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Groundwater Sampling, NAPL Monitoring/Recovery and Groundwater Treatment Performance Report for the Second Quarter of 2014 (April - June 2014) for the Hempstead Intersection Street Former Manufactured Gas Plant Site Villages of Hempstead & Garden City Nassau County, New York



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January 2015

### GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT FOR THE SECOND QUARTER OF 2014 (APRIL – JUNE)

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

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January 2015

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### **ACRONYMS AND ABBREVIATIONS**

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

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### **EXECUTIVE SUMMARY**

This report provides a summary of field activities, analytical results, and data interpretations associated with groundwater sampling, gauging and recovery of non-aqueous phase liquid (NAPL), and with the groundwater treatment systems at the Hempstead Intersection Street Former Manufactured Gas Plant (MGP) site during the Second Quarter (April, May, and June) 2014.

Quarterly groundwater monitoring and sampling were conducted on June 16-28, 2014. This included measuring the depth to groundwater and NAPL thickness in approximately 47 wells. Groundwater samples were collected from 31 wells and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL monitoring and recovery was conducted on April 17, April 29, June 2, June 16, and June 27, 2014 for a total of five events in the Second Quarter of 2014.

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

- The general direction of groundwater flow in the Second Quarter 2014 in the shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per feet (ft/ft) for shallow, intermediate, and deep water bearing zones.
- The 100 µg/L dissolved-phase plume extended approximately 890 ft south of the site boundary.
- Dense non-aqueous phase liquid (DNAPL) was detected and recovered in one existing well during the Second Quarter. The well (HIMW-021), is located along the west side of Wendell Street, south of the Intersection Street site.
- Approximately 1.85 gallons of NAPL were recovered during the Second Quarter of 2014. A total of 829.4 gallons of NAPL have been recovered from all recovery wells between April 2007 through June 2014.

### URS CORPORATION

• Based on a comparison between the Second Quarter 2014 and First Quarter 2014 data, the concentrations of total BTEX and total PAHs in the majority of monitoring wells remained stable. There were eight monitoring wells that had BTEX and PAH contaminant level fluctuations, primarily adjacent to the site boundaries, though one well that had a decrease in levels is at a moderate distance from the southern site boundary (HIMW-13I).

The first of two oxygen delivery systems (System No. 2) started operating in October 2010 and this system continued to promote aerobic conditions in the aquifer near the system during the Second Quarter of 2014. The second of two oxygen delivery systems (System No. 1) started operating in April 2011 and promoted aerobic conditions in the aquifer near the system during the Second Quarter of 2014.

Bimonthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by Island Pump & Tank Corporation. During the Second Quarter of 2014, Island Pump & Tank monitored System No. 1 during six events and System No. 2 during six events.

### **URS CORPORATION**

### **1.0 INTRODUCTION**

This quarterly report summarizes the field activities, analytical results, and data interpretations associated with groundwater sampling, gauging and recovery of NAPL and the monitoring of the groundwater treatment systems during the Second Quarter of 2014 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 Corporation (URS) performed the following activities during the Second Quarter of 2014:

- Measured the depth to groundwater and NAPL thickness in 47 off-site wells (on June 16, 2014), see Tables 1 and 2.
- Recovered NAPL from HIMW-021 on April 17, April 29, June 2, June 16, and June 27, 2014; see Table 3.
- Collected groundwater samples from 31 monitoring wells for laboratory analysis during the scheduled round of quarterly groundwater sampling (June 16-28, 2014), see Table 4.

Island Pump & Tank also performed water level measurements, well headspace monitoring with a photoionization detector (PID), and dissolved oxygen (DO) measurements with a DO meter (YSI 55A) on System No. 1 during six events and on System No. 2 during six events in the Second Quarter 2014. Monitoring frequency moved from bi-monthly to monthly during the Second Quarter 2014 and is conducted to assess the performance of groundwater treatment System No. 1 and System No. 2. This data is presented in Table 5.

### 2.0 FIELD ACTIVITIES

The field activities performed by URS during the Second Quarter of 2014 included the measurement of the depth to groundwater and NAPL thickness in 47 monitoring wells, the collection of groundwater samples from 31 monitoring wells, and recovery of NAPL from one monitoring well that contained measurable NAPL.

Monitoring wells and piezometers used for these activities are listed in Table 1. Second Quarter 2014 groundwater elevations and NAPL thickness values are presented in Table 2, NAPL recovery amounts are presented in Table 3, and the results of groundwater sampling are presented in Table 4.

Island Pump & Tank performed measurements to monitor the performance of the groundwater treatment Systems No. 1 and No. 2 approximately twice monthly during the Second Quarter of 2014. Monitoring frequency moved from bi-monthly to monthly during the Second Quarter 2014. Island Pump & Tank collected water level measurements with an electronic oil/water interface probe, well headspace monitoring data with a PID, and DO measurements with a YSI 55A dissolved oxygen meter on System No. 1 on April 4, April 21, May 5, May 16, May 30, and June 23, 2014 and on System No. 2 on April 3, April 18, May 2, May 15, May 29, and June 20, 2014. This data is presented in Table 5.

### 2.1 Groundwater Depth and NAPL Thickness Measurements

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

### 2.2 <u>NAPL Recovery</u>

NAPL recovery occurred between 2007 and the Third Quarter of 2011 when the In Situ Solidification (ISS) remediation project began. Approximately 745 gallons of NAPL were recovered between 2007 and 2011 when NAPL recovery ended upon the start of ISS treatment. All but one of the recovery wells were destroyed to complete the ISS work. NAPL recovery is currently limited to one well, HIMW-021, which is located on the south of the site in the sidewalk of the Professional Office Building (POB), outside the ISS area.

During Second Quarter 2014, NAPL levels were monitored in well HIMW-021 during five events: April 17, April 29, June 2, June 16, and June 27, 2014. DNAPL recovery was performed after monitoring on April 17 and April 29, 2014. NAPL levels were minimal (less than 0.5 foot) for the remainder of Second Quarter 2014, therefore recovery was not attempted. During the monitoring and recovery events, the well was gauged with a weighted cotton string to measure the DNAPL thickness. The DNAPL was recovered using a peristaltic pump and dedicated tubing and the recovered water and product was placed in a 55-gallon steel drum for subsequent offsite hazardous waste disposal.

The quantity of recovered DNAPL was estimated based on gallon markings on the side of the bucket used to collect the purged liquids during recovery. Table 3 presents Second Quarter NAPL thicknesses and NAPL recovery amounts from HIMW-021.

### 2.3 <u>Groundwater Sampling</u>

Low-flow groundwater sampling methods were used to sample groundwater, which included purging groundwater at a rate of between 100 and 500 milliliters per minute. The water was pumped through a flow-through cell and monitored for pH, conductivity, turbidity, DO, temperature, and oxidation-reduction potential (ORP). Purging was continued until stable conditions were achieved (defined as three consecutive stable readings [i.e.  $\pm$  10 percent] over a 15 minute period). Groundwater samples were collected afterwards and shipped under chain-of-custody procedures to Pace Analytical Laboratory for analysis of BTEX (United States Environmental Protection Agency [USEPA] Method 8260C) and PAHs (USEPA Method

8270D). Purge water was stored in an onsite storage tank for subsequent offsite disposal. The Data Usability Summary Report is presented in Appendix A.

There were 31 monitoring wells sampled during the Second Quarter June 17 -27, 2014 groundwater sampling event. Analytical results from the quarterly groundwater sampling event and the additional monitoring wells are presented in Table 4.

### 2.4 Groundwater Oxygenation System Operation

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

The performance of System No. 1 and System No. 2 was monitored by Island Pump & Tank during the Second Quarter 2014 through the measurement of water levels, headspace gas, and water quality parameters in the groundwater approximately twice per month, see Table 5. Monitoring frequency moved from bi-monthly to monthly during the Second Quarter 2014. Island Pump & Tank performed water level measurements with an electronic oil/water interface probe, well headspace monitoring with a PID, and DO measurements with a DO meter (YSI 55A). These measurements were collected during the Second Quarter and were taken during six events for System No. 1 on April 4, April 21, May 5, May 16, May 30, and June 23, 2014 and during six events for System No. 2 on April 3, April 18, May 2, May 15, May 29, and June 20, 2014. The full system data is included in Appendix B.

### 3.0 **RESULTS**

### 3.1 Dissolved-Phase Plume

The extent of the dissolved-phase groundwater plume boundary and the data for Second Quarter 2014 are shown in Figure 4. The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100 micrograms per liter ( $\mu$ g/L), extends approximately 890 feet south of the site boundary. Based on comparisons to previous quarterly

groundwater monitoring data, the concentrations of total BTEX or PAHs in groundwater sampled during the Second Quarter in the majority of monitoring wells remained stable. Five monitoring wells showed decreases in BTEX or PAH or both (HIMW-005I, HIMW-008S, HIMW-012I, HIMW-013I, and HIMW-024), one monitoring well showed an increase in BTEX levels only (HIMW-025), and one showed an increase in PAH levels only (HIMW-005D).

PAH results for HIMW-014I were not reported by the laboratory because of a lab accident where both of the two 1-liter amber sample bottles broke during sample preparation. There was no additional volume remaining to analyze. See Appendix A, Data Usability Summary Report, Section V, for a complete discussion.

In June 2014, 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 17  $\mu$ g/L for BTEX and 38  $\mu$ g/L for PAHs (intermediate well, HIMW-015I). The concentrations of total BTEX or total PAHs in wells located between the site and the HIMW-015 cluster varied from "not detected" to 1,483  $\mu$ g/L for BTEX (shallow well, HIMW-027S) and 2,434  $\mu$ g/L for PAHs (intermediate well, HIMW-027S), see Figure 4 and Table 4.

The following are the wells that showed notable changes for Second Quarter 2014. In numerical order, wells HIMW-005I & 005D, HIMW-008S, HIMW-012I, HIMW-013I, HIMW-024, and HIMW-025 are discussed below:

- For HIMW-005I, total BTEX concentrations decreased slightly from 142 µg/L in the First Quarter to 112 µg/L in the Second Quarter 2014. PAH concentrations decreased to a greater degree from 3,117 µg/L in the First Quarter to 2,434 µg/L in the Second Quarter 2014. These values are within the range of values recorded within the four quarters.
- For HIMW-005D, total BTEX, at 32 μg/L, stayed virtually the same as in the previous two quarters. PAH concentrations increased from 509 μg/L in the First Quarter to 735 μg/L in the Second Quarter 2014. A similar value was last recorded in First Quarter 2013.

- For HIMW-008S, total BTEX concentrations decreased substantially from 2,941 ug/L in the First Quarter to 14 ug/L in the Second Quarter 2014. This is in line with historic values recorded in the past two years. PAH concentrations were essentially the same for both quarters.
- For HIMW-012I, total BTEX concentrations were virtually the same in First Quarter (25 μg/L) and Second Quarter 2014 (18 μg/L), while the PAH values decreased from 131 μg/L in the First Quarter to 93 μg/L in the Second Quarter 2014, putting the well cluster outside of the 100 μg/L contour line on Figure 4.
- For HIMW-013I, total BTEX concentrations decreased from 196 µg/L in the First Quarter to 36 µg/L in the Second Quarter 2014. PAH concentrations decreased from 129 µg/L in the First Quarter to 62 µg/L in the Second Quarter 2014. These BTEX and PAH values are a return to concentrations seen in First and Second Quarter 2013.
- For HIMW-024, total BTEX concentrations decreased from 447 µg/L in the First Quarter to 181 µg/L in the Second Quarter 2014. PAH concentrations also decreased from 699 ug/L in the First Quarter to 42 µg/L in the Second Quarter 2014. The contaminant concentrations in this well over the last four quarters have ranged from non-detect to the high values of the First Quarter 2014.
- For HIMW-025, total BTEX concentrations increased from 532 μg/L in the First Quarter to 1,320 μg/L in the Second Quarter 2014. PAH concentrations increased from 131 μg/L in the First Quarter to 240 μg/L in the Second Quarter 2014. These concentrations have been increasing since Fourth Quarter 2013.

### 3.2 <u>Potentiometric Heads and NAPL Thickness</u>

Potentiometric heads and NAPL thickness measurements for Second Quarter 2014 are presented in Table 2. Potentiometric surface maps for shallow, intermediate, and deep groundwater zones were developed using this data and are shown in Figures 5, 6, and 7 for Second Quarter 2014. The data for Second Quarter 2014 indicates that the direction of groundwater flow within the well field was south at an average gradient of approximately 0.002

ft/ft for shallow, intermediate, and deep water bearing zone. These values are consistent with historical data.

DNAPL was observed in one well during the Second Quarter 2014. The well (HIMW-021) is located along the west side of Wendell Street near the POB, located south of the site (Figure 8). All wells in the parking lot of the POB were decommissioned in late June 2013 during ISS work. Wells located within the property boundary of the site were previously decommissioned in Fourth Quarter 2011 with the start of the ISS remediation project.

### 3.3 Groundwater Analytical Results

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

A Data Usability Summary Report (DUSR) was prepared following the guidelines provided in 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 completeness of all required deliverables; holding times; quality control (QC) results (blanks, instrument tunes, calibration standards, matrix spike recoveries, duplicate analyses, and laboratory control sample recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers. All sample analyses were found to be compliant with the method and validation criteria and the data is useable as reported, except where noted in the DUSR.

### 3.4 NAPL Recovery Volumes

In the Second Quarter, 2014, NAPL recovery was performed for well HIMW-021 which is the only remaining product recovery well for the Site. This well is located on the south of the site in the sidewalk of the POB along Wendell Street. The volume of NAPL recovered in the Second Quarter 2014 from this well was approximately 1.85 gallons. Recovery was performed on April 17 and April 29, 2014. Monitoring events continued during the quarter on June 2, June 16, and June 27. DNAPL levels remained below 0.5 ft during June 2014 and no additional recovery was performed during that month.

A total of approximately 829.4 gallons of NAPL have been recovered from all of the recovery wells for the period of April 2007 through June 2014. Table 3 lists the amount of DNAPL gauged in HIMW-021 and the total amount of product recovered during each event.

### 3.5 Groundwater Treatment System Performance

Groundwater treatment system performance data for Second Quarter 2014, as collected and reported by Island Pump & Tank, is presented in Table 5.

### System No. 1

System No. 1 DO readings reported in the Second Quarter 2014 ranged from a low of 10.63 mg/L at MP-1-8 on June 23, 2014 to a high of 48.89 mg/L at MP-1-7 on April 4, 2014. The overall average DO reading was 28.22 mg/L. DO readings were collected from either the middle or bottom of the water column. There were high dissolved oxygen concentration readings (over 40 mg/L) during the Second Quarter for MP-1-4S and MP-1-7 during the April 4, April 21, and May 5 events and for MP-1-2D on June 23. There were no PID headspace readings above 1 ppm for System No. 1 in the Second Quarter 2014 during the April and May 5 events. On May 16 and May 30, the only PID reading over 1 ppm was recorded at MP-1-2S where the headspace was 1.5 ppm and 1.1, respectively. On June 23, seven of the twelve monitoring points had PID readings over 1 ppm that ranged from 1.3 ppm to 16.2 ppm.

There were several repairs conducted during the routine maintenance events that coincided with the monitoring. On April 7, the maintenance technician investigated a low oxygen level in the oxygen receiver tank and replaced a burned out solenoid valve. Oxygen levels returned to normal after this replacement. On April 22, low pressure at MP-1-19S was investigated and it was determined that there was a leak in the oxygen line between the well head and the system shed. The monitoring point was taken off-line at this time and the leak was not repaired as the monitoring results indicate the system is operating effectively without this well.

On June 23, a low oxygen level was found in the oxygen receiver tank and restored to normal levels by cleaning a dust build up.

Based on the data collected during the Second Quarter of 2014, System No. 1 is performing as expected and creating an aerobic environment in the aquifer.

### System No. 2

System No. 2 DO readings reported in the Second Quarter 2014 ranged from 17.70 mg/L at MP-2-5 on April 3, 2014 to 49.88 mg/L at MP-2-3D on May 2, 2014. The average DO reading was 32.11 mg/L. DO readings for this quarter were collected from the bottom of the water column. The wells with consistently high dissolved oxygen concentrations (over 40 mg/L) were MP-2-3S and MP-2-3D. There were no PID headspace readings above 1 ppm for System No. 2 in the Second Quarter 2014 during the April and May 2 events. On May 15, the only PID reading over 1 ppm was recorded at MP-2-5, where the headspace was 2.9 ppm. During the May 29 event, MP-2-1 at 2.3 ppm and MP-2-5, at 1.2 ppm, were the only wells with PID readings over 1 ppm. On June 23, MP-2-1, MP-2-4, and MP-2-5 had PID readings over 1 ppm with 2.0 ppm, 1.2 ppm, and 1.9 ppm, respectively.

There were several repairs conducted during the routine maintenance events that coincided with the monitoring. On May 15, the maintenance technician investigated a low oxygen level and cleaned heavy dirt build up from a solenoid valve. On May 29, oxygen levels in the oxygen receiver tank were on the rise and the technician fixed the condition by checking and maintaining the equipment. On June 20, the technician found the system off when he arrived to perform maintenance. It was determined the dryer unit tubing was leaking air. This unit was replaced in the Third Quarter (August 4, 2014).

Based on the data collected during the Second Quarter of 2014, System No. 2 is performing as expected and creating an aerobic environment in the aquifer.

### 4.0 SUMMARY

Following is a summary of the Second Quarter 2014 groundwater sampling, NAPL monitoring and recovery data, and groundwater treatment performance presented in this report:

- The general direction of groundwater flow in the Second Quarter 2014 in the shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 ft/ft for shallow, intermediate, and deep water bearing zones.
- The 100 µg/L dissolved-phase plume extended approximately 890 ft south of the site boundary.
- DNAPL was recovered from the one existing well (HIMW-021) monitored during the Second Quarter 2014. The well (HIMW-021) is located immediately south of the site along the west side of Wendell Street near the POB. The well was monitored for product five times and 1.85 gallons of DNAPL was recovered during two events during Second Quarter 2014.
- Approximately 829.4 gallons of NAPL has been recovered from all the recovery wells for the period of April 2007 through June 2014.
- Based on a comparison between the Second Quarter 2014 data and previous quarterly data, the concentrations of total BTEX and total PAHs remained relatively stable. There were several monitoring wells, primarily adjacent to the site boundaries, that showed fluctuating BTEX and PAH values, as compared to previous data.
- The first of two oxygen delivery systems (System No. 2), brought on line in October 2010, is promoting aerobic conditions in the aquifer near the system.
- The second of two oxygen delivery systems (System No. 1), brought on line in April 2011, is promoting aerobic conditions in the aquifer near the system.
- Bimonthly headspace and water quality parameters were collected from the monitoring points for Systems No. 1 and No. 2 by Island Pump & Tank. During the Second Quarter 2014, Island Pump & Tank monitored System No. 1 and No. 2 during six events. Both systems are performing as expected and creating an aerobic environment in the aquifer.

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## 2014 2nd QUARTER GROUNDWATER SAMPLING,<br/>NAPL MONITORING, AND GROUNDWATERHEMPSTEAD INTERSECTION<br/>STREET FORMER MGP SITE<br/>TREATMENT PERFORMANCE REPORT

URS, 2014b. Groundwater Sampling and Groundwater Treatment Performance Report for the First Quarter of 2014 (January – March 2014) for the Hempstead Intersection Street Former Manufactured Gas Plant Site. November.

### **TABLES**

### Table 1

### Summary of Field Activities: Water Level Measurements, NAPL Thickness Measurements, NAPL Recovery, and Water Quality Sampling Second Quarter 2014 <sup>(1), (2)</sup> Hempstead Intersection Street Former MGP Site

Well ID		econd Quarte 6 to June 28,		NAPL Monitoring and DNAPL Recovery Events						
Weirib	Water	NAPL	Water	April 17,	April 29,	June 2,	June 16,	June 27,		
	Level	Thickness	Quality	2014	2014	2014	2014	2014		
HIMW-003S	X		X							
HIMW-003I HIMW-003D	X X		X X							
HIMW-003D	X		^							
HIMW-0043	X									
HIMW-004D	X									
HIMW-004D	X		Х							
HIMW-0053	X		X							
HIMW-005D	X		X							
HIMW-008S	X		X							
HIMW-0083	X		X							
HIMW-008D	X		X							
HIMW-009S	X		~							
HIMW-009I	X									
HIMW-009D	X									
HIMW-010S	X									
HIMW-010I	X									
HIMW-011S	X									
HIMW-011I	X									
HIMW-011D	X									
HIMW-012S	X		Х							
HIMW-0120	X		X							
HIMW-012D	X		X							
HIMW-013S	X		X							
HIMW-013I	X		X							
HIMW-013D	X		X							
HIMW-014I	X		X							
HIMW-014D	X		X							
HIMW-015I	X		X							
HIMW-015D	X		X							
HIMW-020S	X		X							
HIMW-0201	X		X							
HIMW-021	Х	Х		Х	Х	Х	Х	Х		
HIMW-022	X		Х							
HIMW-023	X		X							
HIMW-024	X		X							
HIMW-025	X		X							
HIMW-026I	X		X							
HIMW-026D	X		X							
HIMW-027S	X		X							
HIMW-027I	X		X							
HIMW-0271	X		X							
HIMW-0285	X		X							
111111111-0201	^		^							

### Table 1

### Summary of Field Activities: Water Level Measurements, NAPL Thickness Measurements, NAPL Recovery, and Water Quality Sampling Second Quarter 2014 <sup>(1), (2)</sup> Hempstead Intersection Street Former MGP Site

Well ID		econd Quarte 5 to June 28,		NAPL Monitoring and DNAPL Recovery Events						
Weirib	Water	NAPL	Water	April 17,	April 29,	June 2,	June 16,	June 27,		
	Level	Thickness	Quality	2014	2014	2014	2014	2014		
PZ-02	Х									
PZ-03	Х									
OSMW-02	Х									

Notes:

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

2 Blank field indicates that the activity was not performed.

Shaded cell indicates abandoned or destroyed well.

### Table 2 Groundwater and NAPL Measurements Second Quarter 2014 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 <sup>(1)</sup>
		[ft bgs]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft amsl]
HIMW-003S	6/16/2014	65.00	ND	17.59		34.50	0	0.00	
HIMW-003I	6/16/2014	64.94	ND	17.92	ND	85.15	0	0.00	
HIMW-003D	6/16/2014	65.26	ND	18.67	ND	142.71	0	0.00	
HIMW-004S	6/16/2014	72.74	ND	25.94	ND	41.61	0	0.00	
HIMW-004I	6/16/2014	72.78	ND	26.10	ND	90.51	0	0.00	46.68
HIMW-004D	6/16/2014	72.65	ND	26.81	ND	177.00	0	0.00	45.84
HIMW-005S	6/16/2014	67.19	ND	20.26	ND	38.92	0	0.00	46.93
HIMW-005I	6/16/2014	67.22	ND	20.49	ND	90.65	0	0.00	46.73
HIMW-005D	6/16/2014	67.22	ND	21.21	ND	136.30	0	0.00	46.01
HIMW-008S	6/16/2014	65.04	ND	18.51	ND	36.95	0	0.00	46.53
HIMW-008I	6/16/2014	65.14	ND	18.69	ND	75.01	0	0.00	46.45
HIMW-008D	6/16/2014	64.93	ND	18.51	ND	114.61	0	0.00	46.42
HIMW-009S	6/16/2014	70.03	ND	23.03	ND	39.61	0	0.00	47.00
HIMW-009I	6/16/2014	69.93	ND	23.00	ND	80.44	0	0.00	46.93
HIMW-009D	6/16/2014	69.96	ND	23.12	ND	122.86	0	0.00	46.84
HIMW-010S	6/16/2014	71.60	ND	23.67	ND	39.21	0	0.00	47.93
HIMW-010I	6/16/2014	71.47	ND	23.49	ND	89.72	0	0.00	47.98
HIMW-011S	6/16/2014	71.62	ND	24.07	ND	40.21	0	0.00	47.55
HIMW-011I	6/16/2014	71.43	ND	23.94	ND	93.25	0	0.00	47.49
HIMW-011D	6/16/2014	71.39	ND	24.95	ND	122.30	0	0.00	46.44
HIMW-012S	6/16/2014	61.58	ND	16.21	ND	33.20	0	0.00	45.37
HIMW-012I	6/16/2014	61.59	ND	16.09	ND	74.55	0	0.00	45.50
HIMW-012D	6/16/2014	61.82	ND	18.69	ND	128.16	0	0.00	43.13
HIMW-013S	6/16/2014	72.83	ND	29.31	ND	48.70	0	0.00	43.52
HIMW-013I	6/16/2014	72.60	ND	29.08	ND	81.63	0	0.00	43.52
HIMW-013D	6/16/2014	72.53	ND	29.08	ND	122.03	0	0.00	43.45
HIMW-014I	6/16/2014	71.71	ND	28.15	ND	95.88	0	0.00	43.56
HIMW-014D	6/16/2014	71.59	ND	31.72	ND	151.95	0	0.00	39.87
HIMW-015I	6/16/2014	64.18	ND	23.91	ND	92.69	0	0.00	40.27
HIMW-015D	6/16/2014	63.96	ND	26.50	ND	152.36	0	0.00	37.46
HIMW-020S	6/16/2014	70.43	ND	24.39	ND	36.83	0	0.00	46.04
HIMW-020I	6/16/2014	70.30	ND	24.25	ND	74.89	0	0.00	46.05

### Table 2 Groundwater and NAPL Measurements Second Quarter 2014 Hempstead Intersection Street Former MGP Site

Well ID	DateElevation of TORDepth to LNAPLDepth to WaterDepth to DNAPLWell Depth[ft bgs][ft][ft][ft][ft]		Date of TOR LNAPL Water DNAPL Depth of LNAPL of DN		Thickness of DNAPL [ft]	Corrected Potentiometric Head <sup>(1)</sup> [ft amsl]			
HIMW-021	6/16/2014	NM	ND	18.74		45.30	0	0.20	
HIMW-022	6/16/2014	74.07	ND	29.29	ND	64.40	0	0.00	44.78
HIMW-023	6/16/2014	74.41	ND	29.46	ND	75.48	0	0.00	44.95
HIMW-024	6/16/2014	59.83	ND	14.98	ND	54.93	0	0.00	44.85
HIMW-025	6/16/2014	62.75	ND	16.40	ND	52.25	0	0.00	46.35
HIMW-26I	6/16/2014	NM	ND	22.21	ND	84.85	0	0.00	NM
HIMW-26D	6/16/2014	NM	ND	22.34	ND	137.49	0	0.00	NM
HIMW-27S	6/16/2014	NM	ND	23.26	ND	41.57	0	0.00	NM
HIMW-27I	6/16/2014	NM	ND	22.69	ND	70.31	0	0.00	NM
HIMW-28S	6/16/2014	NM	ND	23.63	ND	41.39	0	0.00	NM
HIMW-28I	6/16/2014	NM	ND	23.30	ND	71.61	0	0.00	NM
PZ-02	6/16/2014	72.96	ND	24.79	ND	35.45	0	0.00	48.17
PZ-03	6/16/2014	64.58	ND	16.73	ND	29.89	0	0.00	47.85
OSMW-02	6/16/2014	71.59	ND	24.27	ND	45.05	0	0.00	47.32
OSMW-03	6/16/2014	71.39	ND	24.06	ND	44.68	0	0.00	47.33

### Notes:

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

	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 3NAPL RecoverySecond Quarter 2014Hempstead Intersection Street Former MGP Site

			Second Quarter 2014													
			April 17, 20	14		April 29, 20	14		June 2, 2014			June 16, 20	14	June 27, 2014		
	Well		Thickness			Thickness		Thickness	Thickness	Volume		Thickness			Thickness	
Well ID		of LNAPL	of DNAPL	of NAPL	of LNAPL	of DNAPL	of NAPL	of LNAPL	of DNAPL	of NAPL	of LNAPL	of DNAPL	of NAPL	of LNAPL	of DNAPL	of NAPL
	(inches)			Removed <sup>(1)</sup>			Removed <sup>(1)</sup>			Removed <sup>(1)</sup>			Removed <sup>(1)</sup>			Removed (1)
		[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]	[ft]	[ft]	[gal]
HIMW-021	6	N/A	1.00	1.00	N/A	0.80	0.85	N/A	0.05	0.00	N/A	0.2	0.00	N/A	0.4	0.00
		Volume Re	moved	1.00	Volume Removed 0.85			Volume Removed 0.00		Volume Re	moved	0.00	Volume Re	emoved	0.00	
		Total product volume recovered during the Second Quarter 2014:							1.85							

829.4 gallons

Total volume of NAPL recovered in Second Quarter 2014:1.85 gallons

### Total volume of NAPL recovered since April 2007:

### Notes:

(1) Volume of product recovered was estimated by using the markings on a five gallon bucket.

LNAPL Light Non-Aqueous Phase Liquid

DNAPL Dense Non-Aqueous Phase Liquid

ND NAPL Not Detected

NM Not Measured

### Table 4

### Dissolved-Phase Concentrations of Total BTEX and Total PAH Compounds Second Quarter of 2014 Hempstead Intersection Street Former MGP Site

	Second Quarter 2014							
Well ID	June 17 - June 27, 2014							
	BTEX	PAH						
	[ug/L]	[ug/L]						
HIMW-003S	ND	ND						
HIMW-003I	ND	ND						
HIMW-003D	ND	ND						
HIMW-004S								
HIMW-004I								
HIMW-004D								
HIMW-005S	ND	ND						
HIMW-005I	112	2,434						
HIMW-005D	32	735						
HIMW-008S	14	2						
HIMW-008I	ND	ND						
HIMW-008D	ND	ND						
HIMW-009S								
HIMW-009I								
HIMW-009D								
HIMW-010S								
HIMW-010I								
HIMW-011S								
HIMW-011I								
HIMW-011D								
HIMW-012S	ND	ND						
HIMW-012I	18	93						
HIMW-012D	ND	ND						
HIMW-013S	ND	ND						
HIMW-013I	36	62						
HIMW-013D	3	16						
HIMW-014I	12	NA						
HIMW-014D	ND	ND						
HIMW-015I	17	38						
HIMW-015D	ND	ND						
HIMW-020S	ND	ND						
HIMW-0201	2	7						
HIMW-021								
HIMW-022	ND	ND						
HIMW-023	ND	ND						
HIMW-024	182	38						
HIMW-025	1,320	240						
HIMW-026I	ND	ND						
HIMW-026D	26	794						
HIMW-027S	1,483	1,441						
HIMW-0271	ND	ND						
HIMW-028S	175	372						
HIMW-0281	ND	ND						
PZ-02								
PZ-03								

### Notes:

	A blank field is "Not Sampled". NAPL is periodically identified in this well.
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
PAH	Poly Aromatic Hydrocarbons
ug/L	micrograms per liter
ND	Not Detected.
NA	Not Analyzed For

# Table 5Groundwater Treatment Performance Monitoring<br/>Second Quarter 2014Hempstead Intersection Street Former MGP Site

## System #1

	April 4, 2014			April 21, 2014			May 5, 2014			May 16, 2014			May 30, 2014			June 23, 2014		
ID	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)
MP-1-1S	27.28	0.0	32.38	26.91	0.0	35.45	26.20	0.0	32.12	25.75	0.0	32.05	25.65	0.1	27.87	25.88	0.0	21.14
MP-1-1D	27.22	0.0	35.11	26.87	0.0	30.12	26.12	0.0	30.98	25.68	0.3	25.27	25.56	0.4	24.91	25.82	0.0	22.43
MP-1-2S	21.75	0.0	26.16	21.42	0.2	26.64	20.67	0.4	28.83	20.26	1.5	33.86	20.13	1.1	28.80	20.39	0.0	32.15
MP-1-2D	21.01	0.0	31.54	20.74	0.2	29.94	20.12	0.3	26.00	19.83	0.0	39.11	19.90	0.0	36.25	20.15	0.0	42.18
MP-1-3S	19.49	0.0	13.88	19.25	0.2	16.87	18.37	0.1	21.12	18.11	0.0	27.33	17.98	0.0	32.47	18.21	1.3	20.95
MP-1-3D	19.69	0.2	30.12	19.41	0.0	19.18	18.62	0.0	19.55	18.25	0.0	19.25	18.12	0.0	26.77	18.42	2.4	17.94
MP-1-4S	22.45	0.2	45.05	22.17	0.0	42.10	21.33	0.0	41.45	21.05	0.0	19.75	20.92	0.0	31.95	21.22	6.3	25.18
MP-1-4D	22.40	0.3	29.94	22.15	0.0	39.18	21.30	0.0	35.88	21.03	0.0	27.91	20.87	0.0	27.47	21.17	3.7	31.16
MP-1-5	27.02	0.0	32.44	25.66	0.0	30.58	25.93	0.0	26.15	25.48	0.4	29.12	25.37	0.3	31.38	25.61	4.1	30.25
MP-1-6	19.20	0.0	13.12	18.95	0.0	12.90	18.07	0.0	13.01	17.80	0.0	19.30	17.60	0.0	22.89	17.91	0.0	13.84
MP-1-7	22.57	0.0	48.89	22.20	0.0	46.02	21.36	0.0	45.11	21.08	0.0	38.55	20.95	0.0	38.72	21.23	16.2	36.18
MP-1-8	23.98	0.0	12.13	23.72	0.0	12.67	22.88	0.0	12.88	22.59	0.0	20.19	22.47	0.0	19.80	22.75	3.2	10.63

### **Abbreviations**

DTW: Depth to water (feet)

O<sub>2</sub>: Oxygen measurement of well headspace (percent oxygen)

PID: Photoionization Detector measurement of well headspace (parts per million)

DO: Dissolved Oxygen concentration (percent or milligrams per liter)

NA: Not Accessible

NM: Not Measured

ppm: parts per million mg/L: milligrams per liter ft: feet

### Table 5 Groundwater Treatment Performance Monitoring Second Quarter 2014 Hempstead Intersection Street Former MGP Site

### . . шО

								Syste	m #2									
	April	3, 2014		А	pril 18, 20 <sup>-</sup>	14	Μ	lay 2, 2014		Ν	lay 15, 201	4	Ν	/lay 29, 201	4	JI	une 20, 20	14
ID	DTW (ft)	PID (ppm)	DO (mg/L) Bottom	DTW (ft)	PID (ppm)	DO (mg/L) Bottom	DTW (ft)	PID (ppm)	DO (mg/L) Bottom	DTW (ft)	PID (ppm)	DO (mg/L) Bottom	DTW (ft)	PID (ppm)	DO (mg/L) Bottom	DTW (ft)	PID (ppm)	DO (mg/L) Bottom
MP-2-1	30.19	0.0	24.14	29.87	0.1	33.35	29.34	0.0	30.99	28.63	0.9	25.11	28.53	2.3	27.87	28.75	2.0	28.87
MP-2-2	31.56	0.0	37.98	31.21	0.4	35.48	30.70	0.2	35.45	30.00	0.0	32.13	29.90	0.0	35.41	30.07	0.0	34.14
MP-2-3S	31.37	0.0	38.18	31.08	0.2	48.42	30.46	0.1	48.12	29.91	0.0	30.44	29.79	0.0	44.12	29.96	0.0	45.15
MP-2-3D	31.51	0.0	44.50	31.18	0.0	49.83	30.55	0.0	49.88	29.63	0.0	27.11	29.58	0.0	46.17	30.10	0.0	41.11
MP-2-4	20.05	0.0	21.25	19.79	0.3	21.94	19.08	0.4	18.14	18.61	0.0	23.35	18.50	0.6	23.77	18.68	1.2	21.18
MP-2-5	18.20	0.0	17.70	17.97	0.0	20.44	17.22	0.0	22.58	16.80	2.9	17.88	16.71	1.2	29.95	16.85	1.9	24.00

### Abbreviations

DTW: Depth to water (feet)

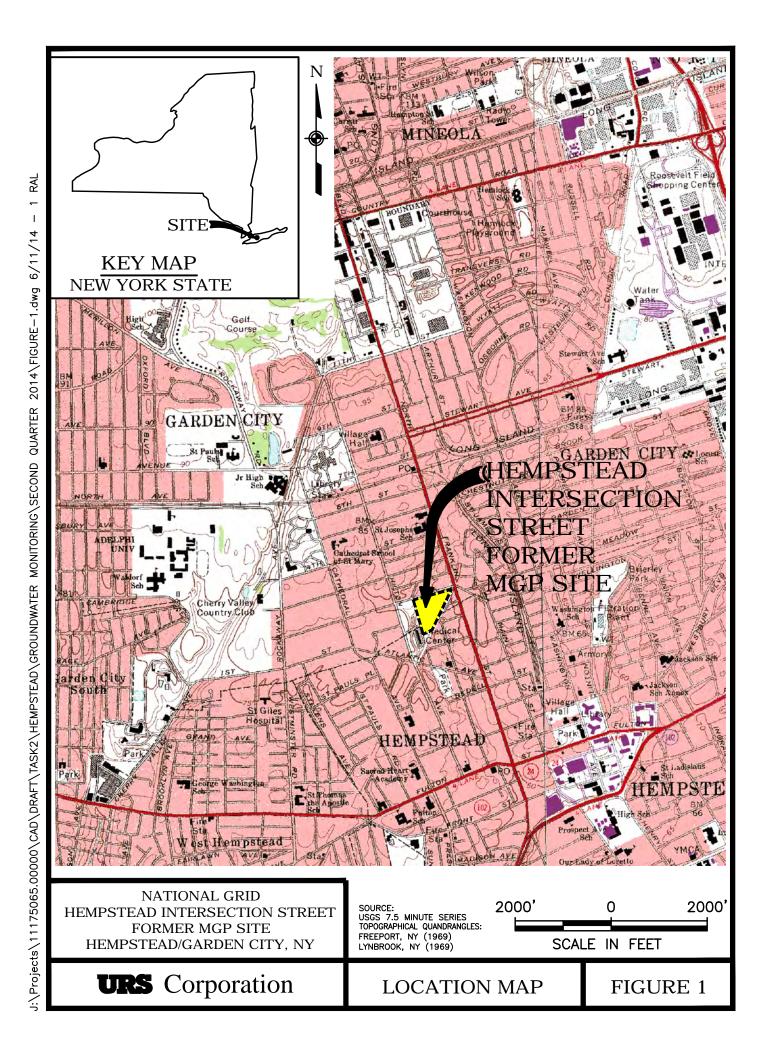
- O<sub>2</sub>: Oxygen measurement of well headspace (percent oxygen)
- PID: Photoionization Detector measurement of well headspace (parts per million) DO: Dissolved Oxygen concentration (percent or milligrams per liter)

