	0.0	12.69	NM	NM	19.12	20.4	0.0	11.70	NM	NM	19.62	20.6	0.0	10.11	NM	NM	19.95	20.9	0.0	11.18	NM	NM
MP-1-7	22.06	17.2	0.0	36.01	NM	NM	22.38	19.6	0.0	28.35	NM	NM	22.90	19.6	0.0	29.94	NM	NM	23.24	18.9	0.2	28.58	NM	NM
MP-1-8	18.29	20.1	0.0	7.71	NM	NM	23.90	17.5	0.2	10.40	NM	NM	24.45	17.7	0.2	8.15	NM	NM	24.76	22.1	0.2	9.95	NM	NM

	December 2,2013						December 6, 2013						December 26, 2013					
Well ID[(2)]	VOC (ppm)	CO2 (%)	LEL (%)	O2(%)	Pressure	Odor	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	0	0	0	20.9	No	No	22.54	NM	0.0	15.07	NM	NM	28.12	NM	0.0	11.21	NM	NM
MP-1-1D	0	0.2	0	20.9	No	No	22.31	NM	0.0	NM	22.49	NM	28.04	NM	0.0	NM	13.31	NM
MP-1-2S	0	0	0	20.9	No	No	28.04	NM	0.0	28.04	NM	NM	22.57	NM	0.1	20.77	NM	NM
MP-1-2D	0	0.5	1.0	>40	No	No	27.95	NM	0.0	NM	25.95	NM	22.37	NM	0.0	NM	16.11	NM
MP-1-3S	0	0.2	1.0	20.9	No	No	20.37	NM	0.0	16.65	NM	NM	20.41	NM	0.0	13.55	NM	NM
MP-1-3D	0	0.1	1.0	20.9	No	No	20.48	NM	0.2	NM	38.06	NM	20.56	NM	0.2	NM	20.21	NM
MP-1-4S	0	0	1.0	20.9	No	No	23.29	NM	0.3	12.32	NM	NM	23.34	NM	0.2	10.78	NM	NM
MP-1-4D	0	0	1.0	24.7	No	No	23.45	NM	0.0	NM	22.57	NM	23.28	NM	0.0	NM	17.10	NM
MP-1-5	0	0	1.0	20.9	No	No	27.78	NM	0.2	27.78	NM	NM	27.85	NM	0.4	21.12	NM	NM
MP-1-6	0	0	1.0	20.9	No	No	20.03	NM	0.0	6.91	NM	NM	20.10	NM	0.0	5.07	NM	NM
MP-1-7	0.7	0.4	1.0	20.9	No	No	23.33	NM	0.2	34.28	NM	NM	23.35	NM	0.0	26.61	NM	NM
MP-1-8	0	0	1.0	20.9	No	No	24.83	NM	0.3	14.18	NM	NM	24.87	NM	0.2	11.12	NM	NM

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

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

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

System #2

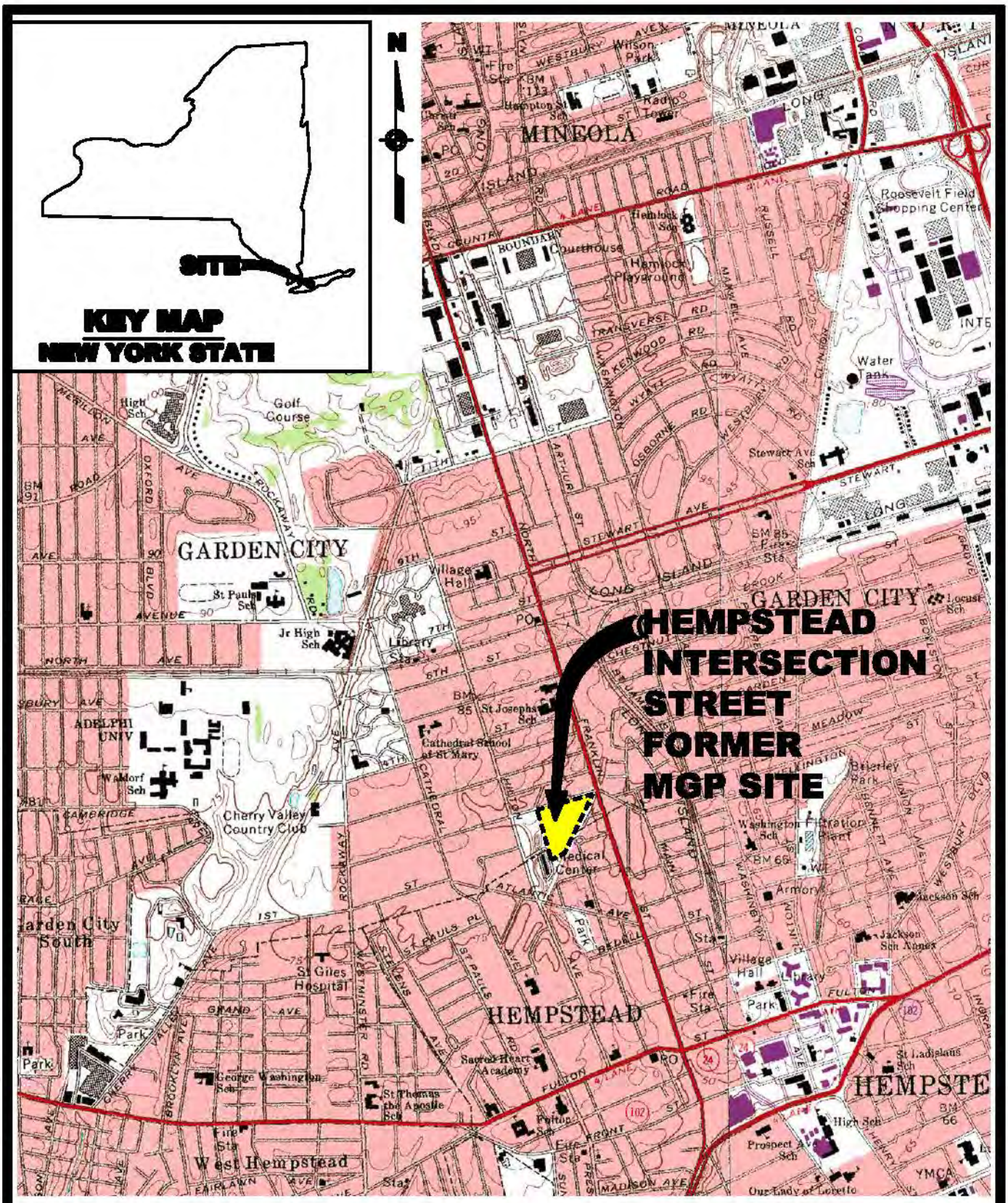
	October 3, 2013						October 17, 2013						November 4, 2013						November 19, 2013					
Well ID	**DTW (ft)**	**O_2 Head-space ($\%O_2$)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**	**DTW (ft)**	**O_2 Head-space ($\%O_2$)(1)**	**PID (ppm)**	**DO (mg/L) Bottom**	**DO (mg/L) Middle**	**DO (mg/L) Top**
MP-2-1	29.58	22.7	0.1	26.01	NM	NM	29.95	22.9	0.0	21.71	NM	NM	30.48	22.9	0.0	22.69	NM	NM	29.80	22.5	0.0	23.78	NM	NM
MP-2-2	30.95	19.5	0.0	47.72	30.00	20.27	31.32	20.5	0.2	40.82	30.11	21.25	31.89	20.1	0.3	39.11	35.05	21.55	32.19	20.3	0.2	37.17	34.11	28.81
MP-2-3S	30.83	19.4	0.2	45.12	21.75	24.69	31.17	19.2	0.2	47.71	41.50	31.39	31.73	19.0	0.2	48.59	40.75	36.42	32.03	19.0	0.3	45.75	41.55	39.91
MP-2-3D	30.96	40.0	0.0	41.15	36.77	30.07	31.34	38.1	0.0	42.12	33.39	24.88	31.89	39.5	0.2	27.78	19.90	16.81	32.22	39.3	0.2	24.11	20.33	18.17
MP-2-4	19.55	20.9	0.2	21.29	NM	NM	19.91	21.9	0.0	21.71	NM	NM	20.47	22.1	0.0	22.60	NM	NM	20.78	23.6	0.1	20.87	NM	NM
MP-2-5	17.73	21.3	0.3	42.12	14.47	18.66	18.07	21.2	0.4	30.42	21.64	17.14	18.66	21.5	0.3	28.42	22.61	17.96	18.95	21.4	0.3	25.13	19.15	15.41

	December 2, 2013						December 5, 2013						December 24, 2013					
Well ID	**VOC (ppm)**	**CO2 (%)**	**LEL (%)**	**O2(%)**	**Pressure**	**Odor**	**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	0	0	0	20.9	No	No	30.94	NM	0.0	20.02	NM	NM	31.05	NM	0.0	22.54	NM	NM
MP-2-2	0	0	1.0	20.9	No	No	32.32	NM	0.0	47.17	NM	NM	32.37	NM	0.0	46.14	NM	NM
MP-2-3S	0	0	0	20.9	No	No	32.16	NM	0.0	50.14	NM	NM	32.20	NM	0.3	45.51	NM	NM
MP-2-3D	0	0	0	24.3	No	No	32.29	NM	0.2	48.98	NM	NM	32.35	NM	0.2	43.33	NM	NM
MP-2-4	0	0.1	1.0	20.9	No	No	20.90	NM	0.0	8.89	NM	NM	20.87	NM	0.0	7.55	NM	NM
MP-2-5	0	0	0	21.1	No	No	19.06	NM	0.0	27.21	NM	NM	19.04	NM	0.0	27.11	NM	NM

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

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

FIGURES



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

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

2000' 0 2000'
SCALE IN FEET

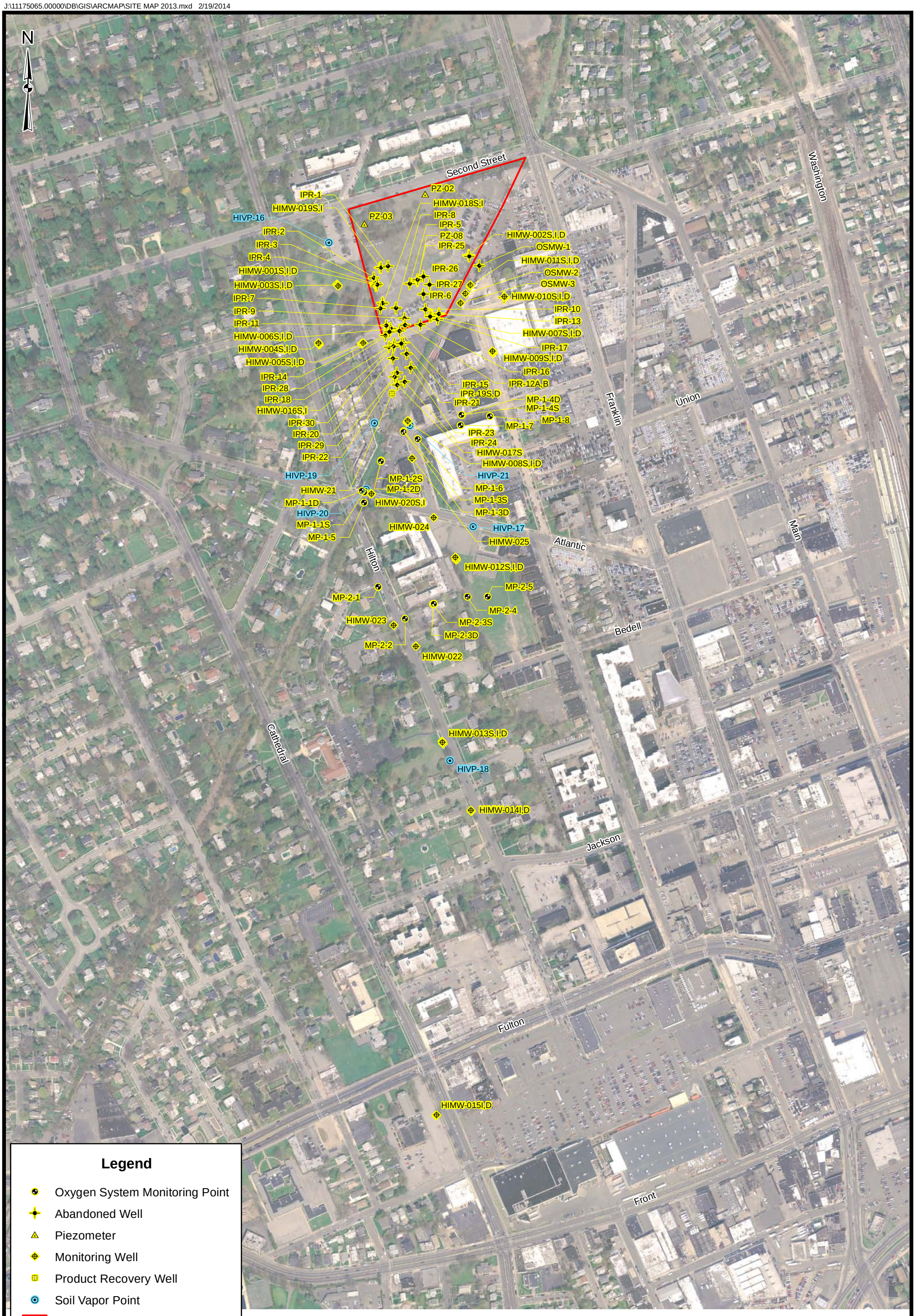
URS Corporation

LOCATION MAP

FIGURE 1

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

J:\11175065.00000\DB\GIS\ARCMAP\SITE MAP 2013.mxd 2/19/2014



Legend

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

URS

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

FIGURE 2

J:\Projects\11175065.00000\DB\GIS\ARCMAP\GROUNDWATER TREATMENT LOCATIONS (11x17) (REV7).mxd 9/15/2014

N

INSET 1

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

INSET 2

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

NATIONAL GRID
FORMER MGP SITE

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

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

Legend

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

Estimated Extent of Groundwater Plume:

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

300 0 300 Feet

URS

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

FIGURE 3

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

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

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

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

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

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

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

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

HIMW-015 I,D		
DEPTH	TOT. BTEX	TOT. PAHs
80–90	5–111 (11)	ND–273 (24)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

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

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

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

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

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

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

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

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

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

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

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

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

HIMW-020S,I		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–3 (ND)	ND–5(ND)
63–73	1–474 (36)	ND–3,968 (84)

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

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

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

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

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

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

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

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

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

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

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

HIMW-011S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
28–38	603	2,813
80–90	ND	ND
109–119	ND	ND