NA: Not Accessible

NM: Not Measured

ppm: parts per million mg/L: milligrams per liter ft: feet

### **FIGURES**

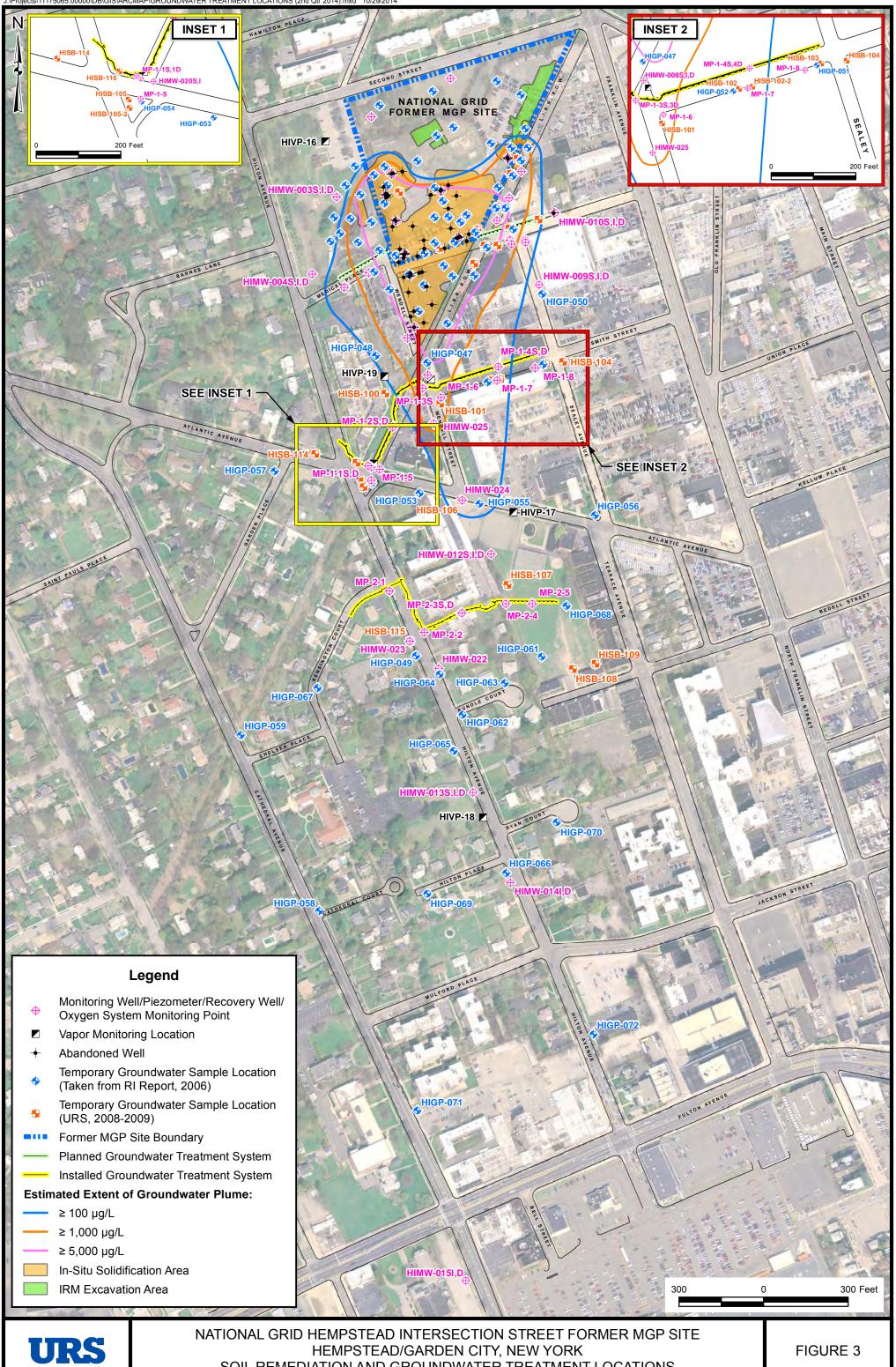




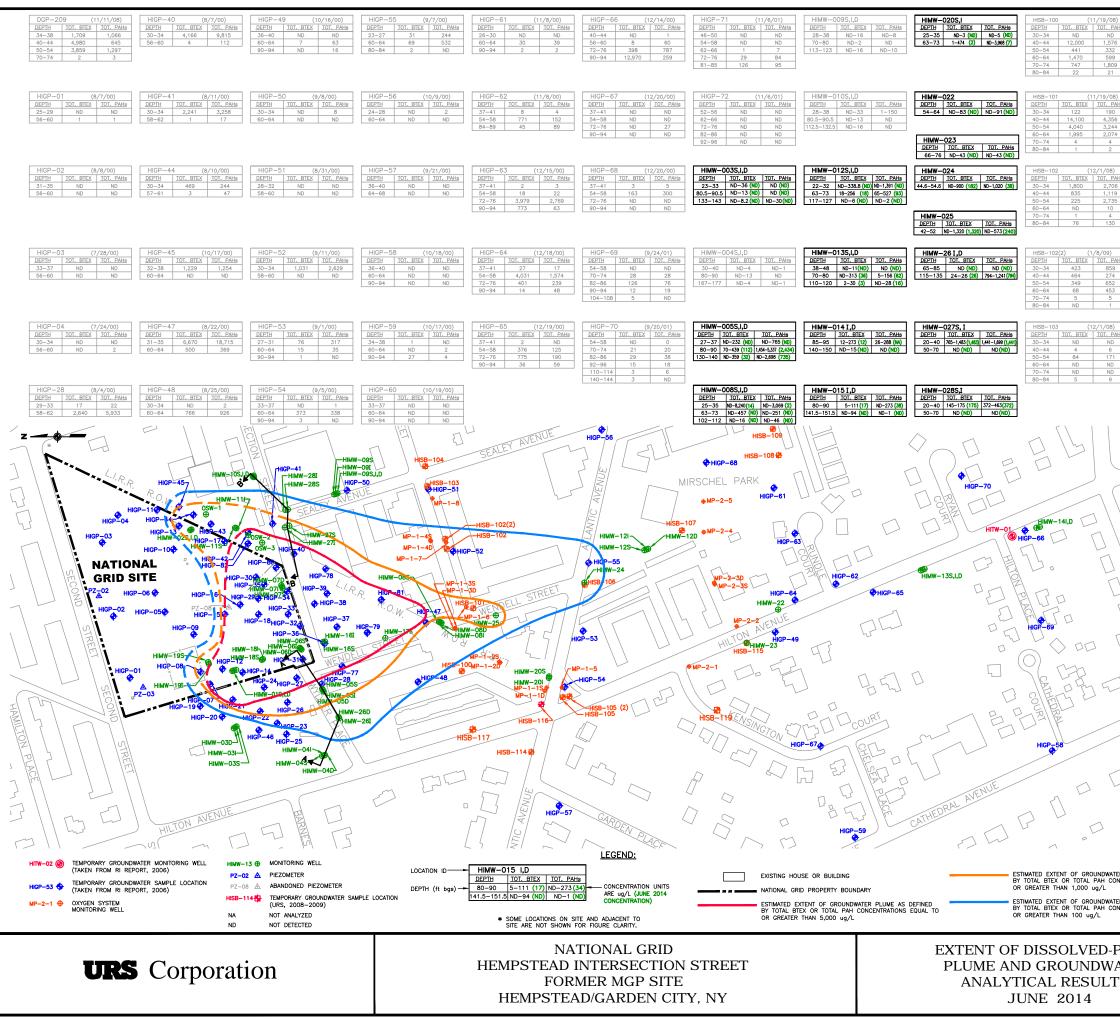


### NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE HEMPSTEAD/GARDEN CITY, NY SITE MAP - JUNE 2014

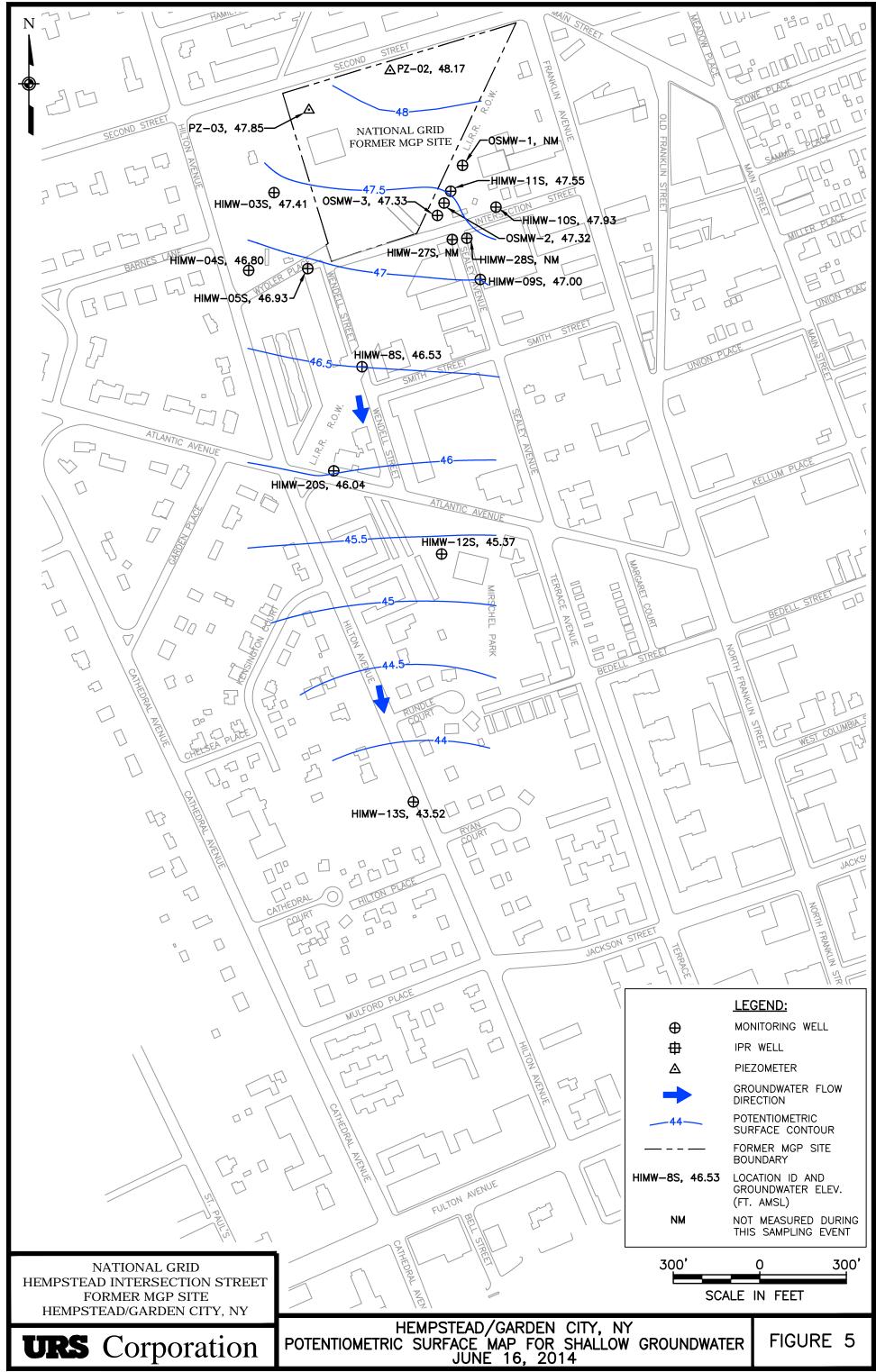
FIGURE 2



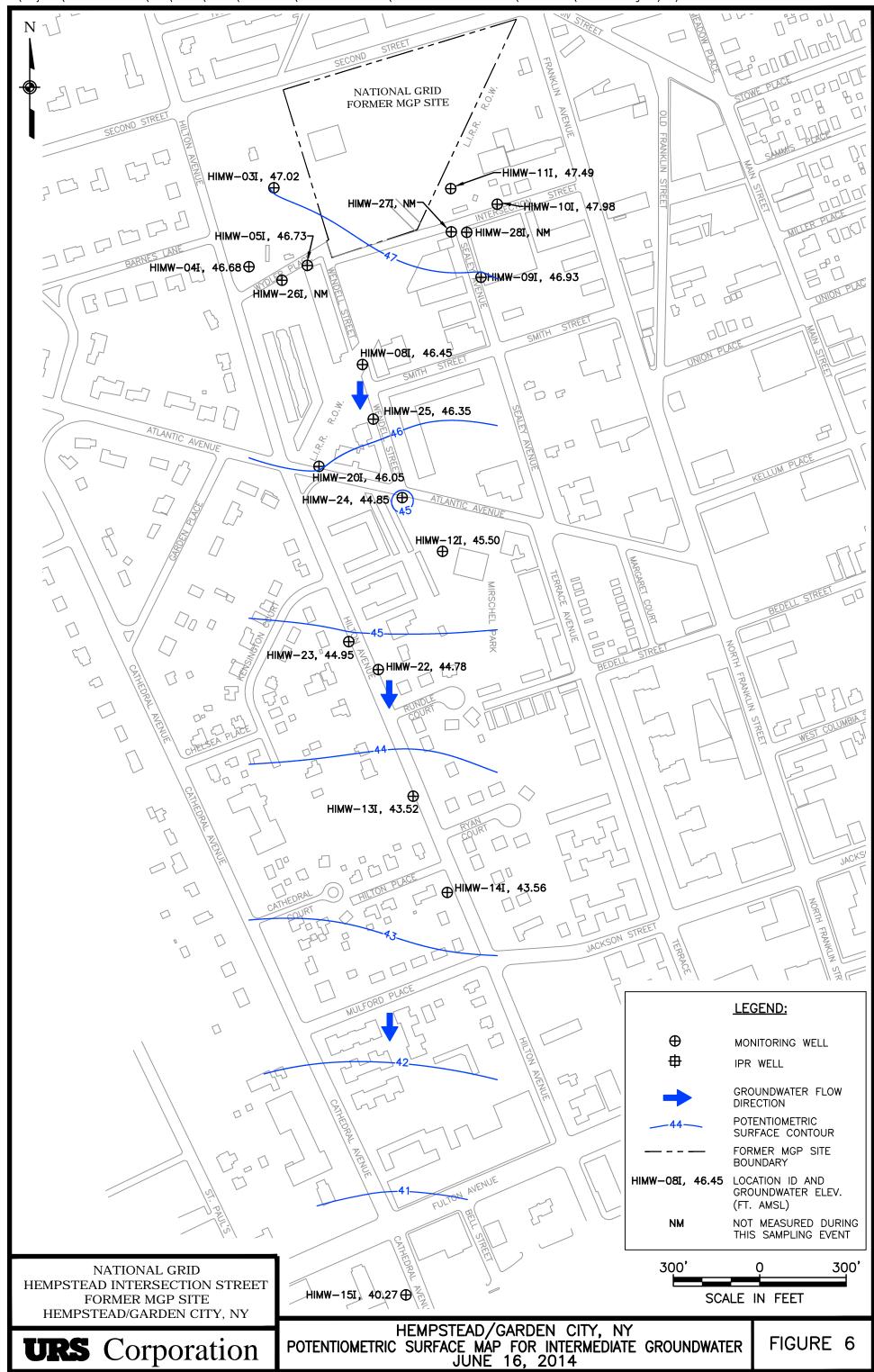
HEMPSTEAD/GARDEN CITY, NEW YORK SOIL REMEDIATION AND GROUNDWATER TREATMENT LOCATIONS FIGURE 3

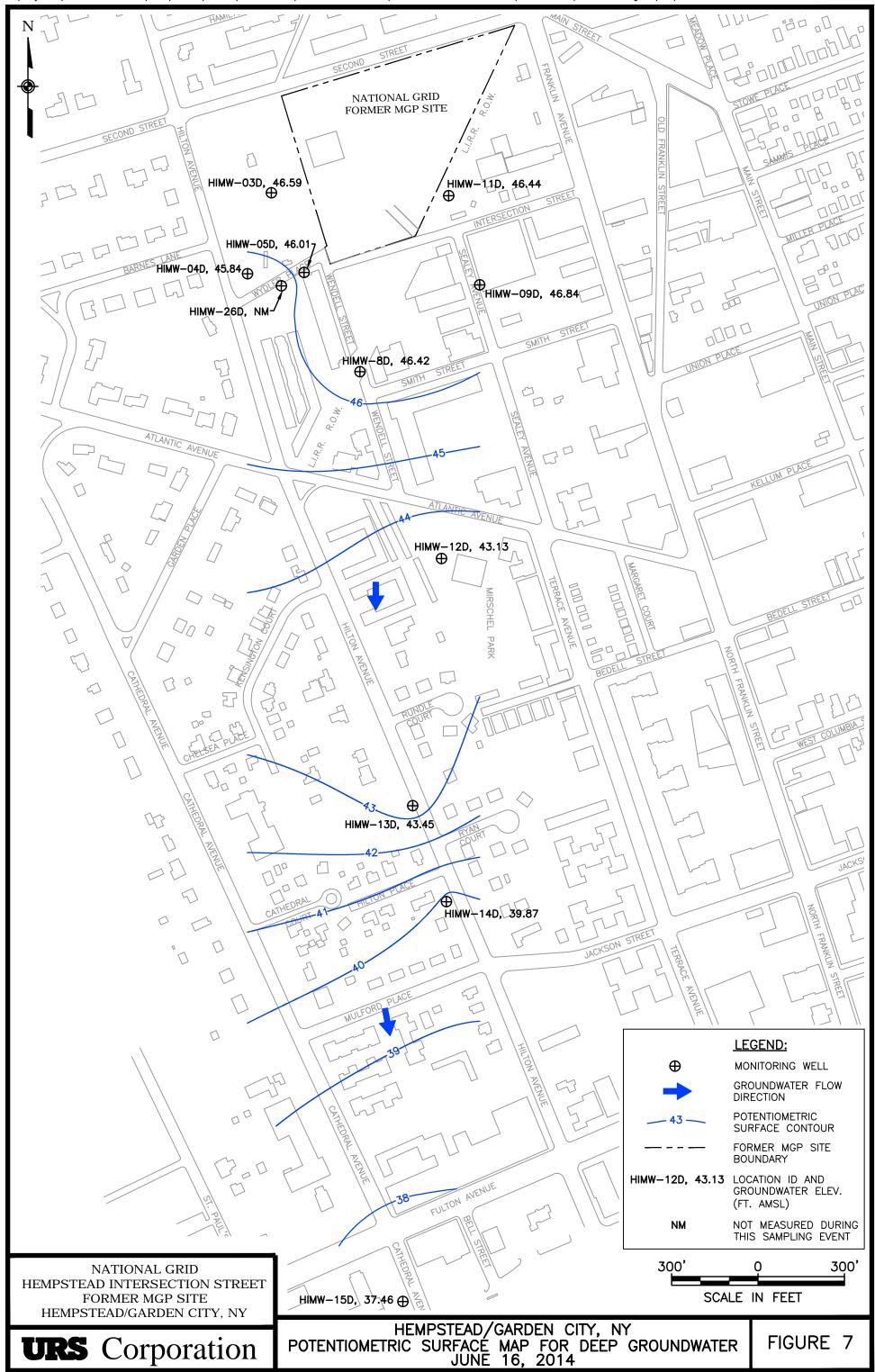


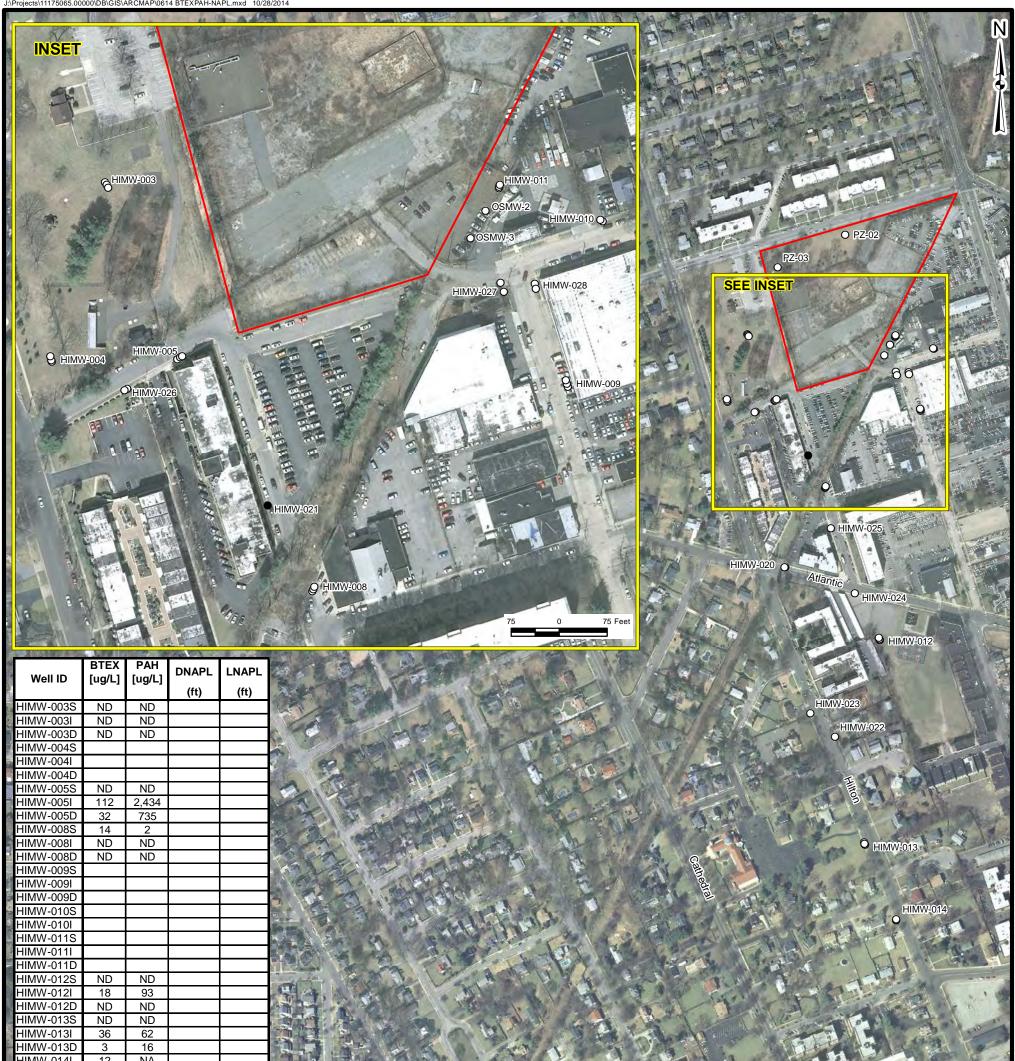
CONCENT	UME AS DEFINED IRATIONS EQUAL TO		DWATER PLUME AS DEFINED BY ONCENTRATIONS. DASHED LINES ONCENTRATIONS THAT ARE LIKELY
			ST. PAUL'S ROAD
			ST. PAUL'S ROAD
1			
D	FORD PLACE	CATHEORAL AVENUE	
		5	CATHEDRAL AVENUE
		-02	ATTENT AVENUE
	3000		AT DELL STREET
	HIGP-72 + AV		
9	TO-74         ND         ND           80-84         ND         ND           90-94         24         8	70-74         6         37           80-84         91         330           90-94         100         451           100-104         292         604	OSMW-O3 DEPTH TOT.BTEX TOT.PAHs 29-39 4,301 2,911
08) PAHs ND 6 171 ND	HISB-107         (12/8/08)           DEPTH         TOT. BTEX         TOT. PAHs           30-34         ND         ND           40-44         217         47           50-554         5551         258           60-64         29         68	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	OSMW-02         DEPTH         TOT.         BTEX         TOT.         PAHs           30-40         2,604         3,517         3,517         3,517         3,517
274 352 153 5 1	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	$\begin{array}{ccccc} 40-44 & 9 & 14 \\ \hline 50-54 & 288 & 265 \\ 60-64 & 125 & 133 \\ \hline 70-74 & 1,411 & 1,153 \\ 80-84 & 123 & 99 \\ 90-94 & 56 & 67 \\ \end{array}$	65-70         5         9           75-80         9         40           85-90         29         52           115-120         42         ND           148-153         9         0
9) <u>PAHs</u> 359	90-94         24         221           100-104         1         ND           HISB-106         (12/4/08)           DEPTH         TOT. BTEX         TOT. PAHs           30-34         418         602	90-94         ND         ND           HISB-115         (1/14/09)           DEPTH         TOTBTEX         TOTPAHs           30-34         ND         15	HTW-02 (10/31/01) DEPIH TOT. BTEX TOT. PAHs 55-60 2 ND
PAHs ,706 ,119 ,735 10 4 130	DECIM         IOL. BILX         IOL. PArts           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	JbF/IF         JOL_BIEs         JOL_FAHS           30-34         ND         ND           40-44         ND         ND           50-54         ND         ND           60-64         ND         ND           70-74         ND         ND           80-84         ND         ND	LbE/TH         LOL. BLS         LOL.         PARs           40-44         2         ND           54-58         3         6           70-74         95         278           82-86         293         274           90-94         45         44           109-113         210         1
074 4 2 08) PAHs	60-64         1,043         3,058           70-74         60         59           80-84         279         576           90-94         48         99           HISB-105(2)         (12/18/08)           DEPTH         IOT. BTEX         IOT. PAHs	60-64         19         ND           70-74         28         ND           80-84         31         2           90-94         ND         ND           HISB-114         (12/23/08)         DEPTH           DEPTH         JOL. BTEX         JOL. PAHs	60-64 ND ND 70-74 ND 4 80-84 ND 16 90-94 ND 4 HITW-01 (9/21/01) DEPTH IOT. BTEX TOT. PAds
.356 .244	HISB-105         (12/4/08)           DEPTH         TOTBTEX         TOTPAHs           30-34         ND         ND           40-44         ND         518           50-54         469         ND           60.64         1.047         7.068	HISB-109         (12/10/08)           DEPTH         TOT. BTEX         TOT. PAHs           30-34         ND         ND           40-44         ND         ND           50-54         8         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         1
/08) PAHs 190		80-84         20         1           90-94         26         2	90-94 ND 2 100-104 ND ND
PAHs 190	45-49         ND         ND           55-59         ND         ND	40-44         ND         ND           50-54         ND         ND           60-64         ND         ND           70-74         12         1	40-44 ND ND 50-54 ND ND 60-64 ND ND 70-74 ND 2 80-84 2 32



J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\JUNE 2014\FIGURE 6.dwg 10/29/14 - 3 RAL







			(ft) (1	t)	ROAD CONTRACTOR			1 1/4			
HIMW-003S	ND	ND		1 mil			State In State	122 201	165 9	HIMW-023	
HIMW-003I	ND	ND			and and a	Las Lange P.	A STATE OF A	AL ST.	A della	HIMW-022	-na I
IIMW-003D	ND	ND				all the store		Villey and stat	3/12/2	0	
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SECOND QUARTER 2014

# **APPENDIX A**

# DATA USABILITY SUMMARY REPORT

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# APPENDIX A DATA USABILITY SUMMARY REPORT SECOND QUARTER 2014

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

Analyses Performed by: PACE ANALYTICAL

**Prepared For:** 

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

Prepared by:

URS CORPORATION 257 WEST GENESEE STREET, SUITE 400 BUFFALO, NY 14202-2657

AUGUST 2014

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(Following Text)

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

### APPENDICES

(Following Tables)

- Attachment A Validated Form 1's
- Attachment B Support Documentation

#### I. INTRODUCTION

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

This DUSR discusses the usability of the analytical data for thirty-one (31) groundwater samples, three (3) field duplicates, three (3) matrix spike/matrix spike duplicate (MS/MSD) pairs, one (1) field blank, and eight (8) trip blanks collected by URS personnel on April 17-29 and June 17-26, 2014. Six (6) of the groundwater samples (i.e., HIMW-26I, -26D, -27S, -27I, -28S, and -28I) were collected in April as part of the oxygen treatment system design evaluation, while the remaining twenty-five (25) of groundwater samples were collected in June as part of the 2014 2<sup>nd</sup> quarter groundwater monitoring event at the Hempstead Intersection Street Former MGP Site.

#### II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION

The samples were analyzed by Pace Analytical for the following parameters:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) USEPA Method SW8260C,
- Polynuclear aromatic hydrocarbons (PAHs) USEPA Method SW8270D, and
- Total Iron USEPA Method SW6010C.

Only the groundwater and field QC samples used to evaluate the effectiveness of the oxygen treatment system design were analyzed for total iron.

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;

- Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22, Rev. 4, August 2008; and
- ICP-AES Data Validation, SOPHW-2a, Rev. 15, December 2012.

The limited data validation included a review of completeness of all required deliverables; holding times; quality control (QC) results (instrument tunes, calibration standards, blanks, interference check standards, matrix spike recoveries, field duplicate analyses, laboratory control sample (LCS) recoveries, serial dilutions, and surrogate/internal standard recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

The validated analytical results are presented in Tables A-1 and A-2. Copies of the validated laboratory results (i.e., Form 1's) are presented in Attachment A. Copies of the chain-of-custodies, case narratives, and documentation supporting the qualification of data are presented in Attachment B. Only problems affecting data usability are discussed in this report.

#### III. DATA DELIVERABLE COMPLETENESS

Full deliverable data packages (i.e., NYSDEC ASP Category B or equivalent) were provided by the laboratory, and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

#### IV. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-ofcustody (COC). All samples were analyzed within the required holding times, expect for the following instance. Sample HIMW-26I (collected on 04/29/14) was extracted one day outside holding time. As a result, the PAH results for this sample were qualified as estimated 'UJ'. Documentation supporting the qualification of data (i.e., extraction log) is presented in Attachment B.

#### V. NON-CONFORMANCES

#### Sample Extraction/Preparation

During the PAH extraction process, a laboratory accident occurred which precluded the preparation of sample HIMW-14I (i.e., both 1-liter amber containers broke). Since there was no more sample volume available for re-extraction, the PAH analysis could not be performed on sample HIMW-14I. Total PAH concentrations for this monitoring well interval have historically been below 100  $\mu$ g/L, except for two instances [i.e., 4<sup>th</sup> quarter 2003 (288  $\mu$ g/L) and 2<sup>nd</sup> quarter 2013 (103  $\mu$ g/L)], therefore, resampling of this monitoring well interval is not recommended until the next quarterly sampling event.

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

#### **Serial Dilution**

For total iron (Fe) analyses, the serial dilution percent difference (%D) for sample HIMW-026D (collected on 06/27/14) was greater than 10%. The total Fe result for this sample was qualified 'J'.

Documentation supporting the qualification of data (i.e., Form 9) 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. Results detected below the quantitation limits were qualified 'J' (for BTEX and PAHs) and 'B' (for total Fe) by the laboratory, while results reported from secondary dilution analyses were qualified 'D'. The 'B' qualifiers for total Fe were changed to 'J' during the data review in accordance with the current USEPA data qualifier convention for inorganics.

The initial total xylene result for sample HIMW-27S (collected on 04/18/14) was above the linear range of calibration. However, the laboratory did not qualify the total xylene result 'E'. Since the lab had to reanalyze the sample at a secondary dilution for ethylbenzene, the total xylene result was reported from the secondary dilution and qualified 'D'.

Field duplicates were collected from monitoring well locations HIMW-20S, HIMW-24, and HIMW-28I (collected on 04/17/14), which exhibited good field and analytical precision.

#### VII. SUMMARY

All sample analyses were found to be compliant with the method and validation criteria, and the data are usable as reported, except for those results qualified 'J' or 'UJ' during the data validation, which should be considered conditionally usable. URS does not recommend the re-collection of any samples at this time.

**Prepared By:** Peter R. Fairbanks, Senior Chemist **Reviewed By:** Kisluk, Senior Chemist George E.

Date: <u>9/2/14</u> Date: <u>9/2/14</u>

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#### **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.

Location ID	-		HIMW-003D	HIMW-003I	HIMW-003S	HIMW-005D	HIMW-0051
Sample ID	<i></i>		HIMW-03D	HIMW-03I	HIMW-03S	HIMW-005D	HIMW-0051
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	t)		•	-	-	•	-
Date Sampled	-		06/20/14	06/20/14	06/23/14	06/26/14	06/26/14
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	5	2
Ethylbenzene	UG/L	-	10	10	10	10	1 U
Toluene	UG/L	•	10	10	10	10	1 U
Xylene (total)	UG/L	-	10	1 U	10	27	110
Total BTEX	UG/L	100	ND	ND	ND	32	
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	96 DJ	340 D
Acenaphthene	UG/L	-	10 U	10 U	10 U	2 J	10 U
Acenaphthylene	UG/L	-	10 U	10 U	10 U	32	160 DJ
Anthracene	UG/L	-	10 U	10 U	10 Ü	10 U	1 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	•	10 U				
Fluorene	UG/L	-	10 U	10 U	10 U	5 J	21
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U				
Naphthalene	UG/L	-	10 U	10 U	10 U	600 D	1,900 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	10 U	12
Pyrene	UG/L	-	10 U				
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND		2,434

\*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. Made By\_PRF 08/18/14\_; Checked By\_AMK \_\_\_\_\_

Location ID			HIMW-003D	HIMW-0031	HIMW-003S	HIMW-005D	HIMW-005I
Sample ID			HIMW-03D	HIMW-03J	HIMW-03S	HIMW-005D	HIMW-0051
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (	ft)		-	-	-	•	-
Date Sampled	06/20/14	06/20/14	06/23/14	06/26/14	06/26/14		
Parameter	Units	Criteria*					
Metals							
Iron	UG/L	-	NA	NA	NA	10,200	38,500

\*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.

Location ID			HIMW-005S	HIMW-008D	HIMW-008I	HIMW-008S	HIMW-012D
Sample ID			HIMW-05S	HIMW-008D	HIMW-0081	HIMW-008S	HIMW-012D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	t)		-	-	•	-	-
Date Sampled	·		06/25/14	06/23/14	06/23/14	06/23/14	06/24/14
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1U	1 U	14	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	•	1 U	10	10	10	10
Xylene (total)	UG/L	•	1 U	10	1 U	1 U	1 U
Total BTEX	UG/L	100	ND	ND	ND	14	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U				
Acenaphthene	UG/L	•	10 U				
Acenaphthylene	UG/L	-	10 U	10 U	10 U	2 J	10 U
Anthracene	UG/L	-	10 U				
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	-	10 U				
Fluorene	UG/L	•	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U				
Naphthalene	UG/L	-	10 U				
Phenanthrene	UG/L	-	10 U				
Pyrene	UG/L	-	10 U				
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	2	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 Made By\_PRF 08/18/14\_: Checked By\_AMK\_\_\_\_\_\_

Location ID			HIMW-005S	HIMW-008D	HIMW-008I	HIMW-008S	HIMW-012D
Sample ID			HIMW-05S	HIMW-008D	HIMW-0081	HIMW-008S	HIMW-012D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	it)		-	-	-	-	-
Date Sampled		06/25/14	06/23/14	06/23/14	06/23/14	06/24/14	
Parameter	Units	Criteria*					
Metals							
Iron	UG/L	-	NA	NA	NA	NA	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

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UJ - Not detected. The reported quantitation limit is an estimated value. D - Result reported from a secondary dilution analysis. Made By\_PRF 08/18/14\_; Checked By\_AMK\_\_\_\_\_\_\_\_

Location ID	,		HIMW-012I	HIMW-012S	HIMW-013D	HIMW-0131	HIMW-013S
Sample ID			HIMW-012I	HIMW-012S	HIMW-13D	HIMW-13I	HIMW-13S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	ť)		•	-	-	-	-
Date Sampled			06/24/14	06/24/14	06/19/14	06/19/14	06/19/14
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	16	1 U	3	34	1 U
Ethylbenzene	UG/L	-	1 U	10	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	10	1 U	10
Xylene (total)	UG/L	-	2	1U	1 U	2	1 U
Total BTEX	UG/L	100	18	ND	3	36	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	7 J	10 U
Acenaphthene	UG/L	•	31	10 U	5 J	4 J	10 U
Acenaphthylene	UG/L	-	29	10 U	11	35	10 U
Anthracene	UG/L	•	1 J	10 U	10 U	1 J	10 U
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	-	10 U				
Fluorene	UG/L	-	20	10 U	10 U	3 J	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 Ü	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U				
Phenanthrene	UG/L	-	12	10 U	10 U	12	10 U
Pyrene	UG/L	-	10 Ū	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	93	ND	16	62	ND

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

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Concentration Exceeds Criteria <

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UJ - Not detected. The reported quantitation limit is an estimated value. D - Result reported from a secondary dilution analysis. Made By\_PRF 08/18/14\_: Checked By\_AMK\_\_\_\_\_\_\_

	-						
Location ID			HIMW-012I	HIMW-012S	HIMW-013D	HIMW-013I	HIMW-013S
Sample ID			HIMW-012I	HIMW-012S	HIMW-13D	HIMW-13I	HIMW-13S
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Depth Interval (f		-	-	-	-	-	
Date Sampled		06/24/14	06/24/14	06/19/14	06/19/14	06/19/14	
Parameter	Units	Criteria*					
Metals							
ron	UG/L	-	NA	NA	NA	NA	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.

Location ID			HIMW-014D	HIMW-014I	HIMW-015D	HIMW-015I	HIMW-0201
Sample ID			HIMW-14D	HIMW-14I	HIMW-15D	HIMW-15I	HIMW-201
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	t)		-		-	-	
Date Sampled			06/18/14	06/18/14	06/17/14	06/17/14	06/18/14
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	11	1 U	13	1 U
Ethylbenzene	UG/L	-	1 U	1 U	10	1 U	10
Toluene	UG/L	-	1 U	1 U	1 U	10	10
Xylene (total)	UG/L	-	1 U	1	1 U	4	2
Total BTEX	UG/L	100	ND	12	ND	17	2
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	•	10 U	NA	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	NA	10 U	10	1
Acenaphthylene	UG/L	-	10 U	NA	10 U	24	6 J
Anthracene	UG/L	-	10 U	NA	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	•	10 U	NA	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	•	10 U	NA	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	NA	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	NA	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	NA	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	NA	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L		10 U	NA	10 U	10 U	10 U
Fluoranthene	UG/L		10 U	NA	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	NA	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	NA	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	NA	10 U	10 U	10 U
Phenanthrene	UG/L	-	10 U	NA	10 U	4 J	10 U
Pyrene	UG/L	-	10 U	NA	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	NA	ND	38	7

\*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,

Location ID			HIMW-014D	HIMW-014I	HIMW-015D	HIMW-015I	HIMW-0201
Sample ID			HIMW-14D	HIMW-14I	HIMW-15D	HIMW-15I	HIMW-201
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f		-	-	-	-	-	
Date Sampled	Date Sampled				06/17/14	06/17/14	06/18/14
Parameter	Units	Criteria*					
Metals							
Iron	UG/L	-	NA	NA	NA	NA	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.

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Location ID			HIMW-020S	HIMW-020S	HIMW-022	HIMW-023	HIMW-024
Sample ID			DUP061814	HIMW-20S	HIMW-22	HIMW-23	DUP061914
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	t)		-	•	-	-	-
Date Sampled			06/18/14	06/18/14	06/18/14	06/17/14	06/19/14
Parameter	Units	Criteria*	Field Duplicate (1-1)				Field Duplicate (1-1)
Volatile Organic Compounds							
Benzene	UG/L	-	10	1 U	10	1 U	88
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	2
Toluene	UG/L	-	10	1 U	10	1 U	5
Xylene (total)	UG/L	-	10	1 U	10	1 U	86
Total BTEX	UG/L	100	ND	ND	ND	ND	
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	3 J
Acenaphthene	UG/L	-	10 U	10 U	10 U	10 U	1 J
Acenaphthylene	UG/L	•	10 U	10 U	10 U	10 U	4 J
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	10 U	1 J
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	10 U	10 U	10 U	33
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	ND	ND	42

\*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. Made By\_PRF 08/18/14\_; Checked By\_AMK\_\_\_\_\_\_

Location ID		-	HIMW-020S	HIMW-020S	HIMW-022	HIMW-023	HIMW-024
Sample ID Matrix Depth Interval (ft) Date Sampled			DUP061814	HIMW-20S Groundwater -	HIMW-22 Groundwater	HIMW-23 Groundwater	DUP061914
			Groundwater				Groundwater
			-				
			06/18/14	06/18/14	06/18/14	06/17/14	06/19/14
Parameter	arameter Units Criteria*		Field Duplicate (1-1)			-	Field Duplicate (1-1)
Metals							
Iron	UG/L	-	NA	NA	NA	NA	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. Made By\_PRF 08/18/14\_; Checked By\_AMK\_\_\_\_\_\_

Location ID	4 20 1V 2 1 4		HIMW-024	HIMW-025	HIMW-026D	HIMW-026D	HIMW-0261
Sample ID			HIMW-24	HIMW-25	HIMW-26D	HIMW-26D	HIMW-261
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	ťt)		-	-	-	-	•
Date Sampled			06/19/14	06/23/14	04/18/14	06/27/14	04/29/14
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	89	190 D	1 U	1 U	1 U
Ethylbenzene	UG/L	-	2	170	1 U	1 U	10
Toluene	UG/L	-	5	150	1 U	1 U	10
Xylene (total)	UG/L	-	86	810 D	24	26	1 U
Total BTEX	UG/L	100			24	26	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	2 J	27	220 D	130 DJ	10 UJ
Acenaphthene	UG/L	-	1 J	2 J	7 J	4 J	10 UJ
Acenaphthylene	UG/L	-	3 J	18	120 DJ	63	10 UJ
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Fluorene	UG/L	-	10 U	3 J	19	10	10 UJ
Indeno(1,2,3-cd)pyrene	UG/L	•	10 U	10 U	10 U	10 U	10 UJ
Naphthalene	UG/L	-	32	190 D	860 D	580 D	10 UJ
Phenanthrene	UG/L	-	10 U	10 U	15	7 J	10 UJ
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 UJ
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	38	240	1,241		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

Location ID			HIMW-024	HIMW-025	HIMW-026D	HIMW-026D	HIMW-026I
Sample ID	Sample ID			HIMW-25	HIMW-26D	HIMW-26D	HIMW-26I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			•	-	-	-	-
Date Sampled			06/19/14	06/23/14	04/18/14	06/27/14	04/29/14
Parameter	arameter Units Criteria*						
Metals							
Iron	UG/L	-	NA	NA	NA	169 J	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. Made By\_PRF 0B/18/14\_; Checked By\_AMK\_\_\_\_\_\_

Location ID			HIMW-026I	HIMW-0271	HIMW-0271	HIMW-027S	HIMW-027S
Sample ID			HIMW-261	HIMW-27I	HIMW-27I	HIMW-27S	HIMW-27S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth interval (f	t)		-	-	-	-	-
Date Sampled			06/25/14	04/17/14	06/27/14	04/18/14	06/27/14
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1 U	1 U	22	6
Ethylbenzene	UG/L	-	10	1 U	1 U	350 D	670 D
Toluene	UG/L	-	1 U	10	1 U	23	47
Xylene (total)	UG/L	•	1 U	1 U	1 U	370 D	760 D
Total BTEX	UG/L	100	ND	ND	ND	765	
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	320 D	300 D
Acenaphthene	UG/L	-	10 U	10 U	10 U	92 DJ	74
Acenaphthylene	UG/L	-	10 U	10 U	10 U	6 J	3 J
Anthracene	UG/L	-	10 U	10 U	10 U	7 J	6 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	3	10 U	10 U	10 U	1 J	1 J
	UG/L	-	10 U	10 U	10 U	38	30
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U				
Naphthalene	UG/L	-	10 U	10 U	10 U	1,200 D	990 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	35	35
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	2 J
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	1,699	

\*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. Made By\_PRF 08/18/14\_: Checked By\_AMK\_\_\_\_\_\_30(1)

Location ID			HIMW-0261	HIMW-0271	HIMW-027I	HIMW-027S	HIMW-027S
Sample ID	Sample ID			HIMW-271 Groundwater	HIMW-271 Groundwater -	HIMW-27S Groundwater -	HIMW-27S
Matrix Depth Interval (ft)			Groundwater				Groundwater -
Parameter	arameter Units Criteria*						
Metals							
Iron	UG/L	-	NA	NA	775	NA	85,600

\*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.

Made By\_PRF 08/18/14\_; Checked By\_AMK\_\_\_\_\_\_

Location ID			HIMW-028I	HIMW-028I	HIMW-0281	HIMW-028S	HIMW-028S
Sample ID			DUP041714	HIMW-28I	HIMW-28J	HIMW-28S	HIMW-28S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	t)		-	-	-	-	-
Date Sampled			04/17/14	04/17/14	06/25/14	04/18/14	06/26/14
Parameter	Units	Criteria*	Field Duplicate (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-1	1 U	1 U	1 U	36	22
Ethylbenzene	UG/L	-	1 U	1 U	1 U	90	120
Toluene	UG/L	-	1 ປ	1 U	10	1	8
Xylene (total)	UG/L	-	1 U	10	10	18	25
Total BTEX	UG/L	100	ND	ND	ND		
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	50	33
Acenaphthene	UG/L	-	10 U	10 U	10 U	29	23
Acenaphthylene	UG/L	-	10 U	10 U	10 U	2 J	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	5 J	3 J
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	1 J	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	1 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	3 J	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	22	16
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	320 D	280 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	26	17
Pyrene	UG/L	-	10 U	10 U	10 U	4 J	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	ND	463	372

\*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.

Location ID			HIMW-0281	HIMW-0281 HIMW-281	HIMW-0281	HIMW-028S	HIMW-028S
Sample ID			DUP041714		HIMW-28I	HIMW-28S	HIMW-28S
Matrix	Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/17/14	04/17/14	06/25/14	04/18/14	06/26/14
Parameter	ameter Units Criteria*		Field Duplicate (1-1)				
Metals							
ron	UG/L	-1	NA	NA	NA	NA	60,200

\*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.

#### TABLE A-2

### VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID	17		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB041814	TB042914	TB061714	TB061914	TB062014
Matrix			Water Quality				
Depth Interval (f	t)		-	-	-	-	-
Date Sampled	Date Sampled			04/18/14	06/17/14	06/18/14	06/20/14
Parameter	Units	Criteria*	Trip Blank (1-1)				
Volatile Organic Compounds							
Benzene	UG/L	-	10	10	10	1 U	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	-	10	10	10	10	10
Xylene (total)	UG/L	-	10	10	10	10	10
Total BTEX	UG/L	100	ND	ND	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	NA	NA	NA	NA	NA
Acenaphthene	UG/L	-	NA	NA	NA	NA	NA
Acenaphthylene	UG/L	×	NA	NA	NA	NA	NA
Anthracene	UG/L	×	NA	NA	NA	NA	NA
Benzo(a)anthracene	UG/L	×	NA	NA	NA	NA	NA
Benzo(a)pyrene	UG/L	-	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	UG/L	-	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	UG/L	-	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	UG/L	-	NA	NA	NA	NA	NA
Chrysene	UG/L	-	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	UG/L	-	NA	NA	NA	NA	NA
Fluoranthene	UG/L	-	NA	NA	NA	NA	NA
Fluorene	UG/L	-	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	NA	NA	NA
Naphthalene	UG/L	-	NA	NA	NA	NA	NA
Phenanthrene	UG/L	-	NA	NA	NA	NA	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.

Detection Limits shown are PQL

		and the second se					and the second se
Location ID			FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB041814	TB042914	TB061714	TB061914	TB062014
Matrix Depth Interval (ft)			Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
			-	-	-	-	
Date Sampled	Date Sampled			04/18/14	06/17/14	06/18/14	06/20/14
Parameter	Units Criteria*		Trip Blank (1-1)	Тлр Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)
Semivolatile Organic Compounds							
Pyrene	UG/L	-	NA	NA	NA	NA	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	NA	NA	NA
Metals							
Iron	UG/L	-	NA	NA	NA	NA	NA

\*Criteria- Goundwater Piume 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

NA - The sample was not analyzed for this parameter

Made By\_PRF 08/18/14\_; Checked By\_AMK \_\_\_\_\_

**Detection Limits shown are PQL** 

J'\Projects\1117508500000\D6\Program\EDMS.md Preted: 8/16/2014 8.52.52 Ak [LOGDATE] >= \$4/17/2014# AND [MATRIX] = WQ

## TABLE A-2

#### VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB062414	TB062614	FB062714	TB062714
Matrix			Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (f	t)		-	-	-	•
Date Sampled			06/24/14	06/26/14	06/27/14	06/27/14
Parameter	Units	Criteria*	Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds						
Benzene	UG/L	-	1 Ū	1 U	1 U	10
Ethylbenzene	UG/L	-	10	10	10	1 U
Toluene	UG/L	-	1 U	10	10	1 U
Xylene (total)	UG/L	-	10	10	10	1 U
Total BTEX	UG/L	100	ND	ND	ND	ND
Semivolatile Organic Compounds						
2-Methylnaphthalene	UG/L	-	NA	NA	10 U	NA
Acenaphthene	UG/L	-	NA	NA	10 U	NA
Acenaphthylene	UG/L	-	NA	NA	10 U	NA
Anthracene	UG/L	-	NA	NA	10 U	NA
Benzo(a)anthracene	UG/L		NA	NA	10 Ū	NA
Benzo(a)pyrene	UG/L	-	NA	NA	10 U	NA
Benzo(b)fluoranthene	UG/L	-	NA	NA	10 U	NA
Benzo(g,h,i)perylene	UG/L	-	NA	NA	10 U	NA
Benzo(k)fluoranthene	UG/L	-	NA	NA	10 U	NA
Chrysene	UG/L	-	NA	NĂ	10 U	NA
Dibenz(a,h)anthracene	UG/L	-	NA	NA	10 U	NA
Fluoranthene	UG/L	-	NA	NA	10 U	NA
Fluorene	UG/L	-	NA	NA	10 U	NA
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	10 U	NA
Naphthalene	UG/L	-	NA	NA	10 U	NA
Phenanthrene	UG/L	-	NA	NA	10 U	NA

\*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.

NA - The sample was not analyzed for this parameter.

Made By\_PRF 08/18/14\_; Checked By\_AMK\_80011

Location ID			FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB062414	TB062614	FB062714	TB062714
Matrix			Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (f	Depth Interval (ft)				-	-
Date Sampled		06/24/14	06/26/14	06/27/14	06/27/14	
arameter Units Criteria*		Trip Blank (1-1)	Trip Blank (1-1)	Field Blank (1-1)	Trip Blank (1-1)	
Semivolatile Organic Compounds						
<sup>o</sup> yrene	UG/L	-	NA	NA	10 U	NA
Fotal Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	ND	NA
Metals						
ron	UG/L	-	NA	NA	7.1 J	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.

**Detection Limits shown are PQL** 

## ATTACHMENT A

## VALIDATED FORM 1'S

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-035

Lab Name:	PACE ANALYI	ICAL		Contra	ct:		
Lab Code:	10478	Case No.:	KEY-UR	s sas	No.:	SDG No.:	KEY-URS185
Matrix: (so	il/water)	WATER			Lab Sample ID:	1406H97-00	DIA
Sample wt/v	ol: <u>5</u>	(g/mL)	<u>ML</u>		Lab File ID:	514\G26109	2
Level: (1	ow/med)	LOW			Date Received:	06/24/14	
% Moisture:	not dec.				Date Analyzed:	06/25/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mm)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(րբ)	î.	Soil Aliquot Volu	me	(µL)

#### CONCENTRATION UNITS:

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

EPA SAMPLE NO.

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE	ORGANICS ANALISIS LAI	A SREET	HIMW-035
Lab Name: PACE ANALYTIC	CAL Contrac	et:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SA	S No.:	SDG NO.: KEY-URS185
Matrix: (soil/water) WA	TER	Lab Sample ID:	1406H97-001B
Sample wt/vol: 100	00 (g/mL) <u>ml</u>	Lab File ID:	4\N66802.D
Level: (low/med)	TOM	Date Received:	06/24/14
<pre>% Moisture: De</pre>	canted: $(Y/N)$ <u>N</u>	Date Extracted:	06/27/14
Concentrated Extract Vo	lume: <u>1000</u> (µL)	Date Analyzed:	06/30/14
Injection Volume:	2 (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N	pH:	Extraction: (Type)	CONT

#### CONCENTRATION UNITS:

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

1.

OLM04.2 KEY-URS185 S54

#### 1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-03I

Lab Name:	PACE ANALYI	ICAL		Contract:			
Lab Code:	10478	Case No.:	KEY-URS	SAS No.	:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER		Lab	Sample ID:	1406F74-00	2A
Sample wt/v	ol: <u>5</u>	(g/mL)	<u>ML</u>	Lab	File ID:	4\A81806.D	
Level: (lo	ow/med)	TOM		Dat	e Received:	06/20/14	
% Moisture:	not dec.			Dat	e Analyzed:	06/22/14	
GC Column:	Rtx-624	ID:	<u>.18</u>	(mm) Dil	ution Factor:	1.00	
Soil Extrac	t Volume:		(µL)	Soi	l Aliquot Volu	ne	(µL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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	

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DA	MA S	HEET
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SEMIVOLATILE ORGANICS	ANALYSIS DATA SHEET	HIMW-03I
Lab Name: PACE ANALYTICAL	Contract:	
Lab Code: 10478 Case No.:	KEY-URS SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water) WATER	Lab Sample ID:	1406F74-002B
Sample wt/vol: 1000 (g/	/mL) <u>ml</u> Lab File ID:	4\R23201.D
Level: (low/med) LOW	Date Received:	06/20/14
<pre>% Moisture: Decanted:(Y/</pre>	N) <u>N</u> Date Extracted:	06/26/14
Concentrated Extract Volume: 10	00 (µL) Date Analyzed:	06/27/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pi	H: Extraction: (Type)	CONT

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

#### 1**A**

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-03D

Lab Name:	PACE ANALYT	ICAL		Contra	ot:	<u></u>		
Lab Code:	10478	Case No.:	KEY-UR	SAS	No.:		SDG No.:	KEY-URS184
Matrix: (so	il/water)	WATER			Lab Samp	le D:	1406574-00	<u>01A</u>
Sample wt/v	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab File	ID:	4\A81805.D	2
Level: (le	ow/med)	TOM			Date Rec	eived:	06/20/14	
<pre>% Moisture:</pre>	not dec.				Date Ana	lyzed:	06/22/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(m)	Dilution	Factor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil Ali	quot Volu	me	(بتد)

### CONCENTRATION UNITS:

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHE	SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET
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SEMIVOLATILE ORGANICS ANALYSIS DAT	TA SHEET	HIMW-03D
Lab Name: PACE ANALYTICAL Contrac	ct:	
Lab Code: 10478 Case No.: KEY-URS SA	AS NO.:	SDG No.: KEY-URS184
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	1406F74-001B
Sample wt/vol: <u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\R23200.D
Level: (low/med) LOW	Date Received:	06/20/14
<pre>% Moisture: Decanted:(Y/N) N</pre>	Date Extracted:	06/26/14
Concentrated Extract Volume: <u>1000</u> ( $\mu$ L)	Date Analyzed:	06/27/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH:	Extraction: (Type)	) <u>CONT</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	Ū
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	υ
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	υ

(1) Cannot be separated from Diphenylamine

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05S

Lab Name: PACE ANALY	TICAL Contra		
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-001A
Sample wt/vol: $5$	(g/mL) ML	Lab File ID:	<u>14\G26290.</u>
Level: (low/med)	LOW	Date Received:	06/26/14
<pre>% Moisture: not dec.</pre>		Date Analyzed:	07/06/14
GC Column: Rtx-624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(بلا)	Soil Aliquot Volu	me(µL)

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

			HIMW-05S
Lab Name: PACE ANALY	TICAL	Contract:	
Lab Code: <u>10478</u>	Case No.: KEY-U	RS SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-001B
Sample wt/vol:	1000 (g/mL)	<u>ml</u> Lab File ID:	4\N66825.D
Level: (low/med)	LOW	Date Received:	06/26/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	<u>N</u> Date Extracted:	06/30/14
Concentrated Extract	Volume: <u>1000</u> (	µL) Date Analyzed:	07/01/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Typ	e) <u>CONT</u>

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

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OLM04.2 KEY-URS185 S55

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-0051

Lab Name: PACE ANA	LYTICAL	Contract:			
Lab Code: <u>10478</u>	Case No.: KEY-UR	S SAS No.:		SDG No .:	KEY-URS185
Matrix: (soil/water)	WATER	Lab	Sample ID:	1406J99-004	<u>1A</u>
Sample wt/vol:	(g/mL) <u>ML</u>	Lab 1	File ID:	14\G26287.	
Level: (low/med)	LOW	Date	Received:	06/26/14	
% Moisture: not dec		Date	Analyzed:	07/06/14	
GC Column: <u>Rtx-62</u>	1 ID: <u>.18</u>	(mm) Dilu	tion Factor:	1.00	
Soil Extract Volume	(בען)	Soil	Aliquot Volum	Ne .	(بىتە)

CAS NO.	COMPOUND	(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)	110	

SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET

			HIMW-005I
Lab Name: PACE ANALY	TICAL Cont	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-004B
Sample wt/vol:	<u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66828.D
Level: (low/med)	LOW	Date Received:	06/26/14
<pre>% Moisture:</pre>	Decanted: (Y/N) N	Date Extracted:	06/30/14
Concentrated Extract	Volume: <u>1000</u> (بلد)	Date Analyzed:	07/01/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	1900 860	B-J
91-57-6	2-Methylnaphthalene	340 220	Z I
208-96-8	Acenaphthylene	160 150	2 D
83-32-9	Acenaphthene	10	υ
86-73-7	Fluorene	21	
85-01-8	Phenanthrene	12	
120-12-7	Anthracene	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo (a, h) anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

OLM04.2 KEY-URS185 S46 8/14/14

	EPA SAMPLE NO.			
SEMIVOLAT	ILE ORGANICS ANALYSIS DA	ATA SHEET	HIMW-005IDL	
Lab Name: PACE ANALY	TICAL Contra	act:		
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG NO.: KEY-1	JRS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-004BDI	
Sample wt/vol:	<u>1000</u> (g/mL) <u>ML</u>	Lab File ID:	4\N66905.D	
Level: (low/med)	LOW	Date Received:	06/26/14	
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/30/14	
Concentrated Extract	Volume: 1000 (µL)	Date Analyzed:	07/03/14	
Injection Volume:	<u>2</u> (۲۲)	Dilution Factor:	25.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	) <u>cont</u>	
		CONCE	NTRATION UNITS:	
CAS NO.	COMPOUND	(µg/L	or µg/Kg) UG/L	Q
91-20-3	Naphthalene		1900 /	D
91-57-6	2-Methylnaphthalene		340 /	D
208-96-8	Acenaphthylene		160/	DJ
83-32-9	Acenaphthene	1	250	U
86-73-7	Fluorene		250	υ
85-01-8	Phenanthrene		250	U

Benzo(g,h,i)perylene (1) Cannot be separated from Diphenylamine

Anthracene

Pyrene

Chrysene

Fluoranthene

Benzo(a) anthracene

Benzo(b) fluoranthene

Benzo(k) fluoranthene

Indeno(1,2,3-cd)pyrene

Dibenzo(a,h)anthracene

Benzo(a)pyrene

120-12-7

206-44-0

129-00-0

56-55-3

218-01-9

205-99-2

207-08-9

193-39-5

50-32-8

53-70-3

191-24-2

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		:	,	EPA SAMPLE NO
		ORGANIC ANALYSI	5 DATA SHEET	HIMW-0051
Lab Name: PACE ANAL	YTICAL			L
Lab Code: <u>10478</u>	Case No.	SAS	No.:	SDG No.: KEY-URS185
Matrix (soil/water):	WATER		Lab Sample 1	ID: <u>1406J99-004</u>
Level (low/med):	LOW		Date Receive	ed: <u>6/26/2014</u>
<pre>% Solids:</pre>	0.0			
Concentra	tion Units	(ug/L or mg/kg o	dry weight): <u>I</u>	DG/L
CAS No.	Analyte	Concentration	с о м	
7439-89-6	Iron	38500	P	
Color Before: BROWN	Clarity	Before: CLOUI	 )Y Te	xture:
Color After: YELLOW	Clarity			

U.S. EPA - CLP

Comments:

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Date Reported 7/10/2014

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-005D

Lab Name:	PACE ANALYI	ICAL		Contra	ot:			
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:		SDG No.:	KEY-URS185
Matrix: (so:	il/water)	WATER			Lab S	ample ID:	1406J99-00	)5A
Sample wt/vo	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab F	ile ID:	14\G26286.	<u>-</u>
Level: (lo	ow/med)	TOM			Date	Received:	06/26/14	
% Moisture:	not dec.				Date .	Analyzed:	07/06/14	
GC Column:	<u>Rtx-624</u>	Ð	.18	(mm)	Dilut	ion Factor:	1.00	
Soil Extrac	t Volume:		(புட)		Soil .	Aliquot Volum	ne	_ (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	5	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	27	

HIMW-005D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALY	TICAL Cont	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-005B
Sample wt/vol:	<u>500</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66829.D
Level: (low/med)	LOW	Date Received:	06/26/14
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/30/14
Concentrated Extract	Volume: <u>500</u> (µL)	Date Analyzed:	07/01/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

AS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	600 500	-8-1
91-57-6	2-Methylnaphthalene	96 ,95	-8-1
208-96-8	Acenaphthylene	32	
83-32-9	Acenaphthene	2	J
86-73-7	Fluorene	5	J
85-01-8	Phenanthrene	10	υ
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	ប
205-99-2	Benzo(b)fluoranthene	10	υ
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

OLM04.2 **KEY-URS185 S44** 

8/14/14

	10		EPA SAMPLE NO	<b>)</b> .
SEMIVOLAT	ILE ORGANICS ANALYSIS DATA	A SHEET	HIMW-005DDL	
Lab Name: PACE ANALY	TICAL Contrac	t:		
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	S NO.:	SDG NO.: KEY-I	JRS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-005BDL	!
Sample wt/vol:	<u>500</u> (g/mL) <u>ML</u>	Lab File ID:	4\N66906.D	
Level: (low/med)	LOW	Date Received:	06/26/14	
<pre>% Moisture:</pre>	Decanted: (Y/N) N	Date Extracted:	06/30/14	
Concentrated Extract	Volume: <u>500</u> (µL)	Date Analyzed:	07/03/14	
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	20.00	
GPC Cleanup: (Y/N)	и рн;	Extraction: (Type)	CONT	
			NTRATION UNITS:	
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene		600	D
91-57-6	2-Methylnaphthalene		96	DJ
208-96-8	Acenaphthylene		34	DJ
83-32-9	Acenaphthene		200	U
86-73-7	Fluorene		200	U
85-01-8	Phenanthrene		200	U
120-12-7	Anthracene	1	200	U
206-44-0	Fluoranthene		200	U
129-00-0	Pyrene	/	200	U
56-55-3	Benzo(a) anthracene		200	U
218-01-9	Chrysene		200	U
205-99-2	Benzo(b) fluoranthene		200	U
207-08-9	Benzo(k) fluoranthene		200	U
50-32-8	Benzo(a) pyrene		200	<u> </u>
193-39-5	Indeno(1,2,3-cd)pyrene		200	U
53-70-3	Dibenzo (a, h) anthracene		200	U
191-24-2	Benzo(g,h,i)perylene		200	U

191-24-2Benzo(g,h,i)perylene(1) Cannot be separated from Diphenylamine

8/14/14

OLM04.2 **KEY-URS185 S45** 

#### 1 EPA SAMPLE NO INORGANIC ANALYSIS DATA SHEET HIMW-005D Lab Name: PACE ANALYTICAL Case No. SDG No.: KEY-URS185 Lab Code: 10478 SAS No.: Matrix (soil/water): WATER Lab Sample ID: 1406J99-005 Level (low/med): LOW Date Received: 6/26/2014 % Solids: 0.0 Concentration Units (ug/L or mg/kg dry weight): UG/L CAS No. Analyte Concentration C М 0 7439-89-6 Iron 10200 P Color Before: BROWN Clarity Before: CLOUDY Texture: Color After: YELLOW Clarity After: CLOUDY Artifacts:

U.S. EPA - CLP

Comments:

Date Reported 7/10/2014

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-008S

Lab Name: PACE ANAL	YTICAL Cont	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SA	AS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406H97-004A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	514\G26112
Level: (low/med)	TOM	Date Received:	06/24/14
% Moisture: not dec.		Date Analyzed:	06/25/14
GC Column: <u>Rtx-624</u>	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

# CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	14	
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	1	U

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EPA SAMPLE NO.

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMI VOLAI	IDS ORGANICS ANADI		HIMW-008S
Lab Name: PACE ANALY	TICAL	Contract:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-U</u>	RS SAS NO.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406H97-004B
Sample wt/vol:	<u>1000</u> (g/mL)	ml Lab File ID:	4\N66805.D
Level: (low/med)	LOW	Date Received:	06/24/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	<u>N</u> Date Extracted:	06/27/14
Concentrated Extract	Volume: <u>1000</u> ()	μL) Date Analyzed:	06/30/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	Extraction: (Type)	CONT

# CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	υ
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	2	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	υ
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	υ
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	υ
205-99-2	Benzo(b)fluoranthene	10	υ
207-08-9	Benzo(k) fluoranthene	10	U
50-32-8	Benzo(a) pyrene	10	υ
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

OLM04.2 KEY-URS185 S50

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-0081

Lab Name:	PACE ANALYI	ICAL	c	Contract		
Lab Code:	10478	Case No.:	KEY-URS	SAS No	o.:	SDG No.: KEY-URS185
Matrix: (so	il/water)	WATER		L	ab Sample ID:	1406H97-003A
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML	r	ab File ID:	514\G26111
Level: (lo	ow/med)	TOM		D	ate Received:	06/24/14
<pre>% Moisture:</pre>	not dec.			D	ate Analyzed:	06/25/14
GC Column:	Rtx-624	ID:	<u>.18</u> (;	men) D	ilution Factor:	1.00
Soil Extract	t Volume:		(µL)	S	oil Aliquot Volu	me (يلر)

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

HIMW-0081

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYTICAL Contract: Lab Code: 10478 Case No.: KEY-URS SAS No.: SDG NO.: KEY-URS185 Matrix: (soil/water) WATER Lab Sample ID: 1406H97-003B Sample wt/vol: 1000 (g/mL) ml Lab File ID: 4\N66804.D Date Received: 06/24/14 Level: (low/med) LOW Decanted: (Y/N) <u>N</u> Date Extracted: 06/27/14 % Moisture: Concentrated Extract Volume: <u>1000</u> (µL) Date Analyzed: 06/30/14 Injection Volume: <u>2</u> (µL) Dilution Factor: 1.00 Extraction: (Type) CONT GPC Cleanup: (Y/N) N pH: \_\_\_\_

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	υ
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	υ
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	υ
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	Ū
193-39-5	Indeno(1,2,3-cd)pyrene	10	υ
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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-008D

Lab Name:	PACE ANALYT	ICAL		Contrac	st:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS185
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406H97-00	2 <u>2</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab File ID:	514\G26110	2
Level: (lo	ow/med)	LOW			Date Received:	06/24/14	
% Moisture:	not dec.				Date Analyzed:	06/25/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mm)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil Aliquot Volu	me	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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

HIMW-008D

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# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALY	Cont	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406H97-002B
Sample wt/vol:	<u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66803.D
Level: (low/med)	LOW	Date Received:	06/24/14
<pre>% Moisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	06/27/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/30/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	υ
208-96-8	Acenaphthylene	10	υ
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	υ
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	υ
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	υ
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

OLM04.2 KEY-URS185 S48

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-0125

Lab Name:	PACE ANALYT	ICAL		Contra	ct:			
Lab Code:	10478	Case No.:	KEY-UR	SAS	No.:		SDG No.:	KEY-URS185
Matrix: (so:	il/water)	WATER			Lab S	ample ID:	1406H97-00	<u>6A</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab F	Tile ID:	514\G26114	
Level: (lo	ow/med)	LOW			Date	Received:	06/24/14	
<pre>% Moisture:</pre>	not dec.				Date	Analyzed:	06/25/14	
GC Column:	Rtx-624	D:	.18	(mm)	Dilut	ion Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil	Aliquot Volu	ne	(ب <del>ا</del> لم)

### CONCENTRATION UNITS:

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

.

HIMW-012S

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYT	IT GAT Contra		
Lab Name: PACE ANALII	<u>ICAL</u> CONCE	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406H97-006B
Sample wt/vol: 1	000 (g/mL) <u>ml</u>	Lab File ID:	4\N66807.D
Level: (low/med)	LOW	Date Received:	06/24/14
<pre>% Moisture: 1</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/27/14
Concentrated Extract V	Volume: <u>1000</u> (µL)	Date Analyzed:	06/30/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) 1	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	υ
208-96-8	Acenaphthylene	10	υ
83-32-9	Acenaphthene	10	υ
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	υ
120-12-7	Anthracene	10	υ
206-44-0	Fluoranthene	10	υ
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	υ
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	υ
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

.

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-0121

Lab Name: PACE ANALY	TICAL Contra	.et:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406H97-007A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	514\G26115
Level: (low/med)	TOM	Date Received:	06/24/14
% Moisture: not dec.		Date Analyzed:	06/25/14
GC Column: Rtx-624	ID: <u>.18</u> (mn)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE URGANICS A	HIMW-012I	
Lab Name: PACE ANALYTICAL	Contract:	
Lab Code: 10478 Case No.: K	EY-URS SAS NO.:	SDG No.: KEY-URS185
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	1406H97-007B
Sample wt/vol: 1000 (g/m	nL) <u>ml</u> Lab File ID:	4\N66808.D
Level: (low/med) LOW	Date Received:	06/24/14
% Moisture: Decanted:(Y/N	) <u>N</u> Date Extracted:	06/27/14
Concentrated Extract Volume: 100	0 (µL) Date Analyzed:	06/30/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH	: Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	29	
83-32-9	Acenaphthene	31	
86-73-7	Fluorene	20	
85-01-8	Phenanthrene	12	
120-12-7	Anthracene	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	σ
56-55-3	Benzo(a) anthracene	10	U
218-01-9	Chrysene	10	υ
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

OLM04.2 KEY-URS185 S52

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-012D

Lab Name:	PACE ANALYT	ICAL	)	Contrac	st:			
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:		SDG No.:	KEY-URS185
Matrix: (so:	il/water)	WATER			Lab S	Sample ID:	1406H97-00	BA
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab H	file ID:	514\G26118	1
Level: (lo	ow/med)	TOM			Date	Received:	06/24/14	
% Moisture:	not dec.				Date	Analyzed:	06/25/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mn)	Dilut	ion Factor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil	Aliquot Volum	ne	(بىتە)

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

1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-012D

EPA SAMPLE NO.

Lab Name: PACE ANALY	TICAL Cont	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406H97-008B
Sample wt/vol:	<u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66811.D
Level: (low/med)	TOM	Date Received:	06/24/14
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/27/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/30/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

#### CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-13s

Lab Name:	PACE ANALYT	ICAL		Contra	st:		
Lab Code:	10478	Case No.:	KEY-UR:	s sas	No.:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	<u>1406E93-00</u>	<u>7</u> A
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab File ID:	4\A81802.D	1
Level: (lo	ow/med)	LOW			Date Received:	06/19/14	
<pre>% Moisture:</pre>	not dec.				Date Analyzed:	06/22/14	
GC Column:	Rtx-624	ID:	.18	(mm)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil Aliquot Volu	me	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATI	SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET						
Lab Name: PACE ANALY	TICAL Con	tract:					
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184				
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-007B				
Sample wt/vol:	1000 (g/mL) <u>ml</u>	Lab File ID:	4\N66777.D				
Level: (low/med)	LOW	Date Received:	06/19/14				
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/25/14				
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/26/14				
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00				
GPC Cleanup: (Y/N)	<u>м</u> рн:	Extraction: (Type	) <u>CONT</u>				

### CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

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OLM04.2 KEY-URS184 S72

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-13I

Lab Name:	PACE ANALYI	ICAL		Contra	ct:		
Lab Code:	10478	Case No.:	KEY-UR	<u>s</u> sas	No.:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	<u>1406E93-00</u>	8A
Sample wt/v	ol: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	4\A81785.D	2
Level: (1)	ow/med)	TOM			Date Received:	06/19/14	
% Moisture:	not dec.				Date Analyzed:	06/20/14	
GC Column:	<u>Rtx-624</u>	ID	.18	(ma)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(բե)		Soil Aliquot Volu	me	_ (µL)

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

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATIL	HIMW-13I		
Lab Name: PACE ANALYTI	CAL Contr	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water) W	ATER	Lab Sample ID:	1406E93-008B
Sample wt/vol: 10	00 (g/mL) ml	Lab File ID:	4\N66780.D
Level: (low/med)	LOW	Date Received:	06/19/14
% Moisture: De	ecanted: (Y/N) <u>N</u>	Date Extracted:	06/25/14
Concentrated Extract Vo	olume: 1000 (µL)	Date Analyzed:	06/27/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (፻/ክ) <u>N</u>	рн:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	7	J
208-96-8	Acenaphthylene	35	
83-32-9	Acenaphthene	4	J
86-73-7	Fluorene	3	J
85-01-8	Phenanthrene	12	
120-12-7	Anthracene	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo (a) pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-13D

Lab Name:	PACE ANALY	TCAL		Contra	ct:	
Lab Code:	10478	Case No.:	KEY-UR	s sas	No.:	SDG No.: KEY-URS184
Matrix: (so	il/water)	WATER			Lab Sample ID:	1406E93-009A
Sample wt/v	ol: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	4\A81786.D
Level: (1	ow/med)	TOM			Date Received:	06/19/14
% Moisture:	not dec.				Date Analyzed:	06/20/14
GC Column:	<u>Rtx-624</u>	ID	<u>.18</u>	(1111)	Dilution Factor:	1.00
Soil Extrac	t Volume:		(بىتە)		Soil Aliquot Volu	ime (بلار)

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

SEMIVOLATILE ORGANICS ANALYSIS D	HIMW-13D	
Lab Name: PACE ANALYTICAL Cont:	ract:	
Lab Code: 10478 Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	1406E93-009B
Sample wt/vol: <u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66799.D
Level: (low/med) LOW	Date Received:	06/19/14
<pre>% Moisture: Decanted:(Y/N) N</pre>	Date Extracted:	06/25/14
Concentrated Extract Volume: $1000$ (µL)	Date Analyzed:	06/30/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH:	Extraction: (Type)	CONT

# CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	11	
83-32-9	Acenaphthene	5	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	υ
120-12-7	Anthracene	10	ប
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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-14I

Lab Name:	PACE ANALYI	ICAL		Contra	ct:		
Lab Code:	10478	Case No.:	KEY-UR	<u>s</u> sas	No.:	SDG No.: K	EY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406E93-0012	<u> </u>
Sample wt/ve	ol: <u>5</u>	(g/mL	ML		Lab File ID:	4\A81776.D	
Level: (lo	ow/med)	LOW			Date Received:	06/19/14	
<pre>% Moisture:</pre>	not dec.				Date Analyzed:	06/20/14	
GC Column:	<u>Rtx-624</u>	Ð	.18	(1111)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil Aliquot Volu	me	(µL)

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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-14D

Lab Name:	PACE ANALY	ICAL		Contra	ct:		
Lab Code:	10478	Case No.:	KEY-UR	eae <u>e</u>	No.:	SDG No.:	KEY-URS184
Matrix: (so	il/water)	WATER			Lab Sample ID:	1406293-00	2A
Sample wt/v	ol: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	4\A81777.D	
Level: (1	ow/med)	FOM			Date Received:	06/19/14	
% Moisture:	not dec.				Date Analyzed:	06/20/14	
GC Column:	<u>Rtx-624</u>	Ð	.18	(mn)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(µL)	i i	Soil Aliquot Volu	me	(µL)

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

10

EPA SAMPLE NO.

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

			HIMW-14D
Lab Name: PACE ANALY	TICAL	Contract:	
Lab Code: <u>10478</u>	Case No.: KEY-U	RS SAS No.:	SDG NO.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-002B
Sample wt/vol:	1000 (g/mL)	<u>ml</u> Lab File ID:	4\N66772.D
Level: (low/med)	LOW	Date Received:	06/19/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	<u>N</u> Date Extracted:	06/25/14
Concentrated Extract	Volume: <u>1000</u> ()	pL) Date Analyzed:	06/26/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

OLM04.2 KEY-URS184 S73

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-151

Lab Name:	PACE ANALYT	ICAL	c	Contrac	t:			
Lab Code:	10478	Case No.:	KEY-URS	SAS 1	No.:		SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER		3	Lab Sam	ple ID:	1406073-00	<u>1A</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML	3	Lab Fil	e ID:	4\A81677.D	1
Level: (lo	ow/med)	TOM		1	Date Re	ceived:	06/17/14	
<pre>% Moisture:</pre>	not dec.			1	Date Ar	alyzed:	06/18/14	
GC Column:	<u>Rtx-624</u>	ID:	<u>.18</u> (	imm) I	Dilutic	n Factor:	1.00	
Soil Extract	t Volume:		(µւ)	:	Soil Al	iquot Volum	ne	_ (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L		
71-43-	2 Benzene	13		
108-88-	Toluene	1	U	
100-41-	Ethylbenzene	1	U	
1330-20-	Xylene (total)	4		

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLAT	HIMW-15I			
Lab Name: PACE ANALY	TICAL	Contrac	t:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-</u>	URS SAS	3 No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER		Lab Sample ID:	1406C73-001B
Sample wt/vol:	<u>1000</u> (g/mL)	ml	Lab File ID:	4\R22990.D
Level: (low/med)	LOW		Date Received:	06/17/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	N	Date Extracted:	06/18/14
Concentrated Extract	Volume: 1000	(µL)	Date Analyzed:	06/20/14
Injection Volume:	<u>2</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:_		Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	24	
83-32-9	Acenaphthene	10	
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	4	J
120-12-7	Anthracene	10	υ
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	υ
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	υ

(1) Cannot be separated from Diphenylamine

OLM04.2 KEY-URS184 S75

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-15D

Lab Name:	PACE ANALYT	ICAL		Contrac	t:			
Lab Code:	10478	Case No.:	KEY-URS	SAS N	No.:		SDG No.:	KEY-URS184
Matrix: (so	il/water)	WATER		1	Lab San	mple ID:	1406073-00	<u>2A</u>
Sample wt/vo	pl: <u>5</u>	(g/mL)	ML	1	Lab Fil	Le ID:	4\A81678.D	
Level: (lo	ow/med)	LOW		I	Date Re	ceived:	06/17/14	
% Moisture:	not dec.			1	Date Ar	alyzed:	06/18/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mm) 1	Dilutio	on Factor:	1.00	
Soil Extract	t Volume:		(µL)	:	Soil Al	liquot Volum	ne	(hT)

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

SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET
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SEMIVOLAT	ILE ORGANICS ANAL	YSIS DATA	A SHEET	HIMW-15D
Lab Name: PACE ANAL	TICAL	Contract	t:	
Lab Code: <u>10478</u>	Case No.: KEY-	URS SAS	S NO.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER		Lab Sample ID:	1406C73-002B
Sample wt/vol:	<u>1000</u> (g/mL)	ml	Lab File ID:	4\R22991.D
Level: (low/med)	LOW		Date Received:	06/17/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	N	Date Extracted:	06/18/14
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	06/20/14
Injection Volume:	<u>2</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	м рн: _		Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	υ
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

OLM04.2 **KEY-URS184 S74** 

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-20S

Lab Name:	PACE ANALYT	ICAL	c	Contrac	st:	
			-			
Lab Code:	10478	Case No.:	KEY-URS	SAS :	No.:	SDG No.: KEY-URS184
Matrix: (soi	il/water)	WATER			Lab Sample ID:	1406E93-004A
Sample wt/vo	pl: <u>5</u>	(g/nL)	ML		Lab File ID:	4\A81779.D
Level: (lo	ow/med)	LOW			Date Received:	06/19/14
<pre>% Moisture:</pre>	not dec.				Date Analyzed:	06/20/14
GC Column:	Rtx-624	ID:	<u>.18</u> ()	nna)	Dilution Factor:	1.00
Soil Extract	t Volume:		(بىتە)		Soil Aliquot Volu	me (يلا)

CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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.

DUP061814 (HI AW -205)

Lab Name: PACE ANAL	TICAL Cor	ntract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-006A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\A81781.D
Level: (low/med)	TOM	Date Received:	06/19/14
% Moisture: not dec.		Date Analyzed:	06/20/14
GC Column: Rtx-624	ID: <u>.18</u> (mm)	) Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATI	LLE ORGANICS ANALISIS I	DATA SHEET	HIMW-20S
Lab Name: PACE ANALY	FICAL Cont	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-004B
Sample wt/vol: 1	<u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66774.D
Level: (low/med)	LOW	Date Received:	06/19/14
<pre>% Moisture:</pre>	Decanted: (Y/N) N	Date Extracted:	06/25/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/26/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>м</u> рн:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

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OLM04.2 KEY-URS184 S77

FORM I SV- 1

DUP061814	
(111141) 705)	
(HIMW - 200)	

Lab Name: PACE ANAL	YTICAL Cor	ntract:	(HIMW-205)
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-006B
Sample wt/vol:	<u>1000</u> (g/mL) ml	Lab File ID:	4\N66776.D
Level: (low/med)	LOW	Date Received:	06/19/14
<pre>% Moisture:</pre>	Decanted: (Y/N) N	Date Extracted:	06/25/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/26/14
Injection Volume:	2 (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a) anthracene	10	υ
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	υ
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

OLM04.2 KEY-URS184 S65 18

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-201

Lab Name:	PACE ANALYT	ICAL		Contra	ct:			
Lab Code:	10478	Case No.:	KEY-UR	<u>s</u> sas	No.:	-	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sam	ole D:	1406E93-00	)5 <u>A</u>
Sample wt/v	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab File	ID:	4\A81780.I	2
Level: (lo	ow/med)	FOM			Date Rec	ceived:	06/19/14	
<pre>% Moisture:</pre>	not dec.				Date Ana	alyzed:	06/20/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(1111)	Dilutior	a Factor:	1.00	
Soil Extrac	t Volume:		(րբ)		Soil Ali	quot Volu	me	(µL)

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVULAI	ILE ORGANICS ANALISIS	DATA BALLI	HIMW-20I
Lab Name: PACE ANALY	TICAL Con	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-005B
Sample wt/vol:	<u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\N66775.D
Level: (low/med)	LOW	Date Received:	06/19/14
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/25/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/26/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	6	J
83-32-9	Acenaphthene	1	
86-73-7	Fluorene	10	U
B5-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	υ
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

OLM04.2 KEY-URS184 S76

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMM-22

Lab Name:	PACE ANALYT	ICAL		Contrac	st:			
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:		SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample	ID:	1406293-00	<u>3A</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab File II	<b>D:</b>	4\A81778.D	1
Level: (lo	ow/med)	LOW			Date Receiv	ved:	06/19/14	
% Moisture:	not dec.				Date Analy:	zed:	06/20/14	
GC Column:	<u>Rtx-624</u>	D:	.18	(mm)	Dilution Fa	actor:	1.00	
Soil Extract	t Volume:		(hr)		Soil Alique	ot Volum	ne	(بتد)

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

1C

EPA SAMPLE NO.