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

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

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

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

HITW-01 (9/21/01)		
DEPTH	TOT. BTEX	TOT. PAHs
40–44	2	ND
54–58	3	6
70–74	95	278
82–86	293	274
90–94	45	44
109–113	210	1

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

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

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

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

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

HIGP-69 (9/24/01)		
DEPTH	TOT. BTEX	TOT. PAHs
54–58	ND	ND
70–74	28	28
82–86	126	76
90–94	12	19
104–108	5	ND

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

HIMW-012S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
22–32	ND–338.8 (ND)	ND–1,391 (ND)
63–73	20–256 (20)	65–527 (115)
117–127	ND–6 (ND)	ND–2 (ND)

HIMW-023		
DEPTH	TOT. BTEX	TOT. PAHs
66–76	ND–43 (1)	ND–43 (1)

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

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

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

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

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

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

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

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

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

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

HIMW-005S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
27–37	ND–232 (ND)	ND–765 (ND)
80–90	95–439 (70)	1,454–5,337 (2,115)
130–140	ND–359 (36)	ND–2,698 (489)

HIMW-013S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
38–48	ND–11	ND
70–80	ND–313(188)	5–156 (84)
110–120	2–30 (2)	ND–28 (8)

HIMW-024		
DEPTH	TOT. BTEX	TOT. PAHs
44.6–54.6	13–900 (ND)	7–1,020 (ND)

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

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

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

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

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

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

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

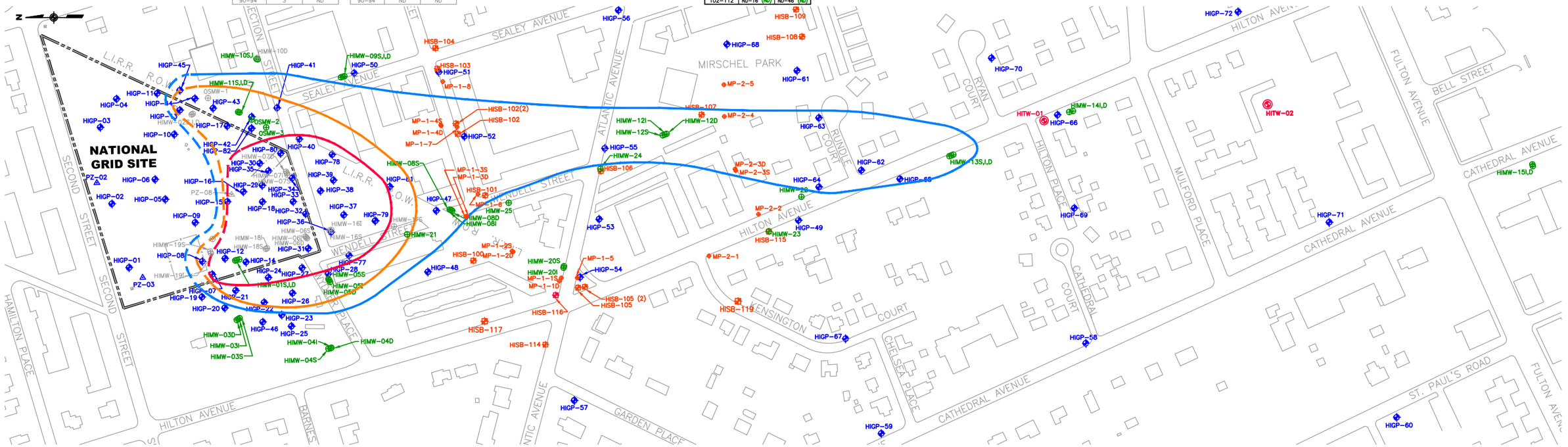
HIGP-60 (10/19/00)		
DEPTH	TOT. BTEX	TOT. PAHs
33–37	ND	ND
60–64	ND	ND
90–94	ND	ND

HIMW-008S,I,D		
DEPTH	TOT. BTEX	TOT. PAHs
25–35	ND–8,240 (48)	ND–3,069 (6)
63–73	ND–457 (457)	ND–251 (85)
102–112	ND–16 (ND)	ND–46 (ND)

HIMW-014 I,D		
DEPTH	TOT. BTEX	TOT. PAHs
85–95	12–273 (12)	26–288 (34)
140–150	ND–15	ND

HIMW-025		
DEPTH	TOT. BTEX	TOT. PAHs
42–52	ND–552 (86)	ND–573 (9)

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



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

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

MP-2-1 OXYGEN SYSTEM MONITORING WELL

HIMW-17S ABANDONED/DESTROYED WELLS

HIMW-13 MONITORING WELL

PZ-02 PIEZOMETER

PZ-08 ABANDONED PIEZOMETER

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

ND NOT DETECTED

LEGEND:

LOCATION ID → HIMW-015 I,D

DEPTH (ft bgs)	TOT. BTEX	TOT. PAHs
80–90	5–111 (11)	ND–273 (24)
141.5–151.5	ND–94 (ND)	ND–1 (ND)

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

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

EXISTING HOUSE OR BUILDING

NATIONAL GRID PROPERTY BOUNDARY

ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 5,000 ug/L

ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 1,000 ug/L

ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS EQUAL TO OR GREATER THAN 100 ug/L

ESTIMATED EXTENT OF GROUNDWATER PLUME AS DEFINED BY TOTAL BTEX OR TOTAL PAH CONCENTRATIONS. DASHED LINES REPRESENT CONTAMINATION CONCENTRATIONS THAT ARE LIKELY INFLUENCED BY THIRD PARTY SOURCES.

150' 0 150'
SCALE IN FEET

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\FOURTH QUARTER 2013\FIGURE 4.dwg 2/28/14 - 5 RAL

URS Corporation

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

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

FIGURE 4

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\DEC 2013\FIGURE 5.dwg 2/25/14 - 1 RAL

N

NATIONAL GRID
FORMER MGP SITE

PZ-02, 46.08
PZ-03, 45.82
OSMW-1, NM
HIMW-11S, 45.44
HIMW-03S, 45.45
OSMW-3, 45.24
HIMW-10S, 45.79
OSMW-2, 45.31
HIMW-04S, 44.80
HIMW-05S, 44.94
HIMW-09S, 44.85
HIMW-8S, 44.42
HIMW-20S, 43.83
HIMW-12S, 43.12
HIMW-13S, 41.13

45
45.5
44.5
44
43.5
43
42.5
42
41.5

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

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
△	PIEZOMETER
→	GROUNDWATER FLOW DIRECTION
44	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-8S, 45.66	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

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

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR SHALLOW GROUNDWATER
DECEMBER 2, 2013

FIGURE 5

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\DEC 2013\FIGURE 6.dwg 2/25/14 - 3 RAL

N

NATIONAL GRID
FORMER MGP SITE

HIMW-03I, 45.64
HIMW-11I, 45.39
HIMW-10I, 45.85
HIMW-05I, 44.64
HIMW-04I, 44.66
HIMW-09I, 44.81
HIMW-08I, 44.32
HIMW-25, 44.17
HIMW-20I, 43.85
HIMW-24, 43.65
HIMW-12I, 43.26
HIMW-23, 42.70
HIMW-22, 42.46
HIMW-13I, 41.09
HIMW-14I, 41.05
HIMW-15I, 38.20

45
44
43
42
41
40
39

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

LEGEND:

⊕	MONITORING WELL
⊞	IPR WELL
→	GROUNDWATER FLOW DIRECTION
44	POTENTIOMETRIC SURFACE CONTOUR
— - - —	FORMER MGP SITE BOUNDARY
HIMW-08I, 45.64	LOCATION ID AND GROUNDWATER ELEV. (FT. AMSL)
NM	NOT MEASURED DURING THIS SAMPLING EVENT

300' 0 300'
SCALE IN FEET

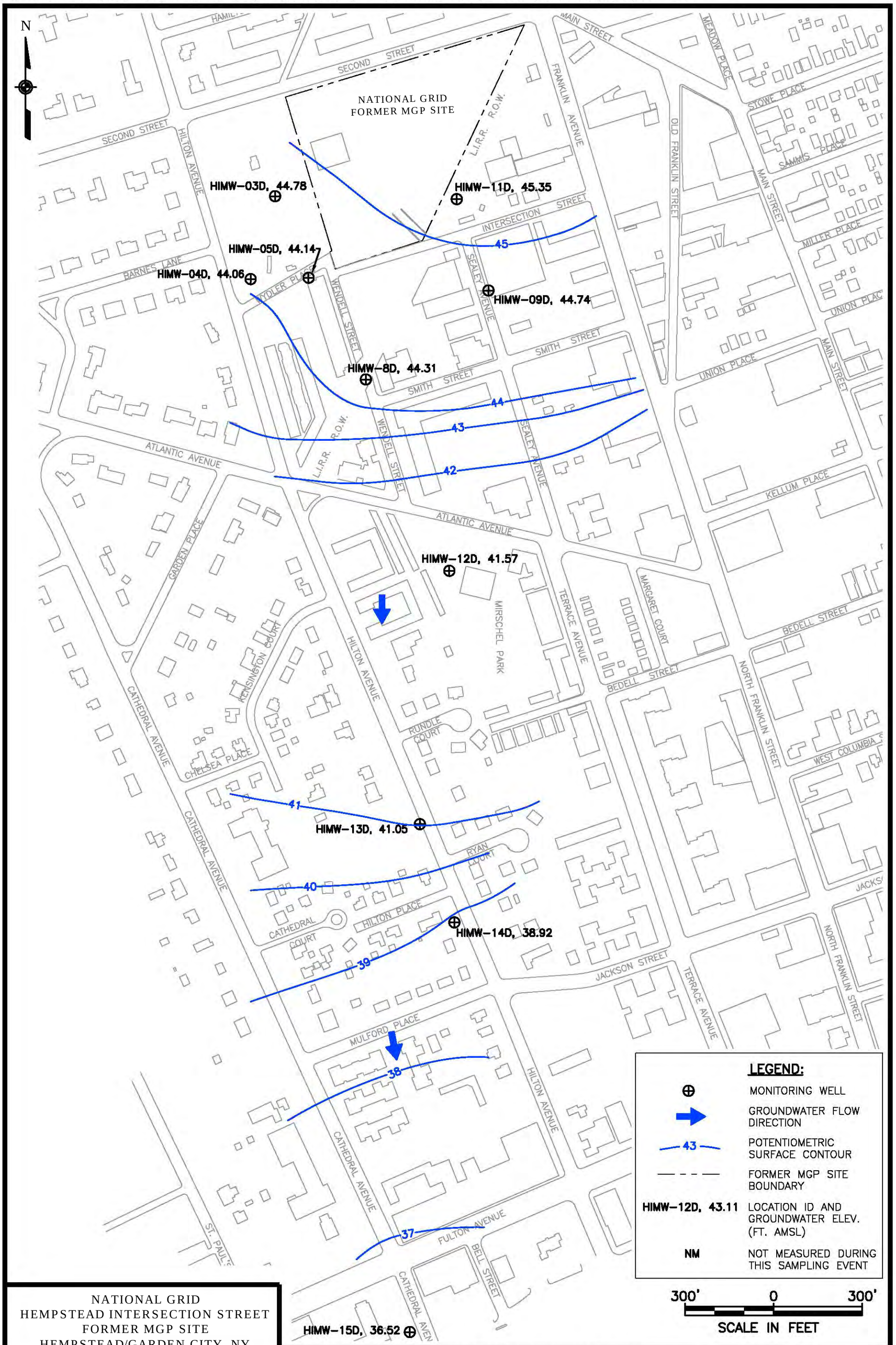
NATIONAL GRID
HEMPSTEAD INTERSECTION STREET
FORMER MGP SITE
HEMPSTEAD/GARDEN CITY, NY

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE GROUNDWATER
DECEMBER 2, 2013

FIGURE 6

J:\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\DEC 2013\FIGURE 7.dwg 2/25/14 - 2 RAL



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

URS Corporation

HEMPSTEAD/GARDEN CITY, NY
POTENTIOMETRIC SURFACE MAP FOR DEEP GROUNDWATER
DECEMBER 2, 2013

FIGURE 7

J:\11175065.00000\DB\GIS\ARCMAP\1213 BTEXPAH-NAPL.mxd 2/18/2014

LOCID	BTEX [ug/L]	PAH [ug/L]	DNAPL (ft)	LNAPL (ft)
HIMW-02S				
HIMW-02I				
HIMW-02D				
HIMW-03S				
HIMW-03I				
HIMW-03D				
HIMW-04S	ND	ND		
HIMW-04I	ND	ND		
HIMW-04D				
HIMW-05S	ND	ND		
HIMW-05I	70	2,115		
HIMW-05D	36	489		
HIMW-08S	48	6		
HIMW-08I	457	85		
HIMW-08D	ND	ND		
HIMW-09S				
HIMW-09I				
HIMW-09D				
HIMW-10S	ND	ND		
HIMW-10I	ND	ND		
HIMW-10D	Destroyed			
HIMW-11S	603	2,813		
HIMW-11I	ND	ND		
HIMW-11D	ND	ND		
HIMW-12S	ND	ND		
HIMW-12I	20	115		
HIMW-12D	ND	ND		
HIMW-13S				
HIMW-13I	188	84		
HIMW-13D	2	8		
HIMW-14I	12	34		
HIMW-14D				
HIMW-15I	11	24		
HIMW-15D	ND	ND		
HIMW-16S	Abandoned			
HIMW-16I	Abandoned			
HIMW-17S	Abandoned			
HIMW-20S	ND	ND		
HIMW-20I	36	84		
HIMW-21			2.50	
HIMW-22	ND	ND		
HIMW-23	1	1		
HIMW-24	ND	ND		
HIMW-25	86	9		
PZ-02				
PZ-03				
IPR-18	Decommissioned			
IPR-19S	Decommissioned			
IPR-19D	Decommissioned			
IPR-20	Decommissioned			
IPR-21	Decommissioned			
IPR-22	Decommissioned			
IPR-23	Decommissioned			
IPR-24	Decommissioned			
IPR-29	Decommissioned			
IPR-30	Decommissioned			
OSMW-01	Destroyed			
OSMW-02	2,604	3,517		
OSMW-03	4,031	2,911		

Legend

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

Notes:

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

400 0 400 Feet

URS

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

FIGURE 8

APPENDIX A

DATA USABILITY SUMMARY REPORT

(Provided in Electronic Format Only)

APPENDIX A
DATA USABILITY SUMMARY REPORT
FOURTH QUARTER 2013

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

Analyses Performed by:
PACE ANALYTICAL
(formerly 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

FEBRUARY 2014

TABLE OF CONTENTS

I. INTRODUCTION

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

This DUSR discusses the usability of the analytical data for twenty (20) groundwater samples, two (2) field duplicates, two (2) matrix spike/matrix spike duplicate (MS/MSD) pairs, one (1) field blank, and five (5) trip blanks collected by URS personnel on December 6-17, 2013. The samples were collected as part of the 2013 4th quarter groundwater monitoring event at the Hempstead Intersection Street Former MGP Site. Also, nine (9) additional groundwater samples were collected on December 3-11, 2013 as part of the oxygen treatment system design evaluation.