SEMIVOLATI	LE ORGANICS ANALYSIS	DATA SHEET	HIMW-22
Lab Name: PACE ANALYI	Cont	tract:	L,
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u>	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406E93-003B
Sample wt/vol: <u>1</u>	.000 (g/mL) <u>ml</u>	Lab File ID:	4\N66773.D
Level: (low/med)	LOW	Date Received:	06/19/14
<pre>% Moisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	06/25/14
Concentrated Extract V	Volume: <u>1000</u> (µL)	Date Analyzed:	06/26/14
Injection Volume:	2 (pL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

OLM04.2 **KEY-URS184 S78** 

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-23

Lab Name:	PACE ANALYI	ICAL		Contra	at:		
Lab Code:	10478	Case No.:	KEY-URS	sas	No.:	SDG No.: 1	CEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406073-003	A
Sample wt/v	ol: <u>5</u>	(g/mL	<u>ML</u>		Lab File ID:	4\A81679.D	
Level: (le	ow/med)	TOM			Date Received:	06/17/14	
% Moisture:	not dec.				Date Analyzed:	06/18/14	
GC Column:	Rtx-624	ID:	.18	(11111)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(րդ)		Soil Aliquot Volu	<b>me</b>	(µL)

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

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE ORGANICS ANALYSIS D	ATA SHEET	HIMW-23
Lab Name: PACE ANALYTICAL Contr	ract:	L
Lab Code: 10478 Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	1406C73-003B
Sample wt/vol: <u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\R22992.D
Level: (low/med) LOW	Date Received:	06/17/14
<pre>% Moisture: Decanted:(Y/N) N</pre>	Date Extracted:	06/18/14
Concentrated Extract Volume: <u>1000</u> ( $\mu$ L)	Date Analyzed:	06/20/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N pH:	Extraction: (Type	) <u>CONT</u>

CONCENTRATION UNITS:

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

# OLM04.2 **KEY-URS184 S79**

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-24

Lab Name:	PACE ANALYT	ICAL		Contra	ct:			
Lab Code:	10478	Case No.:	KEY-UR:	SAS	No.:		SDG No.:	KEY-URS184
Matrix: (so	il/water)	WATER			Lab S	ample ID:	1406F74-00	)3A
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab F	'ile ID:	4\A81807.D	2
Level: (lo	ow/med)	FOM			Date	Received:	06/20/14	
<pre>% Moisture:</pre>	not dec.				Date	Analyzed:	06/22/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(1111)	Dilut	ion Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil	Aliquot Volum	De	(یلر)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	89	
108-88-3	Toluene	5	
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	86	

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP	061914	
	(HIMW -	24)

Lab Name: PACE ANALY	TICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406F74-004A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\A81808.D
Level: (low/med)	TOM	Date Received:	06/20/14
% Moisture: not dec.		Date Analyzed:	06/22/14
GC Column: <u>Rtx-624</u>	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(،تىر)	Soil Aliquot Volu	me(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	
71-43-2	Benzene	88	
108-88-3	Toluene	5	
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene (total)	86	

SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET	
101					

SEMIVOLATILE ORGANICS ANALYSIS D	DATA SHEET HIMW-24	
Lab Name: PACE ANALYTICAL Contr	ract:	
Lab Code: 10478 Case No.: KEY-URS	SAS No.: SDG No.: KEY-URS18	4
Matrix: (soil/water) WATER	Lab Sample ID: 1406F74-003B	
Sample wt/vol: <u>1000</u> (g/mL) <u>ml</u>	Lab File ID: <u>4\R23202.D</u>	
Level: (low/med) LOW	Date Received: 06/20/14	
<pre>% Moisture: Decanted:(Y/N) N</pre>	Date Extracted: 06/26/14	
Concentrated Extract Volume: <u>1000</u> ( $\mu$ L)	Date Analyzed: 06/27/14	
Injection Volume: <u>2</u> (µL)	Dilution Factor: 1.00	
GPC Cleanup: (Y/N) <u>N</u> pH:	Extraction: (Type) CONT	

#### CONCENTRATION UNITS:

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

OLM04.2 **KEY-URS184 S80**  1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

DUP061914 (HIMW-24)

Lab Name: PACE ANAL	TICAL Con	tract:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u>	SAS No.:	SDG NO.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406F74-004B
Sample wt/vol:	<u>1000</u> (g/mL) <u>ml</u>	Lab File ID:	4\R23203.D
Level: (low/med)	LOW	Date Received:	06/20/14
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/26/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/27/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	) CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>		
91-20-3	Naphthalene	33		
91-57-6	2-Methylnaphthalene	3	J	
208-96-8	Acenaphthylene	4	J	
83-32-9	Acenaphthene	1	J	
86-73-7	Fluorene	1	J	
85-01-8	Phenanthrene	10	U	
120-12-7	Anthracene	10	U	
206-44-0	Fluoranthene	10	U	
129-00-0	Pyrene	10	U	
56-55-3	Benzo(a) anthracene	10	U	
218-01-9	Chrysene	10	U	
205-99-2	Benzo(b)fluoranthene	10	U	
207-08-9	Benzo(k)fluoranthene	10	U	
50-32-8	Benzo(a)pyrene	10	U	
193-39-5	Indeno(1,2,3-cd)pyrene	10	U	
53-70-3	Dibenzo(a,h)anthracene	10	U	
191-24-2	Benzo(g,h,i)perylene	10	U	

(1) Cannot be separated from Diphenylamine

OLM04.2

# FORM I SV- 1

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-25

Lab Name:	PACE ANALYI	ICAL		Contra	ot:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS185
Matrix: (so	il/water)	WATER			Lab Sample ID:	1406H97-00	5A
Sample wt/vo	51: <u>5</u>	(g/mL)	ML		Lab File ID:	514\G26113	
Level: (lo	ow/med)	TOM			Date Received:	06/24/14	
% Moisture:	not dec.				Date Analyzed:	06/25/14	
GC Column:	Rtx-624	ID:	.18	(mn)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil Aliquot Volu	me	(µ <b>L</b> )

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	190 200	2D
108-88-3	Toluene	150	
100-41-4	Ethylbenzene	170	
1330-20-7	Xylene (total)	810 520	F D

8/14/14

1A	EPA SAMPLE NO.
VOLATILE ORGANICS ANALYSIS DAT	HIMW-25DL
Lab Name: PACE ANALYTICAL Con	tract:
Lab Code: 10478 Case No.: KEY-URS	SAS No.: SDG No.: <u>KEY-URS185</u>
Matrix: (soil/water) WATER	Lab Sample ID: 1406H97-005ADL
Sample wt/vol: <u>5</u> (g/mL) <u>ML</u>	Lab File ID: <u>514\G26119</u>
Level: (low/med) <u>LOW</u>	Date Received: 06/24/14
<pre>% Moisture: not dec.</pre>	Date Analyzed: 06/25/14
GC Column: <u>Rtx-624</u> ID: <u>.18</u> (mm)	Dilution Factor: 2.00
Soil Extract Volume: (µL)	Soil Aliquot Volume (µL)

	1	CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(µg/L or µg/Kg)		UG/L Q	
71-43-2	Benzene	1	190	D	
108-88-3	Toluene		140	D	
100-41-4	Ethylbenzene	$\langle \rangle$	170	D	
1330-20-7	Xylene (total)	X	810	D	

8/14/14 ne

FORM I VOA - 1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLAT.	HIMW-25			
Lab Name: PACE ANALY	TICAL	Contra	act:	
Lab Code: <u>10478</u>	Case No.:	KEY-URS	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER		Lab Sample ID:	1406H97-005B
Sample wt/vol:	<u>1000</u> (g	/mL) <u>ml</u>	Lab File ID:	4\N66806.D
Level: (low/med)	LOW		Date Received:	06/24/14
<pre>% Moisture:</pre>	Decanted: (Y	/n) <u>n</u>	Date Extracted:	06/27/14
Concentrated Extract	Volume: 10	000 (µL)	Date Analyzed:	06/30/14
Injection Volume:	<u>2</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u>	DH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	190 120	21
91-57-6	2-Methylnaphthalene	27	
208-96-8	Acenaphthylene	18	
83-32-9	Acenaphthene	2	J
86-73-7	Fluorene	3	J
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	Ū
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

OLM04.2 **KEY-URS185 S56** 

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	10			
SEMIVOLA	HIMW-25DL			
Lab Name: PACE ANAL	TICAL	Contract:		
Lab Code: <u>10478</u>	Case No.: KEY-U	RS SAS NO.:	SDG NO .: KEY-URS	185
Matrix: (soil/water)	WATER	Lab Sample ID	: 1406H97-005BDL	
Sample wt/vol:	1000 (g/mL)	ML Lab File ID:	4\N66904.D	
Level: (low/med)	LOW	Date Received	: 06/24/14	
<pre>% Moisture:</pre>	Decanted: (Y/N)	N Date Extracte	d: 06/27/14	
Concentrated Extract	Volume: <u>1000</u> ()	uL) Date Analyzed	: <u>07/03/14</u>	
Injection Volume:	2 (µL)	Dilution Fact	or: $4.00$	
GPC Cleanup: (Y/N)	м рн:	- Extraction: (	Type) CONT	
		с	ONCENTRATION UNITS:	
CAS NO.	COMPOUND	(	µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene		190	D
91-57-6	2-Methylnaphthale	ne	30	DJ
208-96-8	Acenaphthylene	1	20	DJ
83-32-9	Acenaphthene	1	40	U
86-73-7	Fluorene		40	U
85-01-8	Phenanthrene		40	U
120-12-7	Anthracene		40	U
206-44-0	Fluoranthene		40	Ū
129-00-0	Pyrene		40	U
56-55-3	Benzo(a) anthracen	e \	40	U
218-01-9	Chrysene	1	40	U
205-99-2	Benzo(b) fluoranthe	ene	40	U
207-08-9	Benzo(k) fluoranth		40	U
50-32-8	Benzo (a) pyrene		40	U
193-39-5	Indeno(1,2,3-cd)p	Vrene	40	U
53-70-3	Dibenzo(a, h) anthr		40	U
191-24-2	Benzo (g, h, i) peryle		40	U
		1		

(1) Cannot be separated from Diphenylamine

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-261

CONCENTRATION UNITS:

Lab Name:	PACE ANALY	FICAL	Co	ontrac	st:	<del></del>		
Lab Code:	10478	Case No.:	KEY-URS	SAS 1	No.:		SDG No.:	KEY-URS182
Matrix: (so	oil/water)	WATER		:	Lab Sample I	D:	1404197-0	01A
Sample wt/v	rol: <u>5</u>	(g/mL	) <u>mL</u>	1	Lab File ID:		G24827.D	
Level: (1	.ow/med)	LOW		1	Date Receive	ad:	04/30/14	
% Moisture:	not dec.			1	Date Analyze	ad:	05/02/14	
GC Column:	<u>Rtx-624</u>	ID	: <u>.18</u> (m	m) 1	Dilution Fac	stor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil Aliquot	: Volu	me	(pL)

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

a na si ng mara

FORM I VOA - 1

.

**KEYURS182 S16** 

HIMW-26I

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYT	FICAL Cont	ract:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u>	SAS No.:	SDG No.: KEY-URS182
Matrix: (soil/water)	WATER	Lab Sample ID:	1404L97-001B
Sample wt/vol: <u>1</u>	000 (g/mL) <u>mL</u>	Lab File ID:	R22078.D
Level: (low/med)	LOW	Date Received:	04/30/14
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	05/07/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	05/09/14
Injection Volume:	<u>2</u> (μL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	Extraction: (Type)	) <u>CONT</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>	Q	
91-20-3	Naphthalene	10	UJ	
91-57-6	2-Methylnaphthalene	10	U	
208-96-8	Acenaphthylene	10	U	
83-32-9	Acenaphthene	10	υ	
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

6/9/14

OLM04.2

LA VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

HIMW-26I

Lab Name:	PACE ANALY	FICAL		Contra	Act:		
Lab Code:	10478	Case No.:	KEY-UF	RAS SAS	No.:	SDG No.:	KEY-URS185
Matrix: (soi	l/water)	WATER			Lab Sample ID:	<b>1406</b> J99-0	02A
Sample wt/vo	01: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	14\G26289	<u>.</u>
Level: (lo	w/med)	LOW			Date Received:	06/26/14	
% Moisture:	not dec.				Date Analyzed:	07/06/14	
GC Column:	<u>Rtx-624</u>	Ъ	: <u>.18</u>	(mm)	Dilution Factor:	1.00	
Soil Extract	: Volume:		(pL)	).	Soil Aliquot Volu		(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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

SEMIVOURITHE ORGANICS MUMIDID DRIN DIMEN	SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET
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HIMW-26I Lab Name: PACE ANALYTICAL Contract: Lab Code: 10478 Case No.: KEY-URS SAS No.: SDG No.: KEY-URS185 Matrix: (soil/water) <u>WATER</u> Lab Sample ID: 1406J99-002B 4\N66826.D Sample wt/vol: 1000 (g/mL) <u>ml</u> Lab File ID: LOW Date Received: 06/26/14 Level: (low/med) Decanted: (Y/N) N Date Extracted: 06/30/14 % Moisture: Concentrated Extract Volume: 1000 (µL) Date Analyzed: 07/01/14 Dilution Factor: 1.00 Injection Volume: <u>2</u> (µL) Extraction: (Type) CONT GPC Cleanup: (Y/N) <u>N</u> pH: \_\_\_\_

#### CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANALYTICAL

HIMW-26D

Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-001A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\G24738.D
Level: (low/med)	LOW	Date Received:	04/18/14
% Moisture: not dec.		Date Analyzed:	04/29/14
GC Column: Rtx-624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(pL)	Soil Aliquot Vol	ume (µL)

## CONCENTRATION UNITS:

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COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
Benzene	1	U
Toluene	1	U
Ethylbenzene	1	U
Xylene (total)	24	
	Benzène Toluene Ethylbenzene	Benzene1Toluene1Ethylbenzene1

**KEY-URS181 S16** 

CONCENTRATION UNITS:

SEMIVOLATILE ORGANICS ANALYSI	S DATA SHEET	HIMW-26D
Lab Name: PACE ANALYTICAL Co.	ntract:	<u>L.</u>
Lab Code: 10478 Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS181
Matrix: (soil/water) WATER	Lab Sample ID:	1404E33-001B
Sample wt/vol: <u>1000</u> (g/mL) <u>m</u> l	Lab File ID:	R21764.D
Level: (low/med) <u>LOW</u>	Date Received:	04/18/14
% Moisture: Decanted:(Y/N) N	Date Extracted:	04/22/14
Concentrated Extract Volume: 1000 (µL)	Date Analyzed:	04/25/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH:	Extraction: (Type	) <u>CONT</u>

1C

CAS NO. COMPOUND ( $\mu$ g/L or  $\mu$ g/Kg)  $\mu$ g/L Q 91-20-3 Naphthalene 2D 540 860 91-57-6 2-Methylnaphthalene 180 220 B 208-96-8 Acenaphthylene 97 EDJ 120 83-32-9 7 J Acenaphthene 86-73-7 19 Fluorene 85-01-8 15 Phenanthrene 10 120-12-7 Anthracene U 10 206-44-0 Fluoranthene υ 129-00-0 Pyrene 10 U 56-55-3 Benzo(a) anthracene 10 U 218-01-9 10 U Chrysene 10 υ 205-99-2 Benzo(b) fluoranthene 207-08-9 10 U Benzo(k) fluoranthene 50-32-8 10 U Benzo(a)pyrene 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 I SV- 1

6/3/14

	1C		EPA SAMPLE	NO.
SEMIVOLA	TILE ORGANICS ANALYSIS DATA	SHEET		
			HIMW-26DDL	
Lab Name: PACE ANAL	YTICAL Contract	•		
			\.	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY	-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404833-0018D	<u>ь</u>
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	<u>R21816.D</u>	
Level: (low/med)		Date Received:	04/18/14	
% Moisture:	Decanted: (Y/N) N	Date Extracted:	04/22/14	
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	04/28/14	
Injection Volume:	<u>2</u> (µЪ)	Dilution Factor:	20.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	CONT	
		CONCE	NTRATION UNITS	:
CAS NO.	COMPOUND	(pg/L	or µg/Kg) µg/1	έQ
91-20-3	Naphthalene		860	D
91-57-6			220	D
208-96-8	Acenaphthylene		120	עם
83-32-9	Acenaphthene		200	U
86-73-7	Fluorene		21	DJ
85-01-8	Phenanthrene		200	U
120-12-7	Anthracene	/	200	U
206-44-0	Fluoranthene	/	200	U
129-00-0	Pyrene	·	200	<u> </u>
56-55-3	Benzo (a) anthracene		200	U U
218-01-9	Chrysene		200	U
205-99-2	Benzo (b) fluoranthene		200	บ บ
203-99-2	Benzo (k) fluoranthene		200	<u> </u>
50-32-8			200	U U
193-39-5		\	200	U U
53-70-3		<u> </u>		U U
			200	U U
191-24-2	Benzo(g,h,i)perylene		200	<u> </u>

(1) Cannot be separated from Diphenylamine

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**KEY-URS181 S26** 

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-26D

Lab Name:	PACE ANALYT	ICAL		Contra	et:		
Lab Code:	10478	Case No.:	KEY-UR	SAS	No.:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406K88-00	<u>1A</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML		Lab File ID:	4\A81922.D	
Level: (lo	ow/med)	LOW			Date Received:	06/27/14	
% Moisture:	not dec.				Date Analyzed:	07/07/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mn)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(դե)		Soil Aliquot Volu	me	(μ۲.)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	1	υ
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylene (total)	26	

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SEMIVOLAT	ILE ORGANICS ANAL	YSIS DATA	SHEET	HIMW-26D
Lab Name: PACE ANALY	TICAL	Contract	t:	adama and a second second
Lab Code: <u>10478</u>	Case No.: <u>KEY-</u>	URS SAS	No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER		Lab Sample ID:	1406K88-001B
Sample wt/vol:	<u>1000</u> (g/mL)	ml	Lab File ID:	4\N66831.D
Level: (low/med)	LOW		Date Received:	06/27/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	N	Date Extracted:	06/30/14
Concentrated Extract	Volume: <u>1000</u>	(րբ)	Date Analyzed:	07/01/14
Injection Volume:	<u>3</u> (pr)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:		Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	580 520	B
91-57-6	2-Methylnaphthalene	130 120	JA D
208-96-8	Acenaphthylene	63	
83-32-9	Acenaphthene	4	J
86-73-7	Fluorene	10	
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	υ
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	σ
50-32-8	Benzo(a)pyrene	10	υ
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
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(1) Cannot be separated from Diphenylamine

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	1C		EPA SAMPLE NO	
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET				
			HIMW-26DDL	
Lab Name: PACE ANAL	TICAL Contract			
		·····		
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG NO.: KEY-U	RS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406K88-001BDL	
Sample wt/vol:	1000 (g/mL) <u>ML</u>	Lab File ID:	<u>4\N66908.D</u>	
Level: (low/med)	LOW	Date Received:	<u>06/27/14</u>	
% Moisture:	Decanted: (Y/N) <u>N</u>	Date Extracted:	06/30/14	
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	07/03/14	
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	20.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	CONT	
		CONCE	NTRATION UNITS:	
CAS NO.	COMPOUND	(µg/L	or µg/Kg) UG/L	Q
91-20-3	Naphthalene	/	580	D
91-57-6	2-Methylnaphthalene		130	DJ
208-96-8			68	DJ
83-32-9	Acenaphthene		200	U
86-73-7	Fluorene		200	U
85-01-8	Phenanthrene		200	υ
120-12-7	Anthracene		200	U
206-44-0	Fluoranthene		200	U
129-00-0	Pyrene		200	U
56-55-3	Benzo(a) anthracene		200	U
218-01-9	Chrysene		200	U
205-99-2	Benzo(b) fluoranthene	1	200	υ
207-08-9	Benzo(k) fluoranthene	/	200	U
50-32-8	Benzo(a)pyrene		200	U
193-39-5	Indeno(1,2,3-cd) pyrene		200	U

(1) Cannot be separated from Diphenylamine

191-24-2 Benzo(g,h,i)perylene

Dibenzo(a, h) anthragene

53-70-3

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	TNODONITO ANA		EPA SAMPLE NO
		LYSIS DATA SHEET	HIMW-26D
Lab Name: <u>PACE ANAL</u>	YTICAL		
Lab Code: <u>10478</u>	Case No.	SAS No.: SD	G Nc.: <u>KEY-URS184</u>
Matrix (soil/water):	WATER	Lab Sample ID: <u>1</u>	406K88-001
Level (low/med):	LOW	Date Received: 6	5/27/2014
<pre>% Solids:</pre>	0.0		
Concentrat	tion Units (ug/L or mg	/kg dry weight): <u>UG/L</u>	
CAS No.	Analyte Concentrat	ion C Q M	
7439-89-6	Iron	169 🗾 P	
		i	
Color Before: COLORLE	SS Clarity Before:	CLEAR Texture	:
Color After: COLORLE	SS Clarity After:	CLEAR Artifac	ts:
		414/14	
		SIL CONTRACT	

U.S. EPA - CLP

Comments:

Date Reported 7/9/2014

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KEY-URS184 588 1

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# VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-27S

Lab Name: PACE ANALY	TICAL Conti	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SA	S No.:	SDG No.: KEY-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-002A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	4\G24741.D
Level: (low/med)	LOW	Date Received:	04/18/14
% Moisture: not dec.		Date Analyzed:	04/29/14
GC Column: Rtx-624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(pL)	Soil Aliquot Vol	ume (µL)

## CONCENTRATION UNITS:

r ð	(µg/L or µg/Kg) <u>UG/L</u>	CAS NO. COMPOUND	
	22	Benzene	71-43-2
	23	Toluene	108-88-3
) BD	310 350	Ethylbenzene	100-41-4
E	350	Xylene (total)	1330-20-7
	350		

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FORM I VOA - 1

1A VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

HIMW-27SDL

Lab Name: PACE ANALY	TICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG No.: <u>KEY-URS181</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-002ADL
Sample wt/vol: 5	· (g/mL) <u>ML</u>	Lab File ID:	4\G24746.D
Level: (low/med)	LOW	Date Received	04/18/14
% Moisture: not dec.		Date Analyzed:	04/29/14
GC Column: <u>Rtx-624</u>	ID: <u>.18</u> (mm)	Dilution Factor:	2.00
Soil Extract Volume:	(µL)	Soil Aliquot Vol	ume (µL)

	$\setminus$			CONCENTRATION UNITS:	
CAS NO.	COMPOUND		/	(µg/L or µg/Kg) UG/L	Q
71-43-2	Benzène			19	D
108-88-3	Toluene	1		20	D
100-41-4	Ethylbenzene			350	D
1330-20-7	Xylene (total)	1	1	370	D

6/2/14

FORM I VOA - 1

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATI	HIMW-27S		
Lab Name: PACE ANALY	TICAL Cont:	ract:	1. 
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u>	SAS No.:	SDG No.: KEY-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-002B
Sample wt/vol: 1	000 (g/mL) mL	Lab File ID:	<u>R21767.D</u>
Level: (low/med)	LOW	Date Received:	04/18/14
<pre>% Moisture:</pre>	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	04/22/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	04/25/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	№ . рн:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μg/L or μg/Kg) <u>μg/L</u>	Q
91-20-3	Naphthalene	270 1200	PD)
91-57-6	2-Methylnaphthalene	290 320	FD
208-96-8	Acenaphthylene	6	J
83-32-9	Acenaphthene	85 92	RO.
86-73-7	Fluorene	38	
85-01-8	Phenanthrene	35	
120-12-7	Anthracene	7	J
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	υ
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 I SV- 1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET	
	MPLE NO.
HIMW-2	7SDL
Lab Name: PACE ANALYTICAL Contract:	
Lab Name: FACE ANALITICAL	
Lab Code: 10478 Case No.: KEY-URS SAS No.: SDG No.:	KEY-URS181
Matrix: (soil/water) WATER Lab Sample ID: 1404E33-	-002BDL
Sample wt/vol: <u>1000</u> (g/mL) <u>mL</u> Lab File ID: <u>R21804.I</u>	2
Level: (low/med) LOW Date Received: 04/18/14	1
% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/14	<u>1</u>
Concentrated Extract Volume: 1000 (µL) Date Analyzed: 04/27/14	1
Injection Volume: <u>2</u> (µL) Dilution Factor: <u>20.00</u>	
GPC Cleanup: (Y/N) N pH: Extraction: (Type) CONT	
CONCENTRATION	
CAS NO. COMPOUND (µg/L or µg/Kg	) <u>μg/L</u> Q
91-20-3 Naphthalene 1200	D
91-57-6 2-Methylnaphthalene 320	D
208-96-8 Acenaphthylene 200	U
83-32-9 Acenaphthene 92	DJ
86-73-7 Fluorene 40	DJ
85-01-8 Phenanthrene 38	DJ
120-12-7 Anthracene 200	<u> </u>
	<u>U</u>
206-44-0 Fluoranthene 200	<u> </u>
	U
129-00-0 Pyrene 200	U
129-00-0         Pyrene         200           56-55-3         Benzo (a) anthracene         200	
129-00-0         Pyrene         200           56-55-3         Benzo (a) anthracene         200           218-01-9         Chrysene         200	<u> </u>
129-00-0         Pyrene         200           56-55-3         Benzo (a) anthracene         200           218-01-9         Chrysene         200           205-99-2         Benzo (b) fluoranthene         200	
129-00-0         Pyrene         200           56-55-3         Benzo(a) anthracene         200           218-01-9         Chrysene         200           205-99-2         Benzo(b) fluoranthene         200           207-08-9         Benzo(k) fluoranthene         200	U
129-00-0         Pyrene         200           56-55-3         Benzo(a) anthracene         200           218-01-9         Chrysene         200           205-99-2         Benzo(b) fluoranthene         200           207-08-9         Benzo(k) fluoranthene         200           50-32-8         Benzo(a) pyrene         200	บ บ
129-00-0         Pyrene         200           56-55-3         Benzo(a) anthracene         200           218-01-9         Chrysene         200           205-99-2         Benzo(b) fluoranthene         200           207-08-9         Benzo(k) fluoranthene         200           50-32-8         Benzo(a) pyrene         200	บ บ บ

191-24-2Benzo(g,h,i)perylene(1) Cannot be separated from Diphenylamine

6/3/14

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-275

Lab Name:	PACE ANALYT	ICAL	Contr	act:	
Lab Code:	10478	Case No.:	KEY-URS SA	S No.:	SDG No.: KEY-URS184
Matrix: (so:	il/water)	WATER		Lab Sample ID:	1406K88-002A
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML	Lab File ID:	4\A81923.D
Level: (lo	ow/med)	LOW		Date Received:	06/27/14
<pre>% Moisture:</pre>	not dec.			Date Analyzed:	07/07/14
GC Column:	<u>Rtx-624</u>	ID:	<u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract	t Volume:		(µL)	Soil Aliquot Volu	me (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	6	
108-88-3	Toluene	47	
100-41-4	Ethylbenzene	670 630	20
1330-20-7	Xylene (total)	760 240	A P

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	18		EPA SAMPLE 1	10.
VOLATI	LE ORGANICS ANALYSIS DATA	SHEET		
			HIMW-27SDL	
Lab Name: PACE ANAL	LYTICAL Contr	act:		
Lab Code: 10478	Case No.: KEY-URS SAS	SNO.:	SDG No.: KEY-	URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406K88-002ADL	
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\A81927.D	
• () ()		Deter Desident de	00107/24	
Level: (low/med)	TOM	Date Received:	06/27/14	
* Moisture: not dec.		Date Analyzed;	07/07/14	
GC Column: Rtx-624	ID: .18 (mm)	Dilution Factor:	10.00	
Soil Extract Volume:	(JTT)	Soil Aliquot Volu	me (ш.	<b>\</b>
SOII EXCLACT VOIUME.	( here)	Don't HErdage Lot		/
SUIT EXCLACT VOILLE.		John Hardron vor		,
SOII EXCLASE VOILLE.			TRATION UNITS:	,
CAS NO.	COMPOUND	CONCEN		ç
		CONCEN	TRATION UNITS:	
CAS NO.	COMPOUND Benzene Toluene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u>	Q
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3	COMPOUND Benzene Toluene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48	Q U D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	NTRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670	Q U D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	TRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670 760	Q D D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	TRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670 760	Q D D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	TRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670 760	Q D D D
CAS NO. 71-43-2 108-88-3 100-41-4	COMPOUND Benzene Toluene Ethylbenzene	CONCEN	TRATION UNITS: or µg/Kg) <u>UG/L</u> 10 48 670 760	Q U D D

SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET	HIMW-27S
Lab Name: PACE ANALYTICAL Contract:	
Lab Code: 10478 Case No.: KEY-URS SAS No.:	SDG No.: KEY-URS184
Matrix: (soil/water) <u>WATER</u> Lab Sample ID:	1406K88-002B
Sample wt/vol: <u>1000</u> (g/mL) <u>ml</u> Lab File ID:	4\N66832.D
Level: (low/med) LOW Date Received:	06/27/14
<pre>% Moisture: Decanted:(Y/N) N Date Extracted:</pre>	06/30/14
Concentrated Extract Volume: <u>1000</u> (µL) Date Analyzed:	07/01/14
Injection Volume: <u>2</u> (µL) Dilution Factor:	1.00
GPC Cleanup: (Y/N) N pH: Extraction: (Type	) <u>CONT</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	990 260	FD
91-57-6	2-Methylnaphthalene	300 290	21
208-96-8	Acenaphthylene	3	J
83-32-9	Acenaphthene	74	
86-73-7	Fluorene	30	
85-01-8	Phenanthrene	35	
120-12-7	Anthracene	6	J
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	2	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

8/14/14

	1C		EPA SAMPLE NO.
SEMIVOLA'	TILE ORGANICS ANA		HIMW-27SDL
Lab Name: PACE ANAL	YTICAL	Contract:	
Lab Code: <u>10478</u>	Case No.: KEY	-URS SAS No.:	SDG No.: <u>KEY-URS184</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	1406K88-002BDL
Sample wt/vol:	<u>1000</u> (g/mL)	ML Lab File ID:	4\N66909.D
Level: (low/med)	LOW	Date Received:	06/27/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	<u>N</u> Date Extracted:	06/30/14
Concentrated Extract	: Volume: 1000	(µL) Date Analyzed:	07/03/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	25.00
GPC Cleanup: (Y/N)	<u>N</u> pH:_	Extraction: (Type	) <u>Cont</u>
		CONCE	NTRATION UNITS:
CAS NO.	COMPOUND	(hð\r	or µg/Kg) <u>UG/L</u> Q

CAS NU.	COMPOUND	1	(have or have) neve	Q
91-20-3	Naphthalene		990	D
91-57-6	2-Methylnaphthalene	1	300	D
208-96-8	Acenaphthylene		250	U
83-32-9	Acenaphthene		71	DJ
86-73-7	Fluorene		19	DJ
85-01-8	Phenanthrene	<u>\/</u>	34	DJ
120-12-7	Anthracene	X	250	υ
206-44-0	Fluoranthene	Fluoranthene		U
129-00-0	Pyrene		250	U
56-55-3	Benzo(a)anthracene		250	U
218-01-9	Chrysene		250	U
205-99-2	Benzo(b)fluoranthene		250	U
207-08-9	Benzo(k)fluoranthene	Benzo(k)fluoranthene		U
50-32-8	Benzo(a)pyrene	\     \	250	U
193-39-5	Indeno(1,2,3,cd)pyrene		250	U
53-70-3	Dibenzo(a, b) anthracene		250	U
191-24-2	Benzo(g,h,i)perylene		250	U

(1) Cannot be separated from Diphenylamine

8/14/14

OLM04.2

	1 INORGANIC ANALYSIS DA			
Lab Name: PACE ANALYT	TICAL	HIMW-27S		
Lab Code: <u>10478</u>	Case No. SAS No	SDG No.: KEY-URS184		
Matrix (soil/water):	WATER	Lab Sample ID: <u>1406K88-002</u>		
Level (low/med):	LOW	Date Received: 6/27/2014		
% Solids:	<u>0.0</u>			
Concentration Units (ug/L or mg/kg dry weight): UG/L				
CAS No.	Analyte Concentration C	Q M		
7439-89-6 []	ron 85600	¥ P		
Color Before: COLORLES: Color After: YELLOW	S Clarity Before: CLEAR Clarity After: CLEAR	Texture: Artifacts:		

U.S. EPA - CLP

1/14/14

Comments:

Date Reported 7/9/2014

KEY-URS184 589

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-27I

Lab Name: PACE ANALYTICAL Cont	ract:	1
Lab Code: 10478 Case No.: KEY-URS SA	S No.:	SDG No.: KEY-URS181
Matrix: (soil/water) WATER	Lab Sample ID:	1404E33-003A
Sample wt/vol: <u>5</u> (g/mL) <u>ML</u>	Lab File ID:	4\G24742.D
Level: (low/med) LOW	Date Received:	04/18/14
% Moisture: not dec.	Date Analyzed:	04/29/14
GC Column: <u>Rtx-624</u> ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume: (µL)	Soil Aliquot Volu	me(pL)

## CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q	
71-43-2	Benzène	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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## 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE ORGANICS A	ANALYSIS DAT	A SHEET	HIMW-27I
Lab Name: PACE ANALYTICAL	Contrac	t:	L
Lab Code: <u>10478</u> Case No.: <u>K</u>	EY-URS SAS	5 No.:	SDG No.: KEY-URS181
Matrix: (soil/water) <u>WATER</u>		Lab Sample ID:	1404E33-003B
Sample wt/vol: 1000 (g/m	nL) <u>mL</u>	Lab File ID:	R21768.D
Level: (low/med) LOW		Date Received:	04/18/14
<pre>% Moisture: Decanted:(Y/N</pre>	и) <u>и</u>	Date Extracted:	04/22/14
Concentrated Extract Volume: 100	<u>0</u> (µL)	Date Analyzed:	04/25/14
Injection Volume: $2 (\mu L)$		Dilution Factor:	1.00
GPC Cleanup: (Y/N) N pH	:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	Ŭ
1.29-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	υ
205-99-2	Benzo(b)fluoranthene	10	υ
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

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FORM I SV- 1

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-27I

Lab Name:	PACE ANALYT	ICAL		Contrac	st:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406K88-00	3A
Sample wt/va	ol: <u>5</u>	(g/mL)	ML		Lab File ID:	4\A81924.E	!
Level: (lo	ow/med)	LOW			Date Received:	06/27/14	
<pre>% Moisture:</pre>	not dec.				Date Analyzed:	07/07/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mm)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(بىتە)		Soil Aliquot Volu	ine	(بتد)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATII	LE ORGANICS ANALISIS DAI	TA SHEET	HIMW-27I
Lab Name: PACE ANALYT	ICAL Contrac	ct:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SA	AS No.:	SDG No.: KEY-URS184
Matrix: (soil/water) M	NATER	Lab Sample ID:	1406K88-003B
Sample wt/vol: 10	000 (g/mL) <u>ml</u>	Lab File ID:	4\N66833.D
Level: (low/med)	LOW	Date Received:	06/27/14
<pre>% Moisture: I</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	06/30/14
Concentrated Extract V	olume: <u>1000</u> (µL)	Date Analyzed:	07/01/14
Injection Volume:	<u>2</u> (پتد)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N	pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

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

OLM04.2 KEY-URS184 S83

U.S.	EPA	-	CLP
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		TN	CORGANIC ANALYSI	re r	אידא כיו	1000		EP	A SAMPLE NO
Lab Name:	PACE ANAL		ORGANIC ANALISI	51	DATA SI	1551			HIMW-27I
Lab Code:		Case No.	SA	S N	o.:		5	SDG No.:	KEY-URS184
Matrix (soi	il/water):	WATER			Lab Sa	ample	ID:	1406K88	-003
Level (low/	/med):	LOW			Date H	Receiv	red:	6/27/20	14
% Solids:		0.0							
	Concentra	tion Units	(ug/L or mg/kg	dry	/ weigh	nt):	UG/L		
	CAS No.	Analyte	Concentration	с	Q	М			
	7439-89-6	Iron	775		E.	P			
		SS Clarity SS Clarity	· · · · · ·		-		extur rtifa	_	

Comments:

Date Reported 7/9/2014

KEY-URS184 590.1

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EPA SAMPLE NO.

HIMW-285

VOLATILE ORGANICS ANALYSIS DATA SHEET

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 Lab Name:
 PACE ANALYTICAL
 Contract:

 Lab Code:
 10478
 Case No.:
 KEY-URS SAS No.:
 SDG No.:
 KEY-URS181

 Matrix:
 (soil/water)
 WATER
 Lab Sample ID:
 1404E33-004A

 Sample wt/vol:
 5
 (g/mL) ML
 Lab File ID:
 4\G24743.D

 Level:
 (low/med)
 LOW
 Date Received:
 04/18/14

 % Moisture: not dec.
 Date Analyzed:
 04/29/14

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

 Soil Extract Volume:
 (pL)
 Soil Aliquot Volume \_\_\_\_\_\_\_
 (pL)

## CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L		
71-43-2	Benzene	36		
108-88-3	Toluene	1		
100-41-4	Ethylbenzene	90		
1330-20-7	Xylene (total)	18		

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE ORGANICS ANALYSIS DA	HIMW-28S	
Lab Name: PACE ANALYTICAL Contra	ct:	
Lab Code: 10478 Case No.: KEY-URS SA	AS No.:	SDG No.: KEY-URS181
Matrix: (soil/water) WATER	Lab Sample ID:	1404E33-004B
Sample wt/vol: 1000 (g/mL) mL	Lab File ID:	<u>R21769.D</u>
Level: (low/med) LOW	Date Received:	04/18/14
% Moisture: Decanted: (Y/N) N	Date Extracted:	04/22/14
Concentrated Extract Volume: 1000 ( $\mu$ L)	Date Analyzed:	04/25/14
Injection Volume: <u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N pH:	Extraction: (Type	) <u>CONT</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μg/L or μg/Kg) <u>μg/L</u>	Q
91-20-3	Naphthalene	290 320	ZD
91-57-6	2-Methylnaphthalene	50	
208-96-8	Acenaphthylene	2	J
83-32-9	Acenaphthene	29	
86-73-7	Fluorene	22	
85-01-8	Phenanthrene	26	
120-12-7	Anthracene	5	J
206-44-0	Fluoranthene	3	J
129-00-0	Pyrene	4	J
56-55-3	Benzo(a)anthracene	1	J
218-01-9	Chrysene	1	J
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	υ
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	υ
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 I SV- 1

6/3/14

	10		EPA SAMPLE N	ю.
SEMIVOLA	FILE ORGANICS ANALYSIS DA	TA SHEET	HIMW-28SDL	
Lab Name: PACE ANAL	YTICAL Contrac	ct:	<u>L</u> :	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SA	AS No.:	SDG No.: KEY-	URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-004BD	Ŀ
Sample wt/vol:	<u>1000</u> (g/mL) mL	Lab File ID:	R21805.D	
Level: (low/med)	LOW	Date Received:	04/18/14	
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	04/22/14	
Concentrated Extract	t Volume: <u>1000</u> (μL)	Date Analyzed:	04/27/14	
Injection Volume:	<u>2</u> (μ <sub>L</sub> )	Dilution Factor:	10.00	
		Extra ation (man		
GPC Cleanup: (Y/N)	) <u>N</u> pH:	Extraction: (Type	<u>coni</u>	
GPC Cleanup: (Y/N)	) <u>N</u> pH:		ENTRATION UNITS:	
GPC Cleanup: (Y/N) CAS NO.	ON PH:	CONCE	2	
	-	CONCE	ENTRATION UNITS:	
CAS NO.	COMPOUND	CONCE	ENTRATION UNITS: or µg/Kg) <u>µg/L</u>	Q
CAS NO. 91-20-3	COMPOUND Naphthalene 2-Methylnaphthalene	CONCE	ENTRATION UNITS: οr μg/Kg) μg/L 320	Q
CAS NO. 91-20-3 91-57-6	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene	CONCE	ENTRATION UNITS: οr μg/Kg) μg/L 320 52	Q D DJ
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9	COMPOUND Naphthalene 2-Methylnaphthalene	CONCE	ENTRATION UNITS: or μg/Kg) μg/L 320 52 100	Q D DJ U
CAS NO. 91-20-3 91-57-6 208-96-8	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene	CONCE	ENTRATION UNITS: or μg/Kg) μg/L 320 52 100 29	Q DJ U DJ
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene	CONCE	ENTRATION UNITS: or μg/Kg) μg/L 320 52 100 29 23	Q DJ U DJ DJ DJ
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene	CONCE	ENTRATION UNITS: Δ or μg/Kg) μg/L 320 52 100 29 23 26	Q DJ U DJ DJ DJ DJ DJ
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene	CONCE	ENTRATION UNITS: Δ or μg/Kg) μg/L 320 52 100 29 23 26 100	Q DJ U DJ DJ DJ DJ U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene	CONCE	ENTRATION UNITS: Δ OT μg/Kg) μg/L 320 52 100 29 23 26 100 100	Q DJ U DJ DJ DJ DJ U U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0 56-55-3	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene	CONCE	ENTRATION UNITS: Δ OF μg/Kg) μg/L 320 52 100 29 23 26 100 100 100	Q DJ U DJ DJ DJ DJ U U U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0 56-55-3 218-01-9	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Fluoranthene Fluoranthene Pyrene Benzo(a)anthracene Chrysene	CONCE	ENTRATION UNITS: Δ or μg/Kg) μg/L 320 52 100 29 23 26 100 100 100 100 100	Q DJ U DJ DJ DJ U U U U U U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0 56-55-3 218-01-9 205-99-2	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Fluoranthene Fluoranthene Pyrene Benzo (a) anthracene Chrysene Benzo (b) fluoranthene	CONCE	ENTRATION UNITS: Δ OF μg/Kg) μg/L 320 52 100 29 23 26 100 100 100 100 100 100 100	Q DJ U DJ DJ DJ U U U U U U U U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0 56-55-3 218-01-9 205-99-2 207-08-9	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo (a) anthracene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene	CONCE	ENTRATION UNITS: Δ OF μg/Kg) μg/L 320 52 100 29 23 26 100 100 100 100 100 100 100 10	Q DJ U DJ DJ DJ U U U U U U U U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0 56-55-3 218-01-9 205-99-2 207-08-9 50-32-8	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a) anthracene Chrysene Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene	CONCE	ENTRATION UNITS: Δ Or μg/Kg) μg/L 320 52 100 29 23 26 100 100 100 100 100 100 100 10	Q DJ U DJ DJ DJ U U U U U U U U U
CAS NO. 91-20-3 91-57-6 208-96-8 83-32-9 86-73-7 85-01-8 120-12-7 206-44-0 129-00-0 56-55-3 218-01-9 205-99-2 207-08-9	COMPOUND Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo (a) anthracene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene	CONCE	ENTRATION UNITS: Δ or μg/Kg) μg/L 320 52 100 29 23 26 100 100 100 100 100 100 100 10	Q DJ U DJ DJ DJ U U U U U U U U U U U U U

(1) Cannot be separated from Diphenylamine

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OLM04.2

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

H11MW-285

Lab Name:	PACE ANALYI	ICAL		Contra	ct:			
Lab Code:	10478	Case No.:	KEY-UR	<u>s</u> sas	No.:		SDG No.:	KEY-URS185
Matrix: (so	il/water)	WATER			Lab	Sample ID:	1406J99-00	6A
Sample wt/v	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab	File ID:	14\G26285.	<u>.</u>
Level: (l	ow/med)	TOM			Date	Received:	06/26/14	
<pre>% Moisture:</pre>	not dec.				Date	Analyzed:	07/06/14	
GC Column:	Rtx-624	Ъ:	.18	( <b>nm</b> )	Dilu	tion Factor:	1.00	
Soil Extrac	t Volume:		(بليل)		Soil	Aliquot Volu	me	(بىلد)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71-43-2	Benzene	22	
108-88-3	Toluene	8	
100-41-4	Ethylbenzene	120	
1330-20-7	Xylene (total)	25	

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EPA SAMPLE NO.

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DELLI VOIMI			HIMW-28S
Lab Name: PACE ANALY	TICAL	Contract:	
Lab Code: <u>10478</u>	Case No.: KEY-L	IRS SAS No.:	SDG NO.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-006B
Sample wt/vol:	1000 (g/mL)	<u>ml</u> Lab File ID:	4\N66830.D
Level: (low/med)	LOW	Date Received:	06/26/14
<pre>% Moisture:</pre>	Decanted: (Y/N)	<u>N</u> Date Extracted:	06/30/14
Concentrated Extract	Volume: <u>1000</u>	(µL) Date Analyzed:	07/01/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	
91-20-3	Naphthalene	280 270	- D
91-57-6	2-Methylnaphthalene	33	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	23	
86-73-7	Fluorene	16	
85-01-8	Phenanthrene	17	
120-12-7	Anthracene	3	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

8/14/14

	10		EPA SAMPLE NO	o.
SEMIVOLAT	TILE ORGANICS ANALYSIS	DATA SHEET	HIMW-28SDL	
Lab Name: PACE ANAL	YTICAL Con	tract:		
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS NO	SDG NO.: KEY-1	URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-006BDI	4
Sample wt/vol:	<u>1000</u> (g/mL) <u>ML</u>	Lab File ID:	4\N66907.D	
Level: (low/med)	LOW	Date Received:	06/26/14	
<pre>% Moisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	06/30/14	
Concentrated Extract	: Volume: <u>1000</u> (µL)	Date Analyzed:	07/03/14	1
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	5.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	) <u>CONT</u>	/
		CONCE	INTRATION UNITS:	
CAS NO.	COMPOUND	(ug/I	or µg/Kg) UG/L	Q
91-20-3	Naphthalene	(F3)	280	D
91-57-6	2-Methylnaphthalene		36	L L
208-96-8	Acenaphthylene		50	<u> </u>
83-32-9	Acenaphthene		25	DJ
86-73-7	Fluorene		18	DJ
85-01-8	Phenanthrene		18	
83-01-8	Plielanchrene	<u> </u>	/ l	DJ
120-12-7	Anthracene		50	U
206-44-0	Fluoranthene		50	U
129-00-0	Pyrene		50	U
56-55-3	Benzo(a) anthracene		50	U
218-01-9	Chrysene		50	U
205-99-2	Benzo(b) fluoranthene		50	U
207-08-9	Benzo(k) fluoranthene		50	U
50-32-8	Benne (2) pursone		50	U
	Benzo(a) pyrene			
193-39-5	Benzo(a) pyrene Indeno(1,2,3-cd) pyre	ne	50	U
1	Indeno (1,2,3-cd) pyrei Dibenzo (a, h) anthrace		50 50	U U

191-24-2Benzo(g,h,i)perylene(1) Cannot be separated from Diphenylamine

OLM04.2 KEY-URS185 S61

814/14

## U.S. EPA - CLP

			1		EPA SAMPLE NO
		IN	ORGANIC ANALYSIS DATA	SHEET	HIMW-28S
Lab Name:	PACE ANALY	TICAL			
Lab Code:	10478	Case No.	SAS No.:		SDG No.: KEY-URS185
Matrix (so:	il/water):	WATER	Lab	Sample ID:	<u>1406J99-006</u>
Level (low,	/med):	LOW	Dat	e Received:	6/26/2014
<pre>% Solids:</pre>		0.0			
	Concentrat	ion Units	(ug/L or mg/kg dry we	ight): <u>UG/</u>	L
	CAS No.	Analyte	Concentration C C	2 M	
	7439-89-6	Iron	60200	P	
			······	i	
Color Befo:	re: COLORLE	SS Clarity	Before: CLEAR	Textu	ire:
Color Afte:	r: YELLOW	Clarity	After: CLEAR	Arti	facts:

Comments:

Date Reported 7/10/2014

KEY-URS18518566.1

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-28I

Lab Name: PACE ANALY	TICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG NO.: KEY-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-005A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\G24744.D
Level: (low/med)	LOW	Date Received:	04/18/14
% Moisture: not dec.		Date Analyzed:	04/29/14
GC Column: Rtx-624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Vol	ume (µL)

#### CONCENTRATION UNITS:

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

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET

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VOIRTIN	CAGARICS AMILISIS DATA	SHEMI	DUP041714 (HIMW-28I)
Lab Name: PACE ANALY	FICAL Contra	ct:	, , , , , ,
Lab Code: 10478	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-006A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\G24745.D
Level: (low/med)	LOW	Date Received:	04/18/14
% Moisture: not dec.		Date Analyzed:	04/29/14
GC Column: <u>Rtx-624</u>	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

## CONCENTRATION UNITS:

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

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SERIVOLATINE OR		AIA DIBBI	HIMW-28I
Lab Name: PACE ANALYTICAL	Contra	act:	
Lab Code: 10478 Case	NO.: <u>KEY-URS</u> S	AS No.:	SDG No.: KEY-URS181
Matrix: (soil/water) <u>WATER</u>		Lab Sample ID:	1404E33-005B
Sample wt/vol: 1000	(g/mL) <u>mL</u>	Lab File ID:	<u>R21770.D</u>
Level: (low/med)	LOW	Date Received:	04/18/14
<pre>% Moisture: Decap</pre>	ted:(Y/N) <u>N</u>	Date Extracted:	04/22/14
Concentrated Extract Volum	e: <u>1000</u> (μL)	Date Analyzed:	04/25/14
Injection Volume: 2	(µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N	рН:	Extraction: (Type)	CONT
		CONCERN	TON INTON

#### CONCENTRATION UNITS:

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

(1) Cannot be separated from Diphenylamine

DÚP041714

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## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PACE ANAL	YTICAL Cont	tract:	(HIMW-2PI)
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u>	SAS No.:	SDG No.: KEY-URS181
Matrix: (soil/water)	WATER	Lab Sample ID:	1404E33-006B
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	<u>R21771.D</u>
Level: (low/med)	LOW	Date Received:	04/18/14
<pre>% Moisture:</pre>	Decanted: (Y/N) <u>N</u>	Date Extracted:	04/22/14
Concentrated Extract	: Volume: <u>1000</u> (µL)	Date Analyzed:	04/25/14
Injection Volume:	2 (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	) <u>CONT</u>
	- -	CONCE	NTRATION UNITS:

CONCENTRATION UNITS:

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

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-281

Lab Name:	PACE ANALYI	ICAL		Contra	et:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS185
Matrix: (so:	il/water)	WATER			Lab Sample ID:	<u>1406J99-00</u>	AEC
Sample wt/v	ol: <u>5</u>	(g/mL)	ML		Lab File ID:	14\G26288.	
Level: (lo	ow/med)	LOW			Date Received:	06/26/14	
% Moisture:	not dec.				Date Analyzed:	07/06/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(1111)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil Aliquot Volu	me	(pL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATI	HIMW-28I		
Lab Name: PACE ANALY	TICAL Cont	ract:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u>	SAS No.:	SDG No.: KEY-URS185
Matrix: (soil/water)	WATER	Lab Sample ID:	1406J99-003B
Sample wt/vol: 1	1000 (g/mL) <u>ml</u>	Lab File ID:	4\N66827.D
Level: (low/med)	LOW	Date Received:	06/26/14
<pre>% Moisture:</pre>	Decanted: (Y/N) N	Date Extracted:	06/30/14
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	07/01/14
Injection Volume:	<u>2</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

CONCENTRATION UNITS:

CAS NO. COMPOUND		(µg/L or µg/Kg) <u>UG/L</u>		
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	υ	

(1) Cannot be separated from Diphenylamine

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB041814

Lab Name: PACE ANALYTICAL	Contract:
Lab Code: 10478 Case No.: KEY-URS	SAS No.: SDG No.: KEY-URS181
Matrix: (soil/water) WATER	Lab Sample ID: 1404E33~007A
Sample wt/vol: <u>5</u> (g/mL) <u>ML</u>	Lab File ID: <u>4\G24737.D</u>
Level: (low/med) LOW	Date Received: 04/18/14
% Moisture: not dec.	Date Analyzed: 04/29/14
GC Column: Rtx-624 ID: .18 (	mm) Dilution Factor: 1.00
Soil Extract Volume: (µL)	Soil Aliquot Volume (µL)

## CONCENTRATION UNITS:

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

**KEY-URS181 S23** 

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB042914

Lab Name:	PACE ANALY	TICAL	C	ontract				
Lab Code:	10478	Case No.;	KEY-URS	SAS N	o.:	:	SDG No.:	KEY-URS182
Matrix: (so	il/water)	WATER		L	ab Sample	ID:	1404197-00	)2A
Sample wt/v	ol: <u>5</u>	(g/mL	) <u>ml</u>	L	ab File I	tD: <u>(</u>	G24826.D	
Level: (1	ow/med)	LOW		D	ate Rece	ived:	04/30/14	
% Moisture:	not dec.			D	ate Analy	zed:	05/02/14	
GC Column:	Rtx-624	ID	. <u>.18</u> (m	ma) D	ilution 1	factor:	1.00	
Soil Extrac	t Volume:		(µL)	S	oil Aliq	uot Volum	10	(µL)

CONCENTRATION UNITS:

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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB061714

Lab Name: PACE ANALY	TICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS184
Matrix: (soil/water)	WATER	Lab Sample ID:	1406C73-004A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4\A81680.D
Level: (low/med)	TOM	Date Received:	06/17/14
% Moisture: not dec.		Date Analyzed:	06/18/14
GC Column: <u>Rtx-624</u>	ID: <u>.18</u> (ma)	Dilution Factor:	1.00
Soil Extract Volume:	(pL)	Soil Aliquot Volu	me (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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	

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB061914

Lab Name:	PACE ANALYI	ICAL		Contra	ct: .	· · · · · · · · · · · · · · · · · · ·		
Lab Code:	10478	Case No.:	KEY-UR	SAS	No.: _		SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sa	ample ID:	<u>1406293-01</u>	.0A
Sample wt/v	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab Fi	ile ID:	4\A81787.1	2
Level: (lo	ow/med)	LOW			Date I	Received:	06/19/14	
<pre>% Moisture:</pre>	not dec.				Date A	Analyzed:	06/20/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(nm)	Diluti	ion Factor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil #	Aliquot Volu	me	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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	

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB062014

Lab Name:	PACE ANALYT	ICAL		Contra	ct:	<u> </u>		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:		SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab	Sample ID:	1406F74-00	<u>5A</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab 1	File ID:	4\A81809.D	:
Level: (lo	ow/med)	LOW			Date	Received:	06/20/14	
% Moisture:	not dec.				Date	Analyzed:	06/22/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mm)	Dilu	tion Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil	Aliquot Volu	0e	(µL)

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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB062414

Lab Name:	PACE ANALYT	ICAL		Contra	st:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS185
Matrix: (soj	il/water)	WATER			Lab Sample ID:	<b>1406H97-00</b>	9A
Sample wt/vo	51: <u>5</u>	(g/mL)	ML		Lab File ID:	514\G26108	
Level: (lo	ow/med)	TOM			Date Received:	06/24/14	
% Moisture:	not dec.				Date Analyzed:	06/25/14	
GC Column:	Rtx-624	ID:	.18	(mm)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(դրթ)		Soil Aliquot Volu	me	(تلاب)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	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	

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

FB062714

Lab Name:	PACE ANALYI	ICAL		Contra	et:		
Lab Code:	10478	Case No.:	KEY-UR	s sas	No.:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406K88-00	04A
Sample wt/ve	ol: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	4\A81925.I	2
Level: (lo	ow/med)	TOM			Date Received:	06/27/14	
<pre>% Moisture:</pre>	not dec.				Date Analyzed:	07/07/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mn)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(بىتە)		Soil Aliquot Vol	ume	(pL)

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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB062614

Lab Name: PAC	E ANALYTICAL	Contra	act:	
Lab Code: 104	78 Case No.:	KEY-URS SAS	No.:	SDG No.: KEY-URS185
Matrix: (soil/w	water) <u>WATER</u>		Lab Sample ID:	1406J99-007A
Sample wt/vol:	<u>5</u> (g/m)	L) <u>ML</u>	Lab File ID:	14\G26284.
Level: (low/m	ned) LOW		Date Received:	06/26/14
% Moisture: not	t dec.		Date Analyzed:	07/06/14
GC Column: Rt	tx-624 II	): <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Vo	olume:	(بتد)	Soil Aliquot Volu	me(يلد)

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE	FB062714		
Lab Name: PACE ANALYTIC	CAL Contract	t:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	3 No.:	SDG No.: KEY-URS184
Matrix: (soil/water) <u>WA</u>	TER	Lab Sample ID:	1406K88-004B
Sample wt/vol: 100	00 (g/mL) <u>ml</u>	Lab File ID:	4\N66834.D
Level: (low/med)	LOW	Date Received:	06/27/14
<pre>% Moisture: De</pre>	canted:(Y/N) <u>N</u>	Date Extracted:	06/30/14
Concentrated Extract Vol	lume: <u>1000</u> (µL)	Date Analyzed:	07/01/14
Injection Volume:	2 (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u>	pH:	Extraction: (Type)	CONT

#### CONCENTRATION UNITS:

CAS NO. COMPOUND		(µg/L or µg/Kg) <u>UG/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a) anthracene	10	υ
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	υ
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

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OLM04.2 KEY-URS184 S67

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB062714

Lab Name:	PACE ANALYI	ICAL		Contra	ct:		
Lab Code:	10478	Case No.:	KEY-UR	SAS 2	No.:	SDG No.:	KEY-URS184
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1406K88-00	5A
Sample wt/ve	ol: <u>5</u>	(g/mL)	<u>м</u>		Lab File ID:	4\A81926.D	2
Level: (lo	ow/med)	TOM			Date Received:	06/27/14	
% Moisture:	not dec.				Date Analyzed:	07/07/14	
GC Column:	<u>Rtx-624</u>	ID:	.18	(mn)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil Aliquot Volu		(تلر)

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

U	. s		EPA		CLP
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			1		aunto			EPA	SAMPLE NO
Lab Name:	DACE ANAL		ORGANIC ANALYSI	IS DATA	SHEET				FB062714
Lab Mame:	FACE ANAL	111CAL					<u>i</u> _		
Lab Code:	10478	Case No.	SA	S No.:			SDG	No.:	KEY-URS184
Matrix (so	il/water):	WATER		Lab	Sample	e ID:	140	)6K88-	-004
Level (low	/med):	LOW		Dat	e Rece	Lved:	6/2	27/201	4
<pre>% Solids:</pre>		0.0							
	Concentra	tion Units	(ug/L or mg/kg	dry we	ight):	UG/	Ŀ		
	CAS No.	Analyte	Concentration	çç	2 M				
	7439-89-6	Iron	7.1	₿ ₽	P				
		SS Clarity SSS Clarity				J Textu Artif			

8/14/14

Comments:

Date Reported 7/9/2014

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KEY-URS184.591.1

# ATTACHMENT B

# SUPPORT DOCUMENTATION

H 2 labs 575 Broad Hollow Rd., Melville, NY 11747 (631) 694-3040 Fax: (631) 420-8436	0150				EX	TER	NAL	CHAIN	OF CUS	
www.h2mlabs.com	CLIE	NT:	UR	S					H2M SDG	NO: KEY-URS 18
PROJECT NAME/NUMBER National Grid Hempsterl		glass Hel	5					NOTES:		Project Collect: fet Fairbanks
11176098.	G		3							Phone Number:
SAMPLERS: (Signature)/Client		Cler	de							716-856-5626
Megan Dascol./URS	Sample Container Description	40m2 c	ande					3.4	1°C 4°C 8°C	PIS/Quote #
DELIVERABLES:		4	ヒー					Ч.	4°C	
TURNAROUND TIME:	50		ANA	LYSIS	REQU	ESTED		9.0	BC	
Standard TAT	Total No. of Containers		J					1		
DATE TIME MATRIX FIELD I.D.		Noc	200/2					LAB I.I	D. NO.	REMARKS:
4/8/14 710 GW HIMW-26D	4	xb	ĸ					140HE	33-001	
418/14720 GW HIMW-26D MS/MSD	ß	05							- 001	
4/18/14 937 GW HIMW-275	4	ND	4	_					- 03	
4/1/4 1120 GW HIMW-275	4	10	X					-	- 062	
418/14 1125 GW HIMW-285	4	1×	×						- 005	
4/1/4/408 GW HIMW-28I	4	N	X						- 004	
4/18/14 1200 W TB041814	2	×							- 007	
417/14 1200GW DUP041714	4	20	Q						- 006	
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Relinguished by: (Signature) Date: Time: Received by: (Signature)	pature)	1			te:	Time:			BORATORY US	E ONLY
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KEY-URS181 S3

ACE Long Island

## SDG NARRATIVE FOR VOLATILE ORGANICS SAMPLE(S) RECEIVED: 4/18/14 SDG #: KEY-URS181

For Sample(s):

HIMW-26D	HIMW-28I
HIMW-27S	DUP041714
HIMW-27I	TB041814
HIMW-28S	

The above water sample(s) was/were analyzed for a select list of volatile organic analytes by EPA method 8260C and reported with the requested deliverables.

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

Sample HIMW-26D was submitted for matrix spike/matrix spike duplicate (MS/MSD) analysis. The percent recoveries and RPDs were within the Q. C. limits. A lab fortified blank was analyzed on the date of analysis, and recoveries indicate good method efficiency.

Average response factors were employed for all targeted analytes in the initial calibrations.

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: May 12, 2014

Worky

Ursula Middel Quality Analyst

ace Long Island

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

## SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLE(S) RECEIVED: 1/18/14 SDG #: KEY-URS181

For Sample(s):

HIMW-26D	HIMW-28S
HIMW-27S	HIMW-28I
HIMW-27I	DUP041714

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

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

Sample HIMW-26D was analyzed as the matrix spike/matrix spike duplicate (MS/MSD). The Q. C. limits do not apply for naphthalene, 2-methylnaphthalene, and acenaphthene due to the high concentrations in the sample. The concentrations exceeded the calibration range, and the spike amounts were not a multiple of the sample concentrations. All other percent recoveries and RPDs for the MS/MSD were within Q. C. limits. A lab fortified blank was analyzed, and recoveries indicate good method efficiency.

Three samples were re-analyzed at a dilution due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted.

In the initial calibrations, average response factors were employed for the targeted analytes. In the continuous calibration, the variability (%D) for all analytes was acceptable.

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: May 2, 2014

Ursula Middel Quality Analyst

labs	01531 CLIENT: رجی								RNAL	CHAIN OF CUSTODY		
PROJECT NAME/NUMBER National Grid Hempstead 11176098,00017 SAMPLERS: (Signature)/Client Megan Drock / Megan Dascol URS DELIVERABLES:	otion	40ml glass	ess 12							NOTES: Mailed FedEX 2.1 C	Project Contact: Peter Fairbanks Phone Number: 716-856-5636 PIS/Quote #	
TURNAROUND TIME: Standard	Total No. of Containers	L X		ANALY	'SIS F	REQ	UEST	ΈD				
DATE TIME MATRIX FIELD I.D.	₹ <u>8</u> ▼	als	440							LAB I.D. NO.	REMARKS:	
109/14/1535 GW HIMW-26T	4		×							1404697 -cd		
3/9/19/535 W TB042914	12	X	┼╌┼		-	-			+	V-acr		
			+		+	-	$\square$					
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alinquished by: (Signature) Date: Time: Received by: (Signature)					Da	ite:	Tim	ne:	2. Unbroker	n on outer package: Y or N		
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										KEY	URS182 S3	

the strength of some larger and they were set

ace Long Island

# SDG NARRATIVE FOR VOLATILE ORGANICS SAMPLE(S) RECEIVED: 4/30/14 SDG #: KEY-URS182

For Sample(s):

# HIMW-26I TB042914

The above water sample(s) and blank(s) was/were analyzed for a select list of volatile organic analytes by EPA method 8260C and reported with the requested deliverables.

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

No sample was submitted for matrix spike/matrix spike duplicate (MS/MSD) analysis, but a lab fortified blank was analyzed on the date of analysis, and recoveries indicate good method efficiency.

Average response factors were employed for all targeted analytes in the initial calibrations, and the continuous calibration had acceptable variability 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: May 20, 2014

· dd

Ursula Middel Quality Analyst

ace Long Island

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

#### SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLE(S) RECEIVED: 4/30/14 SDG #: KEY-URS182

For Sample(s):

#### HIMW-26I

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

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

The sample was extracted two days out of prep holding time.

ODR

6/9/142

No sample for matrix spike/matrix spike duplicate (MS/MSD) analysis was submitted. A lab fortified blank was analyzed, and recoveries indicate good method efficiency.

In the initial calibrations, average response factors were employed for the targeted analytes. In the continuous calibration, the variability (%D) for all analytes was acceptable.

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: May 20, 2014

1 d

Ursula Middel Quality Analyst

# PACE ANALYTICAL

Prep Start Date: 5/7/2014 3:40:54 P

# **PREP BATCH REPORT**

Page 1 of 2

Prep End Date Prep Batch ID Initial Temp:	: 5/8/2014 6:10 44427 Prep	:40 P Code: 3	3520_ ℃	В		Technician:	DianaLosit	:0				Factor Units: L / <b>mL</b>		
Sample ID	ClientSampleID	Matrix		pH1	pH2	SampAmt	Fin Vol	factor	GPC	Acid	Sulfur	Florisil	PrepStart	PrepEnd
MB-44427		Aqueous	1	2		1000	1	0.001					5/7/2014	5/8/2014
LFB-44427		Aqueous		2		1000	1	0.001					5/7/2014	5/8/2014
1404L60-008B	DUP-08-Q2	Groundwat		2		1000	1	0.001		ψ			5/7/2014	5/8/2014
1404L97-001B	hold time was excee HIMW-261 hold time was excee	Groundwat	өг	2	)	1000	1	0.001		ψ			5/7/2014	5/8/2014
1404M50-001B	OU2MW-2012 hold time was excee	Groundwat	er	2		1000	1	0.001		ψ			5/7/2014	5/8/2014
1404M50-004B Prep	OU2MW-49I2 hold time was excee	Groundwate ded by 1.92		2 (s)		1000	1	0.001		þ			5/7/2014	5/8/2014
1405004-001D	HOUSE BLANK MAY	( Blank		2		1000	1	0.001		μ_			5/7/2014	5/8/2014
1405188-001B	WASTE TREATMEN	Aqueous	•	2		1000	1	0.001		þ			5/7/2014	5/8/2014
1405289-001B	BBMW-15S	Groundwat	er	2		1000	1	0.001		¢			5/7/2014	5/8/2014
1405289-002B	BBMW-151	Groundwate	er	2	-	1000	1	0.001		ф			5/7/2014	5/8/2014
1405289-003B	BBMW-1512	Groundwat	er	2		1000	1	0.001		$\square$			<i>5/7/</i> 2014	5/8/2014
1405289-003BMS		Groundwat	er	2		1000	1	0.001		þ			5/7/2014	5/8/2014
1405289-003BMSD		Groundwate	er	2		1000	1	0.001		þ			5/7/2014	5/8/2014
1405289-004B	BBMW-15D	Groundwate	er	2		1000	1	0.001		Þ			5/7/2014	5/8/2014
1405289-005B	FB-050514 Q2	Field Blan	k	2		1000	1	0.001		$\Box$			5/7/2014	5/8/2014
1405289-006B	DUP-09 Q2	Groundwate	er	2		1000	1	0.001		$\square$			5/7/2014	5/8/2014
1405290-001B	BBMW-02S	Groundwate	er	2		1000	1	0.001		$\Box$			5/7/2014	5/8/2014
1405290-002B	BBMW-02I	Groundwate	er	2		1000	1	0.001		þ			5/7/2014	5/8/2014
1405290-003B	BBMW-02D	Groundwate	er	2		1000	1	0.001					5/7/2014	5/8/2014

#### Cleanups:

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

H 2 M labs 575 Broad Hollow Rd., Melville, NY 11747 (631) 694-3040 Fax: (631) 420-8436	0212	28			1	EX	TER	NA		CUSTODY
www.h2mlabs.com	CLIE	NT:	U	RS	6	or4	poro	Arc	η H2I	W SDG NO: KEY-URS184
PROJECT NAME/NUMBER National Grid Hempstead 11176098.00004 SAMPLERS: (Signature)/Client	Sample Container	40-ml, Heligher	5						NOTES: BTEX -82.60 PAH -8270]	Project Contact: Peter Fairbanks Phone Number: 716-856-5626
SAMPLERS: (Signature)/Client Wegan Danol / URS Corp Michael anglo / URS Corp DELIVERABLES:	Sam	clear 40	2							PIS/Quote #
TURNAROUND TIME: fand ard	o.o			ANAL	ISIS F	REQU	ESTED		_	
DATE TIME MATRIX FIELD I.D.	Total No. of Containers	RIEX	PAH						LAB I.D. NO.	REMARKS:
6/17/14925 GW HIMW-15I	4	X	X						140673	-00/
6/17/14/045 GW HIMW-15D	4	X	X							-002
4/11/14/330GW HIMW-23	4	X	X							003
		γ.								
6/17/14 W TB061714	2	X							1 -0	204
Relinquished by: (Signature) Date: Time: Received by: (Signature) Date: Time: Received by: (Signature) Date: 19/18	) 2				blr.	1e:	Time:		LABORAT	TORY USE ONLY
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1 2 labs 575 Broad Hollow Rd., Melville, NY 11747 (631) 694-3040 Fax: (631) 420-8436	0212					CHAIN OF CU	plof2
www.h2mlabs.com	CLIE	NT; U	RS Corp	braf	ton	H2M SDG	NO: KET-URS 184
PROJECT NAME/NUMBER National Grid Hempstead 11176098.00004 SAMPLERS: (Signature)/Client Wyanpanol/URS Corp. Michael Ungelo-IVRS Corp. DELIVERABLES:	Sample Container	Cheer cruss 40ml H				BTEX-8260C	Project Contact: Refer Eador han K
TURNAROUND TIME:	30		ANALYSIS REC	UESTED			
Standard	taine.	XI	TTT	TT	1	1406E93	
DATE TIME MATRIX FIELD I.D.	Total No. of Containers	BTEX	8			LAB I.D. NO.	REMARKS:
6/18/40927 GW HIMW-44 I	4	XX				-001	
6/18/HIUST GW HIMW-140	4	XX				-002	
6/18/41215 GW HIMW-22	.4	XX				-00 3	
6/18/14 1350 GW HIMW-205	4	XX				-00 4	
6/18/14 1520 GW HIMW-20I	4	XX				-005	
6/18/14/1200 GW DUPO61814	4	XX					
6/19/14/0845 GW MIMW-135	4	XX				-97	
6/19/144 0850 GW HIMW-135 MS/MSD	8	XX			1-1-		
6/18/14 W TB06181 TB061914	2	X				-010	
6/19/14 1015 GW HIMW-13I	4	XX				-cc 8	
Relinquished by: (Signature) Date: Times Received by: (Sign	ature)	••••••••••••••••••••••••••••••••••••••	Date	Time		LABORATORY US	SE ONLY
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H 2 labs 575 Broad Hollow Rd., Melville, NY 11747 (631) 694-3040 Fax: (631) 420-8436 www.h2mlabs.com	0213			0.6			-	L CHAIN OF C	p2.12
PROJECT NAME/NUMBER National Grid Hempstead 11176098,00004 SAMPLERS: (Signature)/Client Wyth Daw of UKS Corp Michael Angelo UKS Corp. DELIVERABLES: TURNAROUND TIME: Jan Dand	INo. of Sample Container T	Clear Glass, 40mL NCI	Amber Glass, 1 Liter			JESTED	<i>x</i>	NOTES: BTEX-8260C PAH-8270 D	Phone Number: 716-856-5626 PIS/Quote #
DATE TIME MATRIX FIELD 1.D. 5/14/14 1307 GW H(MW-13D	Containers	X BTEX	H by H		 			LAB I.D. NO.	REMARKS:
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Relinquished by: (Signature)       Date       Time:       Received by: (Signature)         Relinquished by: (Signature)       Date       Time:       Received by: (Signature)         Relinquished by: (Signature)       Date:       Time:       Received by: (Signature)         Relinquished by: (Signature)       Date:       Time:       Received by: (Signature)         Relinquished by: (Signature)       Date:       Time:       Received by: (Signature)	ature)	ñ N			tte: 7 14 14: 14: 14: 14: 14: 14: 14: 14: 14: 1	Time:	Sample 1. Shipp COC Ta 1. Prese	LABORATOF as were: bed or Hand Delivered A ape was: ent on outer package: Y or N oken on outer package: Y or N 5.0°	Irbill #

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www.h2mlabs.com	CLIE	NT:	U	RS	Co	-poi	rat	lov	า			H2M SDG	NO:
PROJECT NAME/NUMBER National Grid Hempstead <u>11176098.00004</u> SAMPLERS: (Signature)/Client <u>Michael Aingele /URS corp</u> DELIVERABLES:	Sample Container	Clear Grass, YOML HU	Glass, 1 Liter								notes: BTEX-8 PAH-8	2602	Project Contact: PEAR Fair Dawl(S Phone Number: 716-856-5626 PIS/Quote #
					ALYSIS	BEG	UEST		1				
TURNAROUND TIME: Standard	Total No. of Containers	L.	7			T	T		Γ	Т			
DATE TIME MATRIX FIELD I.D.	Tot Cort	NA R	PAH								LAB I.I	). NO.	REMARKS:
GRONY 1104 GW HIMW-03D	4	Х	Х								1406 F	74-001A+C	8
6/22/141320 GW HUNW-03E	4	-	X								/	2 m	
6/19/141525 GW HIMW-24	4	X	X				<u> </u>		╞			3	
6/19/14/200 GW DUP061914	4	X,	x					-	┞			<u>ч</u> Ј	
424141400 W TB062014	2	x										5A	
		Ϋ́-				+							
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Michael       Mugles       Mail       Mail         Relinduktied by: (Signature)       Date:       Time:       Received by: (Signature)         Relinduktied by: (Signature)       Date:       Time:       Received by: (Signature)         Relinduktied by: (Signature)       Date:       Time:       Received by: (Signature)	/ A					Date:	1/7. Tin	90 ne: 15	1. C( 1.	OC Tape Present	d or Hand Deli e <b>was:</b> t on outer package: en on outer package	Y or N	
Relinquished by: (Signature) Date: Time: Received by: (Signat	ture)	-				Date:	Tin	ne:			1-1	< 0	

(631) 694-3040 Fax: (631) 420-8436	02143		INAL CHAIN OF CU	ffs.
www.h2mlabs.com	CLIENT: U	RS Corp	H2M SDC	NO: URS 185
PROJECT NAME/NUMBER			NOTES:	Project Contact:
National Good Hempiteral	► ¥			Peter Fairbanks
11176098,00004	in Suner			Phone Number:
SAMPLERS: (Signature)/Client	Bescription Description			716-856-5636
SAMPLERS: (Signature)/Client	Description Description			PIS/Quote #
John herm /URS				
DELIVERABLES:	Cler 1			
		ANALYSIS REQUESTED	11-1-011-57	
TURNAROUND TIME: Standard	Containers of		1406#97	
	Not the set of the se			
DATE TIME MATRIX FIELD I.D.			LAB I.D. NO.	REMARKS:
6/23/14/840 (W HIMW-2035	4 XX			
423/14 1115 GW H(MW-008D	$4 \times \times$		500-	
\$3/14/1215 GW HIMW-008I	4 X X		~063	
663/14/335 GW H(MW-008S	4 8 4		-604	
6/23/14/1450 GW HIMW-#25	$4 \times x$		-005	
1/24/19 900 GW HIMW-0125	4 8 2		-006	
6/24/14/1040 GW HIMW-012I	4 XX	·	-007	
6/ 4/14/045 GW HIMW-012 DI MS/MS/	8 x x			
1/4/14/1325 GW HIMW-012D	1 XX		111-008	
6/24/14/1325 W TB 062414	2 X		1 -20 9	
Relinquished by: (Signature) Date: Time: Received by: (Signature)	1. Unpedera	Date: Time:	LABORATORY U	SE ONLY
Relips(Jished by (Sighetup) Deter Time: Received by: (Signetup)	1. UMPERATE	6/21/1/14.30 Date: Time:	Samples were: 1. Shipped or Hand Delivered Alrbill #	·
Home 11 adore 1/ 4/14/15:10	T	D 6074 1510	COC Tape was: 1. Present on outer package: Y or N	
Relinquished by: (Signative) / Date: Time: Received by: (Signative)	ature)	Date: Time:	2. Unbroken on outer package: Y or N	
Relinquished by: (Signature) Date: Time: Received by: (Signature)	ature)	Date: Time:	2.9% +1.84	
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H 2 labs 575 Broad Hollow Rd., Melville, NY 11747	0213	32				E	XT	EF	<b>?</b>  \	NAL CHAIN OF CUSTODY
(631) 694-3040 Fax: (631) 420-8436 www.h2mlabs.com	CLIE	NT:	U	R	5 (	Cov	p.			H2M SDG NO: KEY-UKS 185
PROJECT, NAME/NUMBER Notional Gvid Hempskad 1/176098.00004 SAMPLERS: (Signature)/Client Wyan Rawl/URS DELIVERABLES:	Sample Container	Bull, Hel	しょうし	plastic , soome , Hubg.						NOTES: Stanlard TAT PTERS: Stanlard TAT PTERS: RUN THE PAH analySIS on a opeweek turn aroundtime for: HIMW-026T + HIMW-026T TIG-856 5622 PIS/Quote # PS/Quote #
TURNAROUND TIME:		<u>:</u>		AN/	LYSI	IS RE	QUE	STED		6-2 HIMW-005D
Standard, except where noted DATE TIME MATRIX FIELD I.D.	Total No. of Containers	BTEX	†H	2 S						HIMW-285
		12	e:	2H		_			╀	LAB I.D. NO. REMARKS:
625140850 GW HIMW-055	4	X	X		_		$\perp$	+	╞	1406399-001 PAH+ BTEX-standed
6/25/14 1040 GW HIMW-26I	4	X	X		-	_		-	4	- 002 PAH - Iweele TAT
125714225 GW HIMW-28 I	4	X			$\rightarrow$	$\rightarrow$		-	╀	-003 PAH. Iweel TAT
6/20/14 1005 GW HIMW 005 I	5		X	Х	_			_		ODT IweehTAT
1/14/1150 GW HIMW-005D	5	X		Х				+		- 005 PAH + total Fe = 1
GUI14 1350 GW HLMW-285	5	X	X	X	-+		_		_	OOG PAH + total Te =
924/14 1352 W TBO 62614	2	X					+		$\downarrow$	V -007
					+	+		+	╀	
									t	
Relinquished by: (Signature) Date: Time: Received by: (Sig	gnature)	12	2		1	Date: 6/26		lime:	L	LABORATORY USE ONLY
Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Date: Time: Received by: (Signature)	gnature)	3	5		6	Date:	415	425 Time: 1.3 0 Time:	C 1.	Samples were:         1. Shipped or Hand Delivered Airbill #         COC Tape was:         1. Present on outer package:       Y of NY         2. Unbroken on outer package:       Y of NY
Relinquished by: (Signature) Date: Time: Received by: (Sig	gnature)					Date:	7	Time:		2.7°C

	H 2 labs 575 Broad Hollow Rd., Melville, NY 11747 (631) 694-3040 Fax; (631) 420-8436	0213	33				E	EX	TE	R	ľ	IAL	CHAIN OF CUSTODY
	www.h2mlabs.com	CLIE	NT:			S(	s.	P	1				H2M SDG NO: FEY-URS 184
	PROJECT NAME/NUMBER Notional Grid Hempsteal 1176098, 00004 SAMPLERS: (Signature)/Client Mega Paul /URS John Cupp / URS DELIVERABLES:	Sample Container	undergense, tomethe	2	plustic soome Hubs								NOTES: BTEX Stanlard TAT PAH+ Total Fe me week TAT 716-856-5626 PIS/Quote #
	TURNAROUND TIME: BTEX-standard //PAH+Total Fe-3 week	to. of Iners		1	AN	ALYS	IS R	EQU	EST	ED	Т		
	DATE TIME MATRIX FIELD I.D.	Total No. of Containers	BTEX	644	Total A								LAB I.D. NO. REMARKS:
427	124/19/003 GW HIMW-26D	5	X	K	X						t		1706488 -001
1.00	67/14/145 GW HIMW -275	5	X	X	Х								2
	121141258 GW HIMW-27I	5	X	X	X		_						3
									-+		┞		
	27/140720 XW FB062714	5	X	X	X				$\rightarrow$		┝		4
	27/14/300 W TB062714	2	X		- 	$\rightarrow$			+		┝		5
	HNO3: 53130 H2SO4: 52171 N∎OH: B0975869342	+	1	-			-				┢		
	ZnAc: 2303C36 NH4Cl: 47072741		1						$\neg$	-	t		
	Na2S2O3: 2280C123 (Thiosulfate)		1								T		
	Relino	ature)					Date	e: */14	Tim				LABORATORY USE ONLY
	Relinguished by: (Signature) Date: Time: Received by: (Signature) Received by: (Signature) Date: Time: Received by: (Signa	ature) ature)	7	E	3		Date	e: //// e:	Time / 2 Time	е: 70 9:	0	OC Tap	
	Relinquished by: (Signature) Date: Time: Received by: (Signature)	ature)					Date	θ:	Tim	e:		1,0	ر ر

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ACE Long Island

575 Broad Hollow Read Melville, NY 11747 tel 631.694.3040 lax 631.420.8436

#### SDG NARRATIVE FOR VOLATILE ORGANICS SAMPLES RECEIVED: 6/17/14 6/19/14 6/20/14 & 6/27/14 SDG #: KEYURS184

For Sample(s):

HIMW-15I	HIMW-22	HIMW-13D	TB062014
HIMW-15D	HIMW-20S	TB061914	HIMW-26D
HIMW-23	HIMW-20I 🧝	HIMW-03D	HIMW-27S
TB061714	HIMW-201 DUP061914	HIMW-03I	HIMW-27I
HIMW-14I	HIMW-13S	HIMW-24	FB062714
HIMW-14D	HIMW-13I	DUP061914	TB062714

The above sample(s) and blank(s) was/were analyzed for a select list of volatile organic analytes by EPA method 8260C and reported with requested deliverables.

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

Sample HIMW-13S was analyzed as the matrix spike/matrix spike duplicate. All percent recoveries and RPD's were met. Lab fortified blanks were analyzed and indicated good method efficiency.

Sample HIMW-27S was reanalyzed at a dilution due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted.

difference

1,2-dichloroethane-d4 had a percent dilution greater than 20% in the continuing calibration of 6/22/14 and 7/7/14.

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

Date Reported: July 18, 2014

Joann M. Slavin General Manager

**KEY-URS184 S31** 

8/13/14

ICE Long Island

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

#### SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLE(S) RECEIVED: 6/17/14 – 6/27/14 SDG #: KEY-URS184

Page 1 of 2

For Sample(s):

	8	
HIMW-15I	DUP061\$14	HIMW-24
HIMW-15D	HIMW-13S	DUP061914
HIMW-23	HIMW-13I	HIMW-26D
HIMW-14D	HIMW-13D	HIMW-27S
HIMW-22	HIMW-03D	HIMW-27I
HIMW-20S	HIMW-03I	FB062714
HIMW-20I		

\_

The above water sample(s) was/were analyzed for a select list of polynuclear aromatics (PNAs) by EPA method 8270D and reported with the requested deliverables.

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

The submitted sample HIMW-14I could not be analyzed, because both the sample bottle and the spare sample bottle broke during sample preparation.

Sample HIMW-13S was analyzed as the matrix spike/matrix spike duplicate (MS/MSD). All percent recoveries and RPDs were within Q. C. limits. A lab fortified blank was analyzed for each day of extraction, and recoveries indicate good method efficiency. All recoveries met the limits.

The recovery for one surrogate compound was low in FB062714 (acceptable).

Two samples were re-analyzed at a dilution due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted.

In the initial calibrations, average response factors were employed for the targeted analytes, and in the continuous calibration, the variability (%D) for all targeted analytes was acceptable.

The variability for the surrogate nitrobenzene-d5, however, exceeded 20% in the CCV(s) on 6/26/14, 6/30/14, 7/1/14, and 7/3/14, and recoveries reported for nitrobenzene-d5 for analyses on those days are regarded "estimated" and may be biased high.

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#### SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLE(S) RECEIVED: 6/17/14 – 6/27/14 SDG #: KEY-URS184

Page 2 of 2

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

Date Reported: July 15, 2014

d del\*

Úrsula Middel Quality Analyst



# SDG NARRATIVE FOR METALS ANALYSES SAMPLE(S) RECEIVED: 6/27/14 SDG #: KEY-URS184

For Sample(s):

# HIMW-26D HIMW-27S HIMW-27I FB062714

Sample(s) was/were received by Pace Analytical Services Inc. for total iron analysis.

Samples were prepared and analyzed using EPA method 6010C with a TS ICAP 6000 instrument.

Sample HIMW-26D was utilized for QC analysis and reporting.

The ICP serial dilution analysis did not meet acceptance criteria for iron. Iron data was reported flagged "E" on forms 1 and 9.

No other issues were noted during the analysis of this sample group.