II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION

The samples were analyzed by Pace Analytical [formerly H2M Labs, Inc. (Melville, NY)] for the following parameters:

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

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

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B, 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 extractions of the MS/MSD for sample HIMW-24 due to a laboratory login error. Since the MS/MSD recoveries were within QC limits, no qualification of the parent sample results were deemed necessary. Documentation (i.e., extraction log) is presented in Attachment B.

V. NON-CONFORMANCES

Internal Standard Recoveries

The PAH analysis for sample HIMW-08S exhibited an extremely low internal standard (IS) %R for perylene-d12 (i.e., <25%). The laboratory did not reanalyze the sample, thus did not properly substantiate the

presence of matrix interference. However, the sample chromatography does show significant matrix interference within the retention time window for this IS. The non-detect PAH results associated with this IS outlier were rejected and qualified 'R", while the detected PAH results were qualified 'J'.

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

Instrument Calibration

For PAH analyses, the percent difference (%D) between the initial calibration (ICAL) average relative response factor (RRF) and the RRF in the continuing calibration (CCAL) standard was greater than 20.0% for 2-methylnaphthalene. The non-detect 2-methylnaphthalene results for samples HIMW-12D, HIMW-12I, and FB-121713 were qualified 'UJ'.

Documentation supporting the qualification of data (i.e., Forms 5 and 7) 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, while results reported from secondary dilution analyses were qualified 'D'.

Field duplicates were collected from monitoring well locations HIMW-05S and HIMW-22, 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, and qualified 'R' (rejected) which are considered unusable. URS does not recommend the re-collection of any samples at this time.

Prepared By: _____ **Date:** 3/3/14
Peter R. Fairbanks, Senior Chemist

Reviewed By: _____ **Date:** 3/3/14
George E. Kisluk, Senior Chemist

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

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

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

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

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

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

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

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

Location ID			HIMW-004I	HIMW-004S	HIMW-005D	HIMW-005I	HIMW-005S
Sample ID			HIMW-04I	HIMW-04S	HIMW-5D	HIMW-05I	DUP120613
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/03/13	12/04/13	12/09/13	12/06/13	12/06/13
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	2	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	35	68	1 U
Total BTEX	UG/L	100	ND	ND	36	70	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	42	240 DJ	10 U
Acenaphthene	UG/L	-	10 U	10 U	10 U	10	10 U
Acenaphthylene	UG/L	-	10 U	10 U	15	130 DJ	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	2 J	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	2 J	21	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	430 D	1,700 D	10 U
Phenanthrene	UG/L	-	10 U	10 U	10 U	12	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	489	2,115	ND

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

Flags assigned during chem stry validation are shown

(oval) 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 R - The data is rejected. ND - Not detected

Made By_PRF 02/25/14_ Checked By_AMK 02/25/14_

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-010I
Sample ID			HIMW-05S	HIMW-8D	HIMW-8I	HIMW-8S	HIMW-10I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/06/13	12/16/13	12/16/13	12/10/13	12/03/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	64	47	1 U
Ethylbenzene	UG/L	-	1 U	1 U	12	1 U	1 U
Toluene	UG/L	-	1 U	1 U	41	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	340	1	1 U
Total BTEX	UG/L	100	ND	ND	457	48	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	8 J	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	-	10 U	10 U	3 J	1 J	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	1 J	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	1 J	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	R	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	1 J	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	1 J	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	R	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	1 J	10 U
Naphthalene	UG/L	-	10 U	10 U	74	10 U	10 U
Phenanthrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	85	6	ND

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

Flags assigned during chemistry validation are shown

(oval) 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. R - The data is rejected. ND - Not detected

Made By_PRF 02/25/14_ Checked By_AMK 02/25/14_

Detection Limits shown are PQL

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

Location ID			HIMW-010S	HIMW-011D	HIMW-011I	HIMW-011S	HIMW-012D
Sample ID			HIMW-10S	HIMW-11D	HIMW-11I	HIMW-11S	HIMW-12D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/03/13	12/04/13	12/04/13	12/04/13	12/17/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	2	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	170	1 U
Toluene	UG/L	-	1 U	1 U	1 U	11	1 U
Xylene (total)	UG/L	-	1 U	1 U	1 U	420 D	1 U
Total BTEX	UG/L	100	ND	ND	ND	603	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	550 D	10 UJ
Acenaphthene	UG/L	-	10 U	10 U	10 U	200 DJ	10 U
Acenaphthylene	UG/L	-	10 U	10 U	10 U	12	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	24	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	7 J	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	3 J	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	2 J	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	6 J	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	16	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	57	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	1,800 D	10 U
Phenanthrene	UG/L	-	10 U	10 U	10 U	110 DJ	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	26	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	2,813	ND

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

Flags assigned during chemistry validation are shown

(oval) 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. R - The data is rejected. ND - Not detected

Made By_PRF 02/25/14_; Checked By_AMK 02/25/14_

Detection Limits shown are PQL

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Printed: 3/3/2014 1:48:35 PM
WHERE ([LOGDATE] >= #12/3/2013# AND ([MATRIX] = 'WG' AND [FLDSAMPID] NOT LIKE 'HS'

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

Location ID			HIMW-012I	HIMW-012S	HIMW-013D	HIMW-013I	HIMW-014I
Sample ID			HIMW-12I	HIMW-12S	HIMW-13D	HIMW-13I	HIMW-14I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/16/13	12/16/13	12/11/13	12/12/13	12/09/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	20	1 U	2	170	9
Ethylbenzene	UG/L	-	1 U	1 U	1 U	2	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	16	3
Total BTEX	UG/L	100	20	ND	2	188	12
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 UJ	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	40	10 U	3 J	6 J	10
Acenaphthylene	UG/L	-	35	10 U	5 J	60	14
Anthracene	UG/L	-	2 J	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	24	10 U	10 U	8 J	5 J
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	1 J	10 U	10 U	3 J	10 U
Phenanthrene	UG/L	-	13	10 U	10 U	7 J	5 J
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	115	ND	8	84	34

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

Flags assigned during chemistry validation are shown

Concentration Exceeds Criteria

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

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

D - Result reported from a secondary dilution analysis R - The data is rejected ND - Not detected

Made By_PRF 02/25/14_, Checked By_AMK 02/25/14_

Detection Limits shown are PQL

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Printed: 3/3/2014 | 48.35 Pk
WHERE ([LOGDATE] >= #12/3/2013# AND [MATRIX] = 'WG' AND [FLDSAMPID] NOT LIKE 'HS*'

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

Location ID			HIMW-015D	HIMW-015I	HIMW-020I	HIMW-020S	HIMW-022
Sample ID			HIMW-16D	HIMW-15I	HIMW-20I	HIMW-20S	DUP121013
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/12/13	12/12/13	12/06/13	12/12/13	12/10/13
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	8	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	3	36	1 U	1 U
Total BTEX	UG/L	100	ND	11	36	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	8 J	10 U	10 U
Acenaphthene	UG/L	-	10 U	6 J	6 J	10 U	10 U
Acenaphthylene	UG/L	-	10 U	16	51	10 U	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10	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	8 J	10 U	10 U
Phenanthrene	UG/L	-	10 U	2 J	1 J	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	24	84	ND	ND

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

Flags assigned during chemistry validation are shown

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit J - The reported concentration is an estimated value

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

D - Result reported from a secondary dilution analysis R - The data is rejected ND - Not detected

Made By_PRF 02/25/14_, Checked By_AMK 02/25/14_

Detection Limits shown are PQL

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WHERE ([LOGDATE] >= #12/3/2013# AND [MATRIX] = 'WG' AND [FLDSAMPID] NOT LIKE 'HS'

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

Location ID			HIMW-022	HIMW-023	HIMW-024	HIMW-025	OSMW-2
Sample ID			HIMW-22	HIMW-23	HIMW-24	HIMW-25	OSMW-2
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/10/13	12/11/13	12/13/13	12/11/13	12/11/13
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1	1 U	44	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1	690 D
Toluene	UG/L	-	1 U	1 U	1 U	2	14
Xylene (total)	UG/L	-	1 U	1 U	1 U	39	1,900 D
Total BTEX	UG/L	100	ND	1	ND	86	2,604
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	450 DJ
Acenaphthene	UG/L	-	10 U	10 U	10 U	10 U	80
Acenaphthylene	UG/L	-	10 U	1 J	10 U	10 U	41
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	14
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	4 J
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	3 J
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	2 J
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	4 J
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
Fluorene	UG/L	-	10 U	10 U	10 U	10 U	37
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	6 J	2,800 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	3 J	55
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	17
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	1	ND	9	3,517

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

Flags assigned during chemistry validation are shown

(oval) 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. R - The data is rejected. ND - Not detected
Made By_PRF 02/25/14_; Checked By_AMK 02/25/14_

Detection Limits shown are PQL

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WHERE ([LOGDATE] >= #12/3/2013# AND [MATRIX] = 'WG' AND [FLDSAMPID] NOT LIKE 'HS'

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

Location ID			OSMW-3
Sample ID			OSMW-3
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			12/10/13
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
Benzene	UG/L	-	1 U
Ethylbenzene	UG/L	-	1,100 D
Toluene	UG/L	-	31
Xylene (total)	UG/L	-	2,900 D
Total BTEX	UG/L	100	4,031
Semivolatile Organic Compounds			
2-Methylnaphthalene	UG/L	-	550 D
Acenaphthene	UG/L	-	72
Acenaphthylene	UG/L	-	7 J
Anthracene	UG/L	-	7 J
Benzo(a)anthracene	UG/L	-	10 U
Benzo(a)pyrene	UG/L	-	10 U
Benzo(b)fluoranthene	UG/L	-	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U
Benzo(k)fluoranthene	UG/L	-	10 U
Chrysene	UG/L	-	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U
Fluoranthene	UG/L	-	2 J
Fluorene	UG/L	-	34
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U
Naphthalene	UG/L	-	2,200 D
Phenanthrene	UG/L	-	36
Pyrene	UG/L	-	3 J
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	2,911

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

Flags assigned during chemistry validation are shown

(oval) 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 R - The data is rejected ND - Not detected

Made By_PRF 02/25/14_, Checked By_AMK 02/25/14_

Detection Limits shown are PQL

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WHERE (LOGDATE) >= #2/3/2013# AND (MATRIX = 'WG' AND (FLDSAMPID) NOT LIKE '%D'

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 120413	TB 120613	TB 121113	TB 121313	FB 121713
Matrix			Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)			-	-	-	-	-
Date Sampled			12/04/13	12/06/13	12/11/13	12/13/13	12/17/13
Parameter	Units	Criteria*	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	1 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	100	ND	ND	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	NA	NA	NA	NA	10 UJ
Acenaphthene	UG/L	-	NA	NA	NA	NA	10 U
Acenaphthylene	UG/L	-	NA	NA	NA	NA	10 U
Anthracene	UG/L	-	NA	NA	NA	NA	10 U
Benzo(a)anthracene	UG/L	-	NA	NA	NA	NA	10 U
Benzo(a)pyrene	UG/L	-	NA	NA	NA	NA	10 U
Benzo(b)fluoranthene	UG/L	-	NA	NA	NA	NA	10 U
Benzo(g,h,i)perylene	UG/L	-	NA	NA	NA	NA	10 U
Benzo(k)fluoranthene	UG/L	-	NA	NA	NA	NA	10 U
Chrysene	UG/L	-	NA	NA	NA	NA	10 U
Dibenz(a,h)anthracene	UG/L	-	NA	NA	NA	NA	10 U
Fluoranthene	UG/L	-	NA	NA	NA	NA	10 U
Fluorene	UG/L	-	NA	NA	NA	NA	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	NA	NA	10 U
Naphthalene	UG/L	-	NA	NA	NA	NA	10 U
Phenanthrene	UG/L	-	NA	NA	NA	NA	10 U
Pyrene	UG/L	-	NA	NA	NA	NA	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	NA	NA	ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit. 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. R - The data is rejected. ND - Not detected

Made By_PRF 02/25/14_, Checked By_AMK 02/25/14_

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 121713
Matrix			Water Quality
Depth Interval (ft)			-
Date Sampled			12/17/13
Parameter	**Units**	**Criteria***	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	100	ND
Semivolatile Organic Compounds			
2-Methylnaphthalene	UG/L	-	NA
Acenaphthene	UG/L	-	NA
Acenaphthylene	UG/L	-	NA
Anthracene	UG/L	-	NA
Benzo(a)anthracene	UG/L	-	NA
Benzo(a)pyrene	UG/L	-	NA
Benzo(b)fluoranthene	UG/L	-	NA
Benzo(g,h,i)perylene	UG/L	-	NA
Benzo(k)fluoranthene	UG/L	-	NA
Chrysene	UG/L	-	NA
Dibenz(a,h)anthracene	UG/L	-	NA
Fluoranthene	UG/L	-	NA
Fluorene	UG/L	-	NA
Indeno(1,2,3-cd)pyrene	UG/L	-	NA
Naphthalene	UG/L	-	NA
Phenanthrene	UG/L	-	NA
Pyrene	UG/L	-	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA

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

Flags assigned during chemistry validation are shown

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit. 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 R - The data is rejected ND - Not detected

Made By_PRF 02/25/14_, Checked By_AMK 02/25/14_

Detection Limits shown are PQL

ATTACHMENT A

VALIDATED FORM 1'S

Form 1

CLIENT SAMPLE NO.

HIMW-04S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63299.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-04S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62362.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-04I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63298.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-04I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62361.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-05S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312414-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63307.D

Level: (low/med) LOW Date Received: 12/6/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312414-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62377.D

Level: (low/med) LOW Date Received: 12/06/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/09/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/11/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

DUP120613
(HIMW-055)

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312414-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63310.D

Level: (low/med) LOW Date Received: 12/6/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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.

DUP120613 (HIMW-055)

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312414-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62380.D

Level: (low/med) LOW Date Received: 12/06/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/09/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/11/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-05I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312414-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63306.D

Level: (low/med) LOW Date Received: 12/6/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	2	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	68	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312414-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62376.D

Level: (low/med) LOW Date Received: 12/06/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/09/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/11/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	1700 ~~1200~~	~~E~~ D
91-57-6	2-Methylnaphthalene	240 ~~230~~	~~E~~ DJ
208-96-8	Acenaphthylene	130 ~~150~~	~~E~~ DJ
83-32-9	Acenaphthene	10	
86-73-7	Fluorene	21	
85-01-8	Phenanthrene	12	
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

2/24/14

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-05IDL

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312414-001BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: N62501.D

Level: (low/med) LOW Date Received: 12/06/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/09/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/17/13

Injection Volume: 2 (µL) Dilution Factor: 50.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	1700	D
91-57-6	2-Methylnaphthalene	240	DJ
208-96-8	Acenaphthylene	130	DJ
83-32-9	Acenaphthene	500	U
86-73-7	Fluorene	500	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) Cannot be separated from Diphenylamine

2/24/14

Form 1

CLIENT SAMPLE NO.