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

Date Reported: July 10, 2014

#### U.S. EPA - CLP

9 ICP SERIAL DILUTIONS

		ICP SERIAL DILUTIONS		HIMW-	260	
Lab Name:	PACE ANALYTICA	Contract:			200	J
Lab Code:	<u>10478</u> Case	SAS No.:		SDG No.:		
Matrix (sc	il/water): <u>WATH</u>		Level	(low/med):	LOW	110/14 ومر

## Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	м
Iron	168.70	208.5C B	23.6	E	P

CC Long Island

575 Broad Hollow Road Melville, NY 11747 tel 631.694.3040 (ax 631.420.8436

#### SDG NARRATIVE FOR VOLATILE ORGANICS SAMPLES RECEIVED: 6/24/14 & 6/26/14 SDG #: KEY-URS185

For Sample(s):

HIMW-03S	HIMW-008S	HIMW-012I	HIMW-05S	HIMW-005I	TB062614
HIMW-008D	HIMW-25	HIMW-012D	HIMW-26I	HIMW-005D	
HIMW-008I	HIMW-012S	TB062414	HIMW-28I	HIMW-28S	

The above sample(s) and blank(s) was/were analyzed for a select list of volatile organic analytes by EPA method 8260C and reported with the requested deliverables.

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

Sample HIMW-012I was analyzed as the matrix spike/matrix spike duplicate. All percent recoveries and RPD's were met. Lab fortified blanks were analyzed and indicated good method efficiency.

Sample HIMW-25 was reanalyzed at a dilution due to concentration levels of targeted analytes above the calibration range. Both sets of data are submitted.

1,2-dichloroethane-d4 had a %D greater than 20% in the continuing calibration of 7/6/14.

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

Date Reported: July 21, 2014

General Manager

**KEY-URS185 S18** 

CC Long Island

575 Broad Holiow Road Melville, NY 11747 tel 631.694.3040 fax 631.420.8436

#### SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLE(S) RECEIVED: 6/24/14 – 6/26/14 SDG #: KEY-URS185

Page 1 of 2

For Sample(s):

HIMW-03S	HIMW-012D
HIMW-008D	HIMW-05S
HIMW-008I	HIMW-26I
HIMW-008S	HIMW-28I
HIMW-25	HIMW-005I
HIMW-012S	HIMW-005D
HIMW-012I	HIMW-28S

The above sample(s) was/were analyzed for a select list of polynuclear aromatics (PNAs) by EPA method 8270D and reported with the requested deliverables.

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

Sample HIMW-012I was analyzed as the matrix spike/matrix spike duplicate (MS/MSD). All percent recoveries and RPDs were within Q. C. limits. A lab fortified blank was analyzed and indicates good method efficiency.

Sample HIMW-25, HIMW-0051, HIMW-005D, and HIMW-28S were reanalyzed at a dilution due to concentration levels of a targeted analytes above the calibration range. Both sets of data are submitted.

The variability for the surrogate standard d5 nitrobenzene exceeded 20% on instrument HP 5973N for the continuing calibration (CCV)'s of 6/30/14, 7/1/14, and 7/3/14. This analyte results may be biased or high on these days of analysis.

ace Long Island

575 Broad Hollow Road Melville, NY 11747 el 631.694.3040 fax 631.420.8436

#### SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLE(S) RECEIVED: 6/24/14 – 6/26/14 SDG #: KEY-URS185

Page 2 of 2

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

Date Reported: July 17, 2014

Joann M. Slavin General Manager

ace Long Island

# SDG NARRATIVE FOR METALS ANALYSES SAMPLE(S) RECEIVED: 6/26/14 SDG #: KEY-URS185

For Sample(s):

# HIMW-005I HIMW-005D HIMW-28S

Sample(s) was/were received by Pace Analytical Services Inc. for total iron analysis.

Samples were prepared and analyzed using EPA method 6010C with a TS ICAP 6000 instrument.

Sample HIMW-005I was utilized for QC analysis and reporting.

Iron spike analysis did not recover within 75-125%. Since the sample value was greater than four times the spike concentration, post spikes and data qualifiers were not required.

No problems were noted during the analysis of this sample group.

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

Date Reported: July 10, 2014

Vincent Stancampiano

# **APPENDIX B**

# OXYGEN SYSTEM OPERATION & MAINTENANCE MEASUREMENTS

J:\Projects\11175065.00000\WORD\DRAFT\Quarterly&Annual Data Reports\2014 2nd Quarter\2Q 2014 GW PR Report 2014-10-29-JAS.docx

# SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed B	erature:	14 Ri ~4: ~60	2014 :45 ain 5° F 0° F 7 Ryan								
	O <sub>2</sub> Ge	<mark>enerator (A</mark> i	irSep)				Compressor	(Kaesar Rota	<mark>ry Screw</mark>	7)	
Hours			8,580.7	-	Compressor T	'ank *			100		(psi)
Feed Air Pressure *			100	(psi)		(rea	dings below	are made from c	control p	anel)	
Cycle Pressure *			70	(7.2)	Delivery Air				115 169		(psi)
Cycle Pressure *			70	(psi)	Element Outle	et Temperatu	Ire		109		(oF)
Oxygen Receiver Pressur	re *			110 (psi)	Running Hour Loading Hour				9,832 6,219		(hours) (hours)
Oxygen Purity * maximum reading during loa	uding cycle		79.0	(percent)	* maximum read	ling during load	ing cycle				
I	njection Bank	1		O <sub>2</sub> Inject	tion System #1 Injection Bank 2				Iniecti	ion 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	17	OW-1-9D	88.5	30	27
OW-1-2	96.5	40	30	OW-1-6S	67.0	30	18	OW-1-10D	87.2	25	27
OW-1-3	96.3	45	32	OW-1-7S	66.9	30	19	OW-1-11D	86.1	30	29
OW-1-4	95.0	40	30	OW-1-8S	66.7	30	18	OW-1-12D	85.3	40	29
OW-1-5D	93.9	30	29	OW-1-9S	66.0	45	18	OW-1-13D	84.7	25	28
OW-1-6D	92.4	35	29	OW-1-10S	54.6	45	13	OW-1-14D	84.1	25	27
OW-1-7D	91.1	40	29	OW-1-11S	54.1	45	13	OW-1-15D	83.3	30	28
OW-1-8D	89.6	30	28	OW-1-12S	53.6	45	13	OW-1-16D	82.5	30	14
				rate of ~30 scfh provided that 3ank #1 and Bank #3 were se		g was no greate	or than the press	ures provided in the	e hydrosta	tic tables prepar	ed by URS

# SYSTEM #1

				O <sub>2</sub> Inject	ion System #1						
	Injection Bank	4			Injection Bank 5				Injecti	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	14	OW-1-17D	79.5	30	15	OW-1-21S	49.3	45	14
OW-1-14S	52.7	30	14	OW-1-18D	78.3	20	24	OW-1-22S	49.3	55	13
OW-1-15S	52.2	45	15	OW-1-19D	78.9	25	22	OW-1-238	48.8	50	12
OW-1-16SR	51.8	30	24	OW-1-20D	79.5	35	28	OW-1-24S	48.4	35	12
OW-1-17S	50.7	30	22	OW-1-21D	79.5	30	29	OW-1-258	48.8	30	14
OW-1-18S	50.2	20	12	OW-1-22D	79.5	20	26	OW-1-26SR	48.3	30	14
OW-1-19S	49.7	20	4	OW-1-23D	78.7	30	24	OW-1-27S	48.3	30	15
OW-1-20S	49.3	20	13	OW-1-24D	78.2	30	29	OW-1-28S	48.3	30	15
All inject nents: Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow r	ate of ~30 scfh provided that Bank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1		r than the press	sures provided in th	-		red by URS
All inject nents: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje 7	the target flow r ection times at E	Bank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	Injecti	on Bank 9	
All inject Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow r	Bank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8 Depth		r than the press	sures provided in th	-		
All inject nents: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje 7	the target flow r ection times at E	Bank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	Injecti	on Bank 9	psi
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth	ere adjusted to g readings. Inje 7 scfh	the target flow r ection times at E psi	Bank #5 were set at 3 minutes O <sub>2</sub> Inject D	ion System #1 Injection Bank 8 Depth	scfh	psi	ID	Injecti Depth	on Bank 9 scfh	
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth 78.1	re adjusted to g readings. Inje 7 scfh 30	the target flow r cction times at E psi 27	Bank #5 were set at 3 minutes O2 Inject D OW-1-29S	ion System #1 Injection Bank 8 Depth 48.5	scfh 25	<b>psi</b> 13	ID OW-1-33D	Injecti Depth 83.2	on Bank 9 scfh 30	28 31
All inject Corporat ID OW-1-25D OW-1-26D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1	re adjusted to g readings. Inje 7 30 30 30	the target flow r tection times at E psi 27 27 27	Bank #5 were set at 3 minutes O2 Inject D OW-1-29S OW-1-30S	ion System #1 Injection Bank 8 Depth 48.5 48.8	scfh 25 35	<b>psi</b> 13 13	D OW-1-33D OW-1-34D	Injecti           Depth           83.2           84.5	on Bank 9 scfh 30 30	28 28 31 27
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 30 30 20	the target flow r ection times at E psi 27 27 27 28	Bank #5 were set at 3 minutes O2 Inject O2 Inject OW-1-29S OW-1-30S OW-1-31S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3	scfh 25 35 45	<b>psi</b> 13 13 13	ID OW-1-33D OW-1-34D OW-1-35D	Injecti           Depth           83.2           84.5           85.0	on Bank 9 scfh 30 30 30	28 28 31 27 29
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0	re adjusted to g readings. Inje 7 Scfh 30 30 20 30	the target flow r ection times at E psi 27 27 27 28 29	O2 Inject           O2 Inject           O3 Inject           OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3	scfh 25 35 45 40	<b>psi</b> 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D	Injecti           Depth           83.2           84.5           85.0           85.0	on Bank 9 scfh 30 30 30 30	28 28 31 27 29 28
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 30 30 20 30 35	the target flow r ection times at E psi 27 27 27 28 29 25	O2 Inject           O2 Inject           ID           OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S           OW-1-33S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7	scfh 25 35 45 40 40	psi           13           13           13           13           13           13           13           13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D	Injecti           Depth           83.2           84.5           85.0           85.0           84.0	scfh           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30	psi           28           31           27           29           28           38
nents: All inject Corporat ID OW-1-25D OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D OW-1-30D	ion point flows we ion after collecting Injection Bank 78.1 78.1 78.1 77.9 78.0 78.0 78.4 79.0	re adjusted to g readings. Inje 7 30 30 20 30 35 35	the target flow rection times at E psi 27 27 27 28 29 25 36	O2 Inject           02 Inject           00	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7 50.1	scfh           25           35           45           40           40           40	psi           13           13           13           13           13           13           13           13           13           13           13           13           13           13           13           13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D           0W-1-38D	Injecti           Depth           83.2           84.5           85.0           85.0           84.0           82.0	scfh           30           35           35	Image: constraint of the second sec

# SYSTEM #1

							on System #1						
	In	jection Bank 1				I	njection Bank 1					on Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3	37S	50.5	25	16	OW-1-4	1D	73.6	30	24	OW-1-43	67.4	35	18
OW-1-3	38S	50.6	15	16	OW-1-42	2D	71.0	30	22	OW-1-44	66.6	45	19
OW-1-3	39S	50.7	15	15	OW-1-4	45	65.7	30	19	OW-1-51R	60.6	45	18
OW-1-4	40S	51.1	15	14	OW-1-4	46	64.3	30	18	OW-1-52	59.3	35	16
OW-1-4	41S	51.5	30	14	OW-1-4	47	63.4	20	18	OW-1-53	60.0	30	17
OW-1-4	42S	51.3	20	14	OW-1-4	48	62.5	20	17	OW-1-54	60.0	30	16
					OW-1-4	49	61.5	30	18				
					OW-1-5	50	61.0	20	18				
mments:					ate of ~30 scfh pro nk #11 was set at (	6 minutes.	-	g was no greate	er than the press	ures provided in th	e hydrosta	tic tables prepa	red by URS
mments:	Corporation	after collecting	g readings. Inje		nk #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1 nitoring Points I	Log	er than the press	-	-	ng Points Log	-
mments:	Corporation	itoring Points	g readings. Inje		nk #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log Ig/L)	er than the press	-	-	ng Points Log	red by URS (mg/L) iddle
	Corporation	itoring Points	; readings. Inje Log ng/L)	ction time at Ba	nk #11 was set at (	6 minutes. ) <sub>2</sub> Injectio Mo	on System #1 nitoring Points I DO (n	Log ng/L) om			Monitori	ng Points Log DO M	(mg/L)
ID	Corporation Mon DTW	itoring Points	readings. Inje	ction time at Ba	nk #11 was set at (	6 minutes. <mark>)2 Injectio</mark> <u>Mo</u> DTW	on System #1 nitoring Points I DO (n Bott	Log ng/L) om 14	PID (ppm)	ID	Monitori	ng Points Log DO M 3	(mg/L) iddle
ID MP-1-1D	Corporation Mon DTW 27.22	a after collecting itoring Points DO (r Boti	readings. Inje	PID (ppm)	nk #11 was set at (	6 minutes.  2 Injectio Mo 27.02	n System #1 nitoring Points I DO (n Bott 32.4	Log ng/L) om 14	PID (ppm)		Monitori )	ng Points Log DO M 3 3	(mg/L) iddle 5.11
ID MP-1-1D MP-1-1S	Corporation Mon DTW 27.22 27.28	toring Points DO (r Both 32.	readings. Inje	PID (ppm) 0 0	nk #11 was set at (	6 minutes.  2 Injectio Mo 27.02 19.20	n System #1 nitoring Points I DO (n Bott 32. 13.	Log ug/L) om 14 12 39	PID (ppm) 0 0	ID MP-1-11 MP-1-21	Monitori ) )	ng Points Log DO M 3 3	(mg/L) iddle 5.11 1.54
ID MP-1-1D MP-1-1S MP-1-2D	Corporation Mon DTW 27.22 27.28 21.01	toring Points DO (r Both 32.	r readings. Inje	Ction time at Ba	nk #11 was set at 0 ID MP-1-5 MP-1-6 MP-1-7	6 minutes.  2 Injectio Mo 27.02 19.20 22.57	n System #1 nitoring Points I DO (n Bott 32.4 13. 48.1	Log ug/L) om 14 12 39	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 3	(mg/L) iddle 5.11 1.54 0.12
ID           MP-1-1D           MP-1-1S           MP-1-2D           MP-1-2S	Mon           DTW           27.22           27.28           21.01           21.75	toring Points DO (r Both 32.	g readings. Inje	ction time at Ba PID (ppm) 0 0 0 0 0 0 0	nk #11 was set at 0 ID MP-1-5 MP-1-6 MP-1-7	6 minutes.  2 Injectio Mo 27.02 19.20 22.57	n System #1 nitoring Points I DO (n Bott 32.4 13. 48.1	Log ug/L) om 14 12 39	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 3	(mg/L) iddle 5.11 1.54 0.12
ID           MP-1-1D           MP-1-1S           MP-1-2D           MP-1-2S           MP-1-3D	Mon           DTW           27.22           27.28           21.01           21.75           19.69	itoring Points DO (r Bott 32. 26.	g readings. Inje	ction time at Ba PID (ppm) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	nk #11 was set at 0 ID MP-1-5 MP-1-6 MP-1-7	6 minutes.  2 Injectio Mo 27.02 19.20 22.57	n System #1 nitoring Points I DO (n Bott 32.4 13. 48.1	Log ug/L) om 14 12 39	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 3	(mg/L) iddle 5.11 1.54 0.12

#### SYSTEM #1

	Date: 4/4/2014
	OPERATIONAL NOTES
GA5 Air Compressor	UPERATIONAL NUTES
1) Oil Lev * Unlo	rel Checked with system unloaded* Yes X No ad system, wait until Delivery Air Pressure is less than 9 psi rel with system unloaded
3) Oil add 4) Oil cha 5) Oil filt 6) Air filt 7) Oil sep	Low (red)         X         Normal (green)         High (orange)           led         Yes         No
AS-80 O <sub>2</sub> Generator 1) Prefilte	
2) Coales	ring changed Yes X No
	GENERAL SYSTEM NOTES
<u>Trailer</u> 1) 2)	Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) Yes X No Abnormal conditions observed (e.g. vandalism)
<i>,</i>	
3)	Other major activities completed Temp fencing is setup near shed with steel stakes being driven in ground to hold in place.
4)	Supplies needed
5)	Visitors
	ties such as any alarm/shutdowns, sampling, maintenance, material il/filter/gasket and/or any other abnormal operating conditions:
vents in shed and instal	oor of shed and repaired hose that below out of separator canister. Added small amount of oil to the compressor. Removed all blank covers from fresh air ed air filters. Noted low oxygen level in system. Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipment and from around fence areas.
· · ·	ated low oxygen level and found a burned out solenoid valve on the feeder side of the unit. Replaced value with new unit and restarted system. Oxygen level levels after installing new valve.
	ed to 100% oxygen saturation. PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 97 ppm. Zeroed unit with fresh air and Calibrated with 100 ppm isobutylene and reading was 100 ppm.
Electric Meter # 96-93	4-323 tied into Pole #4
Action Items:	

# SYSTEM #1

Date: Time: Weather: Outdoor Temper Inside Trailer Temp Performed B	erature:	12 Su ~50 ~60	/2014 :40 nny )° F )° F Ryan								
	0 <sub>2</sub> Ge	enerator (Ai	irSep)				Compressor	(Kaesar Rota	<mark>ry Screw</mark>	7)	
Hours			8,752.0		Compressor T	ank *			110		(psi)
Feed Air Pressure *			110	(psi)		(rea	dings below	are made from c	control p	anel)	
					Delivery Air				114		(psi)
Cycle Pressure *			70	(psi)	Element Outle	et Temperatu	re		102		(oF)
Oxygen Receiver Pressur	e *			105 (psi)	Running Hour Loading Hour				10,024 6,335		(hours) (hours)
Oxygen Purity * maximum reading during loa	iding cycle		99.1	(percent)	* maximum read	ing during load	ing cycle				
I	njection Bank	1			Injection Bank 2				Injecti	ion Bank 3	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	29	OW-1-5S	67.3	25	17	OW-1-9D	88.5	25	26
OW-1-2	96.5	40	29	OW-1-6S	67.0	35	18	OW-1-10D	87.2	35	27
OW-1-3	96.3	30	32	OW-1-7S	66.9	30	18	OW-1-11D	86.1	35	28
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	18	OW-1-12D	85.3	30	29
OW-1-5D	93.9	35	29	OW-1-9S	66.0	30	18	OW-1-13D	84.7	40	28
OW-1-6D	92.4	30	29	OW-1-10S	54.6	30	13	OW-1-14D	84.1	30	27
OW-1-7D	91.1	30	28	OW-1-11S	54.1	35	13	OW-1-15D	83.3	30	28
OW-1-8D	89.6	30	28	OW-1-12S	53.6	30	13	OW-1-16D	82.5	30	14
				ate of ~30 scfh provided that th ank #1 and Bank #3 were set		g was no greate	r than the press	ures provided in the	e hydrosta	tic tables prepa	red by URS

# SYSTEM #1

				O <sub>2</sub> Inject	ion System #1						
	Injection Bank	4			Injection Bank 5				Injecti	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	14	OW-1-17D	79.5	30	15	OW-1-21S	49.3	30	14
OW-1-14S	52.7	30	15	OW-1-18D	78.3	30	25	OW-1-22S	49.3	30	14
OW-1-15S	52.2	30	15	OW-1-19D	78.9	35	23	OW-1-238	48.8	30	12
OW-1-16SR	51.8	35	24	OW-1-20D	79.5	35	28	OW-1-248	48.4	30	13
OW-1-17S	50.7	35	22	OW-1-21D	79.5	35	29	OW-1-258	48.8	30	14
OW-1-18S	50.2	35	13	OW-1-22D	79.5	45	26	OW-1-26SR	48.3	35	14
OW-1-19S	49.7	30	4	OW-1-23D	78.7	30	24	OW-1-278	48.3	35	15
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	29	OW-1-28S	48.3	40	15
All inject	ion point flows we	ere adjusted to g readings. Inje	the target flow r	ate of ~30 scfh provided that tank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1			sures provided in th	e hydrosta	tic tables prepa	red by URS
All inject nents: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje	the target flow r ection times at B	Bank #5 were set at 3 minutes	ion System #1 Injection Bank 8		r than the press	_	e hydrosta Injecti	ic tables prepa	1
All inject	ion point flows we	ere adjusted to g readings. Inje	the target flow r	Bank #5 were set at 3 minutes	ion System #1			Bures provided in th	e hydrosta	tic tables prepa	psi
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth	ere adjusted to g readings. Inje 7 scfh	the target flow r ection times at B psi	tank #5 were set at 3 minutes O2 Inject D ID	ion System #1 Injection Bank 8 Depth	scfh	r than the press	ID	e hydrosta Injecti Depth	tic tables prepa on Bank 9 scfh	<b>psi</b> 27
All inject Corporat ID OW-1-25D	ion point flows we ion after collecting Injection Bank Depth 78.1	ere adjusted to g readings. Inje 7 scfh 30	the target flow r cction times at B psi 25	tank #5 were set at 3 minutes O2 Inject ID OW-1-29S	ion System #1 Injection Bank 8 Depth 48.5	scfh 30	r than the press	ID OW-1-33D	e hydrostar Injecti Depth 83.2	on Bank 9 scfh 30	<b>psi</b> 27 30
All inject Corporat ID OW-1-25D OW-1-26D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1	re adjusted to g readings. Inje 7 30 30 30	the target flow r trection times at B psi 25 26	ank #5 were set at 3 minutes O2 Inject D OW-1-29S OW-1-30S	ion System #1 Injection Bank 8 Depth 48.5 48.8	scfh 30 30	r than the press	ID OW-1-33D OW-1-34D	e hydrosta Injecti Depth 83.2 84.5	ic tables prepa on Bank 9 scfh 30 30	27 30 27
All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 30 30 30 30	the target flow r ection times at B psi 25 26 28	Ank #5 were set at 3 minutes O2 Inject O2 Inject OW-1-29S OW-1-30S OW-1-31S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3	scfh 30 30 40	r than the press	ID OW-1-33D OW-1-34D OW-1-35D	e hydrosta Injecti Depth 83.2 84.5 85.0	ic tables prepa on Bank 9 scfh 30 30 30	27 27 30 27 27 27
All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0	re adjusted to g readings. Inje 7 Scfh 30 30 30 30	the target flow r faction times at B psi 25 26 28 29	ank #5 were set at 3 minutes	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3	scfh 30 30 40 50	r than the press	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D	e hydrosta Injecti Depth 83.2 84.5 85.0 85.0	ic tables prepa on Bank 9 scfh 30 30 30 30 30	27 27 30 27 27 27 28
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 30 30 30 30 30 30	the target flow r foction times at B psi 25 26 28 29 25 25	ank #5 were set at 3 minutes	Injection Bank 8           Injection Bank 8           Depth           48.5           48.8           49.3           49.3           49.7	scfh           30           30           40           50           50	r than the press	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D	e hydrosta Injecti 83.2 84.5 85.0 85.0 84.0	ic tables prepa on Bank 9 scfh 30 30 30 30 30 35	27 27 30 27 27 28 38
nents: All inject Corporat ID OW-1-25D OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D OW-1-30D	ion point flows we ion after collecting Injection Bank 78.1 78.1 78.1 78.1 77.9 78.0 78.0 78.4 79.0	re adjusted to g readings. Inje 7 30 30 30 30 30 30 30	the target flow r foction times at B psi 25 26 28 29 25 36	ank #5 were set at 3 minutes	ion System #1           Injection Bank 8           Depth           48.5           48.8           49.3           49.3           49.7           50.1	scfh           30           30           40           50           50           45	r than the press	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D           0W-1-38D	e hydrosta Injecti 83.2 84.5 85.0 85.0 84.0 82.0	tic tables prepa on Bank 9 scfh 30 30 30 30 30 35 30	Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Image: constraint of the second system           Image: constraint of the second system         Im

# SYSTEM #1

					(		on System #1						
	In	jection Bank 1				I	njection Bank 1	11				on Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3	57S	50.5	25	16	OW-1-4	1D	73.6	30	23	OW-1-43	67.4	30	18
OW-1-3	885	50.6	35	15	OW-1-42	2D	71.0	30	22	OW-1-44	66.6	30	20
OW-1-3	99S	50.7	30	15	OW-1-4	45	65.7	30	20	OW-1-51R	60.6	30	19
OW-1-4	los	51.1	30	14	OW-1-4	46	64.3	20	18	OW-1-52	59.3	30	16
OW-1-4	15	51.5	30	13	OW-1-4	47	63.4	25	18	OW-1-53	60.0	30	17
OW-1-4	28	51.3	30	14	OW-1-4	48	62.5	30	17	OW-1-54	60.0	30	16
					OW-1-4	49	61.5	35	18				
					OW-1-5	50	61.0	30	18				
mments:					ate of ~30 scfh pro ink #11 was set at (	6 minutes.	e pressure reading	g was no greate	er than the press	ures provided in th	e hydrosta	tic tables prepa	ed by URS
omments:	Corporation	after collecting	g readings. Inje		ink #11 was set at (	6 minutes. D <sub>2</sub> Injectio	on System #1	Log	er than the press	-	-	ng Points Log	-
ID	Corporation	after collecting	; readings. Inje Log ng/L)		ink #11 was set at (	6 minutes. D <sub>2</sub> Injectio	on System #1	Log 1g/L)	er than the press	-	-	ng Points Log	red by URS
	Corporation Mon	after collecting itoring Points DO (r	; readings. Inje Log ng/L)	ction time at Ba	nk #11 was set at (	6 minutes. D <sub>2</sub> Injectio Mo	on System #1 nitoring Points I DO (n	Log ng/L) om			Monitori	ng Points Log DO M	(mg/L)
ID	Corporation Mon DTW	after collecting itoring Points DO (r	r readings. Inje	ection time at Ba	nk #11 was set at o	6 minutes. D <sub>2</sub> Injectio Mo DTW	on System #1 nitoring Points I DO (n Bott	Log ng/L) om 58	PID (ppm)	ID	Monitori	ng Points Log DO Mi	(mg/L) iddle
ID MP-1-1D	Corporation Mon DTW 26.87	after collecting itoring Points DO (r Boti	r readings. Inje	PID (ppm)	nk #11 was set at ( ID MP-1-5	6 minutes.  2 Injectio Mo DTW 25.66	on System #1 nitoring Points I DO (n Bott 30.	Log ng/L) om 558	PID (ppm) 0	 	Monitori )	ng Points Log DO M 30	(mg/L) iddle
ID MP-1-1D MP-1-1S	Corporation Mon DTW 26.87 26.91	after collecting itoring Points DO (r Boti	r readings. Inje	PID (ppm) 0 0	nk #11 was set at 0	6 minutes.  2 Injectio Mo 25.66 18.95	n System #1 nitoring Points I DO (n Bott 30.: 12.:	Log ng/L) om 58 90 02	PID (ppm) 0 0	ID MP-1-11 MP-1-21	Monitori ) )	ng Points Log DO M 3 2	(mg/L) ddle 0.12 9.94
MP-1-1D MP-1-1S MP-1-2D	Corporation Mon DTW 26.87 26.91 20.74	after collecting itoring Points DO (r Both 35.	r readings. Inje	Ction time at Ba	MP-1-7	6 minutes.  2 Injectio Mo 25.66 18.95 22.20	m System #1 nitoring Points I DO (n Bott 30.: 12.: 46.0	Log ng/L) om 58 90 02	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 2	(mg/L) (iddle ). 12 9.94 9.18
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S	Mon           DTW           26.87           26.91           20.74           21.42	after collecting itoring Points DO (r Both 35.	g readings. Inje	ction time at Ba PID (ppm) 0 0 0 0 0.2 0.2 0.2	MP-1-7	6 minutes.  2 Injectio Mo 25.66 18.95 22.20	m System #1 nitoring Points I DO (n Bott 30.: 12.: 46.0	Log ng/L) om 58 90 02	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 2	(mg/L) (iddle ). 12 9.94 9.18
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S MP-1-3D	Mon           DTW           26.87           26.91           20.74           21.42           19.41	after collecting itoring Points DO (r Both 35. 26.	g readings. Inje	ction time at Ba PID (ppm) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MP-1-7	6 minutes.  2 Injectio Mo 25.66 18.95 22.20	m System #1 nitoring Points I DO (n Bott 30.: 12.: 46.0	Log ng/L) om 58 90 02	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 2	(mg/L) (iddle ). 12 9.94 9.18

#### SYSTEM #1

						Date:	4/21/2014
			O DED A TIONAL				
			<b>OPERATIONAL</b>	NOTES			
* Unload	el Checked with system unlo l system, wait until Deliver		n 9 psi	Yes	X	No	
2) Oil Leve	el with system unloaded						
3) Oil adde	Low (red)	Yes	Normal (green)	No	X	High (orange)	
4) Oil chan		Yes		No No	X		
5) Oil filter	0	Yes		No No	X		
6) Air filter	e	Yes		No	X		
,	rator changed	Yes		No	X		
, <b>1</b>	l strips checked	Yes X		No			
AS-80 O <sub>2</sub> Generator							
1) Prefilter	changed	Yes X		No			
2) Coalesci	6	Yes X		No			
		G	ENERAL SYSTEM	4 NOTES			
<u>Trailer</u> 1)	Performed general housek	eeping (i.e. sweep, colle	ect trash inside and o	ut, etc.) Yes	X	No	
2)	Abnormal conditions obse	rved (e.g. vandalism)					
	·						
3)	Other major activities con	ipleted					
4)	Supplies needed						
5)	*** *,						
5)	Visitors						
	es such as any alarm/shut l/filter/gasket and/or any						
Replaced belt on booster garbage from around fend		t. Soaked up small amo	ount of oil and water	from separat	or unit for c	disposal. Wiped down all eq	uipment and cleaned up all
shed and found no leaks.	Leak appears to be somew	here in the piping run fr	om the shed to the w	ell head. Th	nis area appe	all fittings and found no leaks. wears to be in the location of the ium test prior to excavating.	Checked all connections under an new fencing and retaining
	d to 100% oxygen saturation alibrated with 100 ppm isol		••	ne prior to c	alibration a	and unit was reading 97 ppm.	Zeroed unit with fresh air and
Electric Meter # 96-934-	-323 tied into Pole #4						
Action Items:							

# SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed B	erature:	11 Su ~6' ~6!	2014 :40 nny 7° F 5° F Ryan								
	0 <sub>2</sub> Ge	enerator (Ai	irSep)				Compressor	<mark> (Kaesar Rota</mark>	r <mark>y Screw</mark>	7)	
Hours			8,903.7	-	Compressor T	`ank *			105		(psi)
Feed Air Pressure * Cycle Pressure * Oxygen Receiver Pressur	е *		100 70	_(psi) _(psi) 110	Delivery Air Element Outle Running Hour	et Temperatu	-	are made from o	control pa <u>114</u> <u>178</u> 10,188	anel)	(psi) (oF) (hours)
Oxygen Purity * maximum reading during loa			98.2	(percent)	Loading Hour	"S	ing cycle		6,440		(hours)
				O <sub>2</sub> Inject	tion System #1						
	njection Bank				Injection Bank 2	u				ion Bank 3	
<b>ID</b> OW-1-1	Depth 95.5	scfh 30	<b>psi</b> 28	ID OW-1-5S	07.3	scfh 30	<b>psi</b> 18	ID OW-1-9D	Depth 88.5	scfh 30	<b>psi</b> 27
OW-1-2	96.5	30	29	OW-1-6S	67.0	40	18	OW-1-10D	87.2	25	27
OW-1-3	96.3	30	32	OW-1-7S	66.9	40	17	OW-1-11D	86.1	35	28
OW-1-4	95.0	25	30	OW-1-8S	66.7	50	18	OW-1-12D	85.3	40	28
OW-1-5D	93.9	30	28	OW-1-9S	66.0	40	18	OW-1-13D	84.7	35	28
OW-1-6D	92.4	35	28	OW-1-10S	54.6	30	14	OW-1-14D	84.1	30	26
OW-1-7D	91.1	35	28	OW-1-11S	54.1	25	13	OW-1-15D	83.3	30	27
OW-1-8D	89.6	35	28	OW-1-12S	53.6	30	13	OW-1-16D	82.5	30	14
				rate of ~30 scfh provided that 3ank #1 and Bank #3 were se		g was no greate	r than the press	sures provided in the	e hydrosta	tic tables prepar	ed by URS

# SYSTEM #1

				O <sub>2</sub> Inject	ion System #1						
	Injection Bank	4			Injection Bank 5				Injecti	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	14	OW-1-17D	79.5	30	16	OW-1-21S	49.3	25	14
OW-1-14S	52.7	30	15	OW-1-18D	78.3	35	24	OW-1-22S	49.3	35	15
OW-1-15S	52.2	30	16	OW-1-19D	78.9	35	23	OW-1-238	48.8	35	13
OW-1-16SR	51.8	25	23	OW-1-20D	79.5	35	28	OW-1-24S	48.4	30	13
OW-1-17S	50.7	35	22	OW-1-21D	79.5	40	29	OW-1-258	48.8	30	14
OW-1-18S	50.2	30	14	OW-1-22D	79.5	40	26	OW-1-26SR	48.3	30	14
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	24	OW-1-27S	48.3	40	15
OW-1-20S	49.3	25	13	OW-1-24D	78.2	30	28	OW-1-28S	48.3	30	15
All inject nents: Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow ra	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1		r than the press	sures provided in th	e hydrosta	tic tables prepa	red by URS
nents: All inject Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje	the target flow rates at B	ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	e hydrosta Injecti	tic tables prepa	1
All inject Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow ra	ank #5 were set at 3 minutes O2 Inject D ID	ion System #1 Injection Bank 8 Depth		r than the press	sures provided in th	e hydrosta	tic tables prepa	
All inject nents: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje 7	the target flow rates at B	ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	e hydrosta Injecti	tic tables prepa	psi
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth	ere adjusted to g readings. Inje 7 scfh	the target flow r ection times at B psi	ank #5 were set at 3 minutes O2 Inject D ID	ion System #1 Injection Bank 8 Depth	scfh	psi	ID	e hydrosta Injecti Depth	tic tables prepa on Bank 9 scfh	<b>psi</b> 26
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth 78.1	re adjusted to g readings. Inje 7 scfh 30	the target flow rates at B	ank #5 were set at 3 minutes O2 Inject ID OW-1-29S	ion System #1 Injection Bank 8 Depth 48.5	scfh 30	<b>psi</b> 13	ID OW-1-33D	e hydrostar Injecti Depth 83.2	tic tables prepa on Bank 9 scfh 25	<b>psi</b> 26 29
All inject Corporat ID OW-1-25D OW-1-26D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1	re adjusted to g readings. Inje 7 scfh 30 40	the target flow r. triction times at B	ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S	ion System #1 Injection Bank 8 Depth 48.5 48.8	scfh 30 30	<b>psi</b> 13 13	D OW-1-33D OW-1-34D	e hydrosta Injecti Depth 83.2 84.5	tic tables prepa	26 29 27
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1	re adjusted to g readings. Injo 7 30 40 30	the target flow r. tcction times at B psi 25 26 27	ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3	scfh 30 30 30	<b>psi</b> 13 13 13	ID OW-1-33D OW-1-34D OW-1-35D	e hydrosta Injecti Depth 83.2 84.5 85.0	tic tables prepa	<b>psi</b> 26 29 27 27 27
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0	re adjusted to g readings. Inje 7 Scfh 30 40 30 30	the target flow rection times at B	ank #5 were set at 3 minutes	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3	scfh 30 30 30 30	<b>psi</b> 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D	e hydrosta Injecti Depth 83.2 84.5 85.0 85.0	tic tables prepa	26 29 27 27 27 28
nents: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 30 40 30 30 30 30	the target flow rection times at B psi 25 26 27 27 27 25	ank #5 were set at 3 minutes	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7	scfh 30 30 30 30 25	<b>psi</b> 13 13 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D	e hydrosta Injecti 83.2 84.5 85.0 85.0 84.0	tic tables prepa on Bank 9 scfh 25 25 30 30 25	26 29 27 27 27 28 37
nents: All inject Corporat ID OW-1-25D OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D OW-1-30D	ion point flows we ion after collecting Injection Bank 78.1 78.1 78.1 78.1 77.9 78.0 78.0 78.4 79.0	re adjusted to g readings. Inje 7 30 40 30 30 30 30 30	the target flow rection times at B psi 25 26 27 27 27 25 36	ank #5 were set at 3 minutes	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7 50.1	scfh           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30	<b>psi</b> 13 13 13 13 13 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D           0W-1-38D	e hydrosta Injecti 83.2 84.5 85.0 85.0 84.0 82.0	tic tables prepa on Bank 9 scfh 25 25 30 30 25 30	red by URS

# SYSTEM #1

					<u> </u>		on System #1						
	In	jection Bank 1				I	njection Bank 1	Ú		Injection Bank 12			
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3	OW-1-37S 50.5 30 15		15	OW-1-41D		73.6	25	21	OW-1-43	67.4	30	18	
OW-1-3	OW-1-38S 50.6 35 15		15	OW-1-42D		71.0	20	22	OW-1-44	66.6	40	19	
OW-1-3	99S	98 50.7 35 14		14	OW-1-4	45	65.7	20	20	OW-1-51R	60.6	30	19
OW-1-4	40S	51.1	30	14	OW-1-4	46	64.3	30	18	OW-1-52	59.3	30	16
OW-1-4	41S	51.5	30	13	OW-1-4	47	63.4	30	17	OW-1-53	60.0	40	17
OW-1-4	28	51.3	30	14	OW-1-4	48	62.5	30	17	OW-1-54	60.0	30	17
					OW-1-4	19	61.5	35	18				
					OW-1-5	50	61.0	45	17				
omments:					ate of ~30 scfh pro ink #11 was set at (	6 minutes.	e pressure reading	g was no greate	er than the press	ures provided in th	e hydrosta	tic tables prepa	red by URS
omments:	Corporation	after collecting	g readings. Inje		ink #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log	er than the press	-	-	ng Points Log	-
Domments:	Corporation	itoring Points	g readings. Inje		ink #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log 1g/L)	er than the press	-	-	ng Points Log	red by URS (mg/L) iddle
	Corporation Mon	itoring Points	; readings. Inje Log ng/L)	ction time at Ba	nk #11 was set at (	6 minutes. ) <sub>2</sub> Injectio Mo	on System #1 nitoring Points I DO (n	Log ng/L) om			Monitori	ng Points Log DO M	(mg/L)
ID	Corporation Mon DTW	itoring Points	readings. Inje	ection time at Ba	nk #11 was set at o	6 minutes. <mark>)2 Injectio</mark> <u>Mo</u> DTW	on System #1 nitoring Points I DO (n Bott	Log ng/L) om	PID (ppm)		Monitori	ng Points Log DO M 3	(mg/L) iddle
ID MP-1-1D	Corporation Mon DTW 26.12	itoring Points DO (r Boti	readings. Inje	PID (ppm)	nk #11 was set at ( ID MP-1-5	6 minutes.  2 Injectio Mo DTW 25.93	on System #1 nitoring Points k DO (n Bott 26.	Log ng/L) om 15	PID (ppm)		Monitori )	ng Points Log DO M 3	(mg/L) iddle
ID MP-1-1D MP-1-1S	Corporation Mon DTW 26.12 26.20	itoring Points DO (r Boti	r readings. Inje	PID (ppm) 0 0	nk #11 was set at (	6 minutes.  2 Injectio Mo 25.93 18.07	n System #1 nitoring Points I DO (n Bott 26. 13.0	Log pg/L) om 15 D1	PID (ppm) 0 0	ID MP-1-11 MP-1-21	Monitori ) )	ng Points Log DO M 3 2	(mg/L) iddle 0.98 6.00
ID MP-1-1D MP-1-1S MP-1-2D	Corporation Mon DTW 26.12 26.20 20.12	itoring Points DO (r Botn 32.	r readings. Inje	PID (ppm)           0           0           0.3	MP-1-5 MP-1-7	6 minutes.  2 Injectio Mo 25.93 18.07 21.36	m System #1 nitoring Points I DO (n Bott 26. 13. 45.	Log pg/L) om 15 D1	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 2	(mg/L) iddle 0.98 6.00 9.55
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S	Mon           DTW           26.12           26.20           20.12           20.67	itoring Points DO (r Botn 32.	r readings. Inje	ction time at Ba PID (ppm) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MP-1-5 MP-1-7	6 minutes.  2 Injectio Mo 25.93 18.07 21.36	m System #1 nitoring Points I DO (n Bott 26. 13. 45.	Log pg/L) om 15 D1	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 2	(mg/L) iddle 0.98 6.00 9.55
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S MP-1-3D	Mon           DTW           26.12           26.20           20.12           20.67           18.62	itoring Points DO (r Bott 32. 28.	r readings. Inje	Ction time at Ba	MP-1-5 MP-1-7	6 minutes.  2 Injectio Mo 25.93 18.07 21.36	m System #1 nitoring Points I DO (n Bott 26. 13. 45.	Log pg/L) om 15 D1	PID (ppm) 0 0 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 3 2	(mg/L) iddle 0.98 6.00 9.55