HIMW-5D

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22399.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	1	
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	35	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-5D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19689.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	430 ~~330~~	~~E~~ D
91-57-6	2-Methylnaphthalene	42	
208-96-8	Acenaphthylene	15	
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

2/24/14

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-5DDL

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-001BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: R19727.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/21/13

Injection Volume: 2 (µL) Dilution Factor: 10.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	430	D
91-57-6	2-Methylnaphthalene	44	DJ
208-96-8	Acenaphthylene	16	DJ
83-32-9	Acenaphthene	100	U
86-73-7	Fluorene	100	U
85-01-8	Phenanthrene	100	U
120-12-7	Anthracene	100	U
206-44-0	Fluoranthene	100	U
129-00-0	Pyrene	100	U
56-55-3	Benzo(a)anthracene	100	U
218-01-9	Chrysene	100	U
205-99-2	Benzo(b)fluoranthene	100	U
207-08-9	Benzo(k)fluoranthene	100	U
50-32-8	Benzo(a)pyrene	100	U
193-39-5	Indeno(1,2,3-cd)pyrene	100	U
53-70-3	Dibenzo(a,h)anthracene	100	U
191-24-2	Benzo(g,h,i)perylene	100	U

(1) Cannot be separated from Diphenylamine

2/24/14

Form 1

CLIENT SAMPLE NO.

HIMW-8S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22406.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	47	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	

1C

EPA SAMPLE NO.

HIMW-8S

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19698.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

2/24/14

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-8I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22545.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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	64	
108-88-3	Toluene	41	
100-41-4	Ethylbenzene	12	
1330-20-7	Xylene (total)	340	

1C

EPA SAMPLE NO.

HIMW-8I

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62707.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/19/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/28/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	74	
91-57-6	2-Methylnaphthalene	8	J
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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-8D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22544.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-8D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62706.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/19/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/28/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-10S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63301.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-10S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62364.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-10I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63300.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-10I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62363.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-11S

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63296.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: not dec. Date Analyzed: 12/10/13

GC Column: DB-624 ID: 0.18 (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	2	
108-88-3	Toluene	11	
100-41-4	Ethylbenzene	170	
1330-20-7	Xylene (total)	420 ~~400~~	~~E~~ D

2/24/14

Form 1

CLIENT SAMPLE NO.

HIMW-11SDL

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-007ADL

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63297.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 2.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	2	U
108-88-3	Toluene	11	D
100-41-4	Ethylbenzene	170	D
1330-20-7	Xylene (total)	420	D

2/24/14

FORM I VOA SW8260

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-11S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-007B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62367.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	1800 ~~1100~~	~~E~~ D
91-57-6	2-Methylnaphthalene	550 ~~440~~	~~E~~ D
208-96-8	Acenaphthylene	12	
83-32-9	Acenaphthene	200 ~~170~~	~~E~~ DJ
86-73-7	Fluorene	57	
85-01-8	Phenanthrene	110 ~~98~~	~~E~~ DJ
120-12-7	Anthracene	24	
206-44-0	Fluoranthene	16	
129-00-0	Pyrene	26	
56-55-3	Benzo(a)anthracene	7	J
218-01-9	Chrysene	6	J
205-99-2	Benzo(b)fluoranthene	2	J
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	3	J
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

2/24/14

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-11SDL

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-007BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: N62381.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/11/13

Injection Volume: 2 (µL) Dilution Factor: 50.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	1800	D
91-57-6	2-Methylnaphthalene	550	D
208-96-8	Acenaphthylene	500	U
83-32-9	Acenaphthene	200	DJ
86-73-7	Fluorene	68	DJ
85-01-8	Phenanthrene	110	DJ
120-12-7	Anthracene	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) Cannot be separated from Diphenylamine

2/24/14

Form 1

CLIENT SAMPLE NO.

HIMW-11I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63303.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-11I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62366.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-11D

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63302.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-11D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312226-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62365.D

Level: (low/med) LOW Date Received: 12/04/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/05/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/10/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22547.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19871.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/27/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	1	J
91-57-6	2-Methylnaphthalene	10	U J
208-96-8	Acenaphthylene	35	
83-32-9	Acenaphthene	40	
86-73-7	Fluorene	24	
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

2/24/14 av

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22546.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62708.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/19/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/28/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22548.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-12D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19872.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/27/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U J
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

2/24/14

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22340.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	170	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	16	

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19822.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/24/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	3	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	60	
83-32-9	Acenaphthene	6	J
86-73-7	Fluorene	8	J
85-01-8	Phenanthrene	7	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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-001A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22337.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-13D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-001B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19819.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/23/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-14I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22405.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	9	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	3	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-14I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-004B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19694.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	14	
83-32-9	Acenaphthene	10	
86-73-7	Fluorene	5	J
85-01-8	Phenanthrene	5	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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 13\G22338.

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	8	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	3	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19820.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/23/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22339.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-15D

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19821.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/24/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-20S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-005A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22341.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-20S

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-005B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19823.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/24/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

Form 1

CLIENT SAMPLE NO.

HIMW-20I

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312414-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63308.D

Level: (low/med) LOW Date Received: 12/6/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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)	36	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-20I

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312414-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: N62378.D

Level: (low/med) LOW Date Received: 12/06/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/09/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/11/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	8	J
91-57-6	2-Methylnaphthalene	8	J
208-96-8	Acenaphthylene	51	
83-32-9	Acenaphthene	6	J
86-73-7	Fluorene	10	
85-01-8	Phenanthrene	1	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

Form 1

CLIENT SAMPLE NO.

HIMW-22

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22408.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-22

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-008B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19697.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP121013 (HIMW-22)

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312685-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22334.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP121013 (HIMW-22)

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312685-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19687.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-23

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22345.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-23

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-008B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19826.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/24/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	1	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-24

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22331.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-24

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-007B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19825.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/17/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/24/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

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

(1) Cannot be separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-25

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312685-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22335.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
71-43-2	Benzene	44	
108-88-3	Toluene	2	
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene (total)	39	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-25

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312685-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19686.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	6	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	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

Form 1

CLIENT SAMPLE NO.

OSMW-2

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-003A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22402.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	14	
100-41-4	Ethylbenzene	690 ~~630~~	~~E~~ D
1330-20-7	Xylene (total)	1900 ~~1600~~	~~E~~ D

2/24/14

FORM I VOA SW8260

KEY-URS176 S 49

Form 1

CLIENT SAMPLE NO.

OSMW-2DL

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-003ADL

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22403.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 10.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	10	U
108-88-3	Toluene	13	D
100-41-4	Ethylbenzene	690	D
1330-20-7	Xylene (total)	1900	D

2/24/14

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

OSMW-2

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-003B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19693.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2800 ~~1400~~	~~E~~ D
91-57-6	2-Methylnaphthalene	450 ~~390~~	~~E~~ DJ
208-96-8	Acenaphthylene	41	
83-32-9	Acenaphthene	80	
86-73-7	Fluorene	37	
85-01-8	Phenanthrene	55	
120-12-7	Anthracene	14	
206-44-0	Fluoranthene	10	
129-00-0	Pyrene	17	
56-55-3	Benzo(a)anthracene	4	J
218-01-9	Chrysene	4	J
205-99-2	Benzo(b)fluoranthene	2	J
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	3	J
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

2/24/14
E

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CSMW-2DL

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-003BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: R19730.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/21/13

Injection Volume: 2 (µL) Dilution Factor: 50.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2800	D
91-57-6	2-Methylnaphthalene	450	DJ
208-96-8	Acenaphthylene	500	U
83-32-9	Acenaphthene	91	DJ
86-73-7	Fluorene	500	U
85-01-8	Phenanthrene	63	DJ
120-12-7	Anthracene	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) Cannot be separated from Diphenylamine

2/24/14

Form 1

CLIENT SAMPLE NO.

OSMW-3

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-002A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22400.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	1	U
108-88-3	Toluene	31	
100-41-4	Ethylbenzene	1100 ~~908~~	~~E~~ D
1330-20-7	Xylene (total)	2900 ~~2380~~	~~E~~ D

2/24/14

Form 1

CLIENT SAMPLE NO.

OSMW-3DL

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312680-002ADL

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22401.D

Level: (low/med) LOW Date Received: 12/11/2013

% Moisture: not dec. Date Extracted:

GC Column: Rtx-624 ID: .18 (mm) Date Analyzed: 12/17/2013

Extract Volume: _____ (µl) Dilution Factor: 10.00

Injection Volume: _____ (µl)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) µg/L	Q
71-43-2	Benzene	10	U
108-88-3	Toluene	29	D
100-41-4	Ethylbenzene	1100	D
1330-20-7	Xylene (total)	2900	D

2/24/14

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

OSMW-3

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-002B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19692.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/20/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2200 ~~1100~~	~~E~~ D
91-57-6	2-Methylnaphthalene	550 ~~310~~	~~E~~ D
208-96-8	Acenaphthylene	7	J
83-32-9	Acenaphthene	72	
86-73-7	Fluorene	34	
85-01-8	Phenanthrene	36	
120-12-7	Anthracene	7	J
206-44-0	Fluoranthene	2	J
129-00-0	Pyrene	3	J
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.

OSMW-3DL

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) WATER Lab Sample ID: 1312680-002BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: R19729.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/13/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/21/13

Injection Volume: 2 (µL) Dilution Factor: 50.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	2200	D
91-57-6	2-Methylnaphthalene	550	D
208-96-8	Acenaphthylene	210	DJ
83-32-9	Acenaphthene	500	U
86-73-7	Fluorene	500	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) Cannot be separated from Diphenylamine

2/24/14

Form 1

CLIENT SAMPLE NO.

TB 120413

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312226-008A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63304.D

Level: (low/med) LOW Date Received: 12/4/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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

Form 1

CLIENT SAMPLE NO.

TB 120613

Lab Name: H2M LABS INC Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

Matrix: (soil/water) Aqueous Lab Sample ID: 1312414-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\F63305.D

Level: (low/med) LOW Date Received: 12/6/2013

% Moisture: not dec. Date Extracted:

GC Column: DB-624 ID: 0.18 (mm) Date Analyzed: 12/10/2013

Extract Volume: _____ (µl) Dilution Factor: 1.00

Injection Volume: _____ (µl)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/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.

TB 121113

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312685-004A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22336.D

Level: (low/med) LOW Date Received: 12/11/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB 121313

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312817-009A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22346.D

Level: (low/med) LOW Date Received: 12/13/13

% Moisture: not dec. Date Analyzed: 12/13/13

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB 121713

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-006A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22543.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB 121713

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-006B

Sample wt/vol: 1000 (g/mL) ml Lab File ID: R19873.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: Decanted: (Y/N) N Date Extracted: 12/20/13

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/27/13

Injection Volume: 2 (µL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U J
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

2/24/14 MR

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB 121713

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Matrix: (soil/water) WATER Lab Sample ID: 1312927-007A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 3\G22542.D

Level: (low/med) LOW Date Received: 12/17/13

% Moisture: not dec. Date Analyzed: 12/26/13

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

ATTACHMENT B

SUPPORT DOCUMENTATION

H2M LABS, INC.

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

42843 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp. | **H2M SDG NO:** KEY-URS176

PROJECT NAME/NUMBER: National Grid Hempstead 11176098.00004

SAMPLERS: (signature)/Client: Megan Dascoli/URS; Robin Hurley/URS

DELIVERABLES:

TURNAROUND TIME: Rush-1week TAT

NOTES: Rush-1week TAT

Cooler temp 3.4 °C
IR gun 122336969 / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C) Present/Absent
Lot#_____

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC VOA (40 ml clear glass, HCl)	ORGANIC BNA (1L amber glass)	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
12/3/13	1105	GW	H1MW-10S	4	X	X				136226-004	
12/3/13	1235	GW	H1MW-10I	4	X	X				003	
12/3/13	1500	GW	H1MW-09I	4	X	X				001	
12/4/13	0806	GW	H1MW-04S	4	X	X				002	
12/4/13	1208	GW	H1MW-11D	4	X	X				005	
12/4/13	1320	GW	H1MW-11I	4	X	X				006	
12/4/13	1430	GW	H1MW-11S	4	X	X				007	Strong petroleum odor on sample, trace sheen
12/4/13		GW	TB120413	2	X					008	
~~12/4/13~~	~~1200~~	~~GW~~	~~DUP120413~~	~~4~~	~~X~~	~~X~~					Delete line DW

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Dascoli	12/4/13	14:45		12/4/13	14:45
	12/4/13	15:50		12/4/13	1550

LABORATORY USE ONLY

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

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

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

KEY-URS176 S 3

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

H2M LABS, INC.

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

40591 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp

H2M SDG NO: KEY-URS176

PROJECT NAME/NUMBER: National Grid Hempstead 11176098.00004

SAMPLERS: (signature)/Client: Megan Dascol/URS, Andreas Papaneocaleous/URS

DELIVERABLES:

TURNAROUND TIME: RUSH - 1 week TAT

NOTES: RUSH TAT- 1WEEK

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
12/6/13	840	GW	HIMW-05S	4	X	X				13124/4-ace	
12/6/13	1000	GW	HIMW-05I	4	X	X				13124-001	
12/6/13	1200	GW	DVP120613	4	X	X					
12/6/13		W	TB120613	2	X						

Cooler temp 4.0 °C
IR gun 122336969 / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Dascol	12/6/13	1500		12/6/13	1500
	12/6/13	1600		12/6	1600

LABORATORY USE ONLY

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

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

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

KEY-URS176 S 9

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

H2M LABS, INC.

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

40592 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp

H2M SDG NO: KEY-URS176

PROJECT NAME/NUMBER: National Grid Hempstead
11176098.00004

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

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES: Standard TAT

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: 40ml clear glass, HCl	1L Teflon amber glass	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
12/6/13	1230	GW	HS-HMW-20I	4	X	X						131249-004	
12/6/13	1435	GW	HMW-20I	4	X	X						1 -003	

Cooler temp 4.0 °C
IR gun (122336969) / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Dacol	12/6/13	1500		12/6/13	1500
	12/6/13	1600		12/6	1600

LABORATORY USE ONLY

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

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

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

KEY-URS176 S 10

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

H2M LABS, INC.