#### SYSTEM #1

						Date	e: 5/5/2014
					LOWER		
GAT AL G			0	PERATIONAL N	NOTES		
<u>GA5 Air C</u> o	1) Oil Leve * Unload	el Checked with system unlo l system, wait until Delivery el with system unloaded			Yes X	No	_
	· •	ged • changed	Yes Yes Yes Yes Yes Yes Xes	Normal (green)	X           No         X	High (orange)	' <u></u>
<u>AS-80 O<sub>2</sub> C</u>	Generator 1) Prefilter 2) Coalesci		Yes X Yes X	_	No No		
			GE	NERAL SYSTEM	I NOTES		
<u>Trailer</u>	1)	Performed general housek	eeping (i.e. sweep, collect	trash inside and ou	it, etc.) Yes <u>X</u>	N	lo
	2)	Abnormal conditions observed	ved (e.g. vandalism)				
	3)	Other major activities com	pleted				
	4)	Supplies needed					
	5)	Visitors					
		es such as any alarm/shut /filter/gasket and/or any o					
		er pump. Adjusted temperat p all garbage from around for		ng hot. Soaked up	small amount of oil a	and water from separator u	unit for disposal. Wiped down all
		d to 100% oxygen saturation alibrated with 100 ppm isob		11 2	e prior to calibration	n and unit was reading 99 p	ppm. Zeroed unit with fresh air and
Electric Me	eter # 96-934-	-323 tied into Pole #4					
Action Iter	ns:						

# SYSTEM #1

Date: Time: Weather: Outdoor Temperature: Inside Trailer Temperature: Performed By:		12 Ri ~6: ~8!	/2014 :44 5° F 0° F Ryan	- - - - -									
	O <sub>2</sub> Generator (AirSep)					Compressor (Kaesar Rotary Screw)							
Hours	urs <u>9,015.2</u>			-	Compressor T	Compressor Tank *					(psi)		
Feed Air Pressure * Cycle Pressure *				_(psi) _(psi)		(readings below are made from Delivery Air Element Outlet Temperature					(psi) (oF)		
				(percent)	Running Hour Loading Hour * maximum read	rs	ing cycle		10,309 6,517		(hours) (hours)		
				O <sub>2</sub> Inject	ion System #1								
	njection Bank	-			Injection Bank 2					ion Bank 3	)		
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi		
OW-1-1	95.5	30	29	OW-1-5S	67.3	35	19	OW-1-9D	88.5	35	28		
OW-1-2	96.5	20	29	OW-1-6S	67.0	45	18	OW-1-10D	87.2	45	28		
OW-1-3	96.3	25	32	OW-1-7S	66.9	25	18	OW-1-11D	86.1	40	27		
OW-1-4	95.0	20	30	OW-1-8S	66.7	20	18	OW-1-12D	85.3	30	28		
OW-1-5D	93.9	20 29 OW-1-9S			66.0	30	17	OW-1-13D	84.7	20	28		
OW-1-6D	92.4	35 28 OW-1-10S			54.6	30	14	OW-1-14D	84.1	30	25		
OW-1-7D	91.1	30	28	OW-1-11S	54.1	30	14	OW-1-15D	83.3	30	27		
OW-1-8D	89.6	20	28	OW-1-12S	53.6	40	13	OW-1-16D	82.5	30	14		
				rate of ~30 scfh provided that Bank #1 and Bank #3 were se		g was no greate	r than the press	ures provided in the	e hydrosta	tic tables prepar	ed by URS		

# SYSTEM #1

				O <sub>2</sub> Inject	ion System #1						
	Injection Bank	4			Injection Bank 5				Injecti	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	25	14	OW-1-17D	79.5	30	16	OW-1-21S	49.3	45	14
OW-1-14S	52.7	35	15	OW-1-18D	78.3	30	25	OW-1-22S	49.3	40	15
OW-1-15S	52.2	25	17	OW-1-19D	78.9	30	22	OW-1-23S	48.8	30	14
OW-1-16SR	51.8	30	22	OW-1-20D	79.5	30	27	OW-1-24S	48.4	20	15
OW-1-17S	50.7	30	22	OW-1-21D	79.5	40	29	OW-1-25S	48.8	30	14
OW-1-18S	50.2	30	14	OW-1-22D	79.5	30	26	OW-1-26SR	48.3	30	14
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	25	OW-1-27S	48.3	30	15
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	28	OW-1-28S	48.3	25	15
All inject ments: Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow r	ate of ~30 scfh provided that tank #5 were set at 3 minutes	ion System #1		r than the press	sures provided in the	e hydrosta		red by URS
All inject ments: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to t g readings. Inje	the target flow r ection times at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	e hydrosta Injecti	on Bank 9	1
All inject ments: Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow r	ate of ~30 scfh provided that tank #5 were set at 3 minutes	ion System #1		r than the press	sures provided in th	e hydrosta		1
All inject ments: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to t g readings. Inje	the target flow r ection times at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	e hydrosta Injecti	on Bank 9	psi
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth	g readjusted to p g readings. Inje 7 scfh	the target flow r ection times at B psi	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject ID	ion System #1 Injection Bank 8 Depth	scfh	psi	ID	e hydrosta Injecti Depth	on Bank 9 scfh	<b>psi</b> 26
Ments: All inject Corporat	ion point flows we ion after collecting Injection Bank Depth 78.1	re adjusted to to greadings. Inje	the target flow r cction times at B psi 25	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject ID OW-1-298	ion System #1 Injection Bank 8 Depth 48.5	scfh 30	<b>psi</b> 13	ID OW-1-33D	e hydrostar Injecti Depth 83.2	on Bank 9 scfh 30	<b>psi</b> 26 30
Ments: All inject Corporat	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1	re adjusted to to greadings. Inje	the target flow r trection times at B psi 25 26	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S	ion System #1 Injection Bank 8 Depth 48.5 48.8	scfh 30 20	<b>psi</b> 13 13	ID OW-1-33D OW-1-34D	e hydrosta Injecti Depth 83.2 84.5	on Bank 9 scfh 30 30	<b>psi</b> 26 30 28
Ments: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1	re adjusted to to greadings. Inje	the target flow r ection times at B psi 25 26 28	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3	scfh 30 20 30	<b>psi</b> 13 13 13	ID OW-1-33D OW-1-34D OW-1-35D	e hydrosta Injecti Depth 83.2 84.5 85.0	on Bank 9 scfh 30 30 30	red by URS psi 26 30 28 27 27
ments: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0	re adjusted to to greadings. Inje	the target flow r faction times at B psi 25 26 28 27	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S OW-1-32S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3	scfh 30 20 30 50	<b>psi</b> 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D	Injecti           Depth           83.2           84.5           85.0           85.0	on Bank 9 scfh 30 30 30 30	26 30 28 27 27
ments: All inject Corporat ID OW-1-25D OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.1 78.0 78.0 78.0	re adjusted to 1 g readings. Inje 7 30 30 30 30 30 30	the target flow r faction times at B psi 25 26 28 27 26 26	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.7	scfh 30 20 30 50 50	<b>psi</b> 13 13 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D	Injecti           83.2         84.5           85.0         85.0           84.0         84.0	on Bank 9 scfh 30 30 30 30 30 30	psi           26           30           28           27           27           36
ments: All inject Corporat ID OW-1-25D OW-1-26D OW-1-26D OW-1-27D OW-1-28D OW-1-29D OW-1-30D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0 78.0 78.4 78.4	re adjusted to 1 g readings. Inje 7 30 30 30 30 30 30	the target flow r foction times at B psi 25 26 28 27 26 27 26 36	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S OW-1-34S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7 50.1	sefh           30           20           30           50           50           55	psi           13           13           13           13           13           13           13           13           13           13           13           13           13           13           13           13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D           0W-1-38D	Injecti           Injecti           83.2           84.5           85.0           85.0           85.0           82.0	scfh           30           35	26 26 30 28 27

# SYSTEM #1

							on System #1						
Injection Bank 10						I	njection Bank 1	11				on Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3	OW-1-37S 50.5 30 15		15	OW-1-41D		73.6	40	21	OW-1-43	67.4	30	18	
OW-1-3	OW-1-38S 50.6 20 16		OW-1-42D		71.0	45	22	OW-1-44	66.6	30	19		
OW-1-3	99S	50.7	30	15	OW-1-4	45	65.7	40	20	OW-1-51R	60.6	30	19
OW-1-4	los	51.1	30	14	OW-1-4	46	64.3	25	18	OW-1-52	59.3	30	15
OW-1-4	15	51.5	35	13	OW-1-4	47	63.4	30	17	OW-1-53	60.0	30	16
OW-1-4	2S	51.3	35	13	OW-1-4	48	62.5	30	17	OW-1-54	60.0	30	17
					OW-1-4	49	61.5	30	19				
					OW-1-5	50	61.0	30	17				
omments:					ate of ~30 scfh pro ink #11 was set at t	6 minutes.	e pressure reading on System #1	g was no greate	er than the press	ures provided in th	e hydrosta	tic tables prepa	red by URS
omments:	Corporation	after collecting	g readings. Inje		ink #11 was set at	6 minutes. D <sub>2</sub> Injectio	on System #1	Log	er than the press	-	-	ng Points Log	-
ID	Corporation	after collecting	; readings. Inje Log ng/L)		ink #11 was set at	6 minutes. D <sub>2</sub> Injectio	on System #1	Log 1g/L)	er than the press	-	-	ng Points Log	red by URS
	Corporation Mon	after collecting itoring Points DO (r	; readings. Inje Log ng/L)	ection time at Ba	nk #11 was set at (	6 minutes. D <sub>2</sub> Injectio Mo	on System #1 nitoring Points I DO (n	Log ng/L) om			Monitori	ng Points Log DO M	(mg/L)
ID	Corporation Mon DTW	after collecting itoring Points DO (r	readings. Inje Log ng/L) tom	ection time at Ba	nk #11 was set at o	6 minutes. D <sub>2</sub> Injectio Mo DTW	on System #1 nitoring Points I DO (n Bott	Log ng/L) om 12	PID (ppm)		Monitori	ng Points Log DO M 2	(mg/L) iddle
MP-1-1D	Corporation Mon DTW 25.68	after collecting itoring Points DO (r Boti	readings. Inje Log ng/L) tom	PID (ppm)	ID MP-1-5	6 minutes.  2 Injectio Mo DTW 25.48	on System #1 nitoring Points k DO (n Bott 29.	Log ng/L) om 12 30	PID (ppm) 0.4	ID 	Monitori )	ng Points Log DO M 2 3	(mg/L) iddle 5.27
ID MP-1-1D MP-1-1S	Corporation Mon DTW 25.68 25.75	after collecting itoring Points DO (r Boti	r readings. Inje	PID (ppm) 0.3 0	ID MP-1-5 MP-1-6	6 minutes.  2 Injectio Mo 25.48 17.80	n System #1 nitoring Points I DO (n Bott 29. 19.	Log pg/L) om 12 30 55	PID (ppm)           0.4           0	ID MP-1-11 MP-1-21	Monitori ) )	ng Points Log DO M 2 3	(mg/L) iddle 5.27 9.11
ID MP-1-1D MP-1-1S MP-1-2D	Corporation Mon DTW 25.68 25.75 19.83	after collecting itoring Points DO (r Both 32.	r readings. Inje	PID (ppm)           0.3           0           0	MP-1-5 MP-1-7	6 minutes.  2 Injectio Mo 25.48 17.80 21.08	m System #1 nitoring Points I DO (n Bott 29. 19.: 38.:	Log pg/L) om 12 30 55	PID (ppm)           0.4           0           0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 3	(mg/L) iddle 5.27 9.11 9.25
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S	Corporation Mon DTW 25.68 25.75 19.83 20.26	after collecting itoring Points DO (r Both 32.	g readings. Inje Log ng/L) tom 05 86	Centre of the section time at Baseline (Control of the section of	MP-1-5 MP-1-7	6 minutes.  2 Injectio Mo 25.48 17.80 21.08	m System #1 nitoring Points I DO (n Bott 29. 19.: 38.:	Log pg/L) om 12 30 55	PID (ppm)           0.4           0           0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 3	(mg/L) iddle 5.27 9.11 9.25
ID           MP-1-1D           MP-1-1S           MP-1-2D           MP-1-2S           MP-1-3D	Mon           DTW           25.68           25.75           19.83           20.26           18.25	after collecting itoring Points DO (r Both 32. 33.	g readings. Inje Log ng/L) tom 05 86	Centre of the section time at Baseline (ppm) 0.3 0 0 0 1.5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MP-1-5 MP-1-7	6 minutes.  2 Injectio Mo 25.48 17.80 21.08	m System #1 nitoring Points I DO (n Bott 29. 19.: 38.:	Log pg/L) om 12 30 55	PID (ppm)           0.4           0           0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 3	(mg/L) iddle 5.27 9.11 9.25

# SYSTEM #1

									Date:	5/16/2014
						100000				
GAS AL G				Ol	PERATIONAL N	OTES				
*	Oil Level * Unload s	Checked with system unlo system, wait until Delivery with system unloaded		less than 9	psi	Yes	X	No		
, ,	Oil added	Low (red)	X Yes	х	Normal (green)	No		High (o	range)	_
,	Oil change		Yes		-	No	Х			
/	Oil filter c Air filter (	U	Yes Yes		-	No No	X			
,		tor changed	Yes		-	No No	X			
8) 1	Terminal s	strips checked	Yes	Х	_	No				
AS-80 O2 Gener	rator									
	Prefilter c		Yes	X	_	No				
2) (	Coalescing	g changed	Yes	Х	-	No				
				GEN	ERAL SYSTEM	<b>I NOTES</b>				
<u>Trailer</u> 1)	]	Performed general housek	eeping (i.e. swee	p, collect t	trash inside and ou	it, etc.) Yes	X		No	
2)		Abnormal conditions obse	ved (e.g. vandal	ism)						-
	-									
3)		Other major activities com	pleted							
4)	:	Supplies needed								
	-									
5)	,	Visitors								
	-									
		s such as any alarm/shut filter/gasket and/or any o	· •	0,	· · · · · · · · · · · · · · · · · · ·					
		ned as it was running hot. or unit for disposal. Wire								Soaked up small amount of all garbage from around
		to 100% oxygen saturatior ibrated with 100 ppm isob			** *	e prior to	calibration	and unit was readir	ng 97 ppm. Zei	roed unit with fresh air and
Electric Meter #	\$ 96-934-3	23 tied into Pole #4								
Action Items:										

### SYSTEM #1

Date: Time: Weather: Outdoor Temper Inside Trailer Tem Performed B	perature:	13 Su ~80 ~70	/2014 :00 nny )° F )° F Ryan								
	O <sub>2</sub> Ge	enerator (Ai	rSep)				Compressor	(Kaesar Rota	ry Screw	<i>i</i> )	
Hours			<u>9,164.2</u> Compressor Tank * <u>115</u> (j				(psi)				
Feed Air Pressure *			115	(psi)		(rea	dings below	are made from c	ontrol panel)		
Cycle Pressure *			70	(psi)	Delivery Air Element Outle	et Temperatu	re		114 160		(psi) (oF)
Oxygen Receiver Pressu	re *			100 (psi)	Running Hour Loading Hour				10,473 6,622		(hours) (hours)
Oxygen Purity * maximum reading during lo	ading cycle		92.9	(percent)	* maximum read	ing during load	ing cycle				
	Injection Bank	1			Injection Bank 2				Injecti	on Bank 3	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	30	OW-1-5S	67.3	30	18	OW-1-9D	88.5	20	28
OW-1-2	96.5	35	31	OW-1-6S	67.0	30	18	OW-1-10D	87.2	15	27
OW-1-3	96.3	45	31	OW-1-7S	66.9	30	18	OW-1-11D	86.1	15	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	18	OW-1-12D	85.3	20	30
OW-1-5D	93.9	30	29	OW-1-9S	66.0	35	19	OW-1-13D	84.7	30	29
OW-1-6D	92.4	35	29	OW-1-10S	54.6	35	13	OW-1-14D	84.1	35	29
OW-1-7D	91.1	30	28	OW-1-11S	54.1	35	15	OW-1-15D	83.3	30	29
OW-1-8D	89.6	20	29	OW-1-12S	53.6	30	16	OW-1-16D	82.5	30	15
				rate of ~30 scfh provided that Bank #1 and Bank #3 were set		g was no greate	r than the press	ures provided in the	e hydrosta	tic tables prepa	red by URS

### SYSTEM #1

				O <sub>2</sub> Inject	ion System #1						
	Injection Bank	4			Injection Bank 5				Injecti	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	13	OW-1-17D	79.5	30	13	OW-1-21S	49.3	30	12
OW-1-14S	52.7	40	15	OW-1-18D	78.3	30	26	OW-1-22S	49.3	40	12
OW-1-15S	52.2	30	13	OW-1-19D	78.9	30	27	OW-1-23S	48.8	30	13
OW-1-16SR	51.8	50	25	OW-1-20D	79.5	30	28	OW-1-24S	48.4	30	13
OW-1-17S	50.7	40	24	OW-1-21D	79.5	30	27	OW-1-25S	48.8	35	13
OW-1-18S	50.2	30	13	OW-1-22D	79.5	30	27	OW-1-26SR	48.3	35	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	40	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	13	OW-1-24D	78.2	30	27	OW-1-28S	48.3	30	14
All inject	ion point flows we	ere adjusted to g readings. Inje		ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject			r than the press	sures provided in th	-	tic tables prepa	red by URS
All inject tents: Corporat	ion point flows we ion after collecting Injection Bank	re adjusted to g readings. Inje	ection times at B	ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	Injecti	on Bank 9	1
All inject	ion point flows we	ere adjusted to g readings. Inje		ank #5 were set at 3 minutes	ion System #1		r than the press psi 13	sures provided in th	-		red by URS
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth	g readjusted to g readings. Inje 7 scfh	psi	ank #5 were set at 3 minutes O <sub>2</sub> Inject ID	ion System #1 Injection Bank 8 Depth	scfh	psi	ID	Injecti Depth	on Bank 9 scfh	psi
ents: All inject Corporat ID OW-1-25D	ion point flows we ion after collecting Injection Bank Depth 78.1	re adjusted to g readings. Inje 7 scfh 25	psi 27	ank #5 were set at 3 minutes O2 Inject ID OW-1-298	ion System #1 Injection Bank 8 Depth 48.5	scfh 30	<b>psi</b> 13	ID OW-1-33D	Injecti Depth 83.2	on Bank 9 scfh 30	28 29
ents: All inject Corporat ID OW-1-25D OW-1-26D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1	re adjusted to greadings. Inje 7 25 35	ection times at Bi	ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S	ion System #1 Injection Bank 8 Depth 48.5 48.8	scfh 30 30	<b>psi</b> 13 13	D OW-1-33D OW-1-34D	Injecti           Depth           83.2           84.5	on Bank 9 scfh 30 30	28 29 29
All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 25 35 30	psi           27           27           27           28	ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3	scfh 30 30 30	<b>psi</b> 13 13 13	ID OW-1-33D OW-1-34D OW-1-35D	Injecti           Depth           83.2           84.5           85.0	on Bank 9 scfh 30 30 20	28 29 29 29 29
All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0	re adjusted to g readings. Inje 7 25 35 30 30	psi           27         27           27         27           28         28           28         28	ID           OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3	scfh 30 30 30 30	<b>psi</b> 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D	Injecti           Depth           83.2           84.5           85.0           85.0	on Bank 9 scfh 30 30 20 20	29 29 29 29 29 29 29 29 29
All inject Corporat ID OW-1-25D OW-1-26D OW-1-26D OW-1-27D OW-1-28D OW-1-29D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.1 78.0 78.0 78.0	re adjusted to g readings. Inje 7 25 35 30 30 30	psi           27           27           27           28           28           27	O2 Inject           O2 Inject           ID           OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S           OW-1-33S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.7	scfh 30 30 30 30 30	<b>psi</b> 13 13 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D	Injecti           Depth           83.2           84.5           85.0           85.0           84.0	on Bank 9 scfh 30 30 20 20 30	29 29 29 29 29 29 29 29 30
All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D OW-1-30D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0 78.0 78.4 78.4	re adjusted to g readings. Inje 7 25 35 30 30 30 30	psi           27           27           27           28           28           27           36	ank #5 were set at 3 minutes	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7 50.1	sefh           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30	<b>psi</b> 13 13 13 13 13 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D           0W-1-38D	Injecti           Depth           83.2           84.5           85.0           85.0           84.0           82.0	scfh           30           30           20           20           30           20           20           20           20           20           20           20           20	

### SYSTEM #1

					<u> </u>		on System #1						
	In	jection Bank 1				I	njection Bank 1	Ú				on Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3	37S	50.5	30	12	OW-1-4	1D	73.6	25	23	OW-1-43	67.4	30	20
OW-1-3	38S	50.6	25	13	OW-1-42	2D	71.0	45	21	OW-1-44	66.6	30	19
OW-1-3	39S	50.7	35	13	OW-1-4	45	65.7	55	19	OW-1-51R	60.6	35	18
OW-1-4	40S	51.1	30	13	OW-1-4	46	64.3	40	18	OW-1-52	59.3	30	17
OW-1-4	41S	51.5	35	13	OW-1-4	47	63.4	35	18	OW-1-53	60.0	30	17
OW-1-4	42S	51.3	30	13	OW-1-4	48	62.5	30	18	OW-1-54	60.0	35	17
					OW-1-4	19	61.5	30	17				
					OW-1-5	50	61.0	30	17				
mments:					ate of ~30 scfh pro ink #11 was set at (	6 minutes.	e pressure reading	g was no greate	er than the press	ures provided in th	e hydrosta	tic tables prepa	ed by URS
omments:	Corporation	after collecting	readings. Inje		nk #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log	er than the press		-	ng Points Log	-
ID	Corporation	after collecting	; readings. Inje Log ng/L)		nk #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log 1g/L)	er than the press		-	ng Points Log	red by URS
	Corporation Mon	itoring Points	; readings. Inje Log ng/L)	ction time at Ba	nk #11 was set at (	6 minutes. ) <sub>2</sub> Injectio Mo	on System #1 nitoring Points I DO (n	Log ng/L) om			Monitori	ng Points Log DO M	(mg/L)
D	Corporation Mon DTW	itoring Points	readings. Inje	ection time at Ba	nk #11 was set at o	6 minutes. <mark>)2 Injectio</mark> <u>Mo</u> DTW	on System #1 nitoring Points DO (n Bott	Log ng/L) om	PID (ppm)	ID	Monitori	ng Points Log DO Mi	(mg/L) iddle
ID MP-1-1D	Corporation Mon DTW 25.56	itoring Points i DO (n Bott	readings. Inje	PID (ppm)	nk #11 was set at ( ID MP-1-5	6 minutes.  2 Injectio Mo DTW 25.37	on System #1 nitoring Points   DO (n Bott 31.	Log ng/L) om 38 89	<b>PID (ppm)</b> 0.3		Monitori )	ng Points Log DO M 2 3	(mg/L) iddle 4.91
ID MP-1-1D MP-1-1S	Corporation Mon DTW 25.56 25.65	itoring Points i DO (n Bott	r readings. Inje	PID (ppm)           0.4           0.1	nk #11 was set at (	6 minutes.  2 Injectio Mo 25.37 17.60	n System #1 nitoring Points   DO (n Bott 31.: 22.:	Log ng/L) om 388 89 72	PID (ppm)           0.3           0	ID MP-1-11 MP-1-21	Monitori ) )	ng Points Log DO M 2 3	(mg/L) ddle 4.91 5.25
ID MP-1-1D MP-1-1S MP-1-2D	Corporation Mon DTW 25.56 25.65 19.90	itoring Points DO (n Bott	r readings. Inje	Ction time at Ba	MP-1-5 MP-1-7	6 minutes. 2 Injectio Mo DTW 25.37 17.60 20.95	n System #1 nitoring Points I DO (n Bott 31.: 22.: 38.	Log ng/L) om 388 89 72	PID (ppm) 0.3 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 3	(mg/L) (iddle 4.91 5.25 5.77
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S	Corporation Mon DTW 25.56 25.65 19.90 20.13	itoring Points DO (n Bott	r readings. Inje Log ng/L) Iom 87 80	ction time at Ba PID (ppm) 0.4 0.1 0 1.1	MP-1-5 MP-1-7	6 minutes. 2 Injectio Mo DTW 25.37 17.60 20.95	n System #1 nitoring Points I DO (n Bott 31.: 22.: 38.	Log ng/L) om 388 89 72	PID (ppm) 0.3 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 3	(mg/L) (iddle 4.91 5.25 5.77
ID           MP-1-1D           MP-1-1S           MP-1-2D           MP-1-2S           MP-1-3D	Mon           DTW           25.56           25.65           19.90           20.13           18.12	itoring Points DO (n Bott 27. 28.	r readings. Inje Log ng/L) Iom 87 80	ction time at Ba PID (ppm) 0.4 0.1 0 1.1 0 0	MP-1-5 MP-1-7	6 minutes. 2 Injectio Mo DTW 25.37 17.60 20.95	n System #1 nitoring Points I DO (n Bott 31.: 22.: 38.	Log ng/L) om 388 89 72	PID (ppm) 0.3 0 0	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 3	(mg/L) (iddle 4.91 5.25 5.77

### SYSTEM #1

					Date:	5/30/2014
CA5 Air Commence			<b>OPERATIONAL</b>	NOTES		
* Unload	el Checked with system unlo l system, wait until Delivery el with system unloaded		n 9 psi	Yes X	No	
2) Oli Leve	Low (red)	Х	Normal (green)		High (orange)	
3) Oil adde	· · · · -	Yes X	r (orman (green)	No		
4) Oil chan	ged	Yes		No X		
5) Oil filter	6	Yes		No X		
6) Air filter	-	Yes		No X		
· 1	rator changed l strips checked	Yes Yes X		No <u>X</u> No		
o) remina	i surps enceked			N0		
AS-80 O2 Generator						
1) Prefilter	changed	Yes X		No		
2) Coalesci	ng changed	Yes X		No		
			ENERAL SYSTEM	INOTES		
				I NOILS		
<u>Trailer</u> 1)	Performed general housek	eeping (i.e. sweep, colle	ect trash inside and ou	ut, etc.) Yes X	No	
2)	Abnormal conditions obse	rved (e.g. vandalism)				
3)	Other major activities com	npleted				
4)	Supplies needed					
5)	Visitors					
	es such as any alarm/shut //filter/gasket and/or any (					
	bil to compressor and tighter water from separator unit fo				<ol> <li>Greased bearings and shaft on boo from around fence areas.</li> </ol>	ster pump. Soaked up
	d to 100% oxygen saturation alibrated with 100 ppm isob			ne prior to calibration	and unit was reading 97 ppm. Zeroo	ed unit with fresh air and
Electric Meter # 96-934-	-323 tied into Pole #4					
Action Items:						

### SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed B	erature:	12 Su ~80 ~7:	/2014 :30 nny 0° F 5° F 9 Ryan						Kaesar Rotary Screw)			
	0 <sub>2</sub> Ge	enerator (Ai	irSep)				Compressor	<mark> (Kaesar Rota</mark>	ry Screw	7)		
Hours			9,442.7	-	Compressor T	`ank *			100		(psi)	
Feed Air Pressure * Cycle Pressure *			95 70	(psi)	Delivery Air Element Outle		-	are made from c	control pa 110 176	anel)	(psi) (oF)	
Oxygen Receiver Pressur	e *			105 (psi)	Running Hour Loading Hour				10,783 6,818		(hours) (hours)	
Oxygen Purity * maximum reading during loa	iding cycle		81.7	(percent)	* maximum read	ling during load	ing cycle					
T	njection Bank	1		O <sub>2</sub> inject	tion System #1 Injection Bank 2	,			Injecti	ion Bank 3		
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi	
OW-1-1	95.5	10	29	OW-1-5S	67.3	20	18	OW-1-9D	88.5	30	27	
OW-1-2	96.5	20	29	OW-1-6S	67.0	20	17	OW-1-10D	87.2	30	27	
OW-1-3	96.3	30	31	OW-1-7S	66.9	30	17	OW-1-11D	86.1	30	27	
OW-1-4	95.0	30	30	OW-1-8S	66.7	30	17	OW-1-12D	85.3	30	28	
OW-1-5D	93.9	20	28	OW-1-9S	66.0	40	18	OW-1-13D	84.7	40	27	
OW-1-6D	92.4	30	27	OW-1-10S	54.6	30	14	OW-1-14D	84.1	30	26	
OW-1-7D	91.1	25	28	OW-1-11S	54.1	30	13	OW-1-15D	83.3	30	27	
OW-1-8D	89.6	35	27	OW-1-12S	53.6	30	13	OW-1-16D	82.5	30	14	
				rate of ~30 scfh provided that Bank #1 and Bank #3 were se		g was no greate	r than the press	sures provided in the	e hydrosta	tic tables prepar	ed by URS	

### SYSTEM #1

				O <sub>2</sub> Inject	ion System #1						
	Injection Bank	4			Injection Bank 5				Injecti	on 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	16	OW-1-21S	49.3	30	15
OW-1-14S	52.7	35	15	OW-1-18D	78.3	25	25	OW-1-22S	49.3	30	15
OW-1-15S	52.2	45	16	OW-1-19D	78.9	35	23	OW-1-23S	48.8	30	13
OW-1-16SR	51.8	45	23	OW-1-20D	79.5	40	28	OW-1-24S	48.4	45	13
OW-1-17S	50.7	30	22	OW-1-21D	79.5	40	28	OW-1-25S	48.8	45	14
OW-1-18S	50.2	20	14	OW-1-22D	79.5	30	26	OW-1-26SR	48.3	35	14
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	24	OW-1-27S	48.3	50	15
OW-1-20S	49.3	30	14	OW-1-24D	78.2	30	28	OW-1-28S	48.3	40	15
All inject ments: Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow ra	ate of ~30 scfh provided that tank #5 were set at 3 minutes	ion System #1		r than the press	sures provided in the	e hydrosta		red by URS
All inject ments: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje	the target flow rates at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	e hydrosta Injecti	on Bank 9	
All inject ments: Corporat	ion point flows we	ere adjusted to g readings. Inje	the target flow ra	ate of ~30 scfh provided that tank #5 were set at 3 minutes	ion System #1		r than the press	sures provided in th	e hydrosta		red by URS
All inject ments: Corporat	ion point flows we ion after collecting Injection Bank	ere adjusted to g readings. Inje	the target flow rates at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject	ion System #1 Injection Bank 8			_	e hydrosta Injecti	on Bank 9	psi
All inject Corporat	ion point flows we ion after collecting Injection Bank Depth	ere adjusted to g readings. Inje 7 scfh	the target flow r. ection times at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject ID	ion System #1 Injection Bank 8 Depth	scfh	psi	ID	e hydrosta Injecti Depth	on Bank 9 scfh	<b>psi</b> 26
Main Main Main Main Main Main Main Main	ion point flows we ion after collecting Injection Bank Depth 78.1	ere adjusted to g readings. Inje 7 scfh 30	the target flow rates at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O <sub>2</sub> Inject ID OW-1-298	ion System #1 Injection Bank 8 Depth 48.5	scfh 30	<b>psi</b> 14	ID OW-1-33D	e hydrostar Injecti Depth 83.2	on Bank 9 scfh 20	<b>psi</b> 26 29
Ments: All inject Corporat ID OW-1-25D OW-1-26D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1	re adjusted to g readings. Inje 7 30 30 30	the target flow r. transformed to the target flow r. transformed to the target flow r. transformed to the target flow restricted to target flow restricted t	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S	ion System #1 Injection Bank 8 Depth 48.5 48.8	scfh 30 30	<b>psi</b> 14 13	ID OW-1-33D OW-1-34D	e hydrosta Injecti Depth 83.2 84.5	on Bank 9 scfh 20 10	26 29 27
IID OW-1-25D OW-1-27D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1	re adjusted to g readings. Inje 7 30 30 30 30	the target flow r. triction times at B psi 25 26 27	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3	scfh 30 30 30	<b>psi</b> 14 13 14	ID OW-1-33D OW-1-34D OW-1-35D	e hydrosta Injecti Depth 83.2 84.5 85.0	on Bank 9 scfh 20 10 10	26 29 27 27 27
ments: All inject Corporat ID OW-1-25D OW-1-25D OW-1-26D OW-1-27D OW-1-28D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 77.9 78.0	re adjusted to g readings. Inje 7 Scfh 30 30 30 40	the target flow rection times at B	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S OW-1-32S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3	scfh 30 30 30 30	<b>psi</b> 14 13 14 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D	Injecti           Depth           83.2           84.5           85.0           85.0	on Bank 9 scfh 20 10 10 15	26 29 27 27 27 28
ments: All inject Corporat ID OW-1-25D OW-1-26D OW-1-27D OW-1-28D OW-1-29D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.1 78.0 78.0 78.0	re adjusted to g readings. Inje 7 30 30 30 40 40	the target flow rection times at B psi 25 26 27 28 26 26	ate of ~30 scfh provided that sank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7	scfh 30 30 30 30 30 35	<b>psi</b> 14 13 14 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D	Injecti           83.2         84.5           85.0         85.0           84.0         84.0	on Bank 9 scfh 20 10 10 15 35	psi           26           29           27           27           27           28           36
ments: All inject Corporat ID OW-1-25D OW-1-26D OW-1-26D OW-1-27D OW-1-28D OW-1-29D OW-1-30D	ion point flows we ion after collecting Injection Bank Depth 78.1 78.1 78.1 78.1 78.0 78.0 78.0 78.4 78.4	re adjusted to g readings. Inje 7 30 30 30 40 40 40	the target flow rection times at B psi 25 26 27 28 26 36	ate of ~30 scfh provided that ank #5 were set at 3 minutes O2 Inject ID OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S OW-1-34S	ion System #1 Injection Bank 8 Depth 48.5 48.8 49.3 49.3 49.3 49.7 50.1	scfh           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           35           35	<b>psi</b> 14 13 14 13 13 13 13 13	ID           0W-1-33D           0W-1-34D           0W-1-35D           0W-1-36D           0W-1-37D           0W-1-38D	Injecti           Injecti           83.2           84.5           85.0           85.0           85.0           82.0	ion Bank 9 scfh 20 10 10 15 35 30	

### SYSTEM #1

					(		on System #1						
	In	jection Bank 1				I	njection Bank 1	Ú				on Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3	37S	50.5	30	15	OW-1-4	1D	73.6	35	21	OW-1-43	67.4	30	18
OW-1-3	38S	50.6	30	15	OW-1-42	2D	71.0	55	21	OW-1-44	66.6	30	19
OW-1-3	39S	50.7	40	15	OW-1-4	45	65.7	50	20	OW-1-51R	60.6	35	19
OW-1-4	40S	51.1	30	14	OW-1-4	46	64.3	30	18	OW-1-52	59.3	35	16
OW-1-4	41S	51.5	30	13	OW-1-4	47	63.4	30	18	OW-1-53	60.0	30	17
OW-1-4	42S	51.3	30	14	OW-1-4	48	62.5	20	17	OW-1-54	60.0	30	18
					OW-1-4	19	61.5	30	18				
					OW-1-5	50	61.0	30	18				
omments:					ate of ~30 scfh pro nk #11 was set at (	6 minutes.	e pressure reading	g was no greate	er than the press	ures provided in th	e hydrosta	tic tables prepa	ed by URS
emments:	Corporation	after collecting	readings. Inje		nk #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log	er than the press	-	-	ng Points Log	-
mments:	Corporation	after collecting	; readings. Inje Log ng/L)		nk #11 was set at (	6 minutes. <mark>)<sub>2</sub> Injectio</mark>	on System #1	Log 1g/L)	er than the press	-	-	ng Points Log	ed by URS
	Corporation Mon	after collecting	; readings. Inje Log ng/L)	ction time at Ba	nk #11 was set at (	6 minutes. ) <sub>2</sub> Injectio Mo	on System #1 nitoring Points I DO (n	Log ng/L) om			Monitori	ng Points Log DO M	(mg/L)
D	Corporation Mon DTW	after collecting	readings. Inje	ection time at Ba	nk #11 was set at (	6 minutes. <mark>)2 Injectio</mark> <u>Mo</u> DTW	on System #1 nitoring Points DO (n Bott	Log ng/L) om 25	PID (ppm)	ID	Monitori	ng Points Log DO M 2	(mg/L) iddle
ID MP-1-1D	Corporation Mon DTW 25.82	after collecting itoring Points 3 DO (1 Bott	readings. Inje	PID (ppm)	nk #11 was set at ( D ID MP-1-5	6 minutes.  2 Injectio Mo DTW 25.61	on System #1 nitoring Points   DO (n Bott 30.	Log ng/L) om 25 84	PID (ppm)           4.1		Monitori )	ng Points Log DO M 2 4	(mg/L) iddle 2.43
ID MP-1-1D MP-1-1S	Corporation Mon DTW 25.82 25.88	after collecting itoring Points 3 DO (1 Bott	r readings. Inje	PID (ppm) 0 0	nk #11 was set at (	6 minutes.  2 Injectio Mo DTW 25.61 17.91	n System #1 nitoring Points   DO (n Bott 30.: 13.:	Log pg/L) om 225 84 18	PID (ppm) 4.1 0	ID MP-1-11 MP-1-21	Monitori ) )	ng Points Log DO M 2 4	(mg/L) iddle 2.43 2.18
ID MP-1-1D MP-1-1S MP-1-2D	Corporation Mon DTW 25.82 25.88 20.15	after collecting itoring Points DO (n Bott 21.	r readings. Inje	Cetion time at Ba	nk #11 was set at 0 ID MP-1-5 MP-1-6 MP-1-7	6 minutes. 2 Injectio Mo DTW 25.61 17.91 21.23	n System #1 nitoring Points I DO (n Bott 30. 13. 36.	Log pg/L) om 225 84 18	PID (ppm) 4.1 0 16.2	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 4	(mg/L) (ddle 2.43 2.18 7.94
ID MP-1-1D MP-1-1S MP-1-2D MP-1-2S	Corporation Mon DTW 25.82 25.88 20.15 20.39	after collecting itoring Points DO (n Bott 21.	r readings. Inje	ction time at Ba	nk #11 was set at 0 ID MP-1-5 MP-1-6 MP-1-7	6 minutes. 2 Injectio Mo DTW 25.61 17.91 21.23	n System #1 nitoring Points I DO (n Bott 30. 13. 36.	Log pg/L) om 225 84 18	PID (ppm) 4.1 0 16.2	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 4	(mg/L) (ddle 2.43 2.18 7.94
ID           MP-1-1D           MP-1-1S           MP-1-2D           MP-1-2S           MP-1-3D	Mon           DTW           25.82           25.88           20.15           20.39           18.42	after collecting itoring Points DO (n Bott 21. 32.	r readings. Inje	PID (ppm)           0           0           0           0           0           2.4	nk #11 was set at 0 ID MP-1-5 MP-1-6 MP-1-7	6 minutes. 2 Injectio Mo DTW 25.61 17.91 21.23	n System #1 nitoring Points I DO (n Bott 30. 13. 36.	Log pg/L) om 225 84 18	PID (ppm) 4.1 0 16.2	ID MP-1-11 MP-1-21 MP-1-31	Monitori ) )	ng Points Log DO M 2 4	(mg/L) (ddle 2.43 2.18 7.94

# SYSTEM #1

								Date:	6/23/2014
					PERATIONAL N	IOTES			
CAE AIRC	1				<b>PERATIONAL</b> P	<b>UIES</b>			. <u></u>
<u>GA5 Air C</u>	1) Oil Leve * Unload	el Checked with system unlo I system, wait until Deliver		less than 9	9 psi	Yes	X	No	
	2) Oil Leve	l with system unloaded Low (red)	Х		Normal (green)			High (orange)	
	3) Oil adde		Yes	Х	Horman (green)	No			_
	4) Oil chan	ged	Yes			No	Х		
	5) Oil filter	changed	Yes			No	Х		
	6) Air filter	-	Yes		_	No	Х		
	, I	rator changed	Yes		_	No	Х		
	8) Terminal	l strips checked	Yes	Х	_	No			
AS-80 O <sub>2</sub>	Generator								
	1) Prefilter	changed	Yes	Х		No			
	2) Coalesci	e	Yes	Х	_	No			
				GE	NERAL SYSTEM	NOTES			
				02					
<u>Trailer</u>	1)	Performed general house	ceeping (i.e. swe	ep, collect	t trash inside and ou	it, etc.) Yes	X	No	_
	2)	Abnormal conditions obs	erved (e.g. vanda	alism)					
	3)	Other major activities con	npleted						
	4)	Supplies needed							
	5)	Visitors							
		es such as any alarm/shu l/filter/gasket and/or any		-					
Soaked up		of oil and water from sepa			5			and low oxygen level and clean garbage from around fence are	1
Injection p	oint OW-1-19	S remains off due to leakin	g line that needs	further in	vestigation.				
		d to 100% oxygen saturatio alibrated with 100 ppm iso			••	ne prior to o	calibration ar	nd unit was reading 97 ppm. Z	eroed unit with fresh air and
Electric M	eter # 96-934-	-323 tied into Pole #4							
Action Ite	ms:								

### SYSTEM #2

Da Tin Weat Outdoor Te Inside Trailer Perforn	ne: ther: mperature: Temperature:	1 Su ~5 ~6	/2014 1:55 11nny 58° F 55° F e Ryan	- - - -							
	O <sub>2</sub> Gen	erator (Ai	rSep)				Com	pressor (Kaesa	<mark>ar Rotary</mark>	Screw)	
Hours			22,144	-	Compressor	Tank *			105		(psi)
Feed Air Pressu	re *		100	(psi)			(reading	s below are mad	le from co	ntrol panel)	
			(0)		Delivery Ai				110		(psi)
Cycle Pressure	*		60	(psi)	Element Ou	tlet Temper	rature		176		(°F)
Oxygen Receive	er Pressure *			90 (psi)	Running Ho Loading Ho				22,513 21,906		(hours) (hours)
Oxygen Purity * maximum reading	g during loading c	ycle	95.9	_(percent)	* maximum re	ading during 1 n System #2		e			
	Injection Ba	nk A			Injection Ba				In	jection Bank	С
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	30	30	OW-2-9S	75'	25	21	OW-2-10D	97.2'	30	26
OW-2-3	94.3'	30	29	OW-2-10S	75'	20	19	OW-2-11D	100.8'	30	32
OW-2-4	94.7'	30	30	OW-2-11S	76.5'	20	19	OW-2-12	94'	30	19
OW-2-5	95.3'	35	30	OW-2-13S	75'	20	18	OW-2-13D	97'	30	33
OW-2-6	95.7'	35	29	OW-2-158	75'	30	19	OW-2-14	96.4'	30	28
OW-2-7	96'	30	29	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	28
OW-2-8	96.3'	30	29	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	27
OW-2-9D	96.7'	30	29	OW-2-20S	79'	30	22	OW-2-17	95'	30	28
Comments:	All injection point	flows were a	diusted to the t	arget flow rate of ~	30 scfh provide	ed that the pre	ssure readin	g was no graatar th	on the proc	wrae provided	in the hydrostatic tables

#### SYSTEM #2

OW-2-18D       95.5'       40       29       OW-2-22S       76'       30       19       OW-2-26D       95'       30       33         OW-2-19       96.1'       45       31       OW-2-24S       77.8'       25       19       OW-2-27       93.5'       25       25       30       33         OW-2-20D       96.6'       40       30       OW-2-26S       74'       30       19       OW-2-28D       92.1'       30       25       30         OW-2-21       96.6'       40       30       OW-2-26S       74'       30       19       OW-2-28D       92.1'       30       25       30         OW-2-21       96.6'       35       27       OW-2-28S       76'       35       21       OW-2-29       92.2'       25       25       27         OW-2-21       96.6'       35       27       OW-2-28S       76'       35       21       OW-2-29       92.2'       25       25       27         OW-2-21       96.3'       30       26       OW-2-30S       67.8'       30       28       OW-2-31       86'       30       22         OW-2-23       97.2'       30       30       29 <t< th=""><th><b>fh</b> 0</th></t<>	<b>fh</b> 0	
Injection Bark D         Injection Bark F	0	
OW-2-18D       95.5'       40       29       OW-2-22S       76'       30       19       OW-2-26D       95'       30       33         OW-2-19       96.1'       45       31       OW-2-24S       77.8'       25       19       OW-2-27       93.5'       25       33         OW-2-10       96.6'       40       30       OW-2-26S       74'       30       19       OW-2-28D       92.1'       30       25       25       25         OW-2-210       96.6'       35       27       OW-2-28S       76'       35       21       OW-2-29       92.2'       25       25       22'         OW-2-21       96.6'       35       27       OW-2-28S       67.8'       30       28       OW-2-30D       88'       30       22'       25       25'       22'         OW-2-23       97.2'       30       30       0W-2-35       66.9.2'       30       19       OW-2-31       86'       30       23'         OW-2-25       96'       35       29       OW-2-35       66.2'       30       20       OW-2-33       82'       30       3'         OW-2-25       96'       35       29       OW-2-36	0	
(1) $(1)$ </td <td>n</td>	n	
$$ $$ $$ $$ $$	0	
(1) $(1)$ <t< td=""><td>8</td></t<>	8	
$\alpha$	7	
OW-2-24D97'3029OW-2-3569.2'3021OW-2-3284'3033OW-2-2596'3529OW-2-36 $64.8'$ 3020OW-2-33 $82'$ 303033Ownents:All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater the pressure sprovided in the hydrosite the hydrosit	4	
OW-2-2596'3529OW-2-3664.8'3020OW-2-3382'3033Ownends: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 hydrosta prepared by URS Corporation after collecting readings. Injection banks D & E are turned off. $30$ $20$ $OW-2-33$ $82'$ $30$ $30$ $30$ OW-2-35All 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 hydrosta prepared by URS Corporation after collecting readings. Injection banks D & E are turned off. <b>OW-2-37OW-2-36</b> <th colspa<="" td=""><td>8</td></th>	<td>8</td>	8
Image: Comments:       All injection point flows were adjusted to the target flow rate of ~30 sch provided that the pressure reading was no greater than the pressures provided in the hydrosta prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.         Comments:       All injection point flows were adjusted to the target flow rate of ~30 sch provided that the pressure reading was no greater than the pressures provided in the hydrosta prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.         Description Bank G       Imjection Bank H       Monitoring Points Log         Image: Image	5	
omments:       prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.       Output: Option System #2       Injection Bank G       Injection Bank G       Injection Bank G       Injection Bank B       Depth     scfh     psi     ID     Depth     scfh     psi     ID       0W-2-37     62.8'     30     19     OW-2-45     61.1'     30     19     MP-2-1     30.19     24.14	6	
ID         Depth         sch         psi         ID         Depth         sch         psi         ID         DIW         Bottom           OW-2-37         62.8'         30         19         OW-2-45         61.1'         30         19         MP-2-1         30.19         24.14		
	PID (pj	
OW-2-38         62.1'         35         20         OW-2-46         61'         30         18         MP-2-2         31.56         37.98	0	
	0	
OW-2-39 60' 35 19 OW-2-47 60.5' 30 18 MP-2-3S 31.37 38.18	0	
OW-2-40 61.7' 35 21 MP-2-3D 31.51 44.50	0	
OW-2-41 61.7' 30 20 MP-2-4 20.05 21.25	0	
OW-2-42         61.6'         30         19         MP-2-5         18.20         17.70	0	
OW-2-43 61.4' 30 20		
OW-2-44R 60.6' 30 21		

#### SYSTEM #2

		Date:	4/3/2014
	OPERATIONAL NOTES		
GA5 Air Compressor	JPERATIONAL NOTES		
<ol> <li>Oil Level Checked with system unloaded*</li> <li>* Unload system, wait until Delivery Air Pressure is les</li> <li>Oil Level with system unloaded</li> </ol>		Yes X No	
Low (red) X	Normal (green)	High (orange)	
3) Oil added Yes		No	
4) Oil changed Yes 5) Oil filter changed Yes		No X No X	
6) Air filter Changed Yes	s	No X	
7) Oil separator cleaned Yes	3 X	No X	
8) Terminal strips checked Yes	X	No	
AS-80 O <sub>2</sub> Generator			
	3	No X	
2) Coalescing changed Yes		No X	
GE	NERAL SYSTEM NOTES		
Trailer           1) Performed general housekeeping (i.e. sweep, collect tra           Yes	sh inside and out, etc.) $X = X$	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, transported off-site, oil/filter/gasket and/or any other abnormal o			
Added small amount of oil to the compressor. Adjusted belt tension or Wiped down all equipment and cleaned up all garbage from around fer			separator unit for disposal.
The threads on the bolt holes of all of the monitoring point manholes ca	an no longer be serviced and no	eed to be replaced.	
DO Meter was calibrated to 100% oxygen saturation. PID was checked fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutyle	11 / 1	rior to calibration and unit was re	ading 97 ppm. Zeroed unit with
Electric Meter # 96-929-544 tied into Pole #3			
Action Items:			

### SYSTEM #2

Da Tin Weat Outdoor Te Inside Trailer Perform	ne: ther: mperature: Temperature:	14 R ~4 ~6	8/2014 4:45 2ain 47° F 60° F e Ryan	-							
	O <sub>2</sub> Gen	erator (Ai	rSep)				Com	pressor (Kaesa	<mark>ar Rotary</mark>	Screw)	
Hours			22,266	-	Compressor	Tank *			120		(psi)
Feed Air Pressu	re *		70	(psi)			(reading	s below are mad	le from co	ntrol panel)	
	÷		(0)		Delivery Ai				115		(psi)
Cycle Pressure	*		60	(psi)	Element Ou	tlet Temper	rature		149		(°F)
Oxygen Receive	er Pressure *			115 (psi)	Running Ho Loading Ho				22,649 22,029		(hours) (hours)
Oxygen Purity * maximum reading	g during loading c	ycle	97.9	(percent)	O <sub>2</sub> Injection			e			
	Injection Ba				Injection Ba					jection Bank	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh
OW-2-2	90.2'	40	29	OW-2-9S	75'	30	21	OW-2-10D	97.2'	30	26
OW-2-3	94.3'	45	30	OW-2-10S	75'	30	19	OW-2-11D	100.8'	20	32
OW-2-4	94.7'	30	30	OW-2-11S	76.5'	30	19	OW-2-12	94'	25	19
OW-2-5	95.3'	30	30	OW-2-13S	75'	30	18	OW-2-13D	97'	20	34
OW-2-6	95.7'	30	28	OW-2-158	75'	35	19	OW-2-14	96.4'	20	28
OW-2-7	96'	35	29	OW-2-16S	75.5'	35	19	OW-2-15D	94.6'	30	28
OW-2-8	96.3'	35	29	OW-2-18S	74.5'	30	18	OW-2-16D	94.1'	30	27
OW-2-9D	96.7'	45	30	OW-2-20S	79'	40	21	OW-2-17	95'	30	28
comments:	All injection point	flows were a	djusted to the t	arget flow rate of ~	30 scfh provide	d that the pre	essure readir	ng was no greater th	an the press	sures provided	in the hydrostatic tables

#### SYSTEM #2

								Date:	-	4/18	8/2014	
					O <sub>2</sub> Injection	n System #	2					
	Injection Ba	ank D			Injection Ba	nk E			In	ijection Bank	F	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	S	:fh
OW-2-18D	95.5'	30	28	OW-2-22S	76'	20	19	OW-2-26D	95'	30	3	30
OW-2-19	96.1'	40	29	OW-2-24S	77.8'	15	28	OW-2-27	93.5'	40	3	30
OW-2-20D	96.6'	45	30	OW-2-26S	74'	20	19	OW-2-28D	92.1'	50	2	27
OW-2-21	96.6'	60	26	OW-2-28S	76'	25	20	OW-2-29	92.2'	35	2	27
OW-2-22D	96.3'	60	26	OW-2-30S	67.8'	35	26	OW-2-30D	88'	30	2	25
OW-2-23	97.2'	35	30	OW-2-34	71'	30	18	OW-2-31	86'	30	2	28
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	21	OW-2-32	84'	30	3	35
OW-2-25	96'	30	29	OW-2-36	64.8'	30	20	OW-2-33	82'	30	3	36
	Injection Ba	ank G			O <sub>2</sub> Injection Injection Ba		2		Mon	itoring Points	Log	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (1 Bot	ng/L) tom	PID (ppm)
OW-2-37	62.8'	25	19	OW-2-45	61.1'	30	19	MP-2-1	29.87		.35	0.1
OW-2-38	62.1'	25	20	OW-2-46	61'	30	18	MP-2-2	31.21	35	.48	0.4
OW-2-39	60'	35	19	OW-2-47	60.5'	30	18	MP-2-3S	31.08	48	.42	0.2
OW-2-40	61.7'	30	21					MP-2-3D	31.18	49	.83	0
OW-2-41	61.7'	30	20					MP-2-4	19.79	21	.94	0.3
OW-2-42	61.6'	30	20					MP-2-5	17.97	20	.44	0
OW-2-43	61.4'	30	20									
OW-2-44R	60.6'	30	21									
Comments:	All injection poin prepared by URS			arget flow rate of ~ eadings.	30 scfh provide	ed that the pre	essure readin	ig was no greater th	nan the pres	sures provided	in the hydrosta	atic tables

#### SYSTEM #2

		Date:	4/18/2014
	OPERATIONAL NO	<u>res</u>	
GA5 Air Compressor 1) Oil Level Checked with system unloaded*		Yes X No	
* Unload system, wait until Delivery Air Pressu	ure is less than 9 nsi		0
2) Oil Level with system unloaded	lie is iess mail 5 poi		
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 X	No <u>X</u>	
8) Terminal strips checked	Yes X	No	_
AS-80 O <sub>2</sub> Generator			
1) Prefilter changed	Yes	No X	
2) Coalescing changed	Yes	No X	—
2) couldoing charges	100		
	GENERAL SYSTEM N	OTES	
Trailer			
1) Performed general housekeeping (i.e. sweep, co	ollect trash inside and out_etc.)		
1) Ferformed general nousekeeping (net sweep, es	Yes X	No	
	100 11		-
2) Abnormal conditions observed (e.g. vandalism)	)		
3) Other major activities completed			
4) Supplies needed			
5) Visitors			
<i>5)</i> VISIOIS			
Record routine activities such as any alarm/shutdowns, sa	mnling, maintenance, materi	al	
transported off-site, oil/filter/gasket and/or any other abno		ai	
transported on site, on meet, gaster and or any entre sites	man operating containe		
		11 C 1 C C1(	
Adjust pressure rate of all auto drain valves. Adjusted belt tens amount of oil and water from separator unit for disposal. Wipe			
amount of on and water from separator unit for disposal. wipe	a down an equipment and erea	ned up an garbage nom around renk	ce areas.
The threads on the bolt holes of all of the monitoring point man	holes can no longer be serviced	1 and need to be replaced.	
DO Meter was calibrated to 100% oxygen saturation. PID was	s checked with 100 ppm isobut	vlene prior to calibration and unit w	vas reading 97 ppm. Zeroed unit with
fresh air and was reading 0.0 ppm. Calibrated with 100 ppm is			
Electric Meter # 96-929-544 tied into Pole #3			
Action Items:			

### SYSTEM #2

Da Tin Wea Outdoor Te Inside Trailer Perforn	ne: ther: mperature: Temperature:	11 Su ~7 ~6	/2014 2:40 anny 72° F 60° F e Ryan	-									
	O <sub>2</sub> Ger	<mark>ierator (Ai</mark>	rSep)		Compressor (Kaesar Rotary Screw)								
Hours			22,395	-	Compressor Tank * 95 (psi)								
Feed Air Pressu	re *		70	(psi)			(reading	s below are mad	de from co	ntrol panel)			
a			~~~~		Delivery Ai				97		(psi)		
Cycle Pressure	*		60	(psi)	Element Ou	tlet Temper	rature		172		(°F)		
Oxygen Receiv	er Pressure *		105 (psi)	Running Ho Loading Ho				22,786 22,156		(hours) (hours)			
Oxygen Purity	g during loading c	ycle	97.8	_(percent)	* maximum re	ading during l n System #2		e					
	Injection Ba	ank A			Injection Ba				In	jection Bank (	C		
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh		
OW-2-2	90.2'	30	28	OW-2-9S	75'	30	20	OW-2-10D	97.2'	25	26		
OW-2-3	94.3'	35	29	OW-2-10S	75'	30	19	OW-2-11D	100.8'	25	33		
OW-2-4	94.7'	35	30	OW-2-11S	76.5'	35	19	OW-2-12	94'	30	19		
OW-2-5	95.3'	30	29	OW-2-138	75'	45	17	OW-2-13D	97'	35	33		
OW-2-6	95.7'	30	28	OW-2-158	75'	40	18	OW-2-14	96.4'	30	27		
OW-2-7	96'	30	28	OW-2-16S	75.5'	40	18	OW-2-15D	94.6'	30	28		
OW-2-8	96.3'	30	28	OW-2-18S	74.5'	25	18	OW-2-16D	94.1'	25	27		
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	21	OW-2-17	95'	25	28		
011 2 92													

#### SYSTEM #2

								Date:		5/2	/2014	
					O <sub>2</sub> Injection	n System #	2					
	Injection B	ank D			Injection Ba				In	ijection Bank	F	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	S	:fh
OW-2-18D	95.5'	30	28	OW-2-228	76'	25	19	OW-2-26D	95'	40	3	60
OW-2-19	96.1'	40	29	OW-2-24S	77.8'	25	27	OW-2-27	93.5'	40	3	60
OW-2-20D	96.6'	30	29	OW-2-26S	74'	30	19	OW-2-28D	92.1'	40	2	27
OW-2-21	96.6'	30	26	OW-2-28S	76'	30	19	OW-2-29	92.2'	30	2	26
OW-2-22D	96.3'	30	25	OW-2-30S	67.8'	35	25	OW-2-30D	88'	30	2	24
OW-2-23	97.2'	50	30	OW-2-34	71'	35	17	OW-2-31	86'	30	2	27
OW-2-24D	97'	45	29	OW-2-35	69.2'	30	19	OW-2-32	84'	30	3	35
OW-2-25	96'	40	29	OW-2-36	64.8'	25	20	OW-2-33	82'	30	36	
	Injection B	ank G			O <sub>2</sub> Injection Injection Ba		4		Mon	itoring Points	Log	
Ю	Depth	scfh	psi	ID	Depth	scfh	psi	Ю	DTW		ng/L) tom	PID (pp
OW-2-37	62.8'	30	19	OW-2-45	61.1'	30	19	MP-2-1	29.34	30	.99	0
OW-2-38	62.1'	30	20	OW-2-46	61'	35	20	MP-2-2	30.70	35	.45	0.2
OW-2-39	60'	35	19	OW-2-47	60.5'	30	19	MP-2-3S	30.46	48	.12	0.1
OW-2-40	61.7'	35	20					MP-2-3D	30.55	49	.88	0
OW-2-41	61.7'	45	20					MP-2-4	19.08	18	.14	0.4
OW-2-42	61.6'	40	21					MP-2-5	17.22	22	.58	0
OW-2-43	61.4'	50	20									
OW-2-44R	60.6'	50	21									
Comments:		nt flows were a	djusted to the ta	-	30 scfh provide	ed that the pre	essure readin	ig was no greater th	nan the press	sures provided	in the hydrosta	atic tables

#### SYSTEM #2

		Date:	5/2/2014
	OPERATIONAL NOTE	0	
GA5 Air Compressor	OPERATIONAL NOTE	<u> </u>	
1) Oil Level Checked with system unload	ed*	Yes X No	
* Unload system, wait until Delivery A		···· <u>···</u> ···· <u>·</u>	
2) Oil Level with system unloaded	1		
Low (red)	X Normal (green)	High (orange)	
3) Oil added	Yes X	No	
4) Oil changed	Yes Yes	No <u>X</u>	
5) Oil filter changed	Yes	No X	
6) Air filter Changed	Yes	No X No X	
<ul><li>7) Oil separator cleaned</li><li>8) Terminal strips checked</li></ul>	Yes Yes X	No <u>X</u> No	
<u>AS-80 O<sub>2</sub> Generator</u>	N/	NT V	
1) Prefilter changed	Yes Yes	No X No X	
2) Coalescing changed	f es	No <u>X</u>	
	GENERAL SYSTEM NOT	TES	
Trailer			
1) Performed general housekeeping (i.e. sv	weep, collect trash inside and out, etc.)		
	Yes X	No	
2) Abnormal conditions observed (e.g. van	ıdalism)		
2) Other major activities completed			
3) Other major activities completed			
4) Supplies needed			
5) Visitors			
Record routine activities such as any alarm/shutdo	wns, sampling, maintenance, material		
transported off-site, oil/filter/gasket and/or any oth	er abnormal operating conditions:		
Added small amount of oil to the compressor. Repaint			
disposal. Rescecured exhaust vents to compressor that	had worked loose due to normal vibration	s. Wiped down all equipment and cl	eaned up all garbage from
around fence areas.			
The threads on the bolt holes of all of the monitoring po	oint manholes can no longer be serviced a	nd need to be replaced.	
DO Meter was calibrated to 100% oxygen saturation.	· · · ·		ading 99 ppm. Zeroed unit with
fresh air and was reading 0.0 ppm. Calibrated with 10	ppin isobutyiene and reading was 100 p	1111.	
Electric Meter # 96-929-544 tied into Pole #3			
Action Items:			

### SYSTEM #2

Da Tin Weat Outdoor Te Inside Trailer Perforn	ne: ther: mperature: Temperature:	11 R ~6 ~6	5/2014 2:40 2:40 60° F 55° F e Ryan	- - - -									
	O <sub>2</sub> Gen	<mark>erator (Ai</mark>	rSep)		Compressor (Kaesar Rotary Screw)								
Hours			22,549	-	Compressor Tank * 90 (psi)								
Feed Air Pressu	re *		70	(psi)			(reading	s below are mad	le from co	ntrol panel)			
				- 	Delivery Ai				98		(psi)		
Cycle Pressure	*		60	(psi)	Element Ou	tlet Temper	rature		169		(°F)		
Oxygen Receive	er Pressure *		105 (psi)	Running Ho Loading Ho				22,946 22,310		(hours) (hours)			
Oxygen Purity * maximum reading	g during loading c	ycle	78.5	(percent)	* maximum re O <sub>2</sub> Injection	ading during l n System #2		e					
	Injection Ba	ink A			Injection Ba	ink B			In	jection Bank (	C		
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh		
OW-2-2	90.2'	35	28	OW-2-9S	75'	30	20	OW-2-10D	97.2'	35	25		
OW-2-3	94.3'	40	28	OW-2-10S	75'	30	19	OW-2-11D	100.8'	25	32		
OW-2-4	94.7'	30	30	OW-2-11S	76.5'	40	19	OW-2-12	94'	35	19		
OW-2-5	95.3'	30	30	OW-2-13S	75'	40	18	OW-2-13D	97'	30	33		
OW-2-6	95.7'	40	28	OW-2-158	75'	45	17	OW-2-14	96.4'	30	27		
OW-2-7	96'	30	28	OW-2-16S	75.5'	40	18	OW-2-15D	94.6'	30	27		
OW-2-8	96.3'	35	29	OW-2-18S	74.5'	30	18	OW-2-16D	94.1'	40	27		
OW-2-9D	96.7'	40	30	OW-2-20S	79'	30	20	OW-2-17	95'	30	28		

#### SYSTEM #2

								Date:		5/15	5/2014	
					O <sub>2</sub> Injection	<mark>n System</mark> #2	2					
	Injection B	ank D			Injection Ba				In	jection Bank	F	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	S	:fh
OW-2-18D	95.5'	30	28	OW-2-228	76'	25	19	OW-2-26D	95'	30	2	29
OW-2-19	96.1'	40	28	OW-2-24S	77.8'	20	26	OW-2-27	93.5'	30	3	30
OW-2-20D	96.6'	30	29	OW-2-26S	74'	20	18	OW-2-28D	92.1'	30	2	27
OW-2-21	96.6'	45	27	OW-2-28S	76'	30	19	OW-2-29	92.2'	30	2	27
OW-2-22D	96.3'	45	25	OW-2-30S	67.8'	30	25	OW-2-30D	88'	30	2	25
OW-2-23	97.2'	30	30	OW-2-34	71'	30	17	OW-2-31	86'	30	2	26
OW-2-24D	97'	30	29	OW-2-35	69.2'	30	19	OW-2-32	84'	30	3	35
OW-2-25	96'	30	28	OW-2-36	64.8'	40	20	OW-2-33	82'	30	36	
	Injection B	ank G			O2 Injection Injection Ba		2		Mon	itoring Points	Log	
Ю	Depth	scfh	psi	Ю	Depth	scfh	psi	Ю	DTW		mg/L) tom	PID (ppi
OW-2-37	62.8'	30	19	OW-2-45	61.1'	35	19	MP-2-1	28.63	25	.11	0.9
OW-2-38	62.1'	35	20	OW-2-46	61'	30	21	MP-2-2	30.00	32	.13	0
OW-2-39	60'	35	19	OW-2-47	60.5'	30	19	MP-2-3S	29.91	30	.44	0
OW-2-40	61.7'	30	19					MP-2-3D	29.63	27	.11	0
OW-2-41	61.7'	30	20					MP-2-4	18.61	23	.35	0
OW-2-42	61.6'	30	20					MP-2-5	16.80	17	.88	2.9
OW-2-43	61.4'	30	20									
OW-2-43	61.4'	30	20									

#### SYSTEM #2

	Date: 5/15/2014
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 <u>X</u>
5) Oil filter changed Yes	No X
6) Air filter Changed Yes	No X
7) Oil separator cleaned     Yes       8) Terminal strips checked     Yes	No X
8) Terminal strips checked Yes X	No
AS-80 O <sub>2</sub> Generator	
1) Prefilter changed Yes	No X
2) Coalescing changed Yes	No X
GENERAL SYSTEM NOTE	28
<u>Trailer</u>	
1) Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)	
Yes X	No
2) Abnormal conditions abcomind (a grandelism)	
2) Abnormal conditions observed (e.g. vandalism)	
3) Other major activities completed	
.,	
4) Supplies needed	
5) Visitors	
5) VISIOIS	
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. Found oxygen level low. Took part solenoid valves	s and cleaned heavy dirt build up. Replaced water bowl auto float.
Soaked up small amount of oil and water from separator unit for disposal. Wiped down all equipm	
The threads on the bolt holes of all of the monitoring point manholes can no longer be serviced and	i need to be replaced.
DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 ppm isobutylene	e prior to calibration and unit was reading 97 ppm. Zeroed unit wi
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:	

### SYSTEM #2

Da Tin Wea Outdoor Te Inside Trailer Perforn	ne: ther: mperature: Temperature:	12 Su ~7 ~7	0/2014 2:30 11nny 78° F 0° F e Ryan	- - - -									
	O <sub>2</sub> Gen	erator (Ai	rSep)		Compressor (Kaesar Rotary Screw)								
Hours			22,683	_	Compressor Tank * (psi)								
Feed Air Pressu	re *		110	(psi)			(reading	s below are mad	le from co	ntrol panel)			
					Delivery Ai				109		(psi)		
Cycle Pressure	*		60	(psi)	Element Ou	tlet Temper	rature		160		(°F)		
Oxygen Receiv	er Pressure *		120 (psi)	Running Ho Loading Ho				23,089 22,446		(hours) (hours)			
Oxygen Purity * maximum readin	g during loading c	ycle	90.1	_(percent)	* maximum re	ading during l		e					
	Injection Ba	nk A			Injection Ba				In	jection Bank (	C		
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh		
OW-2-2	90.2'	30	33	OW-2-9S	75'	30	20	OW-2-10D	97.2'	30	28		
OW-2-3	94.3'	25	287	OW-2-108	75'	30	20	OW-2-11D	100.8'	25	31		
OW-2-4	94.7'	30	30	OW-2-118	76.5'	30	21	OW-2-12	94'	35	19		
OW-2-5	95.3'	30	30	OW-2-138	75'	30	19	OW-2-13D	97'	30	28		
OW-2-6	95.7'	30	29	OW-2-15S	75'	30	18	OW-2-14	96.4'	30	28		
OW-2-7	96'	35	29	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	30		
OW-2-8	96.3'	35	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	28		
OW-2-9D	96.7'	30	30	OW-2-20S	79'	30	22	OW-2-17	95'	30	29		
Comments:	All injection point	flows were a	djusted to the t	arget flow rate of ~	-30 scfh provide	ed that the pre	essure readin	ng was no greater th	an the press	sures provided	in the hydrostatic tables		

#### SYSTEM #2

ID												
					O <sub>2</sub> Injection	1 System #2	2					
	Injection Ba	ank D			Injection Ba				In	jection Bank	F	
ow	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	25	33	OW-2-228	76'	30	20	OW-2-26D	95'	35	3	2
OW-2-19	96.1'	25	30	OW-2-24S	77.8'	30	28	OW-2-27	93.5'	30	2	.9
OW-2-20D	96.6'	30	30	OW-2-26S	74'	35	19	OW-2-28D	92.1'	30	2	.9
OW-2-21	96.6'	35	29	OW-2-28S	76'	30	21	OW-2-29	92.2'	35	2	8
OW-2-22D	96.3'	30	28	OW-2-30S	67.8'	30	23	OW-2-30D	88'	30	2	.7
OW-2-23	97.2'	30	30	OW-2-34	71'	35	20	OW-2-31	86'	30	2	7
OW-2-24D	97'	30	30	OW-2-35	69.2'	40	21	OW-2-32	84'	30	3	4
OW-2-25	96'	30	28	OW-2-36	64.8'	30	19	OW-2-33	82'	40	36	
						re turned off.	,					
	Injection Ba	ank G			O <sub>2</sub> Injection Injection Ba	<mark>1 System #</mark> 2	2		Moni	itoring Points	Log	
ID	Injection Ba	ank G scfh	psi	ID	O <sub>2</sub> Injection	<mark>1 System #</mark> 2	2 psi	ID	Moni DTW	DO (I	Log mg/L) tom	PID (pp
<b>ID</b> OW-2-37			<b>psi</b> 20		O <sub>2</sub> Injection Injection Ba	1 System #2 nk H		<b>ID</b> MP-2-1		DO (1 Bot	mg/L)	<b>РІД (рр</b> 2.3
	Depth	scfh		ID	O <sub>2</sub> Injection Injection Ba Depth	1 System #2 nk H scfh	psi		DTW	DO (i Bot 27	mg/L) tom	
OW-2-37	<b>Depth</b> 62.8'	<b>scfh</b> 30	20	<b>ID</b> OW-2-45	O2 Injection Injection Ba Depth 61.1'	n System #/	<b>psi</b> 21	MP-2-1	<b>DTW</b> 28.53	DO (1 Bot 27 35	mg/L) tom .87	2.3
OW-2-37 OW-2-38	Depth           62.8'           62.1'	scfh 30 20	20	D OW-2-45 OW-2-46	O2 Injection Injection Ba Depth 61.1' 61'	nk H scfh 30 30	<b>psi</b> 21 20	MP-2-1 MP-2-2	<b>DTW</b> 28.53 29.90	27 35 44	mg/L) tom .87 .41	2.3
OW-2-37 OW-2-38 OW-2-39	Depth           62.8'           62.1'           60'	scfh           30           20           30	20 20 18	D OW-2-45 OW-2-46	O2 Injection Injection Ba Depth 61.1' 61'	nk H scfh 30 30	<b>psi</b> 21 20	MP-2-1 MP-2-2 MP-2-38	DTW           28.53           29.90           29.79	27 35 44	mg/L) tom .87 .41 .12	2.3 0 0
OW-2-37 OW-2-38 OW-2-39 OW-2-40	Depth           62.8'           62.1'           60'           61.7'	scfh           30           20           30           30           30	20 20 18 20	D OW-2-45 OW-2-46	O2 Injection Injection Ba Depth 61.1' 61'	nk H scfh 30 30	<b>psi</b> 21 20	MP-2-1 MP-2-2 MP-2-3S MP-2-3D	DTW           28.53           29.90           29.79           29.58	27 35 44 23	mg/L) tom .87 .41 .12 .17	2.3 0 0
OW-2-37       OW-2-38       OW-2-39       OW-2-40       OW-2-41	Depth           62.8'           62.1'           60'           61.7'           61.7'	scfh           30           20           30           30           40	20 20 18 20 20	D OW-2-45 OW-2-46	O2 Injection Injection Ba Depth 61.1' 61'	nk H scfh 30 30	<b>psi</b> 21 20	MP-2-1 MP-2-2 MP-2-38 MP-2-3D MP-2-4	DTW           28.53           29.90           29.79           29.58           18.50	27 35 44 23	mg/L) tom .87 .41 .12 .17 .77	2.3 0 0 0 0

#### SYSTEM #2

	Date: 5/29/2014
OPERAT	IONAL NOTES
GA5 Air Compressor	IONAL NOTES
1) Oil Level Checked with system unloaded*	Yes X No
* Unload system, wait until Delivery Air Pressure is less than 9 p	si
2) Oil Level with system unloaded	
Low (red) X Normal (	(green) High (orange)
3) Oil added     Yes     X       4) Oil changed     Yes     Yes       5) Oil filter changed     Yes     Yes	No No
4) Oil changed Yes	No X No X
5) Oil filter changed Yes 6) Air filter Changed Yes	NO X No X
7) Oil separator cleanedYes8) Terminal strips checkedYesX	No
AS-80 O <sub>2</sub> Generator	
	No X
1) Prefilter changed     Yes       2) Coalescing changed     Yes	No X No X
GENERAL *	SYSTEM NOTES
<u>Trailer</u> 1) Derformed concred housekeeping (i.e. gween, collect trach inside o	1
1) Performed general housekeeping (i.e. sweep, collect trash inside a	
Yes X	No
2) Abnormal conditions observed (e.g. vandalism)	
2) Other and the statistic completed	
3) Other major activities completed	
4) Supplies needed	
5) Waitons	
5) Visitors	
Record routine activities such as any alarm/shutdowns, sampling, maintena	ance, material
transported off-site, oil/filter/gasket and/or any other abnormal operating	
The second second second she should all approximate to make our system in	(
Found oxygen level on the rise and checked all equipment to make sure water is a Repaired leaking valve stem on flow meter at injection points 15S. Soaked up sn	
equipment and cleaned up all garbage from around fence areas. Cut down vines	
The threads on the bolt holes of all of the monitoring point manholes can no long	er be serviced and need to be replaced.
DO Meter was calibrated to 100% oxygen saturation. PID was checked with 100 fresh air and was reading 0.0 ppm. Calibrated with 100 ppm isobutylene and rea	0 ppm isobutylene prior to calibration and unit was reading 97 ppm. Zeroed unit with ading was 100 ppm.
Electric Meter # 96-929-544 tied into Pole #3	
Action Items:	

#### SYSTEM #2

Da Tii Wea Outdoor Te Inside Trailer Perforn	ne: ther: emperature: Temperature:	1 Si ~7 ~7	0/2014 1:15 1:nny 75° F 70° F e Ryan	- - - - -									
	O <sub>2</sub> Ger	nerator (Ai	rSep)		Compressor (Kaesar Rotary Screw)								
Hours					Compressor	Tank *					(psi)		
Feed Air Pressu	ıre *			(psi)	(readings below are made from control panel)								
Cycle Pressure	*			(psi)	Delivery Air () Element Outlet Temperature								
(psi) Loading Hours									(hours) (hours)				
Oxygen Purity * maximum readin	g during loading o	cycle		(percent)		ading during l		e					
					O <sub>2</sub> Injection		2						
ID	Injection B	ank A scfh	psi	ID	Injection Ba	nk B scfh	psi	ID	In Depth	jection Bank	scfh		
OW-2-2	90.2'	sciii	psi	OW-2-98	75'	sem	psi	OW-2-10D	97.2'	sch	3.111		
OW-2-3	94.3'			OW-2-10S	75'			OW-2-11D	100.8'				
OW-2-4	94.7'			OW-2-11S	76.5'			OW-2-12	94'				
OW-2-5	95.3'			OW-2-13S	75'			OW-2-13D	97'				
OW-2-6	95.7'			OW-2-15S	75'			OW-2-14	96.4'				
OW-2-7	96'			OW-2-16S	75.5'			OW-2-15D	94.6'				
OW-2-8	96.3'			OW-2-18S	74.5'			OW-2-16D	94.1'				
OW-2-9D	96.7'			OW-2-20S	79'			OW-2-17	95'				
Comments:	All injection poir prepared by URS				30 scfh provide	ed that the pre	ssure readin	ig was no greater th	nan the press	ures provided	in the hydrostatic tables		

#### SYSTEM #2

					O <sub>2</sub> Injection	n 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'			OW-2-22S	76'			OW-2-26D	95'			
OW-2-19	96.1'			OW-2-24S	77.8'			OW-2-27	93.5'			
OW-2-20D	96.6'			OW-2-26S	74'			OW-2-28D	92.1'			
OW-2-21	96.6'			OW-2-28S	76'			OW-2-29	92.2'			
OW-2-22D	96.3'			OW-2-30S	67.8'			OW-2-30D	88'			
OW-2-23	97.2'			OW-2-34	71'			OW-2-31	86'			
OW-2-24D	97'			OW-2-35	69.2'			OW-2-32	84'			
				OW A AC	64.8'			OW-2-33	82'			
				eadings. Injection	-30 scfh provide	re turned off.		g was no greater th		sures provided i	n the hydros	static tables
omments:	All injection point	S Corporation a		arget flow rate of ~ eadings. Injection	30 scfh provide banks D & E a	re turned off. n System #			han the press	sures provided i	-	static tables
omments:	All injection poin prepared by URS	S Corporation a		arget flow rate of ~ eadings. Injection	30 scfh provide banks D & E a $O_2$ Injection	re turned off. n System #			han the press		Log ng/L)	static tables
omments:	All injection poi prepared by URS Injection B	S Corporation a	fter collecting r	rget flow rate of ~ eadings. Injection	30 scfh provide banks D & E a O <sub>2</sub> Injection Injection Ba	re turned off. n System # nk H	2	g was no greater th	nan the press Moni	itoring Points	Log ng/L) tom	
omments:	All injection poi prepared by URS Injection B Depth	S Corporation a	fter collecting r	rget flow rate of ~ eadings. Injection	30 scfh provide banks D & E a O <sub>2</sub> Injection Injection Ba Depth	re turned off. n System # nk H	2	g was no greater th	nan the press Moni	itoring Points DO (n Bott	Log ng/L) tom 87	PID (pj
omments: ID OW-2-37	All injection poin prepared by URS Injection B Depth 62.8'	S Corporation a	fter collecting r	rget flow rate of ~ eadings. Injection ID OW-2-45	30 scfh provid banks D & E a O <sub>2</sub> Injection Injection Ba Depth 61.1'	re turned off. n System # nk H	2	g was no greater th ID MP-2-1	Moni DTW 28.75	itoring Points DO (n Bott	Log ng/L) tom 87 14	<b>PID (pp</b> 2.0
OW-2-37 OW-2-38	All injection poi prepared by URS Injection B Depth 62.8' 62.1'	S Corporation a	fter collecting r	riget flow rate of ~ eadings. Injection ID OW-2-45 OW-2-46	30 scfh provide banks D & E a O2 Injection B2 Depth 61.1' 61'	re turned off. n System # nk H	2	ID MP-2-1 MP-2-2	Mon DTW 28.75 30.07	itoring Points DO (n Bott 28. 34.	Log ng/L) tom 87 14 15	PID (pp 2.0
OW-2-37 OW-2-38 OW-2-39	All injection poi prepared by URS Injection B Depth 62.8' 62.1' 60'	S Corporation a	fter collecting r	riget flow rate of ~ eadings. Injection ID OW-2-45 OW-2-46	30 scfh provide banks D & E a O2 Injection B2 Depth 61.1' 61'	re turned off. n System # nk H	2	ID MP-2-1 MP-2-2 MP-2-3S	Mon           DTW           28.75           30.07           29.96	itoring Points DO (n Bott 28. 34. 45.	Log ng/L) tom 87 14 15 11	PID (p)           2.0           0           0
OMMENTS: ID OW-2-37 OW-2-38 OW-2-39 OW-2-40	All injection poi prepared by URS Injection B Depth 62.8' 62.1' 60' 61.7'	S Corporation a	fter collecting r	riget flow rate of ~ eadings. Injection ID OW-2-45 OW-2-46	30 scfh provide banks D & E a O2 Injection B2 Depth 61.1' 61'	re turned off. n System # nk H	2	g was no greater th ID MP-2-1 MP-2-2 MP-2-3S MP-2-3D	Moni 28.75 30.07 29.96 30.10	itoring Points DO (n Bott 28. 34. 45. 41.	Log mg/L) tom 87 14 15 11 18	PID (p)           2.0           0           0           0           0
Omments: D OW-2-37 OW-2-38 OW-2-39 OW-2-40 OW-2-41	All injection poi prepared by URS Injection B Depth 62.8' 62.1' 60' 61.7' 61.7'	S Corporation a	fter collecting r	riget flow rate of ~ eadings. Injection ID OW-2-45 OW-2-46	30 scfh provide banks D & E a O2 Injection B2 Depth 61.1' 61'	re turned off. n System # nk H	2	g was no greater th ID MP-2-1 MP-2-2 MP-2-3S MP-2-3D MP-2-4	Moni 28.75 30.07 29.96 30.10 18.68	itoring Points i DO (n Bott 28. 34. 45. 41. 21.	Log mg/L) tom 87 14 15 11 18	PID (pp           2.0           0           0           0           1.2

#### SYSTEM #2

		Date:	6/20/2014
	OPERATIONAL NO	TES	
GA5 Air Compressor 1) Oil Level Checked with system unloaded*		Yes X No	
* Unload system, wait until Delivery Air Pre	ecure is less than 9 nsi	Yes X No	<u> </u>
2) Oil Level with system unloaded	ssure is less than 2 por		
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 X	No X	
8) Terminal strips checked	Yes X	No	
AS-80 O <sub>2</sub> Generator			
1) Prefilter changed	Yes	No X	
2) Coalescing changed	Yes	No X	
	GENERAL SYSTEM N	OTES	
Trailer			
1) Performed general housekeeping (i.e. sweep,	, collect trash inside and out, etc.)		
-	Yes X	No	
2) Abnormal conditions observed (e.g. vandalis	.m)		
3) Other major activities completed			
4) Supplies needed			
., Supplies neede			
5) Visitors			
Record routine activities such as any alarm/shutdowns,		ial	
transported off-site, oil/filter/gasket and/or any other al	onormal operating conditions:		
Found system off upon arrival. Tried to restart system but sy	ystem would not hold pressure an	d shut down. Investigated each unit to d	etermine problem and found
dryer unit had been frozen and the tubing inside the unit was	s leaking air and will not hold pres	ssure. Found auto drain valve in dryer n	ot working. Tried to repair leaks
but after a discussion with tech support unit is not repairable			
Wiped down all equipment and cleaned up all garbage from	around fence areas. Cut down he	eavy vine and brush growth around fenci	ng.
The three do on the helt heles of all of the monitoring point n		J J agod to be wanted	
The threads on the bolt holes of all of the monitoring point m	lannoies can no longer de service	a and need to be replaced.	
DO Meter was calibrated to 100% oxygen saturation. PID v			eading 97 ppm. Zeroed unit with
fresh air and was reading 0.0 ppm. Calibrated with 100 ppn	n isobutylene and reading was 104	0 ppm.	-
El. (1) Materia # 06 020 544 find into Dolo #2			
Electric Meter # 96-929-544 tied into Pole #3			
Action Items:			