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

41239 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp.

H2M SDG NO: KEY-URS176 177

PROJECT NAME/NUMBER: National Grid-Hempstead 1176098.00004

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

DELIVERABLES:

TURNAROUND TIME: RUSH - 1 Week TAT

Sample Container Description: Glass 40ml HCl 3 TEX 8260 B; 1 L amber PAH 8270C

NOTES: RUSH - 1 week TAT

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #:

ANALYSIS REQUESTED

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC: VOA	BNA	Pest/PCB				INORG.: Metal	CN	LAB I.D. NO.	REMARKS:
12/9/13	1350	GW	HIMW-5D	4	X	X							131268O	
12/9/13	1400	GW	HIMW-5D MS/MSD	8	X	X							-001	
12/10/13	820	GW	OSMW-3	4	X	X							-002	strong petroleum odor
12/11/13	850	GW	OSMW-2	4	X	X							-003	strong petrol. odor, trace sheen
12/9/13	1405	GW	HS-HIMW-5I	9	X	X							131268O -005	
													VO 12/11/13 Not Added from bottle	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Dascol	12/11/13	1345	K. Hughes	12/11/13	1345
K. Hughes	12/11/13	15:25	[signature]	12/11/13	1525

LABORATORY USE ONLY

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

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill# ______
2. Ambient or chilled, Temp______
3. Received in good condition: Y or N
4. Properly preserved: Y or N

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

KEY-URS176 S 16

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

H2M LABS, INC.

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

41238 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corp. **H2M SDG NO:** KEY-URS 176/177

PROJECT NAME/NUMBER: National Grid Hempstead 11176098.20004

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

DELIVERABLES:

TURNAROUND TIME: standard

NOTES: Standard TAT
5.7°C
5.9°C
5.1°C

Project Contact: Peter Fairbanks
Phone Number: 716-856-5635
PIS/Quote #

Sample Container Description: clear glass 40 ml, HCl BTEX 8260B; 1 liter amber glass PAH 8270C

ANALYSIS REQUESTED

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG. Metal	INORG. CN	LAB I.D. NO.	REMARKS:
12/9/13	1015	GW	HIMW-14I	4	X	X				317680-004	
12/9/13	"	GW	~~HIMW-14D~~	4	X	X					delete line MD 12/9/13
12/10/13	0945	GW	HS-HIMW-8S	4	X	X				-005	
12/10/13	1040	GW	HIMW-8S	4	X	X				-006	KEY-URS176
12/10/13	1220	GW	HS-HIMW-22	4	X	X				-007	
12/10/13	1400	GW	HIMW-22	4	X	X				-008	
12/10/13	1455	GW	HS-HIMW-5D	4	X	X				317685-001	
12/11/13	1125	GW	HIMW-25	4	X	X				-002	KEY-URS177
12/11/13	1330	W	TB121113	2	X					-004	
12/11/13	1200	GW	DUP121013	4	X	X				-003	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Megan Deacon	12/11/13	1345	K. Hughes	12/11/13	17:15
K. Hughes	12/11/13	15:25		12/11/13	15:25

LABORATORY USE ONLY

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

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

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

KEY URS176 S 17

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

H2M LABS, INC.

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

41240 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS CORPORATION

H2M SDG NO:

PROJECT NAME/NUMBER: NAT. GRID HEMPSTEAD #11176098.00004.

SAMPLERS: (signature)/Client: /URS/ ANDREAS PAPANEOCLEOUS; Megan Dascoli /URS/ Megan Dascoli

DELIVERABLES:

TURNAROUND TIME: Standard.

NOTES: Cooler temp 2.5, 2.6, 2.4 °C 122236969, 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C) Present/Absent
HNO3:52159 H2SO4 52171 HCl:5231
Na2S2O3: 22800123 NH4Cl:47072741
ZnAc:2303C36 NaOH: B0847769239

Project Contact: Peter Fairbanks

Phone Number: 716 856. 5636

PIS/Quote #:

Sample Container Description: Clear glass 40mL HCl BTEX 8260 B. | 1 Liter Amber Glass PAH 8270C

ANALYSIS REQUESTED

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC: VOA	ORGANIC: BNA	ORGANIC: Pest/PCB	INORG.: Metal	INORG.: CN	LAB I.D. NO.	REMARKS:
12/11/13	1450	GW	HIMW-13D.	4	X	X				1317817-001	
12/12/13	0900	GW	HIMW-15I	4	X	X					2
12/12/13	1040	GW	HIMW-15D	4	X	X					3
12/12/13	1325	GW	HIMW-13I	4	X	X					4
12/12/13	1525	GW	HIMW-20S	4	X	X					5
12/12/13	1550	GW	HSHIMW-24.	4	X	X					6
12/13/13	925	GW	HIMW-24.	4	X	X					17
12/13/13	935	GW	HIMW-24 MS/MSD	8	X	X					87
12/13/13	1140	GW	HIMW-23	4	X	X					8
12/13/13	1200	W	~~TB 12/13~~ TB121313	2	X						9

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
ANDREAS PAPANEOCLEOUS	12/13/13	1218	K. Kingsbury	12/13/13	12:19
K. Kingsbury	12/13/13	13:30		12/13	13:30

LABORATORY USE ONLY

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

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

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

KEY-URS177 S 10

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

H2M LABS, INC.

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

42842 EXTERNAL CHAIN OF CUSTODY

CLIENT: URS Corporation | **H2M SDG NO:** KEY-URS 177

PROJECT NAME/NUMBER: National Grid- Hempstead 11176098.00004

SAMPLERS: (signature)/Client: Megan Dascoli / URS / Megan Dascoli; Andreas Papanicolaou / URS / Andreas Papanicolaou

DELIVERABLES:

TURNAROUND TIME: Standard

NOTES: Standard

Project Contact: Peter Fairbanks

Phone Number: 716-856-5636

PIS/Quote #:

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC: VOA (40 ml clear glass, HCl, BTEX 8260B)	ORGANIC: BNA (1 Liter amber glass, PAH 8270C)	ORGANIC: Pest/PCB	INORG.: Metal	INORG.: CN	LAB I.D. NO.	REMARKS:
12/16/13	900	GW	H1MW-8D	4	X	X				31967-001	
12/16/13	1105	GW	H1MW-8I	4	X	X				-002	
12/16/13	1340	GW	H1MW-12S	4	X	X				-003	
12/16/13	1530	GW	H1MW-12I	4	X	X				-004	
12/17/13	852	GW	H1MW-12D	4	X	X				-005	
12/17/13	1000	W	FB121713	4	X	X				-006	
12/17/13	1200	W	TB121713	2	X					007	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Andreas Papanicolaou	12-17-13	12:00		12-17-13	1200
	12-17-13	100		12/17	1300

LABORATORY USE ONLY

Cooler temp 3.3 °C
IR gun 122336969 / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent

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

Cooler temp 3.8 °C
IR gun 122336969 / 122076478
pH strips (10BDH0431) ≤2 3 9 ≥12
Free Cl2 strips(041912C)Present/Absent
Lot#

KEY-URS177 S 16

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

3/5

Pace Long Island

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLES RECEIVED: 12/4/13 – 12/11/13
SDG #: KEY-URS176

For Sample(s):

HIMW-04I	HIMW-11S	DUP120613	HIMW-14I
HIMW-04S	TB 120413	TB 120613	HS-HIMW-8S
HIMW-10I	HIMW-05I	HIMW-5D	HIMW-8S
HIMW-10S	HIMW-05S	OSMW-3	HS-HIMW-22
HIMW-11D	HIMW-20I	OSMW-2	HIMW-22
HIMW-11I	HS-HIMW-20I		

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

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-5D was analyzed as the matrix spike/matrix spike duplicate (MS/MSD). All percent recoveries of the lab fortified blanks (LFB) and recoveries and RPDs of the MS/MSD were within Q.C. limits.

Linear responses with average RFs were used for the targeted analytes.

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: January 3, 2014

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Ursula Middel
Quality Analyst

Pace Long Island

SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLES RECEIVED: 12/4/13 – 12/11/13
SDG #: KEY-URS176

For Sample(s):

HIMW-04I	HIMW-11I	HS-HIMW-20I	HIMW-14I
HIMW-04S	HIMW-11S	DUP120613	HS-HIMW-8S
HIMW-10I	HIMW-05I	HIMW-5D	HIMW-8S
HIMW-10S	HIMW-05S	OSMW-3	HS-HIMW-22
HIMW-11D	HIMW-20I	OSMW-2	HIMW-22

2/24/14

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-5D was submitted for matrix spike/matrix spike duplicate analysis (MS/MSD). Percent recoveries in the MSD were low, and the RPDs then also exceeded the Q. C. limits. All 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 for 4-terphenyl-d14 in the method blank and LFB as well as for 2-fluorobiphenyl in the MSD exceeded the Q. C. limits.

Five samples were reanalyzed at dilutions due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted. In four of the dilutions no surrogate recoveries were reportable, because the surrogates were diluted out.

Two internal standard areas in the MSD were below the control limits. Reported recoveries are regarded estimated.

Samples HIMW-08S and HS-HIMW-22 had low internal standard (IS) areas for perylene-d12. The samples were not reinjected, however no data are affected, because in spite of the low areas no positives were found for any analytes quantified with that IS.

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

Pace Long Island

SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLES RECEIVED: 12/4/13 – 12/11/13
SDG #: KEY-URS176

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: January 6, 2014

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Ursula Middel
Quality Analyst

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS176

EPA Sample No.(SSTD050##): SSTD025 Date Analyzed: 12/20/13

Lab File ID (Standard): R19678A.D Time Analyzed: 1:42

Instrument ID: HP5973R GC Column: R-5SILMS ID: .25 (mm)

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	293276	12.10	348527	15.13	306008	16.25
	UPPER LIMIT	586552	12.60	697054	15.63	612016	16.75
	LOWER LIMIT	146638	11.60	174264	14.63	153004	15.75
	EPA SAMPLE NO.						
01	MB-42538	314754	12.09	337160	15.12	255234	16.23
02	LFB-42538	299597	12.10	363772	15.13	311366	16.24
03	HIMW-5D	298401	12.09	329046	15.13	289641	16.24
04	HIMW-5DMS	301630	12.10	334061	15.13	266054	16.24
05	HIMW-5DMSD	292452	12.10	310256	15.12	38159*	16.24
06	OSMW-3	271125	12.11	316887	15.13	269934	16.24
07	OSMW-2	270723	12.12	309391	15.14	249584	16.25
08	HIMW-14I	292157	12.10	327925	15.13	285970	16.25
09	HS-HIMW-8S	308393	12.11	335268	15.14	228899	16.26
10	HS-HIMW-22	293213	12.10	317636	15.13	81725*	16.24
11	HIMW-22	318946	12.10	359579	15.13	296228	16.25
12	HIMW-8S	333658	12.11	338587	15.15	57206*	16.26

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.

Pace Long Island

SDG NARRATIVE FOR VOLATILE ORGANICS
SAMPLES RECEIVED: 12/11/13 – 12/17/13
SDG #: KEY-URS177

For Sample(s):

HS-HIMW-5D	HIMW-15D	HIMW-8D
HIMW-25	HIMW-13I	HIMW-8I
DUP121013	HIMW-20S	HIMW-12S
TB 121113	HS-HIMW-24	HIMW-12I
HS-HIMW-5I	HIMW-24	HIMW-12D
HIMW-13D	HIMW-23	FB 121713
HIMW-15I	TB 121313	TB 121713

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

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-24 was analyzed as the matrix spike/matrix spike duplicate (MS/MSD). All percent recoveries of the lab fortified blanks (LFB) and recoveries and RPDs of the MS/MSD were within Q. C. limits.

Linear responses with average RFs were used for the targeted analytes.

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: January 9, 2014

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* *
* *
****

Ursula Middel
Quality Analyst

Pace Long Island

SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLES RECEIVED: 12/11/13 – 12/17/13
SDG #: KEY-URS177

For Sample(s):

HS-HIMW-5D	HIMW-15D	HIMW-8D
HIMW-25	HIMW-13I	HIMW-8I
DUP121013	HIMW-20S	HIMW-12S
HS-HIMW-5I	HS-HIMW-24	HIMW-12I
HIMW-13D	HIMW-24	HIMW-12D
HIMW-15I	HIMW-23	FB 121713

2/24/14 AF

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 HIMW-24 was submitted for matrix spike/matrix spike duplicate analysis (MS/MSD). Percent recoveries and the RPDs met the Q. C. limits. The MS and MSD were extracted out of holding time due to a logging error. Lab fortified blanks (LFB) were extracted with all batches, and recoveries indicate good method efficiency. Note that the MS and MSD were only spiked with a solution containing representative compounds, whereas the LFB was spiked with all targeted analytes.

Two samples were reanalyzed at dilutions due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted. In one of the dilutions, no surrogate recoveries were reportable, because the surrogates were diluted out.

In the initial calibrations average response factors were employed all targeted analytes.

In the continuing calibration verification on 12/27/13, the variability for 2-methylnaphthalene was above 20%. No sample result is affected. The concentration reported for the analyte in the LFB-42610 is flagged with a "Z" qualifier indicating that it is regarded estimated.

The method blank extracted on 1/2/13 together with the MS and MSD shows traces below reporting limit for all targeted analyte which seems to indicate some cross contamination with the LFB.

Pace Long Island

SDG NARRATIVE FOR SEMIVOLATILE ANALYSES
SAMPLES RECEIVED: 12/11/13 – 12/17/13
SDG #: KEY-URS177

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: January 9, 2014

****
* *
* *
****
Ursula Middel
Quality Analyst

PACE ANALYTICAL

PREP BATCH REPORT

Prep Start Date: **1/2/2014 4:20:08 P**
Prep End Date: **1/2/2014 6:22:29 P**

Prep Batch ID: **42727** Prep Code: **3520_B** Technician: **Matthew DiStasi**

Prep Factor Units: **mL / mL**

Initial Temp: **°C** Final Temp **°C**

Sample ID	ClientSampleID	Matrix	pH1	pH2	SampAmt	Fin Vol	factor	GPC	Acid	Sulfur	Florisil	PrepStart	PrepEnd
MB-42727		Aqueous	2		1000	1	0.001	☐	☐	☐	☐	1/2/2014	1/2/2014
Lfb-42727		Aqueous	2		1000	1	0.001	☐	☐	☐	☐	1/2/2014	1/2/2014
1312817-007Bms		Groundwater	2		1000	1	0.001	☐	☐	☐	☐	1/2/2014	1/2/2014
	Prep hold time was exceeded by 13.288 days.												
1312817-007Bmsd		Groundwater	2		1000	1	0.001	☐	☐	☐	☐	1/2/2014	1/2/2014
	Prep hold time was exceeded by 13.288 days.												

Type	Chemical / Reagent ID	Chemical / Reagent Name	Container#	Container I	Amount Added	Unit
Chemical	191	Sodium Sulfate, Anhydrous_ VG12F	2568	Container-06 of 06		
Chemical	318	Methylene Chloride	4134	Container-01 of 01		

Spike ID	Spike Name	Samp Type	Container#	Container ID	Amount Added	Amount Unit
BENZIDINES_K	Benzidine and 3,3-Dichlorobenzidine	LFB	1771	Container-01 of 01	25	µL
QC825_BG	BNA QC SPIKE	LFB	2001	Container-01 of 01	500	µL
SS952_AD	BNA Surrogate	all	1730	Container-04 of 04	500	µL

Equipment ID	Description
N-Vap 2	Nitrogen evaporator
Shaker 1	
WB-2	Waterbath

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

KEY-URS177 B 333

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Lab File ID: R19859.D DFTPP Injection Date: 12/27/13

Instrument ID: HP5973R DFTPP Injection Time: 16:51

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.8
68	Less than 2% of mass 69	0.2 (0.4)1
69	Mass 69 relative abundance	41.0
70	Less than 2% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	50.4
197	Less than 1% of mass 198	0.5
198	Base peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	23.7
365	Greater than 1% of mass 198	2.7
441	Present, but less than mass 443	6.7
442	40.0 - 110.0% of mass 198	42.9
443	17.0 - 23.0% of mass 442	8.9 (20.7)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025	SSTD025	R19861A.D	12/27/13	17:39
02	MB-42610	MB-42610	R19868A.D	12/27/13	21:05
03	LFB-42610	LFB-42610	R19869A.D	12/27/13	21:36
04	HIMW-12I	1312927-004B	R19871.D	12/27/13	22:37
05	HIMW-12D	1312927-005B	R19872.D	12/27/13	23:07
06	FB 121713	1312927-006B	R19873.D	12/27/13	23:38

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: PACE ANALYTICAL Contract: _____

Lab Code: 10478 Case No.: KEY-URS SAS No.: _____ SDG No.: KEY-URS177

Instrument ID: HP5973R Calibration Date: 12/27/2013 Time: 17:39

Lab File ID: R19861A.D Init. Calib. Date(s): 12/10/13 12/10/13

EPA Sample No.(SSTD050##): SSTD025 Init. Calib. Times: 17:42 20:12

GC Column: R-5SILMS ID: .25 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Naphthalene	1.015	0.974	0.700	-4.0	20.0
2-Methylnaphthalene	0.676	0.912	0.400	34.8	20.0
Acenaphthylene	1.847	1.808	0.900	-2.1	20.0
Acenaphthene	1.173	1.160	0.900	-1.1	20.0
Fluorene	1.322	1.329	0.900	0.5	20.0
Phenanthrene	1.110	1.088	0.700	-2.0	20.0
Anthracene	1.126	1.189	0.700	5.6	20.0
Fluoranthene	1.286	1.424	0.600	10.7	20.0
Pyrene	1.202	1.121	0.600	-6.7	20.0
Benzo(a)anthracene	1.225	1.180	0.800	-3.7	20.0
Chrysene	1.061	1.040	0.700	-2.0	20.0
Benzo(b)fluoranthene	1.402	1.465	0.700	4.5	20.0
Benzo(k)fluoranthene	1.027	1.154	0.700	12.4	20.0
Benzo(a)pyrene	1.176	1.205	0.700	2.5	20.0
Indeno(1,2,3-cd)pyrene	1.369	1.307	0.500	-4.5	20.0
Dibenzo(a,h)anthracene	1.097	1.051	0.400	-4.2	20.0
Benzo(g,h,i)perylene	1.132	1.041	0.500	-8.0	20.0

All other compounds must meet a minimum RRF of 0.010.

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:	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)

Hours _____

Feed Air Pressure * _____ (psi)

Cycle Pressure * _____ (psi)

Oxygen Receiver Pressure * _____ (psi)

Oxygen Purity _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank * _____ (psi)

(readings below are made from control panel)

Delivery Air _____ (psi)

Element Outlet Temperature _____ (oF)

Running Hours _____ (hours)

Loading Hours _____ (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5			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

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1			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.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1			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 (%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	26.00	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

GA5 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_2 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 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:

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)

Hours	6,786.1	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	85	(psi)
Oxygen Purity	97.5	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	107	(psi)
Element Outlet Temperature	179	(oF)
Running Hours	7,851	(hours)
Loading Hours	4,931	(hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	30	OW-1-5S	67.3	30	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

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	15	OW-1-17D	79.5	30	15	OW-1-21S	49.3	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.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	40	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	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

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	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.

O_2 Injection System #1

Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.36	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

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Found system 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 #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	10/4/2013
Time:	10:40
Weather:	Sunny
Outdoor Temperature:	~75° F
Inside Trailer Temperature:	~69° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	6,902.2	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	95	(psi)
Oxygen Purity	96.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	112	(psi)
Element Outlet Temperature	165	(oF)
Running Hours	7,979	(hours)
Loading Hours	5,017	(hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	30	OW-1-5S	67.3	30	19	OW-1-9D	88.5	40	27
OW-1-2	96.5	40	30	OW-1-6S	67.0	30	19	OW-1-10D	87.2	30	27
OW-1-3	96.3	30	33	OW-1-7S	66.9	30	18	OW-1-11D	86.1	30	32
OW-1-4	95.0	30	30	OW-1-8S	66.7	35	19	OW-1-12D	85.3	20	31
OW-1-5D	93.9	30	29	OW-1-9S	66.0	35	19	OW-1-13D	84.7	35	29
OW-1-6D	92.4	40	30	OW-1-10S	54.6	40	15	OW-1-14D	84.1	30	27
OW-1-7D	91.1	30	32	OW-1-11S	54.1	30	14	OW-1-15D	83.3	20	31
OW-1-8D	89.6	30	30	OW-1-12S	53.6	35	14	OW-1-16D	82.5	20	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: 10/4/2013

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	25	15	OW-1-17D	79.5	30	15	OW-1-21S	49.3	30	13
OW-1-14S	52.7	35	16	OW-1-18D	78.3	35	30	OW-1-22S	49.3	30	12
OW-1-15S	52.2	30	15	OW-1-19D	78.9	35	29	OW-1-23S	48.8	30	13
OW-1-16SR	51.8	30	17	OW-1-20D	79.5	35	28	OW-1-24S	48.4	30	12
OW-1-17S	50.7	30	14	OW-1-21D	79.5	35	29	OW-1-25S	48.8	30	13
OW-1-18S	50.2	30	15	OW-1-22D	79.5	40	28	OW-1-26SR	48.3	30	15
OW-1-19S	49.7	30	15	OW-1-23D	78.7	45	28	OW-1-27S	48.3	30	16
OW-1-20S	49.3	30	14	OW-1-24D	78.2	50	27	OW-1-28S	48.3	25	14

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

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	30	27	OW-1-29S	48.5	40	13	OW-1-33D	83.2	25	29
OW-1-26D	78.1	25	28	OW-1-30S	48.8	50	13	OW-1-34D	84.5	35	30
OW-1-27D	77.9	20	28	OW-1-31S	49.3	50	13	OW-1-35D	85.0	30	31
OW-1-28D	78.0	15	29	OW-1-32S	49.3	55	13	OW-1-36D	85.0	30	30
OW-1-29D	78.4	30	29	OW-1-33S	49.7	35	14	OW-1-37D	84.0	40	30
OW-1-30D	79.0	20	37	OW-1-34S	50.1	30	14	OW-1-38D	82.0	30	34
OW-1-31D	80.5	30	25	OW-1-35S	50.3	30	14	OW-1-39D	78.0	30	30
OW-1-32D	81.6	30	28	OW-1-36S	50.3	30	14	OW-1-40D	76.0	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.

Date: 10/4/2013

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	25	14	OW-1-41D	73.6	20	25	OW-1-43	67.4	45	21
OW-1-38S	50.6	30	15	OW-1-42D	71.0	30	24	OW-1-44	66.6	40	20
OW-1-39S	50.7	30	15	OW-1-45	65.7	25	20	OW-1-51R	60.6	30	20
OW-1-40S	51.1	35	14	OW-1-46	64.3	25	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	14	OW-1-48	62.5	30	18	OW-1-54	60.0	35	16
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	30	19				

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

O_2 Injection System #1

Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	26.52	20.4	18.85	0.4	MP-1-5	26.48	16.2	29.11	0	MP-1-1D	12.10	10.02
MP-1-1S	26.57	34.1	16.39	0.1	MP-1-6	18.79	20.1	12.69	0	MP-1-2D	21.28	19.55
MP-1-2D	20.60	40.0	24.45	0.3	MP-1-7	22.06	17.2	36.01	0	MP-1-3D	48.11	40.09
MP-1-2S	20.98	32.2	21.11	0.2	MP-1-8	18.29	20.1	7.71	0	MP-1-4D	14.48	11.25
MP-1-3D	19.24	19.2	51.12	0								
MP-1-3S	19.10	23.1	18.21	0.2								
MP-1-4D	22.03	27.5	19.15	0.4								
MP-1-4S	22.08	26.3	17.18	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: 10/4/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

The system went into a compressor Alarm on Thursday, October 3, 2013 at approximately 1:30 pm. Responded to conduct routine O&M on Friday, October 4th and traced out alarm condition to the compressor temperature sensor. Removed temperature sensor and cleaned tips and rewired lines into main panel. Added oil to compressor and restarted system.

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 100 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:	10/18/2013
Time:	11:15
Weather:	Sunny
Outdoor Temperature:	~75° F
Inside Trailer Temperature:	~68° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	7,090.6	
Feed Air Pressure *	75	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	110	(psi)
Oxygen Purity	97.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	115	(psi)
(readings below are made from control panel)		
Delivery Air	116	(psi)
Element Outlet Temperature	133	(oF)
Running Hours	8,185	(hours)
Loading Hours	5,154	(hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	30	OW-1-5S	67.3	35	20	OW-1-9D	88.5	30	28
OW-1-2	96.5	40	30	OW-1-6S	67.0	30	19	OW-1-10D	87.2	30	28
OW-1-3	96.3	30	32	OW-1-7S	66.9	30	18	OW-1-11D	86.1	30	32
OW-1-4	95.0	40	31	OW-1-8S	66.7	30	19	OW-1-12D	85.3	30	31
OW-1-5D	93.9	40	29	OW-1-9S	66.0	30	19	OW-1-13D	84.7	30	30
OW-1-6D	92.4	30	30	OW-1-10S	54.6	25	15	OW-1-14D	84.1	30	27
OW-1-7D	91.1	30	32	OW-1-11S	54.1	30	15	OW-1-15D	83.3	30	31
OW-1-8D	89.6	30	30	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: 10/18/2013

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	16	OW-1-17D	79.5	40	15	OW-1-21S	49.3	40	14
OW-1-14S	52.7	30	16	OW-1-18D	78.3	40	31	OW-1-22S	49.3	30	13
OW-1-15S	52.2	40	15	OW-1-19D	78.9	30	30	OW-1-23S	48.8	35	13
OW-1-16SR	51.8	30	17	OW-1-20D	79.5	30	27	OW-1-24S	48.4	40	12
OW-1-17S	50.7	55	15	OW-1-21D	79.5	30	28	OW-1-25S	48.8	30	13
OW-1-18S	50.2	50	15	OW-1-22D	79.5	30	28	OW-1-26SR	48.3	30	15
OW-1-19S	49.7	40	15	OW-1-23D	78.7	35	28	OW-1-27S	48.3	30	16
OW-1-20S	49.3	35	15	OW-1-24D	78.2	35	27	OW-1-28S	48.3	30	14

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

O_2 Injection System #1

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

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

Date: 10/18/2013

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	20	15	OW-1-41D	73.6	30	24	OW-1-43	67.4	35	21
OW-1-38S	50.6	25	16	OW-1-42D	71.0	30	24	OW-1-44	66.6	30	20
OW-1-39S	50.7	30	15	OW-1-45	65.7	30	20	OW-1-51R	60.6	35	20
OW-1-40S	51.1	30	14	OW-1-46	64.3	40	18	OW-1-52	59.3	30	19
OW-1-41S	51.5	30	14	OW-1-47	63.4	30	18	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	14	OW-1-48	62.5	30	19	OW-1-54	60.0	20	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.

O_2 Injection System #1

Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	27.02	20.7	23.68	0	MP-1-5	26.81	18.3	23.87	0	MP-1-1D	19.11	14.00
MP-1-1S	27.06	40.0	31.14	0	MP-1-6	19.12	20.4	11.70	0	MP-1-2D	41.14	39.77
MP-1-2D	21.38	36.6	49.12	0	MP-1-7	22.38	19.6	28.35	0	MP-1-3D	27.15	20.75
MP-1-2S	21.61	38.7	19.27	0	MP-1-8	23.90	17.5	10.40	0.2	MP-1-4D	32.22	25.54
MP-1-3D	19.60	20.6	32.79	0								
MP-1-3S	19.45	23.4	27.40	0.4								
MP-1-4D	22.21	30.2	40.02	0								
MP-1-4S	22.36	27.7	35.50	0.2								

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: 10/18/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator for disposal. Repaired leak in oxygen hose on main manifold. Greased booster pump and auto drains. 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 was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 99 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	11/5/2013
Time:	13:02
Weather:	Sunny
Outdoor Temperature:	~45° F
Inside Trailer Temperature:	~60° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	7,330.4	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	55	(psi)
Oxygen Receiver Pressure *	95	(psi)
Oxygen Purity	98.8	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	115	(psi)
Element Outlet Temperature	165	(oF)
Running Hours	8,448	(hours)
Loading Hours	5,327	(hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	29	OW-1-5S	67.3	40	20	OW-1-9D	88.5	25	28
OW-1-2	96.5	35	30	OW-1-6S	67.0	40	20	OW-1-10D	87.2	25	29
OW-1-3	96.3	35	31	OW-1-7S	66.9	35	17	OW-1-11D	86.1	20	31
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	18	OW-1-12D	85.3	30	30
OW-1-5D	93.9	30	29	OW-1-9S	66.0	30	19	OW-1-13D	84.7	30	30
OW-1-6D	92.4	30	30	OW-1-10S	54.6	30	15	OW-1-14D	84.1	30	26
OW-1-7D	91.1	40	32	OW-1-11S	54.1	35	15	OW-1-15D	83.3	30	30
OW-1-8D	89.6	40	29	OW-1-12S	53.6	30	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: 11/5/2013

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	16	OW-1-17D	79.5	30	16	OW-1-21S	49.3	30	15
OW-1-14S	52.7	40	17	OW-1-18D	78.3	30	31	OW-1-22S	49.3	30	14
OW-1-15S	52.2	50	15	OW-1-19D	78.9	30	30	OW-1-23S	48.8	35	13
OW-1-16SR	51.8	55	16	OW-1-20D	79.5	45	26	OW-1-24S	48.4	30	12
OW-1-17S	50.7	50	16	OW-1-21D	79.5	40	28	OW-1-25S	48.8	30	12
OW-1-18S	50.2	40	15	OW-1-22D	79.5	30	28	OW-1-26SR	48.3	40	15
OW-1-19S	49.7	30	15	OW-1-23D	78.7	30	27	OW-1-27S	48.3	40	16
OW-1-20S	49.3	30	15	OW-1-24D	78.2	35	27	OW-1-28S	48.3	45	14

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

O_2 Injection System #1

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

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

Date: 11/5/2013

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

O_2 Injection System #1

Injection Bank 10				Injection Bank 11				Injection Bank 12			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37S	50.5	30	15	OW-1-41D	73.6	40	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	35	19
OW-1-39S	50.7	35	15	OW-1-45	65.7	20	20	OW-1-51R	60.6	35	20
OW-1-40S	51.1	35	14	OW-1-46	64.3	30	18	OW-1-52	59.3	30	19
OW-1-41S	51.5	30	15	OW-1-47	63.4	30	17	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	15	OW-1-48	62.5	30	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.

O_2 Injection System #1

Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	27.51	20.4	27.75	0.2	MP-1-5	27.33	18.8	21.14	0	MP-1-1D	20.88	15.14
MP-1-1S	27.58	39.1	28.18	0.1	MP-1-6	19.62	20.6	10.11	0	MP-1-2D	37.51	20.95
MP-1-2D	21.87	35.5	45.15	0	MP-1-7	22.90	19.6	29.94	0	MP-1-3D	38.81	31.12
MP-1-2S	22.11	36.0	18.80	0	MP-1-8	24.45	17.7	8.15	0.2	MP-1-4D	30.07	24.17
MP-1-3D	20.02	20.9	40.25	0								
MP-1-3S	19.95	26.5	30.11	0								
MP-1-4D	22.86	25.3	34.15	0.2								
MP-1-4S	22.92	22.5	36.76	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: 11/5/2013

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator for disposal. Repaired leak in oxygen hose at oxygen storage tank. 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 was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 104 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:	11/20/2013
Time:	12:52
Weather:	Sunny
Outdoor Temperature:	~40° F
Inside Trailer Temperature:	~62° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	7,518.5	
Feed Air Pressure *	110	(psi)
Cycle Pressure *	65	(psi)
Oxygen Receiver Pressure *	105	(psi)
Oxygen Purity	98.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	110	(psi)
(readings below are made from control panel)		
Delivery Air	106	(psi)
Element Outlet Temperature	174	(oF)
Running Hours	8,655	(hours)
Loading Hours	5,462	(hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	28	OW-1-5S	67.3	35	20	OW-1-9D	88.5	30	27
OW-1-2	96.5	25	29	OW-1-6S	67.0	30	20	OW-1-10D	87.2	30	29
OW-1-3	96.3	30	31	OW-1-7S	66.9	30	17	OW-1-11D	86.1	30	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	18	OW-1-12D	85.3	30	30
OW-1-5D	93.9	30	29	OW-1-9S	66.0	20	18	OW-1-13D	84.7	40	29
OW-1-6D	92.4	40	29	OW-1-10S	54.6	20	15	OW-1-14D	84.1	45	25
OW-1-7D	91.1	50	31	OW-1-11S	54.1	25	15	OW-1-15D	83.3	40	29
OW-1-8D	89.6	50	29	OW-1-12S	53.6	30	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: 11/20/2013

O_2 Injection System #1

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

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

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1	30	29	OW-1-29S	48.5	30	13	OW-1-33D	83.2	40	30
OW-1-26D	78.1	35	27	OW-1-30S	48.8	30	13	OW-1-34D	84.5	25	31
OW-1-27D	77.9	40	28	OW-1-31S	49.3	35	12	OW-1-35D	85.0	20	29
OW-1-28D	78.0	40	30	OW-1-32S	49.3	40	14	OW-1-36D	85.0	30	30
OW-1-29D	78.4	50	30	OW-1-33S	49.7	40	14	OW-1-37D	84.0	35	30
OW-1-30D	79.0	50	37	OW-1-34S	50.1	35	13	OW-1-38D	82.0	30	34
OW-1-31D	80.5	40	25	OW-1-35S	50.3	30	14	OW-1-39D	78.0	30	29
OW-1-32D	81.6	30	27	OW-1-36S	50.3	35	13	OW-1-40D	76.0	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.

Date: 11/20/2013

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	29	16	OW-1-41D	73.6	39	23	OW-1-43	67.4	30	19
OW-1-38S	50.6	34	15	OW-1-42D	71.0	30	22	OW-1-44	66.6	35	19
OW-1-39S	50.7	35	15	OW-1-45	65.7	20	20	OW-1-51R	60.6	34	20
OW-1-40S	51.1	35	14	OW-1-46	64.3	30	18	OW-1-52	59.3	30	19
OW-1-41S	51.5	30	15	OW-1-47	63.4	30	17	OW-1-53	60.0	30	17
OW-1-42S	51.3	30	16	OW-1-48	62.5	29	17	OW-1-54	60.0	31	16
				OW-1-49	61.5	30	17				
				OW-1-50	61.0	29	17				

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

O_2 Injection System #1

Monitoring Points Log					Monitoring Points Log					Monitoring Points Log		
ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle	DO (mg/L) Top
MP-1-1D	27.90	20.9	28.25	0.1	MP-1-5	27.66	22.9	23.13	0.1	MP-1-1D	25.00	19.18
MP-1-1S	27.92	38.7	26.11	0	MP-1-6	19.95	20.9	11.18	0	MP-1-2D	44.77	40.38
MP-1-2D	22.20	30.3	42.55	0	MP-1-7	23.24	18.9	28.58	0.2	MP-1-3D	40.02	34.47
MP-1-2S	22.44	23.7	20.18	0	MP-1-8	24.76	22.1	9.95	0.2	MP-1-4D	30.35	24.11
MP-1-3D	20.20	20.9	41.55	0								
MP-1-3S	20.24	24.2	29.14	0								
MP-1-4D	23.16	34.8	35.51	0								
MP-1-4S	23.20	32.1	34.47	0.2								

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: 11/20/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Perform 6-month O&M on all equipment between 11-19-13 and 11-22-13.

On November 15, 2013 at approximately 2:43 PM the system went into alarm. The alarm was due to a valve on the oxygen storage tank sticking open and causing the pressure to drop. The valve was repaired on Saturday, November 16, 2013. Total downtime for this alarm was approximately 16 hours.

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

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 101 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:	12/6/2013
Time:	12:40
Weather:	Rain
Outdoor Temperature:	~45° F
Inside Trailer Temperature:	~60° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	7,542.6	
Feed Air Pressure *	95	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	90	(psi)
Oxygen Purity	98.5	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	95	(psi)
(readings below are made from control panel)		
Delivery Air		(psi)
Element Outlet Temperature		(oF)
Running Hours	8,682	(hours)
Loading Hours	5,479	(hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5			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: 12/6/2013

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1			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.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1			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: 12/6/2013

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	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	22.31		0	MP-1-5	27.78	27.78	0.2	MP-1-1D	22.49
MP-1-1S	22.54	15.07	0	MP-1-6	20.03	6.91	0	MP-1-2D	25.95
MP-1-2D	27.95		0	MP-1-7	23.33	34.28	0.2	MP-1-3D	38.06
MP-1-2S	28.04	28.04	0	MP-1-8	24.83	14.18	0.3	MP-1-4D	22.57
MP-1-3D	20.48		0.2						
MP-1-3S	20.37	16.65	0						
MP-1-4D	23.45		0						
MP-1-4S	23.29	12.32	0.3						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/6/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Upon arrival at the site the system was down. No alarm was sent out by the telemetery unit. Mike inspected the telemetry unit and found a loose wire that needed to be repaired. Turned on system and unit shut down due to a compressor alarm. Took apart compressor and found oil on the base plate inside the unit. Found a cracked fitting on the oil feed line. Tried to find part in local stores but was unable to locate. A special order part was ordered from D&D Electric Motors. System was left off until part arrives. Wiped down all equipment and cleaned up all garbage & leaves from around fence areas.

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

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	12/26/2013
Time:	12:35
Weather:	Cloudy
Outdoor Temperature:	~39° F
Inside Trailer Temperature:	~59° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours: 7,542.6

Feed Air Pressure * _____ (psi)

Cycle Pressure * _____ (psi)

Oxygen Receiver Pressure * _____ (psi)

Oxygen Purity _____ (percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank * _____ (psi)

(readings below are made from control panel)

Delivery Air _____ (psi)

Element Outlet Temperature _____ (oF)

Running Hours 8,682 (hours)

Loading Hours 5,479 (hours)

* maximum reading during loading cycle

O_2 Injection System #1

Injection Bank 1				Injection Bank 2				Injection Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5			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: 12/26/2013

O_2 Injection System #1

Injection Bank 4				Injection Bank 5				Injection Bank 6			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1			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.

O_2 Injection System #1

Injection Bank 7				Injection Bank 8				Injection Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-25D	78.1			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: 12/26/2013

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	DO (mg/L) Bottom	PID (ppm)	ID	DTW	DO (mg/L) Bottom	PID (ppm)	ID	DO (mg/L) Middle
MP-1-1D	28.04		0	MP-1-5	27.85	21.12	0.4	MP-1-1D	13.31
MP-1-1S	28.12	11.21	0	MP-1-6	20.10	5.07	0	MP-1-2D	16.11
MP-1-2D	22.37		0	MP-1-7	23.35	26.61	0	MP-1-3D	20.21
MP-1-2S	22.57	20.77	0.1	MP-1-8	24.87	11.12	0.2	MP-1-4D	17.10
MP-1-3D	20.56		0.2						
MP-1-3S	20.41	13.55	0						
MP-1-4D	23.28		0						
MP-1-4S	23.34	10.78	0.2						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #1

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/26/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

System was still off upon arrivel. Attempted to install part received from D&D Electric Motors. It was determined that the wrong part was sent from Germany and that a new one would need to be ordered. System was left off until a new part arrives. Wiped down all equipment and cleaned up all garbage & leaves from around fence areas.

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

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	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)

Hours	19,333	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	94.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	105	(psi)
(readings below are made from control panel)		
Delivery Air	109	(psi)
Element Outlet Temperature	156	(^{o}F)
Running Hours	19,577	(hours)
Loading Hours	19,080	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	32	OW-2-9S	75'	30	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 (%O2)	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 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. 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:	9/20/2013
Time:	10:55
Weather:	Sunny
Outdoor Temperature:	~75° F
Inside Trailer Temperature:	~67° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	19,538	
Feed Air Pressure *	70	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	97.7	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	70	(psi)
(readings below are made from control panel)		
Delivery Air	75	(psi)
Element Outlet Temperature	171	(^{o}F)
Running Hours	19,787	(hours)
Loading Hours	19,287	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	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 (%O2)	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 X No
   * Unload system, wait until Delivery Air Pressure is less than 9 psi
2) Oil Level with system unloaded
   Low (red) X Normal (green) High (orange)
3) Oil added Yes X No
4) Oil changed Yes No X
5) Oil filter changed Yes No X
6) Air filter Changed Yes No X
7) Oil separator cleaned Yes No X
8) Terminal strips checked Yes X No

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

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:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	10/3/2013
Time:	10:52
Weather:	Sunny
Outdoor Temperature:	~75° F
Inside Trailer Temperature:	~66° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	19,720	
Feed Air Pressure *	90	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	98	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	80	(psi)
(readings below are made from control panel)		
Delivery Air	82	(psi)
Element Outlet Temperature	172	(^{o}F)
Running Hours	19,974	(hours)
Loading Hours	19,472	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	32	OW-2-9S	75'	30	21	OW-2-10D	97.2'	25	27
OW-2-3	94.3'	40	27	OW-2-10S	75'	30	30	OW-2-11D	100.8'	35	31
OW-2-4	94.7'	40	33	OW-2-11S	76.5'	30	21	OW-2-12	94'	30	19
OW-2-5	95.3'	40	30	OW-2-13S	75'	30	19	OW-2-13D	97'	35	36
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	19	OW-2-14	96.4'	40	28
OW-2-7	96'	30	29	OW-2-16S	75.5'	35	19	OW-2-15D	94.6'	40	30
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	18	OW-2-16D	94.1'	30	27
OW-2-9D	96.7'	30	30	OW-2-20S	79'	35	22	OW-2-17	95'	30	29

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 10/3/2013

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	29	OW-2-22S	76'	30	21	OW-2-26D	95'	30	37
OW-2-19	96.1'	20	31	OW-2-24S	77.8'	25	29	OW-2-27	93.5'	40	28
OW-2-20D	96.6'	30	32	OW-2-26S	74'	35	21	OW-2-28D	92.1'	40	28
OW-2-21	96.6'	30	30	OW-2-28S	76'	50	21	OW-2-29	92.2'	30	26
OW-2-22D	96.3'	30	27	OW-2-30S	67.8'	50	17	OW-2-30D	88'	35	26
OW-2-23	97.2'	30	28	OW-2-34	71'	30	18	OW-2-31	86'	30	28
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	20	OW-2-32	84'	30	37
OW-2-25	96'	30	29	OW-2-36	64.8'	30	19	OW-2-33	82'	30	31

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	19	OW-2-45	61.1'	30	20	MP-2-1	29.58	22.7	26.01	0.1
OW-2-38	62.1'	35	19	OW-2-46	61'	30	19	MP-2-2	30.95	19.5	47.72	0
OW-2-39	60'	30	19	OW-2-47	60.5'	35	20	MP-2-3S	30.83	19.4	45.12	0.2
OW-2-40	61.7'	35	19	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	30.96	40.0	41.15	0
OW-2-41	61.7'	35	19	MP-2-2	30.00	20.27		MP-2-4	19.55	20.9	21.29	0.2
OW-2-42	61.6'	45	20	MP-2-3S	21.75	24.69		MP-2-5	17.73	21.3	42.12	0.3
OW-2-43	61.4'	45	21	MP-2-3D	36.77	30.07						
OW-2-44R	60.6'	45	20	MP-2-5	14.47	18.66						

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: 10/3/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. 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 100 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:	10/17/2013
Time:	10:40
Weather:	Light Rain
Outdoor Temperature:	~70° F
Inside Trailer Temperature:	~67° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	19,914	
Feed Air Pressure *	80	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	100	(psi)
Oxygen Purity	97.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	90	(psi)
(readings below are made from control panel)		
Delivery Air	92	(psi)
Element Outlet Temperature	172	(^{o}F)
Running Hours	20,172	(hours)
Loading Hours	19,667	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	31	OW-2-9S	75'	40	21	OW-2-10D	97.2'	30	28
OW-2-3	94.3'	30	27	OW-2-10S	75'	20	31	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	30	33	OW-2-11S	76.5'	25	21	OW-2-12	94'	30	19
OW-2-5	95.3'	35	30	OW-2-13S	75'	25	20	OW-2-13D	97'	35	37
OW-2-6	95.7'	35	30	OW-2-15S	75'	30	19	OW-2-14	96.4'	35	28
OW-2-7	96'	35	30	OW-2-16S	75.5'	35	19	OW-2-15D	94.6'	35	30
OW-2-8	96.3'	30	31	OW-2-18S	74.5'	35	19	OW-2-16D	94.1'	35	27
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	30

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 10/17/2013

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'	20	30	OW-2-22S	76'	30	21	OW-2-26D	95'	40	37
OW-2-19	96.1'	25	31	OW-2-24S	77.8'	30	28	OW-2-27	93.5'	50	29
OW-2-20D	96.6'	30	32	OW-2-26S	74'	30	21	OW-2-28D	92.1'	55	28
OW-2-21	96.6'	30	31	OW-2-28S	76'	30	21	OW-2-29	92.2'	55	26
OW-2-22D	96.3'	30	27	OW-2-30S	67.8'	30	26	OW-2-30D	88'	40	25
OW-2-23	97.2'	30	28	OW-2-34	71'	35	17	OW-2-31	86'	30	28
OW-2-24D	97'	30	30	OW-2-35	69.2'	30	20	OW-2-32	84'	30	37
OW-2-25	96'	30	29	OW-2-36	64.8'	30	19	OW-2-33	82'	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. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	35	20	OW-2-45	61.1'	25	20	MP-2-1	29.95	22.9	21.71	0
OW-2-38	62.1'	30	19	OW-2-46	61'	30	19	MP-2-2	31.32	20.5	40.82	0.2
OW-2-39	60'	30	19	OW-2-47	60.5'	30	20	MP-2-3S	31.17	19.2	47.71	0.2
OW-2-40	61.7'	30	18	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	31.34	38.1	42.12	0
OW-2-41	61.7'	25	18	MP-2-2	30.11	21.25		MP-2-4	19.91	21.9	21.71	0
OW-2-42	61.6'	30	20	MP-2-3S	41.50	31.39		MP-2-5	18.07	21.2	30.42	0.4
OW-2-43	61.4'	30	21	MP-2-3D	33.39	24.88						
OW-2-44R	60.6'	30	20	MP-2-5	21.64	17.14						

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.

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 10/17/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Blew out air filters of 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 99 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	11/4/2013
Time:	12:35
Weather:	Sunny
Outdoor Temperature:	~41° F
Inside Trailer Temperature:	~67° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	20,166	
Feed Air Pressure *	115	(psi)
Cycle Pressure *	70	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	97.5	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	120	(psi)
(readings below are made from control panel)		
Delivery Air	120	(psi)
Element Outlet Temperature	162	(^{o}F)
Running Hours	20,431	(hours)
Loading Hours	19,922	(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	21	OW-2-10D	97.2'	30	29
OW-2-3	94.3'	35	26	OW-2-10S	75'	30	32	OW-2-11D	100.8'	30	31
OW-2-4	94.7'	30	32	OW-2-11S	76.5'	30	22	OW-2-12	94'	35	19
OW-2-5	95.3'	30	30	OW-2-13S	75'	35	20	OW-2-13D	97'	35	36
OW-2-6	95.7'	20	30	OW-2-15S	75'	40	20	OW-2-14	96.4'	45	27
OW-2-7	96'	25	30	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	40	30
OW-2-8	96.3'	20	32	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	27
OW-2-9D	96.7'	20	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	30

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/4/2013

O_2 Injection System #2

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	20	21	OW-2-45	61.1'	25	20	MP-2-1	30.48	22.9	22.69	0
OW-2-38	62.1'	25	20	OW-2-46	61'	30	19	MP-2-2	31.89	20.1	39.11	0.3
OW-2-39	60'	30	19	OW-2-47	60.5'	30	20	MP-2-3S	31.73	19.0	48.59	0.2
OW-2-40	61.7'	30	18	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	31.89	39.5	27.78	0.2
OW-2-41	61.7'	30	18	MP-2-2	35.05	21.55		MP-2-4	20.47	22.1	22.60	0
OW-2-42	61.6'	30	20	MP-2-3S	40.75	36.42		MP-2-5	18.66	21.5	28.42	0.3
OW-2-43	61.4'	30	21	MP-2-3D	19.90	16.81						
OW-2-44R	60.6'	30	20	MP-2-5	22.61	17.96						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/4/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Added small amount of oil to the compressor. Soaked up small amount of oil and water from separator unit for disposal. Blew out air filters of dust buildup. Took apart auto drain and cleaned due to float being stuck closed. 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 104 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and reading was 100 ppm.

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	11/19/2013
Time:	11:49
Weather:	Sunny
Outdoor Temperature:	~40° F
Inside Trailer Temperature:	~64° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	20,373	
Feed Air Pressure *	85	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	110	(psi)
Oxygen Purity	97.5	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	85	(psi)
(readings below are made from control panel)		
Delivery Air	95	(psi)
Element Outlet Temperature	169	(^{o}F)
Running Hours	20,644	(hours)
Loading Hours	20,131	(hours)

* maximum reading during loading cycle

O_2 Injection System #2

Injection Bank A				Injection Bank B				Injection Bank C			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	30	OW-2-9S	75'	40	20	OW-2-10D	97.2'	30	30
OW-2-3	94.3'	30	26	OW-2-10S	75'	45	31	OW-2-11D	100.8'	25	30
OW-2-4	94.7'	35	32	OW-2-11S	76.5'	35	22	OW-2-12	94'	30	20
OW-2-5	95.3'	35	29	OW-2-13S	75'	30	20	OW-2-13D	97'	30	36
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	20	OW-2-14	96.4'	35	27
OW-2-7	96'	30	30	OW-2-16S	75.5'	20	21	OW-2-15D	94.6'	30	30
OW-2-8	96.3'	30	31	OW-2-18S	74.5'	10	20	OW-2-16D	94.1'	30	28
OW-2-9D	96.7'	30	30	OW-2-20S	79'	10	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: 11/19/2013

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'	25	28	OW-2-22S	76'	45	20	OW-2-26D	95'	30	31
OW-2-19	96.1'	25	29	OW-2-24S	77.8'	55	27	OW-2-27	93.5'	30	29
OW-2-20D	96.6'	30	32	OW-2-26S	74'	60	20	OW-2-28D	92.1'	35	27
OW-2-21	96.6'	30	30	OW-2-28S	76'	40	20	OW-2-29	92.2'	35	28
OW-2-22D	96.3'	30	27	OW-2-30S	67.8'	30	26	OW-2-30D	88'	30	25
OW-2-23	97.2'	40	27	OW-2-34	71'	20	18	OW-2-31	86'	30	27
OW-2-24D	97'	45	28	OW-2-35	69.2'	30	20	OW-2-32	84'	30	36
OW-2-25	96'	50	30	OW-2-36	64.8'	30	20	OW-2-33	82'	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. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	Oxygen Headspace (%O2)	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	25	20	OW-2-45	61.1'	30	20	MP-2-1	29.80	22.5	23.78	0
OW-2-38	62.1'	30	20	OW-2-46	61'	25	20	MP-2-2	32.19	20.3	37.17	0.2
OW-2-39	60'	20	19	OW-2-47	60.5'	25	20	MP-2-3S	32.03	19.0	45.75	0.3
OW-2-40	61.7'	20	18	ID	DO (mg/L) Middle	DO (mg/L) Top		MP-2-3D	32.22	39.3	24.11	0.2
OW-2-41	61.7'	25	18	MP-2-2	34.11	28.81		MP-2-4	20.78	23.6	20.87	0.1
OW-2-42	61.6'	30	20	MP-2-3S	41.55	39.91		MP-2-5	18.95	21.4	25.13	0.3
OW-2-43	61.4'	30	21	MP-2-3D	20.33	18.17						
OW-2-44R	60.6'	30	21	MP-2-5	19.15	15.41						

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 11/19/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Performed 12-month O&M on all equipment between 11-19-13 and 11-22-13.

On November 20, 2013 at 1:31 AM the air compressor went into alarm. The alarm condition was due to the result of a power failure and the system restarted on it own when power was restored.

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

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

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

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	12/5/2013
Time:	11:48
Weather:	Rain
Outdoor Temperature:	~55° F
Inside Trailer Temperature:	~65° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	20,548	
Feed Air Pressure *	100	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	98.1	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	100	(psi)
(readings below are made from control panel)		
Delivery Air	89	(psi)
Element Outlet Temperature	172	(^{o}F)
Running Hours	20,833	(hours)
Loading Hours	20,314	(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'	25	19	OW-2-10D	97.2'	20	29
OW-2-3	94.3'	40	27	OW-2-10S	75'	30	31	OW-2-11D	100.8'	10	30
OW-2-4	94.7'	40	31	OW-2-11S	76.5'	30	21	OW-2-12	94'	10	21
OW-2-5	95.3'	40	30	OW-2-13S	75'	30	20	OW-2-13D	97'	25	35
OW-2-6	95.7'	35	29	OW-2-15S	75'	30	21	OW-2-14	96.4'	30	26
OW-2-7	96'	30	30	OW-2-16S	75.5'	35	22	OW-2-15D	94.6'	30	31
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	35	19	OW-2-16D	94.1'	30	29
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	30

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/5/2013

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

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	25	20	MP-2-1	30.94	20.02	0
OW-2-38	62.1'	30	21	OW-2-46	61'	30	19	MP-2-2	32.32	47.17	0
OW-2-39	60'	30	19	OW-2-47	60.5'	30	20	MP-2-3S	32.16	50.14	0
OW-2-40	61.7'	40	19					MP-2-3D	32.29	48.98	0.2
OW-2-41	61.7'	40	18					MP-2-4	20.90	8.89	0
OW-2-42	61.6'	45	20					MP-2-5	19.06	27.21	0
OW-2-43	61.4'	30	22								
OW-2-44R	60.6'	30	21								

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/5/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

On November 26, 2013 at 8:03 9M the air compressor went into alarm. The alarm was due to a low oil level in the compressor. Responded to alarm on November 27, 2013 and took apart compressor to find cause of oil leak. Wiped down motor and all motor contolrs to find leak. Found a loose fitting at the back of the compressor. Resealed all fittings at base of oil pump and on all cooling coils. Restarted the system at the end of the day. Total down time for this alarm was 16 hours.

Took apart air compressor to check for leaks and found none. Added small amount of oil to compressor. Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

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

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

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

Action Items:

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date:	12/24/2013
Time:	11:01
Weather:	Rain
Outdoor Temperature:	~38° F
Inside Trailer Temperature:	~60° F
Performed By:	Mike Ryan

O_2 Generator (AirSep)

Hours	20,798	
Feed Air Pressure *	80	(psi)
Cycle Pressure *	60	(psi)
Oxygen Receiver Pressure *	120	(psi)
Oxygen Purity	96.9	(percent)

* maximum reading during loading cycle

Compressor (Kaesar Rotary Screw)

Compressor Tank *	80	(psi)
(readings below are made from control panel)		
Delivery Air	79	(psi)
Element Outlet Temperature	167	(^{o}F)
Running Hours	21,092	(hours)
Loading Hours	20,568	(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'	25	19	OW-2-10D	97.2'	30	29
OW-2-3	94.3'	30	27	OW-2-10S	75'	30	31	OW-2-11D	100.8'	30	30
OW-2-4	94.7'	40	31	OW-2-11S	76.5'	30	21	OW-2-12	94'	20	22
OW-2-5	95.3'	30	31	OW-2-13S	75'	30	20	OW-2-13D	97'	30	35
OW-2-6	95.7'	35	29	OW-2-15S	75'	25	20	OW-2-14	96.4'	30	25
OW-2-7	96'	40	31	OW-2-16S	75.5'	30	21	OW-2-15D	94.6'	25	31
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	25	30
OW-2-9D	96.7'	30	29	OW-2-20S	79'	30	22	OW-2-17	95'	20	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: 12/24/2013

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	29	OW-2-22S	76'	20	21	OW-2-26D	95'	30	31
OW-2-19	96.1'	40	30	OW-2-24S	77.8'	30	26	OW-2-27	93.5'	40	30
OW-2-20D	96.6'	35	30	OW-2-26S	74'	25	22	OW-2-28D	92.1'	30	29
OW-2-21	96.6'	40	30	OW-2-28S	76'	30	19	OW-2-29	92.2'	30	25
OW-2-22D	96.3'	40	28	OW-2-30S	67.8'	30	25	OW-2-30D	88'	35	26
OW-2-23	97.2'	45	29	OW-2-34	71'	30	18	OW-2-31	86'	30	27
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	20	OW-2-32	84'	35	35
OW-2-25	96'	30	30	OW-2-36	64.8'	30	20	OW-2-33	82'	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. Injection banks D & E are turned off.

O_2 Injection System #2

Injection Bank G				Injection Bank H				Monitoring Points Log			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (mg/L) Bottom	PID (ppm)
OW-2-37	62.8'	30	19	OW-2-45	61.1'	30	20	MP-2-1	31.05	22.54	0
OW-2-38	62.1'	25	20	OW-2-46	61'	30	19	MP-2-2	32.37	46.14	0
OW-2-39	60'	30	20	OW-2-47	60.5'	30	19	MP-2-3S	32.20	45.51	0.3
OW-2-40	61.7'	30	19					MP-2-3D	32.35	43.33	0.2
OW-2-41	61.7'	30	18					MP-2-4	20.87	7.55	0
OW-2-42	61.6'	35	21					MP-2-5	19.04	27.11	0
OW-2-43	61.4'	40	22								
OW-2-44R	60.6'	30	21								

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

OXYGEN INJECTION OPERATION MAINTENANCE LOG SHEET

SYSTEM #2

Hempstead Intersection Street
Former MGP Site
Nassau County, New York

Date: 12/24/2013

OPERATIONAL NOTES

GA5 Air Compressor

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

AS-80 O_2 Generator

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

GENERAL SYSTEM NOTES

Trailer

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

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

Soaked up small amount of oil and water from separator unit for disposal. Adjusted compressor exhaust and heater in shed to warm the temperature in the shed. Wiped down all equipment and cleaned up all garbage and leaves from around fence areas.

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

DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 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: