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2016 Annual Groundwater Sampling, NAPL Monitoring/ Recovery, and Groundwater Treatment Performance Report for the Hempstead Intersection Street Former Manufactured Gas Plant Site Villages of Hempstead & Garden City Nassau County, New York



Prepared for: National Grid 175 East Old Country Road Hicksville, New York 11801

Prepared by: **AECOM USA, Inc.** 257 West Genesee Street, Suite 400 Buffalo, New York 14202



April 2017

## 2016 ANNUAL GROUNDWATER SAMPLING, NAPL MONITORING/RECOVERY, AND GROUNDWATER TREATMENT PERFORMANCE REPORT

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

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## ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylenes
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DTW	depth to water
DUSR	data usability summary report
ft	foot (feet)
ft/ft	feet per feet
IPR	Intersection (Street) Product Recovery well
ISS	In Situ Solidification
LNAPL	light non-aqueous phase liquid
LOCID	Location Identifier
MGP	manufactured gas plant
µg/L	micrograms per liter
mg/L	milligrams per liter
MP	monitoring points
NA	not accessible
NAPL	non-aqueous phase liquid
ND	not detected
NM	not measured
NYSDEC	New York State Department of Environmental Conservation
PAHs	polycyclic aromatic hydrocarbons
PID	photo ionization detector
POB	Professional Office Building
ppm	parts per million
PZ	piezometer
QC	quality control
TOR	top of riser
USEPA	United States Environmental Protection Agency
AECOM USA, I	NC.

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## **EXECUTIVE SUMMARY**

This annual report provides a summary of field activities, analytical results, and data interpretations associated with groundwater sampling, gauging, and recovery of non-aqueous phase liquid (NAPL), and with the groundwater treatment systems at the Hempstead Intersection Street Former Manufactured Gas Plant (MGP) site in 2016.

Groundwater monitoring and sampling was conducted on March 7 – 11, June 13 – 20, September 15 – 23, and December 12 – 22, 2016. This included measuring the depth to groundwater and NAPL thickness in 43 to 46 wells. Groundwater samples were collected from 24 wells in the First Quarter, 29 wells in the Second Quarter, 24 wells in the Third Quarter, and 29 wells in the Fourth Quarter and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs).

NAPL monitoring and recovery was conducted during ten events in 2016. For the First Quarter, NAPL monitoring was conducted on January 22 and March 7, for a total of two events. For the Second Quarter, NAPL monitoring was conducted on May 9 and June 13 for a total of two events. For the Third Quarter, NAPL monitoring and recovery was conducted on August 22 and September 23 and monitoring only was conducted on September 15 for a total of three events. For the Fourth Quarter, NAPL monitoring and recovery was conducted on October 26, December 9, and December 12 for a total of three events. NAPL was recovered at the one remaining product recovery well: HIMW-021.

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

- The general direction of groundwater flow during 2016 in shallow, intermediate, and deep water-bearing zones was south at an average gradient of approximately 0.002 feet per feet (ft/ft).
- The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100  $\mu$ g/L, extends approximately 340 feet south of the site boundary in the Third Quarter and approximately 930 feet south of the site boundary in the Fourth Quarter.

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- Dense non-aqueous phase liquid (DNAPL) was detected and recovered from the one remaining product recovery well in 2016. The well (HIMW-021) is located along the west side of Wendell Street, south of the Intersection Street site.
- NAPL monitoring was conducted three times during Third Quarter and three times during Fourth Quarter 2016. No recovery was conducted during the First and Second Quarters. Approximately 2.5 gallons of product was recovered during the Third Quarter and 3.75 gallons were recovered during the Fourth Quarter. A total of 6.25 gallons of NAPL were recovered in 2016. As of December 2016, approximately 847.3 gallons of product have been recovered since product recovery began in April 2007.

The first of two oxygen delivery systems (System No. 2) started operating in October 2010 and continued to promote increased aerobic conditions in the aquifer near the system during the Third and Fourth Quarters of 2016. The second of two oxygen delivery systems (System No. 1) started operating in April 2011 and continued to promote increased aerobic conditions in the aquifer near the system during the Third and Fourth Quarters of 2016.

Monthly headspace and water quality parameters were collected in 2016 from the monitoring points for System No. 1 and No. 2 by Island Pump & Tank Corporation. Both systems were monitored during three events in each of the four quarters of 2016.

## **1.0 INTRODUCTION**

This annual report summarizes field activities, and analytical results associated with groundwater sampling, gauging, and recovery of NAPL, and the monitoring of groundwater treatment systems performed during the First, Second, Third, and Fourth Quarters of 2016 at the Hempstead Intersection Street Former MGP Site (refer to Figures 1, 2, and 3).

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. During 2016, separate reports were issued for the First and Second Quarters. The Third and Fourth Quarter data are included in this Annual report.

AECOM USA, Inc. (AECOM) performed the following activities in 2016:

- Measured the depth to groundwater and NAPL thickness in all accessible on site and off site monitoring wells (March 7, June 13-14, September 15, and December 12-13, 2016). Depth to groundwater was gauged in 45 monitoring wells on March 7, 44 monitoring wells on June 13-14 and September 15, and 46 monitoring wells on December 12-13. NAPL thickness was measured in 45 wells in First and Fourth Quarters and 43 wells in the Second and Third Quarters, see Tables 1A, 2A and 2B.
- Monitored NAPL in HIMW-021 ten times in 2016 (January 22, March 7, May 9, June 13, August 22, September 15, September 23, October 26, December 9, and December 12). Recovered NAPL from HIMW-021 on five of the nine gauging events (August 22, September 23, October 26, December 9, and December 12), after gauging; see Tables 1B and 3.
- Collected groundwater samples from 24 or 29 monitoring wells for laboratory analysis. There were 24 wells sampled on March 7 11; 29 wells sampled on June 14 20; 24 wells sampled on September 16 23; and 29 wells sampled on December 13 22, 2016, see Tables 1A and 4.

Island Pump & Tank Corporation 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 oxygen delivery System No. 1 and No. 2. System No. 1 and No. 2 were monitored during three events in each of the First, Second, Third, and Fourth Quarters in 2016. Monitoring is conducted monthly to assess the performance of groundwater treatment System No. 1 and System No. 2. The data for the Third and Fourth Quarters are presented in Table 5.

## 2.0 FIELD ACTIVITIES

The field activities performed by AECOM during the First Quarter of 2016 included the measurement of the depth to groundwater and NAPL thickness in 45 monitoring wells, the collection of groundwater samples from 24 monitoring wells, and recovery of NAPL from one recovery well.

The field activities performed by AECOM during the Second Quarter of 2016 included the measurement of the depth to groundwater in 44 monitoring wells, measuring NAPL thickness in 43 monitoring wells, the collection of groundwater samples from 29 monitoring wells, and recovery of NAPL from one recovery well.

The field activities performed by AECOM during the Third Quarter of 2016 included the measurement of the depth to groundwater in 44 monitoring wells, measuring NAPL thickness in 43 monitoring wells, the collection of groundwater samples from 24 monitoring wells, and recovery of NAPL from one recovery well.

The field activities performed by AECOM during the Fourth Quarter of 2016 included the measurement of the depth to groundwater in 46 monitoring wells, measuring NAPL thickness in 45 monitoring wells, the collection of groundwater samples from 29 monitoring wells, and recovery of NAPL from one monitoring well.

Monitoring wells and piezometers used for these activities are listed in Table 1A. A summary of NAPL gauging and recovery activities is found in Table 1B. Groundwater elevations and NAPL thickness values for Third Quarter 2016 are presented in Table 2A and for Fourth Quarter 2016 in Table 2B. NAPL levels and recovery amounts for 2016 are presented in Table 3, and the results of groundwater sampling in 2016 are presented in Table 4.

Island Pump & Tank performed measurements to monitor the performance of oxygen delivery Systems No. 1 and No. 2 monthly during 2016. 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 DO meter.

Measurements for the First Quarter were collected at System No. 1 on January 28, February 17, and March 18, a total of three events; and were taken for System No. 2 on January 29, February 19, and March 18, for a total of three events.

Measurements for the Second Quarter were collected at System No. 1 on April 27, May 26, and June 28, a total of three events; and were taken for System No. 2 on April 28, May 26, and June 28, for a total of three events.

Measurements for Third Quarter were collected at System No. 1 on July 29, August 26, and October 3, a total of three events; and were taken for System No. 2 on July 28, August 25, and October 3, for a total of three events.

Measurements for Fourth Quarter 2016 were collected at System No. 1 on October 31, November 30, and December 30, a total of three events; and were taken for System No. 2 on November 1, November 29, and December 29, for a total of three events.

The data from Third and Fourth Quarters 2016 are 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 for Third and Fourth Quarters are listed in Table 2A and 2B, respectively. NAPL thicknesses and recovery amounts for 2016 are listed in Table 3.

There were 44 monitoring wells gauged for water on September 15 during the Third Quarter gauging event and 46 monitoring wells gauged for water on December 12-13 in the Fourth Quarter 2016 gauging event. One monitoring well (HIMW-012I) was successfully gauged for water in the Second through Fourth Quarters, but an obstruction below the water table prevented gauging and sampling below the water table surface inside the well. The obstruction prevented gauging for water during the First Quarter 2016. One monitoring well (HIMW-012D) was not successfully gauged in 2016 because of obstructions inside the well riser. The obstructions in wells 12I and 12D resulted from apparent vandalism as these wells are located in a public area of Mirshell Park. There were two additional monitoring wells that weren't gauged in each of the Second and Third Quarters because access to them was blocked by cars at the time of the gauging events. These monitoring wells include HIMW-009D and OSMW-03 on June 13-14, 2016 and HIMW-011S and OSMW-03 on September 15, 2016.

## 2.2 NAPL Recovery

NAPL recovery occurred between 2007 and the Third Quarter of 2011 when the In Situ Solidification (ISS) remediation project began. Approximately 745 gallons of NAPL were recovered between 2007 and 2011 when NAPL recovery ended upon the start of ISS treatment. All, but one, of the recovery wells were decommissioned as part of the ISS work. NAPL recovery is limited to this 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.

NAPL levels were monitored and product recovered in well HIMW-021 during the Third Quarter during two events, August 22 and September 23, and was monitored only on September 15, 2016. During the Fourth Quarter monitoring and recovery occurred during three gauging and recovery events: October 26, December 9, and December 12, 2016. During these events, the well was gauged with a weighted cotton string to measure the DNAPL thickness. The DNAPL was recovered using a peristaltic pump. 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.

NAPL was gauged during ten events from January to December 2016. NAPL was not recovered in the First and Second Quarters, but was recovered in the Third and Fourth Quarters during five gauging events. The volume of NAPL recovered from HIMW-021 in 2016, during any one gauging event, ranged from approximately 1.0 gallon to 1.5 gallons. Approximately 2.5 gallons of NAPL were recovered during the Third Quarter and approximately 3.75 gallons of NAPL were recovered during the Fourth Quarter, for a total of 6.25 gallons of NAPL recovered in 2016. A total of 847.3 gallons of NAPL have been recovered from all of the Site related recovery wells since product recovery began in April 2007 to December 2016.

Table 3 presents NAPL thicknesses and NAPL recovery amounts at HIMW-021 for 2016.

## 2.3 Groundwater Sampling

Low-flow groundwater sampling methods were used to sample groundwater, which included purging groundwater at a rate of between 100 and 250 milliliters per minute. The water was pumped through a flow-through cell and monitored for pH, conductivity, turbidity, DO, temperature, and oxidation-reduction potential (ORP). Purging was continued until stable conditions were achieved (defined as three consecutive stable readings [i.e.  $\pm$  10 percent] over a 15 minute period). Groundwater samples were collected afterwards and shipped under chain-of-custody procedures to Pace Analytical for analysis of BTEX (United States Environmental Protection Agency [USEPA] Method 8260C) and PAHs (USEPA Method 8270D). Purge water is stored in an onsite storage tank for subsequent offsite disposal. The Data Usability Summary Reports for Third and Fourth Quarters 2016 are presented in Appendix A.

Groundwater sampling was performed during four events in 2016. There were 24 monitoring wells sampled during the First Quarter March 7 – 11 event, 29 monitoring wells sampled during the Second Quarter June 14 – 20 event, 24 monitoring wells sampled during the Third Quarter September 16 – 23 event, and 29 monitoring wells sampled during the Fourth Quarter December 13 – 22 event. Two monitoring wells from the sampling and analysis plan (HIMW-012I and HIMW-012D) were not sampled during these quarterly events because of obstructions inside the wells risers. Analytical results from the quarterly groundwater sampling events are presented in Table 4. Figures 4 and 14 depict the analytical data for the Third Quarter 2016 and Figures 5 and 15 show the analytical data from the Fourth Quarter 2016.

## 2.4 Groundwater Treatment 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 monthly by Island Pump & Tank during 2016 through the measurement of water levels, headspace gas, and water quality parameters in the groundwater, see Table 5. 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 First Quarter for System No. 1 on January 28, February 17, and March 18, a total of three events; and were taken for System No. 2 on January 29, February 19, and March 18, for a total of three events.

The measurements were collected during the Second Quarter for System No. 1 on April 27, May 26, and June 28, a total of three events; and were taken for System No. 2 on April 28, May 26, and June 28, for a total of three events.

The measurements were collected during the Third Quarter for System No. 1 on July 29, August 26, and October 3, a total of three events; and were taken for System No. 2 on July 28, August 25, and October 3, for a total of three events.

The measurements were also collected during the Fourth Quarter for System No. 1 on October 31, November 30, and December 30, a total of three events; and were taken for System No. 2 on November 1, November 29, and December 29, for a total of three events.

The full groundwater treatment system data from Third and Fourth Quarters are included in Appendix B. Groundwater system treatment data for the First Quarter and Second Quarter are provided in the previous quarterly reports (AECOM, 2017a and 2017b, respectively).

## 3.0 **RESULTS**

### 3.1 <u>Dissolved-Phase Plume</u>

The extent of the dissolved-phase groundwater plume boundary and the data for the Third Quarter 2016 are shown in Figure 4 and for the Fourth Quarter 2016 (and the historical concentration ranges) in Figure 5. The downgradient boundary of the plume, which is defined by total BTEX or PAH concentrations greater than 100  $\mu$ g/L, extended approximately 340 feet south of the site boundary in the Third Quarter and approximately 930 feet south of the site boundary in the Fourth Quarter.

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

Potentiometric heads and NAPL thickness measurements for Third Quarter and Fourth Quarter 2016 are presented in Table 2A and 2B, respectively. Potentiometric surface maps for shallow, intermediate and deep groundwater zones were developed using this data and are shown in Figures 6, 7, and 8 for the Third Quarter 2016 and in Figures 9, 10, and 11 for the Fourth Quarter. The data for the Third and Fourth Quarters 2016 indicate that the direction of groundwater flow within the well field was south at an average gradient of approximately 0.002 ft/ft for shallow, intermediate, and deep water bearing zones. These values are consistent with historical data. Potentiometric surface maps for the First Quarter and Second Quarter are provided in the previous quarterly reports (AECOM, 2017a and 2017b, respectively).

DNAPL was observed in one well during 2016 (Table 3). The well (HIMW-021) is located along the west side of Wendell Street south of the Site and Intersection Street. 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 for 2016 are provided in Table 4 as well as in Figures 12 through 15. Third Quarter and Fourth Quarter 2016 estimated dissolved phase plume boundaries are illustrated on Figures 4 and 5, respectively.

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

## 3.4 NAPL Recovery Volumes

HIMW-021 is the one remaining product recovery well associated with the site. It is located south of the site in the sidewalk along the west side of Wendell Street. The volume of NAPL recovered from this well in the Third Quarter 2016 was approximately 2.5 gallons and in the Fourth Quarter 2016 it was 3.75 gallons. Five recovery events occurred in 2016: on August 22, September 23, October 26, December 9 and December 12, 2016.

A total of approximately 847.3 gallons of NAPL have been recovered from all of the recovery wells for the period of April 2007 through December 2016. 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 the Third Quarter and Fourth Quarter 2016, as collected and report by Island Pump & Tank, are presented in Table 5. The data for the First and Second Quarters are found in previous reports (AECOM, 2017a and 2017b, respectively).

#### System No. 1

System No. 1 stopped operating in the Second Quarter due to an equipment breakdown and resumed operation in the Third Quarter after the repair was completed. In the Third Quarter 2016, System No. 1 DO readings ranged from a low of 1.1 milligrams per liter (mg/L) at MP-1-3S on October 3, 2016 to a high of 35.8 mg/L at MP-1-2D on July 29, 2016. The overall average DO reading for System No. 1 in the Third Quarter was 11.3 mg/L.

In the Fourth Quarter 2016, System No. 1 DO readings ranged from a low of 3.9 milligrams per liter (mg/L) at MP-1-8 on November 30, 2016 to a high of 40.4 mg/L at MP-1-2D also on November 30, 2016. The overall average DO reading for System No. 1 in the Fourth Quarter was 15.6 mg/L.

All PID headspace readings were below 1 parts per million (ppm) for System No. 1 in the Third and Fourth Quarter 2016.

During the Third and Fourth Quarters, the system was running and routine maintenance was regularly performed. Based on the data collected during the Third Quarter, decreases in oxygen concentrations were apparent during the October 3 monitoring event due to equipment malfunction. During the Fourth Quarter of 2016 though, System No. 1 was repaired and performed as expected to create an aerobic environment in the aquifer.

#### System No. 2

System No. 2 was down for most of the Second Quarter due to an equipment malfunction in February. Repairs were completed in June and the system restarted.

System No. 2 DO readings reported in the Third Quarter 2016 ranged from a low of 17.4 mg/L at MP-2-2 on July 28, 2016 to a high of 41.5 mg/L at MP-2-3D on October 3, 2016. The overall average DO reading for System No. 2 in the Third Quarter was 30.5 mg/L.

In the Fourth Quarter 2016, reported System No. 2 DO readings ranged from a low of 19.9 mg/L at MP-2-2 on December 29, 2016 to a high of 40.6 mg/L at MP-2-3D on November 1, 2016. The overall average DO reading for System No. 2 in the Fourth Quarter was 29.8 mg/L.

All PID headspace readings were below 1 parts per million (ppm) for System No. 2 in the Third and Fourth Quarter 2016.

During the Third and Fourth Quarters, the system was running and routine maintenance was regularly performed. Based on the data collected during the Third and Fourth Quarters of 2016, System No. 2 performed as expected to create an aerobic environment in the aquifer.

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- URS, 2017b. Groundwater Sampling and Groundwater Treatment Performance Report for the Second Quarter of 2016 (April – June 2016) for the Hempstead Intersection Street Former Manufactured Gas Plant Site. January.

## **TABLES**

## Table 1A

## Summary of 2016 Field Activities:

## Water Level Measurements, NAPL Thickness Measurements, and Water Quality Sampling<sup>(1), (2)</sup>

## Hempstead Intersection Street Former MGP Site

		First Quarte	r	Se	econd Quart	er	-	Third Quarte	r	F	ourth Quart	er
Wall ID	(Mar	ch 7 to 11, 2	2016)	(Jun	e 13 to 20, 2	2016)	(Septen	nber 15 to 2	3, 2016)	(Decerr	ber 12 to 22	2, 2016)
Weirid	Water	NAPL	Water	Water	NAPL	Water	Water	NAPL	Water	Water	NAPL	Water
	Level	Thickness	Quality	Level	Thickness	Quality	Level	Thickness	Quality	Level	Thickness	Quality
HIMW-003S	Х	Х		Х	Х	Х	Х	Х		Х	Х	Х
HIMW-003I	Х	Х		Х	Х	Х	Х	Х		Х	Х	Х
HIMW-003D	Х	Х		Х	Х	Х	Х	Х		Х	Х	Х
HIMW-004S	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-004I	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-004D	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-005S	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-005I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-005D	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-008S	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-008I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-008D	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-009S	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-009I	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-009D	Х	Х					Х	Х		Х	Х	
HIMW-010S	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-010I	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-011S	Х	Х		Х	Х					Х	Х	
HIMW-011I	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-011D	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-012S	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-012I				Х			Х			Х		
HIMW-012D												
HIMW-013S	Х	Х		Х	Х	Х	Х	Х		Х	Х	Х
HIMW-013I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-013D	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-014I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-014D	Х	Х		Х	Х	Х	Х	Х		Х	Х	Х
HIMW-015I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-015D	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

## Table 1A

## Summary of 2016 Field Activities:

## Water Level Measurements, NAPL Thickness Measurements, and Water Quality Sampling<sup>(1), (2)</sup>

## Hempstead Intersection Street Former MGP Site

	ŀ	First Quarte	r	Se	econd Quart	er	7	Third Quarte	r	F	ourth Quart	er
Well ID	(Mar	ch 7 to 11, 2	2016)	(June	e 13 to 20, 2	2016)	(Septen	nber 15 to 2	3, 2016)	(Decem	ber 12 to 2	2, 2016)
Won ib	Water	NAPL	Water	Water	NAPL	Water	Water	NAPL	Water	Water	NAPL	Water
	Level	Thickness	Quality	Level	Thickness	Quality	Level	Thickness	Quality	Level	Thickness	Quality
HIMW-020S	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-020I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-021	Х	Х		Х	Х		Х	Х		Х	Х	
HIMW-022	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-023	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-024	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-025	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-026I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-026D	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-027S	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-027I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-028S	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
HIMW-028I	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
PZ-02	Х	Х		Х	Х		Х	Х		Х	Х	
PZ-03	Х	Х		Х	Х		Х	Х		Х	Х	
OSMW-02	Х	Х		Х	Х		Х	Х		Х	Х	
OSMW-03	Х	Х								Х	Х	

Notes:

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

2 Blank field indicates that the activity was not performed.

## Table 1B

## Summary of 2016 Field Activities: NAPL Gauging and Product Recovery<sup>(1), (2)</sup>

## Hempstead Intersection Street Former MGP Site

## Well ID: HIMW-021

Quarter	Date	Product Gauged	Product Recovered
First Quarter 2016	1/22/2016	х	
Filst Quarter 2010	3/7/2016	х	
Second Quarter 2016	5/9/16	Х	
	6/13/16	х	
Third Quarter 2016	8/22/2016	х	Х
	9/23/2016	Х	Х
	10/26/2016	х	Х
Fourth Quarter 2016	12/9/2016	Х	Х
	12/12/2016	Х	Х

<u>Notes</u>: 1

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

2

Blank field indicates that the activity was not performed.

# Table 2AGroundwater and NAPL MeasurementsThird Quarter 2016Hempstead 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	9/15/2016	65.00	ND	22.22	ND	34.44	0	0.00	42.78
HIMW-003I	9/15/2016	64.94	ND	22.68	ND	85.29	0	0.00	42.26
HIMW-003D	9/15/2016	65.26	ND	23.49	ND	143.60	0	0.00	41.77
HIMW-004S	9/15/2016	72.74	ND	30.76	ND	41.69	0	0.00	41.98
HIMW-004I	9/15/2016	72.78	ND	30.98	ND	90.52	0	0.00	41.80
HIMW-004D	9/15/2016	72.65	ND	31.92	ND	177.15	0	0.00	40.73
HIMW-005S	9/15/2016	67.19	ND	24.97	ND	38.93	0	0.00	42.22
HIMW-005I	9/15/2016	67.22	ND	25.22	ND	90.57	0	0.00	42.00
HIMW-005D	9/15/2016	67.22	ND	26.01	ND	137.35	0	0.00	41.21
HIMW-008S	9/15/2016	65.04	ND	23.04	ND	36.96	0	0.00	42.00
HIMW-008I	9/15/2016	65.14	ND	23.32	ND	75.75	0	0.00	41.82
HIMW-008D	9/15/2016	64.93	ND	23.19	ND	114.61	0	0.00	41.74
HIMW-009S	9/15/2016	70.03	ND	27.65	ND	39.69	0	0.00	42.38
HIMW-009I	9/15/2016	69.93	ND	27.63	ND	80.48	0	0.00	42.30
HIMW-009D	9/15/2016	69.96	ND	27.76	ND	122.97	0	0.00	42.20
HIMW-010S	9/15/2016	71.60	ND	28.39	ND	39.48	0	0.00	43.21
HIMW-010I	9/15/2016	71.47	ND	28.13	ND	89.73	0	0.00	43.34
HIMW-011S	9/15/2016	71.62	NM	NM	NM	40.22	NM	NM	NM
HIMW-011I	9/15/2016	71.43	ND	28.59	ND	93.38	0	0.00	42.84
HIMW-011D	9/15/2016	71.39	ND	28.61	ND	122.28	0	0.00	42.78
HIMW-012S	9/15/2016	61.58	ND	20.79	ND	33.11	0	0.00	40.79
HIMW-012I	9/15/2016	61.59	ND	20.71	ND	NM	0	0.00	40.88
HIMW-012D	9/15/2016	61.82	NM	NM	NM	NM	NM	NM	NM
HIMW-013S	9/15/2016	72.83	ND	33.93	ND	48.65	0	0.00	38.90
HIMW-013I	9/15/2016	72.60	ND	33.72	ND	82.24	0	0.00	38.88
HIMW-013D	9/15/2016	72.53	ND	33.63	ND	121.96	0	0.00	38.90
HIMW-014I	9/15/2016	71.71	ND	32.72	ND	95.64	0	0.00	38.99
HIMW-014D	9/15/2016	71.59	ND	35.65	ND	151.89	0	0.00	35.94
HIMW-015I	9/15/2016	64.18	ND	28.01	ND	93.95	0	0.00	36.17
HIMW-015D	9/15/2016	63.96	ND	30.31	ND	152.87	0	0.00	33.65
HIMW-020S	9/15/2016	70.43	ND	29.03	ND	36.77	0	0.00	41.40
HIMW-020I	9/15/2016	70.30	ND	28.98	ND	74.80	0	0.00	41.32

## Table 2AGroundwater and NAPL MeasurementsThird Quarter 2016Hempstead 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-021	9/15/2016	NM	ND	23.49	42.10	45.30	0	3.20	NM
HIMW-022	9/15/2016	74.07	ND	33.82	ND	64.44	0	0.00	40.25
HIMW-023	9/15/2016	74.41	ND	34.01	ND	75.25	0	0.00	40.40
HIMW-024	9/15/2016	59.83	ND	18.61	ND	54.91	0	0.00	41.22
HIMW-025	9/15/2016	62.75	ND	21.00	ND	52.15	0	0.00	41.75
HIMW-26I	9/15/2016	68.13	ND	26.94	ND	84.91	0	0.00	41.19
HIMW-26D	9/15/2016	68.02	ND	27.09	ND	138.80	0	0.00	40.93
HIMW-27S	9/15/2016	69.49	ND	27.98	ND	41.39	0	0.00	41.51
HIMW-27I	9/15/2016	68.96	ND	27.33	ND	70.05	0	0.00	41.63
HIMW-28S	9/15/2016	69.87	ND	28.32	ND	41.52	0	0.00	41.55
HIMW-28I	9/15/2016	69.56	ND	27.93	ND	71.58	0	0.00	41.63
PZ-02	9/15/2016	72.96	ND	29.62	ND	35.53	0	0.00	43.34
PZ-03	9/15/2016	64.58	ND	21.57	ND	29.93	0	0.00	43.01
OSMW-02	9/15/2016	71.59	ND	28.91	ND	45.28	0	0.00	42.68
OSMW-03	9/15/2016	71.39	NM	NM	NM	44.66	NM	NM	NM

## Notes:

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

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- LNAPL light non-aqueous phase liquid
- DNAPL dense non-aqueous phase liquid

ft bgs feet below ground surface

- ft amsl feet above mean sea level
- ND NAPL not detected
- NM not measured

# Table 2BGroundwater and NAPL MeasurementsFourth Quarter 2016Hempstead 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	12/12/2016	65.00	ND	23.03	ND	34.47	0	0.00	41.97
HIMW-003I	12/12/2016	64.94	ND	23.18	ND	85.99	0	0.00	41.76
HIMW-003D	12/12/2016	65.26	ND	23.79	ND	143.65	0	0.00	41.47
HIMW-004S	12/12/2016	72.74	ND	31.36	ND	41.65	0	0.00	41.38
HIMW-004I	12/12/2016	72.78	ND	31.42	ND	90.43	0	0.00	41.36
HIMW-004D	12/12/2016	72.65	ND	31.77	ND	177.05	0	0.00	40.88
HIMW-005S	12/12/2016	67.19	ND	25.67	ND	38.88	0	0.00	41.52
HIMW-005I	12/12/2016	67.22	ND	25.81	ND	90.54	0	0.00	41.41
HIMW-005D	12/12/2016	67.22	ND	26.19	ND	136.02	0	0.00	41.03
HIMW-008S	12/12/2016	65.04	ND	23.83	ND	36.91	0	0.00	41.21
HIMW-008I	12/12/2016	65.14	ND	24.03	ND	74.79	0	0.00	41.11
HIMW-008D	12/12/2016	64.93	ND	23.83	ND	114.54	0	0.00	41.10
HIMW-009S	12/13/2016	70.03	ND	28.38	ND	39.65	0	0.00	41.65
HIMW-009I	12/13/2016	69.93	ND	28.33	ND	80.44	0	0.00	41.60
HIMW-009D	12/13/2016	69.96	ND	28.37	ND	125.17	0	0.00	41.59
HIMW-010S	12/12/2016	71.60	ND	29.03	ND	39.25	0	0.00	42.57
HIMW-010I	12/12/2016	71.47	ND	28.84	ND	89.75	0	0.00	42.63
HIMW-011S	12/12/2016	71.62	ND	29.53	ND	40.21	0.01	0.00	42.10
HIMW-011I	12/12/2016	71.43	ND	29.33	ND	93.28	0	0.00	42.10
HIMW-011D	12/12/2016	71.39	ND	29.30	ND	122.31	0	0.00	42.09
HIMW-012S	12/12/2016	61.58	ND	21.46	ND	33.19	0	0.00	40.12
HIMW-012I	12/12/2016	61.59	ND	21.34	ND	NM	0	0.00	40.25
HIMW-012D	12/12/2016	61.82	NM	NM	NM	NM	NM	NM	NM
HIMW-013S	12/12/2016	72.83	ND	34.55	ND	48.62	0	0.00	38.28
HIMW-013I	12/12/2016	72.60	ND	34.33	ND	81.55	0	0.00	38.27
HIMW-013D	12/12/2016	72.53	ND	34.31	ND	122.04	0	0.00	38.22
HIMW-014I	12/12/2016	71.71	ND	33.39	ND	95.65	0	0.00	38.32
HIMW-014D	12/12/2016	71.59	ND	34.98	ND	151.30	0	0.00	36.61
HIMW-015I	12/12/2016	64.18	ND	28.31	ND	92.53	0	0.00	35.87
HIMW-015D	12/12/2016	63.96	ND	29.53	ND	152.25	0	0.00	34.43
HIMW-020S	12/12/2016	70.43	ND	29.73	ND	36.73	0	0.00	40.70
HIMW-020I	12/12/2016	70.30	ND	29.58	ND	74.84	0	0.00	40.72

## Table 2BGroundwater and NAPL MeasurementsFourth Quarter 2016Hempstead 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-021	12/12/2016	NM	ND	24.09	42.80	45.30	0.01	2.50	NM
HIMW-022	12/12/2016	74.07	ND	34.53	ND	64.35	0	0.00	39.54
HIMW-023	12/12/2016	74.41	ND	34.68	ND	75.22	0	0.00	39.73
HIMW-024	12/12/2016	59.83	ND	19.22	ND	54.91	0	0.00	40.61
HIMW-025	12/12/2016	62.75	ND	21.70	ND	52.14	0	0.00	41.05
HIMW-26I	12/12/2016	68.13	ND	27.81	ND	84.79	0	0.00	40.32
HIMW-26D	12/12/2016	68.02	ND	27.81	ND	137.42	0	0.00	40.21
HIMW-27S	12/12/2016	69.49	ND	28.79	ND	41.28	0.01	0.00	40.71
HIMW-27I	12/13/2016	68.96	ND	28.06	ND	70.65	0	0.00	40.90
HIMW-28S	12/12/2016	69.87	ND	28.97	ND	41.36	0	0.00	40.90
HIMW-28I	12/12/2016	69.56	ND	28.84	ND	71.53	0	0.00	40.72
PZ-02	12/12/2016	72.96	ND	30.30	ND	35.49	0	0.00	42.66
PZ-03	12/12/2016	64.58	ND	22.19	ND	29.76	0	0.00	42.39
OSMW-02	12/12/2016	71.59	ND	29.62	ND	44.76	0	0.00	41.97
OSMW-03	12/12/2016	71.39	NM	29.48	ND	45.12	0	0.00	41.91

### Notes:

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

TOR top of riser

LNAPL light non-aqueous phase liquid

DNAPL dense non-aqueous phase liquid

ft bgs feet below ground surface

ft amsl feet above mean sea level

ND NAPL not detected

NM not measured

# Table 3NAPL Gauging and RecoverySummary of 2016Hempstead Intersection Street Former MGP Site

Well ID: HIMW-021										
Quarter	Date	Thickness of LNAPL (feet)	Thickness of DNAPL (feet)	Volume of NAPL Removed <sup>(1)</sup> <sub>(gallons)</sub>	Total Quarterly Product Volume Recovered (gallons)					
First	January 22, 2016	NC	1.5	0	0.0					
Quarter	March 7, 2016	0.1	2.1	0	0.0					
Second	May 9, 2016	NC	2.6	0	0.0					
Quarter	June 13, 2016	ND	3.4	0	0.0					
	August 22, 2016	NC	4.0	1.5						
Third Quarter	September 15, 2016	ND	3.3	0	2.5					
	September 23, 2016	0.01	3.2	1.0						
Fourth Quarter	October 26, 2016	0.01	2.9	1						
	December 9, 2016	0.01	3.5	1.25	3.75					
	December 12, 2016	0.01	2.5	1.5						

## Total Volume of NAPL Recovered in 2016:

6.25

847.3

## Total Volume of NAPL Recovered from April 2007 to Fourth Quarter 2016:

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
- NC Not Collected

#### Table 4

## **Dissolved-Phase Concentrations of Total BTEX and Total PAH Compounds** Data Collected in 2016 Hempstead Intersection Street Former MGP Site

	First Quarter 2016		Second Q	uarter 2016	Third Qua	arter 2016	Fourth Quarter 2016	
Wall ID	March 7 t	o 11, 2016	June 14 t	o 20, 2016	September 1	6 to 23, 2016	December 1	3 to 22, 2016
weirib	BTEX	PAH	BTEX	PAH	BTEX	PAH	BTEX	PAH
	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]
HIMW-003S			ND	ND			ND	ND
HIMW-003I			ND	ND			ND	ND
HIMW-003D			ND	ND			ND	ND
HIMW-004S								
HIMW-004I								
HIMW-004D								
HIMW-005S	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-005I	62	1,284	64 (DUP=64)	960 (DUP=1,321)	78 (DUP=79)	891 (DUP=1,409)	71 (DUP=71)	1,896 (DUP=1,880)
HIMW-005D	112 (DUP=99)	970 (DUP=1,098)	95	1,018	67	778	56	2,049
HIMW-008S	33	6	12	1	16	1	137	11
HIMW-008I	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-008D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-009S								
HIMW-009I								
HIMW-009D								
HIMW-010S								
HIMW-010I								
HIMW-011S								
HIMW-011I								
HIMW-011D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-012S	ND	ND	ND	ND	ND	ND	ND	ND
HIMVV-012I								
HIMW-012D			ND	ND			ND	ND
HIMW-0135	ND	ND	ND	ND	ND	ND	ND	ND
	ND	ND	ND	19	ND	ND 14	ND	ND 15
	2 6	9	5	10	3	27	3	10
HIMW-014D	0	25		ND	4	21		ND
HIMW-014D	Α	17	2 (DLIP-2)	10 (DUP-10)	1	10	1	8
HIMW-015D		ND	2 (DOP = 2)					0 ND
HIMW-013D	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-0200	2	1	ND	ND	6	ND	ND	ND
HIMW-021	<u> </u>	-	ing.	ing.	Ŭ	nb	ND	THE STATE
HIMW-022	ND	ND	1	ND	ND	ND	ND	ND
HIMW-023	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-024	136	439	ND	1	ND	5	1	125
HIMW-025	ND	ND	ND	ND	4	ND	ND (DUP=ND)	ND (DUP=ND)
HIMW-026I	ND	ND	ND	ND	ND	3	ND	ND
HIMW-026D	42	1,300	24	536	63	398	52	127
HIMW-027S	711	977	1,206	1,752	645	695	447	715
HIMW-027I	ND	ND	ND	ND	ND	ND	ND	ND
HIMW-028S	ND	10	213	738	206	344	79	265
HIMW-028I	ND (DUP=ND)	ND (DUP=ND)	ND	ND	ND	ND	ND	ND
PZ-02								
PZ-03								

Notes:

A blank field is "Not Sampled". NAPL is periodically identified in this well

BTEX Benzene, Toluene, Ethylbenzene, Xylene: Poly Aromatic Hydrocarbons micrograms per liter Not Detected PAH

- ug/L ND
- NA Not Analyzed For

## Table 5 **Groundwater Treatment Performance Monitoring** Third Quarter 2016 Hempstead Intersection Street Former MGP Site

## System #1

	July 29, 2016			Au	gust 26, 20	016	October 3, 2016		
ID	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)	DTW (ft)	PID (ppm)	DO (mg/L)
MP-1-1S	29.38	0.0	12.59	29.81	0.4	20.65	30.62	0.3	14.12
MP-1-1D	29.34	0.0	12.59	29.90	0.0	16.49	30.54	0.2	12.21
MP-1-2S	23.64	0.1	22.44	24.41	0.3	15.66	25.15	0.0	8.52
MP-1-2D	23.47	0.1	35.83	24.34	0.6	14.45	24.91	0.0	1.68
MP-1-3S	21.85	0.0	20.02	22.31	0.0	9.57	23.06	0.2	1.10
MP-1-3D	21.91	0.0	11.01	22.38	0.0	10.11	23.11	0.2	3.55
MP-1-4S	24.66	0.2	13.88	25.17	0.0	3.18	25.89	0.0	2.00
MP-1-4D	24.63	0.0	25.78	25.15	0.0	2.15	25.86	0.0	3.10
MP-1-5	29.13	0.0	20.12	29.61	0.0	21.98	30.34	0.0	15.11
MP-1-6	21.36	0.0	7.23	21.84	0.0	2.05	22.16	0.0	8.20
MP-1-7	24.68	0.0	19.93	25.20	0.0	5.69	25.91	0.0	6.07
MP-1-8	22.17	0.0	2.14	26.74	0.0	4.11	27.42	0.0	1.79

	J	uly 28, 201	6	Au	gust 25, 20	016	October 3, 2016		
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
MP-2-1	32.22	0.3	24.29	32.70	20.3	26.78	33.40	0.0	23.47
MP-2-2	33.55	0.1	17.38	34.05	7.0	28.12	34.74	0.2	27.82
MP-2-3S	33.46	0.1	32.22	33.94	2.5	38.32	34.60	0.1	39.11
MP-2-3D	33.31	0.4	36.17	34.08	2.1	39.21	34.76	0.0	41.48
MP-2-4	22.13	0.2	25.12	22.61	6.2	28.27	23.33	0.0	33.91
MP-2-5	20.21	0.0	17.95	20.81	15.4	32.53	21.48	0.0	36.21

System #2

#### Abbreviations

DTW: Depth to water (feet)

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

Note (1)

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

## **FIGURES**





- - Former MGP Site Boundary



NATIONAL GRID HEMPSTEAD INTERSECTION STREET FORMER MGP SITE HEMPSTEAD/GARDEN CITY, NY SITE MAP - SEPTEMBER-DECEMBER 2016

FIGURE 2

J:\Projects\11175065.00000\DB\GIS\ARCMAP\GROUNDWATER TREATMENT LOCATIONS (4th Qtr 2016).mxd 3/10/2017



AECOM

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

FIGURE 3




:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\GROUNDWATER MONITORING\FOURTH QUARTER 2016\FIGURE 5.dwg 3/5



J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2016\FIGURE 7.dwg 2/28/17 - 3 RAL







J:\Projects\11175065.00000\CAD\DRAFT\TASK2\HEMPSTEAD\SITE-WIDE REMEDY\GROUNDWATER TREATMENT\3rd & 4th QUARTER 2016\FIGURE 10.dwg 3/10/17 - 3 RAL





HIMW-022

ND

ND









 HIMW-0131
 ND
 ND

 HIMW-013D
 3
 18

 HIMW-014I
 5
 30

 HIMW-014D
 ND
 ND

 HIMW-015I
 2
 10

 HIMW-015D
 ND
 ND

 HIMW-015D
 ND
 ND

 HIMW-020S
 ND
 ND

 HIMW-020I
 ND
 3.35



HIMW-015

HIMW-015D

HMW-0205

HIMW-0201

10

ND

ND

ND

ND

ND

6







ND ND HIMW-014D HIMW-015 8 HIMW-015D ND ND HMW-0205 ND ND HIMW-0201 ND ND HIMW-021 2.50 ND ND HMW-022



# **APPENDIX** A

# DATA USABILITY SUMMARY REPORTS,

# **THIRD AND FOURTH QUARTERS 2016**

# (Provided in Electronic Format Only)

# APPENDIX A DATA USABILITY SUMMARY REPORT THIRD QUARTER 2016

# 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

FEBRUARY 2017

## **TABLE OF CONTENTS**

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

# TABLES

(Following Text)

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

# APPENDICES

(Following Tables)

Attachment A Validated Form 1's

Attachment B Support Documentation

## I. INTRODUCTION

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

This DUSR discusses the usability of the analytical data for twenty-four (24) groundwater samples, one (1) field duplicate, one (1) matrix spike/matrix spike duplicate (MS/MSD) pair, one (1) field blank, and three (3) trip blanks collected by URS personnel on September 16-23, 2016. Six (6) of the groundwater samples (i.e., HIMW-26I, -26D, -27S, -27I, -28S, and -28I) were collected as part of the oxygen treatment system design evaluation, while the remaining eighteen (18) groundwater samples were collected as part of the 2016 3<sup>rd</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 and
- Polynuclear aromatic hydrocarbons (PAHs) USEPA Method SW8270D.

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

- Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Rev. 4, October 2014 and
- Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22, Rev. 4, August 2008.

The limited data validation included a review of completeness of all required deliverables; holding times; quality control (QC) results (instrument tunes, calibration standards, blanks, matrix spike recoveries,

field duplicate analyses, laboratory control sample (LCS) recoveries, and surrogate/internal standard recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

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

### III. DATA DELIVERABLE COMPLETENESS

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

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

All samples were received by the laboratory intact, properly preserved, and under proper chain-ofcustody (COC), except for the following instance.

Trip blank TB20160922 was not received by the laboratory, despite being reference on the COC. Typically, trip blanks have not exhibited BTEX contamination. Therefore, this non-conformance does not significantly impact the usability of the data for the associated samples.

All samples were analyzed/extracted within the required holding times.

## V. NON-CONFORMANCES

The PAH continuing calibrations (CCAL) exhibited percent difference exceedances (i.e., >20% D) for indeno(1,2,3-cd)pyrene. The indeno(1,2,3-cd)pyrene results for the affected samples were qualified "UJ". Documentation supporting the qualification of data (i.e., Form 5 and 7) is presented in Attachment B.

## VI. SAMPLE RESULTS AND REPORTING

All sample results were reported in accordance with method requirements and were adjusted for sample size and dilution factors. Results detected below the quantitation limits were qualified 'J' by the laboratory, while results reported from secondary dilution analyses were qualified 'D'.

A field duplicate was collected from monitoring well location HIMW-05I, 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 '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

George E. Kisluk, Senior Chemist

Date:

Date: 2/23/17

**Reviewed By:** 

### **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-005D	HIMW-0051	HIMW-0051	HIMW-005S	HIMW-008D
Sample ID			HIMW-05D	DUP20180922	HIMW-05I	HIMW-5S	HIMW-08D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (f	t)			-	-	-	-
Date Sampled	r	T	09/22/16	09/22/16	09/22/16	09/23/16	09/20/16
Parameter	Units	*		Field Duplicate (1-1)			
Volatile Organic Compounds							
Benzene	UG/L	-	1 U	1	1	1 U	1 U
Ethylbenzene	UG/L	-	1 U	1	1 U	1 U	1 U
Toluene	UG/L	-	4	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	63	77	77	1 U	1 U
Total BTEX	UG/L	100	67	79	78	ND	ND
Semivolatile Organic Compounds						:	
2-Methylnaphthalene	UG/L	-	72	210 D	140 D	10 U	10 U
Acenaphthene	UG/L	-	2 J	10	6J	10 U	10 U
Acenaphthylene	UG/L	-	30	150 DJ	100 D	10 U	10 U
Anthracene	UG/L	-	10 U	2 J	1 J	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	4 J	23	15	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 UJ	10 UJ	10 UJ	10 UJ	10 U
Naphthalene	UG/L	-	670 D	1,000 D	620 D	10 U	10 U
Phenanthrene	UG/L	-	10 U	14	9 J	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	778		891	ND	ND

\*- Goundwater Plume Delineetlon/Design Criteria, Pre-Design Investigation Work Plen for In-Situ Solidification for tha Hempsteed Intersection Street Formar MGP Site, Appendix E, Finel, URS 2008.

Flegs essigned during chemistry velidetion ere shown.

Concentration Exceeds

D - Result reported from e secondery dilution enelysis. ND - Not detected.

J - The reported concentration is en estimated value.

U - Not detected ebove the reported quentitation limit. UJ - Not detected. The reported quentitation limit is en estimated value.

Mede By\_PRF 12/12/16\_; Checked By\_AMK \_\_\_\_\_

Location ID			HIMW-0081	HIMW-008S	HIMW-012S	HIMW-013D	HIMW-013I
Sample ID			HIMW-081	HIMW-08S	HIMW-012S	HIMW-13D	HIMW-13I
Matrix			Groundweter	Groundweter	Groundweter	Groundweter	Groundweter
Depth Interval (1	it)		-	-	-	-	-
Date Sattipicu Darameter	r	Ι	03/20/10	00/20/10	00/20110	00/10/10	
	Units	*					51 G
Voletile Orgenic Compounde			· · · · · · · · · · · · · · · · · · ·				
Benzene	UG/L	-	1 U	16	1 U	3	1 U
Ethylbenzene	UG/L	-	1U	10	1 U	1 U	1 U
Toluene	UG/L	-	1 U	1 U	1 U	1 U	1 U
Xylene (total)	UG/L	-	1 U	1 U	1 U	1 U	1 U
Total BTEX	UG/L	100	ND	16	ND	3	ND
Semivoletile Orgenic Compounde		24					
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	-	10 U	10 U	10 U	5 J	10 U
Acenephthylene	UG/L	-	10 U	1 J	10 U	9 J	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	•	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Naphthelene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Phenanthrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	1	ND	14	ND

\*- Goundwater Plume Dalineation/Design Criteria, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempsteed Intersection Street Formar MGP Site, Appendix E, Finel, URS 2008.

Flegs assigned during chemistry velidation are shown.

Concentration Exceeds

D - Result raported from e secondary dilution enelysis. ND - Not detected.

J - The reported concentration is en astimated value. U - Not detected ebove the reported quantitation limit. UJ - Not datected. The reported quantitetion limit is en estimated velue.

Made By\_PRF 12/12/16\_; Chackad By\_AMK \_\_\_\_10

Location ID			HIMW-014I	HIMW-015D	HIMW-015	HIMW-020I	HIMW-020S
Sample ID			HIMW-14I	HIMW-015D	HIMW-015I	HIMW-201	HIMW-20S
Matrix			Groundweter	Groundweter	Groundwater	Groundweter	Groundweter
Depth Interval (1	it)		•	-	-	-	-
Date Sampled			09/16/16	09/21/16	09/21/16	09/16/16	09/16/16
Parameter	Units	*			1	G	
Volatile Orgenic Compounds					· · · · · · · · · · · · · · · · · · ·		
Benzene	UG/L	-	4	10	1	1U	10
Ethylbenzene	UG/L	-	10	1U	1 U	10	10
Toluene	UG/L	-	1U	1 U	1U	1U	1 U
Xylene (total)	UG/L	• 7	1U	10	10	6	10
Total BTEX	UG/L	100	4	ND	1	6	ND
Semivoletile Organic Compounds				1211			1211
2-Methylnaphthalene	UG/L	-	5 J	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	· ·	8J	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	-	8J	10 U	10	10 U	10 U
Anthracene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Benzo(a)enthracene	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	•	3 J	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	•	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Phenanthrene	UG/L	-	3 J	10 U	10 U	10 U	10 U
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Totel Polynuclear Aromatic Hydrocarbons	UG/L	100	27	ND	10	ND	ND

\*- Goundwater Plume Delineetlon/Design Criterle, Pre-Design Investigation Work Plen for In-Situ Solidification for the Hempsteed Intersection Street Former MGP Site, Appendix E, Finel, URS 2008.

Flags assigned during chamlstry velidation are shown.

Concantration Exceeds

D - Result reported from a secondary dilution enelysis. ND - Not detected.

J - The raported concentration Is en astimated value. U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

Made By\_PRF 12/12/16\_; Checked By\_AMK \_\_\_\_\_

**Detection Limits shown are PQL** 

Location iD			HIMW-022	HIMW-023	HIMW-024	HIMW-025	HIMW-026D
Sample ID			HIMW-022	HIMW-023	HIMW-024	HIMW-025	HIMW-026D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (I Date Sampied	Ŋ		- 09/21/16	09/21/16	09/20/16	09/21/16	09/22/16
Parameter							
	Units	*					
Volatlle Organic Compounda							
Benzene	UG/L	-	10	1 U	1 U	4	1U
Ethylbenzene	UG/L	-	1 U	10	1 U	1 U	10
Toluene	UG/L	-	1 U	10	1 U	1 U	4
Xylene (total)	UG/L	-	1 U	1 U	1 U	1 U	59
Total BTEX	UG/L	100	ND	ND	ND	4	63
Semivolatlle Organic Compounds							
2-Methylnaphthalene	UG/L	-	10 U	10 U	10 U	10 U	69
Acenaphthene	UG/L	•	10 U	10 U	10 U	10 U	3 J
Acenaphthylene	UG/L	•	10 U	10 U	10 U	10 U	44
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 <sup>°</sup> U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	10 U	10 U	10
Indeno(1,2,3-cd)pyrene	UG/L	-	10 UJ	10 UJ	10 U	10 UJ	10 UJ
Naphthalene	UG/L	-	10 U	10 U	5 J	10 U	260 D
Phenanthrene	UG/L	-	10 U	10 U	10 U	10 U	12
Pyrene	UG/L	-	10 U	10 U	10 U	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND	5	ND	398

\*- Goundwater Plume Delineetlon/Design Criterie, Pre-Design Investigation Work Plan for In-Situ Solidification for the Hempsteed Intersection Street Former MGP Site, Appendix E, Finel, URS 2006.

Flags assigned during chemistry validation are shown.

Concentration Exceeds

D - Result reported from a secondary dilution analysis. ND - Not detected.

J - The reported concentration is an estimated value.

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

Made By\_PRF 12/12/16\_; Checked By\_AMK \_\_1

Location ID			HIMW-026I	HIMW-027I	HIMW-027S	HIMW-028I	HIMW-028S
Sample ID			HIMW-026I	HIMW-0271	HIMW-027S	HIMW-028I	HIMW-028S
Matrix			Groundweter	Groundweter	Groundweter	Groundweter	Groundwater
Depth Interval (1	't)		-	•	()#) •	•	-
Date Sampled		t	09/22/16	09/21/16	09/22/16	09/22/16	09/22/16
	Units	*					22
Voletile Orgenic Compounds	(i)						
Benzene	UG/L	-	t U	10	17	1U	6
Ethylbenzene	UG/L	-	10	10	290 D	10	180
	UG/L	-	10	10	8	10	2
Xylene (total)	UG/L	-	10	10	330 D	ŤŬ	18
Total BTEX	UG/L	100	ND	ND	645	ND	206
Semivoletile Orgenic Compounds				e.			
2-Methylnaphthelene	UG/L	-	10 U	10 U	74	10 U	35
Acenaphthene	UG/L	-	10 U	10 U	56	10 U	26
Acenaphthylene	UG/L	0	10 U	10 U	3 J	10 U	1 J
Anthracene	UG/L	-	10 U	10 U	6 J	10 U	31
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)enthracene	UG/L	-	10 U				
Fluoranthene	UG/L	-	10 U	10 U	2 J	10 U	10 U
Fluorene	UG/L	-	10 U	10 U	28	10 U	12
Indeno(1,2,3-cd)pyrene	UG/L	-	10 UJ	10 U	10 UJ	10 UJ	10 UJ
Naphthelene	UG/L	(s)T==	3 J	10 U	490 D	10 U	250 D
Phenenthrene	UG/L	-	10 U	10 U	33	10 U	17
Pyrene	UG/L	-	10 U	10 U	31	10 U	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	3	ND	695	ND	344

\*- Goundweter Pluma Dalinaetlon/Design Critaria, Pre-Dasign Investigation Work Plen for In-Situ Solidification for the Hempstead Intersaction Street Former MGP Site, Appendix E, Final, URS 2008.

Flegs essigned during chamistry velidation ara shown.

Concentration Exceeds

D - Result raported from a secondery dilution enalysis. ND - Not detected.

J - Tha raported concantration is en astimeted valua.

U - Not datacted abova tha raported quantitation limit. UJ - Not detacted. The reported quantitation limit is an estimated valua.

Meda By\_PRF 12/12/16\_; Checkad By\_AMK \_\_\_\_

Location ID		·	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			TB091616	TB20160920	TB20160921	FB-092316
Matrix		_	Weter Quaiity	Water Quality	Water Quality	Weter Quality
Depth Interval (	ft)		-	-	-	-
Date Sampled			09/16/16	09/20/16	09/21/16	09/23/16
Parameter	Units	*	Trip Blenk (1-1)	Trip Blenk (1-1)	Trip Blank (1-1)	Field Blank (1-1)
Voietiie Orgenic Compounds						0
Benzene	UG/L	-	1 U	1 U	1 U	1 U
Ethylbenzene	UG/L	-	1 U	1 U	1 U	10
Toluene	UG/L	· ·	1 U	1 U	10	10
Xylene (total)	UG/L	-	· 1U	10	1 U	10
Total BTEX	UG/L	100	ND	ND	ND	ND
Semivoletile Organic Compounds			2		- N	
2-Methylnaphthalene	UG/L	-	NA	NA	NA	10 U
Acenephthene	UG/L	-	NA	NA	NA	10 U
Acenaphthylene	UG/L	·	NA	NA	NA	10 U
Anthracene	UG/L	· .	NA	NA	NA	10 U
Benzo(a)anthracene	UG/L	-	NA	NA	NA	10 U
Benzo(a)pyrene	UG/L	-	NA	NA	NA	10 U
Benzo(b)fluoranthene	UG/L	-	NA	NA	NA	10 U
Benzo(g,h,i)perylene	UG/L	-	NA	NA	NA	10 U
Benzo(k)fluoranthene	UG/L	-	NA	NA	NA	10 U
Chrysene	UG/L	-	NA	NA	NA	10 U
Dibenz(a,h)enthracene	UG/L	-	NA	NA	NA	10 U
Fluoranthene	UG/L	-	NA	NA	NA	10 U
Fluorene	UG/L	-	NA	NA	NA	10 U
Indeno(1,2,3-cd)pyrene	UG/L	-	NA	NA	NA	10 UJ
Naphthalene	UG/L	-	NA	NA	NA	10 U
Phenanthrene	UG/L	-	NA	NA	NA th	10 U
Pyrene	UG/L	-	NA	NA	NA	10 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	NA	ND

<sup>\*-</sup> Goundwater Plume DelIneetion/Design Criterie, Pre-Design Investigetion Work Plen for In-Situ Solidification for the Hempsteed Intersection Street Former MGP Site, Appendix E, Finel, URS 2008.

Flags essignad during chemistry velidetion ere shown.

Concentration Excaeds

NA - The semple was not enalyzed for this paremeter. ND - Not detactad. U - Not detected above the reported quentitation limit.

Made By\_PRF 12/12/16\_; Checkad By\_AMK \_1917

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-5S

Lab Name: PACE ANALY	Contra	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609K78-001A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>6\F81362.D</u>
Level: (low/med)	LOW	Date Received:	09/23/16
f Moisture: not dec.		Date Analyzed:	09/24/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

#### CONCENTRATION UNITS:

CAS NO	<b>D</b> .	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
	71-43-2	Benzene	1	U
	108-38-3	Toluene	1	U
	100-41-4	Ethylbenzene	1	U
	1330-20-7	Xylene (total)	1	U

•

EPA SAMPLE NO.

HIMW-5S

Lab Name: PACE ANALY	TICAL	Contract	::	
Lab Code: 10478	Case No.: KEY-	URE SAS	8 No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER		Lab Sample ID:	1609K78-001B
Sample wt/vol:	1000 (g/mL)	mL	Lab File ID:	R36022.D
Level: (lcw/med)	LOW		Date Received:	09/23/16
% Moisture:	Decanted: (Y/N)	<u>11</u>	Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	09/27/15
Injection Volume:	<u>1</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>µg/L</u>	Q
91-20-3	Naphthalene	10	υ
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	σ
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	UJ
53-70-3	Dibenzo(a, h) anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	Ū

(1) Cannot be separated from Diphenylamine

OLM04.2

12/8/16

#### 1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-05I

Lab Name:	PACE ANALYI	ICAL	Co	ontrad	st:	_
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.: KEY-URS209
Matrix: (so	il/water)	WATER			Lab Sample ID:	1609J84-003A
Sample wt/v	ol: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	<u>6\F81356.D</u>
Level: (1	ow/med)	LOW			Date Received:	09/22/16
% Moisture:	not dec.				Date Analyzed:	09/23/16
GC Column:	DB-624	ID	: <u>0.18</u> (m	m)	Dilution Facto	or: <u>1.00</u>
Soil Extrac	t Volume:		(µL)		Soil Aliquot V	Olume (µL)

#### CONCENTRATION UNITS:

CAS NO.		COMPOUND	(µg/)	L or µg/Kg) <u>UG/L</u>	Q
	71-43-2	Penzene		1	
Second Second	108-88-3	Toluene		1	U
	100-41-4	Ethylbenzene		1	U
	1330-20-7	Xylene (total)		77	

EPA SAMPLE NO.

E	INW	-0	5	т
• •		· · ·	$\sim$	÷.

CONCENTRATION UNITS:

Lab Name: PACE ANALY	(TICAL Con	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG NO.: KEY-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-003B
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	F36016.D
Level: (low/med)	TCI4	Date Received:	09/22/16
<pre>% Moisture:</pre>	Decanted:(Y/N) N	Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	Extraction: (Type)	CONT

		0204	d M
91-20-3	Naphthalene	620	R.U
91-57-6	2-Methylnaphthalene	140 100	- FD
208-96-8	Acenaphthylene	100 .85	N A D
83-32-9	Acenaphthone	6	J
86-73-7	Fluorene	1 15	1
85-01-8	Phenanthrene	9	J
120-12-7	Anthracere	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	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	υJ
53-70-3	Dibenzo(a, h) anthracene	10	U
191-24-2	Berzo(g,h,i)perylene	10	υ

FORM I SV- 1

12/9/16

	EPA SAMPLE	EPA SAMPLE NO.		
Semivolat	TILE ORGANICS ANALYSIS	DATA SHEET	HIMW-05IDL	
Lab Name: PACE ANAL	YFICAL Cont	ract:		
Lak Code: 10478	Case No.: KEY-URS	SAS No.:	SDG NC. KEY	r-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-003B	DL
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	R36062.D	$\backslash$
Level: (low/med)	LOW	Date Received:	09/22/16	
% Moisture:	Decanted: (Y/N) N	Date Extracted:	09/23/16	
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	10/01/16	
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	10.00	
GFC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	e) <u>CONT</u>	/
		CONCI	ENTRATION UNITS	5:
CAS NO.	COMPOUND	(ug/)	L or µg/Kg) µg,	L Q
91-20-3	Naphthalene	and the second second second second	620	D
01 57-6	2-Morbylpaphthalene	100 E.S. (100 E.	140	D
200 06 9	Z-Methyinaphthaiene		100	n
208-30-0	Acenapitiny Tene	a service assessment to a	100	IJ
83-32-3	Acenapichene		15	D.T
86-73-7	Phonanthrana		100	EC II
83-01-0	rnenancinesne		100	
120-12-7	Anthracene		100	U
206-44-0	Fluoranthene		100	U
129-00-0	Pyrene		100	U
56-55-3	Benzo (a) anthracene		100	U
218-01-9	Chrysene		100	U
205-99-2	Benzo (b) fluoranthene		100	U
207-08-9	Benzo(k) fluoranthene		100	U
50-32-8	Benzo(a)pyrene		100	U
and the second sec	romina (bo S C 1) and but	a /	100	U
193-39-5	Indeno(1,2,0-cd/p/rem	~		
<u>193-39-5</u> 53-70-3	Dibenzo (a, h) anthracen	e	100	U

(1) Cannot be separated from Diphenylamine

12/12/16

OLM01.2

FORM I SV- 1

1A

EPA SAMPLE NO.

DUP20160922 (HIMW-05I)

VOLATILE	ORGANICS	ANALYSIS	DATA	SHEET	

Lab Name:	PACE ANALY	FICAL	Co	ontrac	:t:		
Lab Code:	10478	Case No.:	KEY-URS	sas i	No.:	SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER		1	Lab Sample ID:	<u>1609J97-0</u>	01A
Sample wt/v	01: <u>5</u>	(g/mL	) <u>ML</u>	1	Lab File ID:	6\F81361.1	<u>0</u>
Level: (1	ow/med)	LOW		I	Date Received:	09/22/16	
<pre>% Moisture:</pre>	not dec.			I	Date Analyzed:	09/24/16	
GC Column:	DB-624	ID:	<u>0.18</u> (m	m) I	Dilution Factor	<u>1.00</u>	
Soil Extrac	t Volume:		(µL)	£	Soil Aliquot Vo	olume	(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u> Q	2
71-43-2	Benzene	1 1	
108-88-3	Toluene	1 0	
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene (total)	77	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HIM (1) -0. Lab Name: PACE ANALYTICAL Contract: Lab Code: 10478 Case No.: KEY-URS SAS No.: SEG No.: KEY-URS208 Matrix: (soil/water) WATER Lab Sample ID: 1609J97-001B Sample wt/vol: 1000 (g/mL) mL Lab File ID: R36021.D LOW Level: (low/med) Date Received: 09/22/16 Decanted: (Y/N) Date Extracted: 09/23/16 & Moisture: N Concentrated Extract Volume: 1000 (µL) Date Analyzed: 09/27/16 Dilution Factor: (µL) 1.00 Injection Volume: 1 Extraction: (Type) CONT рН: \_\_\_\_ GPC Cleanup: (Y/N) N

CAS NO. COMPOUND (µg/L or µg/Kg) µg/L 0 91-20-3 Naphthalene 1000 330 91-57-6 2-Methylnaphthalene 150 210 208-96-8 Acenaphthylene 110 150 83-32-9 Acenaphthene 10 86-73-7 Fluorene 23 85-01-8 Phenanthrene 14 2 120-12-7 Anthracene J 206-44-0 Fluoranthene 10 U 129-00-0 Pyrene 10 U 36-55-3 Bonzo(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 10 50-32-3 Benzo(a)pyrene U 0). 193-39-5 10 Indeno(1,2,3-cd)pyrene 53-70-3 Dibenzo(a, h) anthracene 10 11 191-24-2 Benzo(g,h,i)perylene 10 U

(1) Cannot be separated from Diphenylamine



EFA SAMPLE NO.

12/8/10

CONCENTRATION UNITS:

	10		EPA SAMPL	E NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS DATA	A SHEET		
			DUR201609	2201
Lab Name: PACE ANALY	TICAL Contrac	t:	L(HIMW	-05 I)
			- \	
Lab Code: 10478	Case No.: KEY-URS SAS	S No.:	SDG No.: K	ET-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J97-001	BDL
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	R36066.D	
Level: (low/med)	LOW	Date Received:	09/22/16	
% Moisture:	Decanted: (Y/N) N	Date Extracted:	09/23/16	
Concentrated Extract	Volume: 1000 (µL)	Date Analyzed:	10/01/16	
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	20.00	
GPC Cleanup: (Y/N)	N pH:	Extraction: (Type)	CONT	/
		CONCEN	TRATION UNIT	rs:
CAS NO.	COMFOUND	(µg/L	or ug/Kg/ u	g/L Q
91-20-3	Naphthalene		1000	D
91-57-6	2-Methylnaphthalene		210	D
208-96-8	Acenaphthylene	11. 14 a. 1	150	ŊJ
83-32-9	Acenaphthene		200	U
86-73-7	Fluorene		20	DJ
85-01-8	Phenanthrene		2.00	U
120-12-7	Anthracene		200	U
206-44-0	Fluoranthene		200	0
129-00-0	Purene		200	mente rec <mark>u</mark> itado
56-55-3	Benzo(a) anthracene		200	n
218-01-9	Chrysene		200	
205-99-2	Benzo (b) fluoranthane	· / · · · · · · · · · · · · · · · · · ·	200	TI I
207-08-0	Benzo(k) fluoranthene		200	
50-32-9	Benzo (a) pyrepa		200	n
103-30-5	Indeno(1 2 3-cd)ngrana		200	U
53-70-2	Dihenzo(a h) anthracene		200	<u> </u>
101_24_2	Banzola h inerviene	7	200	11
171-24-2	reman (Alut's berAtene		200	· · · · ·

(1) Cannot be separated from Diphenylamine

OLM04.2

12/9/16

#### LA VOLATILE ORGANICS ANALYSIS DATA SHEET

#### EPA SAMPLE NO.

HIMW-05D

Lab Name: PACE ANALY	FICAL Co	ontract:	
Lab Code: 10478	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-004A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	6\F81357.D
Level: (low/med)	LOW	Date Received:	09/22/16
% Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: <u>0.18</u> (m	m) Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	nne (hr)

CONCENTRATION UNITS:

CAS NO		COMPOUND	(µg/L or µ	1g/Kg) <u>UG/L</u>	Q
4 8 ( P) ( 8	71-43-2	Benzene		1	U
	108-88-3	Toluene		4	
	100-41-4	Ethylbenzene		1	υ
	1330-20-7	Xylene (total)		63	

EPA SAMPLE NO.

HIMW-05D

Lab Name: PACE ANALY	TICAL	Contrac	t;	
Lab Code: 10479	Case No.: KEY	-URS SA	S No.:	SDG No.: KEY-URS209
Matrix: (soil/water)	WATER		Lab Sample ID:	1609J84-C04B
Sample wt/vol:	1000 (g/mL)	mL	Lab File ID:	R36017.D
Level: (low/med)	TOIA		Date Received:	09/22/16
<pre>% Moisture:</pre>	Decanted:(Y/N)	N	Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: $(Y/N)$	N pH:		Extraction: (Type)	CONT

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>		
91-20-3	Naphthalene	670 200	20	
91-57-6	2-Methylnaphthalene	72		
208-96-8	Acenaphthylene	30		
83-32-9	Acenaphthene	2	J	
86-73-7	Fluorene	4	J	
85-01-8	Phenanthrene	1 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(x)fluoranthene	10	U	
50-32-8	Benzo (a) pyrene	10	U	
193-39-5	Indeno(1,2,3-cd) pyrene	10	υJ	
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

12/9/16

10			EPA SAMP	EPA SAMPLE NO.	
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET			-		
					DL
Lab Nama: FACE ANGL	VTTCAT.	Contrac	· •		
bab Name, FACE ANAL	.11050	Concente			
Lab Code: <u>10478</u>	Case No.: KEY	-URS SA	S No.:	SDG No.:	KEY-URS209
Matrix: (soil/water)	WATER		Lab Sample ID:	1509364-00	04BDL
Sample wt/vol:	<u>1000</u> (g/mL)	mL	Lab File ID:	R36063.D	
Level: (low/med)	LOW		Date Received:	09/22/16	
<pre>% Moisture:</pre>	Decanted (Y/N)	N	Date Extracted:	09/23/16	
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	10/01/16	/
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	10.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:_		Extraction: (Type	e) <u>CONT</u>	. /
	CONCE		NTRATION UNITS: /		
CAS NO.	COMPOUND		(µg/:	L or µg/Kg)	ug/L Q
91-20-3	Naphthalene			670	D
91-57-6	2-Methvlnaphtha	lene		78	DJ
208-96-8	Acenaphthylene		30	DJ	
83-32-9	Acenaphthene			100	U
86-73-7	Fluorene	Fluorene			U
85-01-8	Phenanthrene			100	U
120-12-7	Anthracene	27		100	U
206-44-0	Fluoranthene			100	U
129-00-0	Pvrene	Pyrane			U
56-55-3	Benzo(a) anthrace	Benzo (a) anthracene			υ
218-01-9	Chrysene			100	U
205-39-2	Benzo (b) fluoranthene			100	U
207-08-9	Benzo(k)fluoranthene			100	U
50-32-8	Benzo(a)pyrene			100	U
193-39-5	Indenc (1.2.3-cd)	pyrene		100	U
52-70-3	Dibenzo(a, h) anti	racene		100	U 1
191-24-2	Benzo(g.h.i)per	lene		100	1 0
(1) Cannot be separat	ted from Diphenvl	amine	X	N	

2/12/16

FORM I SV 1

OLM04.2

## KEY-URS209 S27 of 53
EPA SAMPLE NO.

HIMW-08S

Lab Name: PACE ANALY	FICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609H36-001A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	6\F81364.D
Level: (low/med)	LOW	Date Received:	09/20/16
% Moisture: not dec.		Date Analyzed:	09/24/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (pl)

CAS NO	)	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
11 4444.010	71-43-2	Benzene	16	
	108-88-3	Toluene	1	U
	100-41-4	Ethylbenzene	1	υ
	1330-20-7	Xylene (total)	1	U

HIMW-08S

Lab Name: PACE ANAL	YTICAL Cont	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: FEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609H36-001B
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	58510.D
Level: (low/med)	LOW	Date Received:	09/20/16
<pre>% Moisture;</pre>	Decanted:(Y/N) N	Date Extracted:	09/22/15
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	Extraction: (Type	e) <u>Cont</u>

#### 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	1	J
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Fhenanthrene	10	IJ
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
207-03-9	<pre>Eenzo(k)fluoranthene</pre>	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	<pre>Benzo(g,h,i)perylene</pre>	10	U

(1) Cannot be separated from Diphenylamine

EPA SAMPLE NO.

HIMW-081

Lab Name: <u>PA</u>	CE ANALYTICAL	Co	ntract: _	······································		
Lab Code: <u>104</u>	478 Case M	IO.: <u>KEY-URS</u>	SAS No.: _	S	DG No.:	KEY-URS208
Matrix: (soil/	/water) WAT	ER	Lab Sa	mple ID: <u>1</u>	<u>609H36-00</u>	<u>3A</u>
Sample wt/vol:	: <u>5</u> (	g/mL) <u>ML</u>	Lab Fi	le ID: <u>6</u>	\F81368.D	
Level: (low/	/med) <u>LOW</u>		Date R	eceived: 0	9/20/16	
% Moisture: no	ot dec.		Date A	nalyzed:	09/24/16	
GC Column: D	<u>0B-624</u>	ID: <u>0.18</u> (mm	a) Diluti	on Factor:	1.00	
Soil Extract V	Volume:	(µL)	Soil A	liquot Volume		(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u> Q	
71-43	-2 Benzene	1 0	ľ
108-88	-3 Toluene	1 0	ļ
100-41	-4 Ethylbenzene	1 U	1
1330-20	-7 Xylene (total)	1 0	i

467 AGT

CONCENTRATION UNITS:

			LITMM-001
Lab Name: PACE ANALYTICAL	Contra		
Lab Code: <u>10478</u> Cas	e No.: <u>KEY-URS</u> S	AS No.:	SDG No.: <u>KEY-URS208</u>
Matrix: (soil/water) WATER		Lab Sample ID:	1609H36-003P
Sample wt/vol: 1000	(g/mL) <u>mL</u>	Lab File ID:	<u>\$8512.D</u>
Level: (low/med)	LOW	Date Received:	09/20/16
% Moisture: Decan	ted:(Y/N) <u>N</u>	Date Extracted:	09/22/16
Concentrated Extract Volume	e: 1000 (µL)	Date Analyzed:	09/27/16
Injection Volume: <u>1</u>	(µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N	pH:	Extraction: (Type)	CONT

COMPOUND (µg/L or µg/Kg) µg/L Q CAS NO. 91-20-3 Naphthalene 10 U U 10 91-57-6 2-Methylnaphthalene 1υ 10 208-96-8 Acenaphthylene · •• U 83-32-9 Acenaphthene 10 U 10 26-73-7 Fluorene 65-01-8 | Phenanthrene 10 U 10 υ 120-12-7 | Anthracene 10 U 206-44-0 Flucranthene 10 U 129-00-0 Pyrene 10 υ Benzo(a) anthracene 56-55-3 U 218-01-9 10 Chrysene 10 υ 205-99-2 Benzo(b)flucranthene 10 U 207-08-9 Benzo(k) fluoranthene IJ 10 50-32-8 Benzo(a)pyrene 10 U. 193-39-5 Indeno(1,2,3-cd)pyrene U Dibenzo(a, h) anthracene 1.0 53-70-3 U 191-24-2 10 Benzo(g,h,i)perylene

(1) Cannot be separated from Diphenylamine

FORM I GV- 1

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-08D

Lab Name: PACE ANALY	TICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609H36-002A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	<u>6\F81365.D</u>
Level: (low/med)	LOW	Date Received:	09/20/16
% Moisture: not dec.		Date Analyzed:	09/24/16
GC Column: DB-624	ID: 0.18 (mm)	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	1	1	Ŭ
108-88-3	Toluene	1		IJ
100-41-4	Ethylbenzene	1		U
1330-20-7	Xylene (total)	1		U

HIHW-08D

SEMIVOLATILE OR	GANICS	ANALYSIS	DATA	SHEET
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Lab Name: PACE ANAL	YTICAL Cont	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG Nc.: KEY-URS203
Matrix: (soil/water)	WATER	Lab Sample ID:	1609H36-002B
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	<u>\$8511.D</u>
Level: (lcw/med)	LOW	Date Received:	09/20/16
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	09/22/16
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	) <u>CONT</u>

COMDO

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) anthracena	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluorantnene	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

HIMW-012S

Lab Name:	PACE ANALYT	ICAL	Contrad	st:	
Lab Code:	10478	Case No.: KEY	Y-URS SAS	No.:	SDG No.: KEY-URS208
Matrix: (so	il/water)	WATER		Lab Sample ID:	1609H36-004A
Sample wt/v	ol: <u>5</u>	(g/mL) <u>M</u>	Ŀ	Lab File ID:	<u>6\F81366.D</u>
Level: (10	ow/med)	LOW		Date Received:	09/20/16
% Moisture:	not dec.			Date Analyzed:	09/24/16
GC Column:	DB-624	ID: <u>0</u> .	18 (mm)	Dilution 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
71-4	3-2 Benzene	1 0
108-8	8-3 Toluene	1 0
100-4	1-4 Ethylbenzene	1 U
1330-2	0-7 Xylene (total)	1   U

SEMIVOLAI	TILE ORGANICS ANAL	YSIS DATA	A SHEET	HIMW-0123
Lab Name: PACE ANAL	YTICAL	Contrac	t:	
Lab Code: <u>10478</u>	Case No.: KEY-	URS SAS	5 No.:	SDG No.: KEY-UFS208
Matrix: (soil/water)	WATER		Lab Sample ID:	1609H36-004B
Sample wt/vol:	1000 (g/mL)	mL	Lab File ID:	S8515.D
Level: (low/med)	LOW		Date Received:	09/20/16
<pre>% Moisture:</pre>	Decanted:(Y/N)	Ň	Date Extracted:	09/22/16
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>µg/L</u>	Ω
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	υ
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	IJ
206-44-0	Fluoranthene	10	σ
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)flucranthene	10	U
207-03-9	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	υ
191-24-2	Benzo(g,h,i)perylene	10	υ

(1) Cannot be separated from Diphenylamine

EPA SAMPLE NO.

HIMW-13I

Lab Name: PACE ANALY	TICAL Cont:	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SA	S No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609E46-003A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	6\F81328.D
Level: (low/med)	TOM	Date Received:	09/16/16
% Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	(11) emu

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	σ
<b>-</b>	1330-20-7	Xylene (total)	1	U

H	I	M77-	1	3	I

Lab Name: PACE ANAL	TICAL	Contrac	t:	
Lab Code: <u>10479</u>	Case No.: <u>KEY-</u>	-URS SAS	S No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER		Lab Sample ID:	1609E46-003B
Sample wt/vol:	1000 (g/mL)	<u>mL</u>	Lab File ID:	<u>\$8507.D</u>
Level: (lcw/med)	LOW		Date Received:	09/16/16
<pre>% Moisture:</pre>	Decanted: (Y/N)	11	Date Extracted:	09/22/16
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>µg/L</u>	Q
91-20-3	Naphthalene	10	U
<u>91-57-6</u>	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(d.h.i)pervlene	10	[]

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

EPA SAMPLE NO.

HIMW-13D

Lab Name: PACE ANAL	YTICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609E46-002A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	6\F81339.D
Level: (low/med)	LOW	Date Received:	09/16/16
% Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L Q	
71-43	-2 Benzene	3	
108-88	-3 Toluene	1 0	
100-41	-4 Ethylbenzene	1 U	
1330-20	-7 Xylene (total)	1 U	

1C

EPA SAMPLE NO.

SEMIVOLAT	ILE ORGANICS ANAI	LYSIS DATA	A SHEET	HIMW-13D
Lab Name: PACE ANALY	TICAL	Contract	t:	
Lab Code: 10478	Case No.: KEY-	-URS SAS	3 No.:	SDG No.: KEY-URS203
Matrix: (soil/water)	WATER		Lab Sample ID:	1609E46-002B
Sample wt/vol:	1000 (g/mL)	mL	Lab File ID:	<u>38506.D</u>
Level: (low/med)	LOW		Date Received:	09/16/16
% Moisture:	Decanted:(Y/N)	N	Date Extracted:	09/22/16
Concentrated Extract	Volume: 1000	(µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>µg/L</u>	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	<u>c</u>	J
63-32-9	Acenaphthene	5	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10 /	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	1 10	Ū
56-55-3	Benzo (a) anthracene	10	U
218-01-9	Chrysene	10	σ
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	Indenc(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzc(a, h) anthracene	10	U
191-24-2	Benzo(g,h,i)pervlene	10	U

(1) Cannot be separated from Diphenylamine

EPA SAMPLE NO.

HIMW-14I

Lab Name:	PACE ANALYI	ICAL	Co	ontrac	et:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER			Lab Sample ID:	<u>1609E46-00</u>	<u>)1A</u>
Sample wt/v	ol: <u>5</u>	(g/mL)	ML	:	Lab File ID:	<u>6\F81340.</u>	2
Level: (10	ow/med)	LOW		1	Date Received:	09/16/16	
% Moisture:	not dec.			1	Date Analyzed:	09/23/16	
GC Column:	DB-624	ID:	<u>0.18</u> (m	m) 1	Dilution Factor:	1.00	
Soil Extract	t Volume:		(µL)	1	Soil Aliquot Volu	me	(µL)

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

FORM I VOA - 1

SEMIVOLAT	ILE ORGANICS ANAL	LYSIS DATA	A SHEET	HINW-14I
Lab Name: PACE ANALY	TICAL	Contrac	E:	
Lab Code: <u>10478</u>	Case No.: <u>FEY</u>	-URS SAS	S Nc.:	SDG No.: KEY-URS203
Matrix: (soil/water)	WATER		Lab Sample ID:	1609E46-001B
Sample wt/vol:	<u>1000</u> (g/mL)	mL	Lab File ID:	S8505.D
Level: (low/med)	LOW		Date Received:	09/16/16
<pre>% Moisture:</pre>	Decanted:(Y/N)	N	Date Extracted:	09/22/16
Concentrated Extract	Volume: 1000	(uL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	*	Extraction: (Type)	CONT

GPC Cleanup: (Y/N) <u>N</u> pH: \_\_\_\_

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	5	J
208-96-8	Acenaphthylene	8	J
83-32-9	Acenaphthene	8	J
86-73-7	Fluorene	3	J
85-01-8	Phenanthrene	3	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	υ
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

EPA SAMPLE NO.

HIMW-0151

Lab Name: PACE ANAL	YTICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609141-003A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	6\F81344.D
Level: (low/med)	TOM	Date Received:	09/21/16
f Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(pL)	Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q	
71-4	3-2   Benzene	1		
108-8	8-3 Toluene	1	U	
100-4	1-4 Ethylbenzene	1	U	
1330-2	0-7 Xylene (total)		U	

SEMINOLAT	TIE	OBGANTOS	ANALYSTS	DATA	SHEET	
SCHTACTHT		OLICIALITOD	2 26 46 400 4 67 4 67	D.11.1		

SEMIVOLAI	ILE ORGANICS ANALYSIS	DATA SHEET	HIMW-015I
Lab Name: PACE ANAL	TTICAL Con	tract:	
Lab Code: 10478	Case No.: <u>KEY-URS</u>	SAS No.:	SDG NO.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609I41-003B
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	S8518.D
Level: (low/med)	LOW	Date Received:	09/21/16
<pre>% Moisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	09/22/16
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

## CONCENTRATICN 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			
83-32-9	Acenaphthene	10	U		
86-73-7	Fluorene	10	U		
85-01-8	Phenanthrene	10	U		
120-12-7	Anthracene	1 10	U		
206-44-0	Fluoranthene	10	IJ		
129-00-0	Pyrene	10	U		
56-55-3	Benzo(a) anthracene	10	IJ		
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

EPA SAMPLE NO.

HIMW-015D

						A	200200000
Lab Name:	PACE ANALY	FICAL	Co	ontract:			
Lab Code:	10478	Case No.:	KEY-URS	SAS No	.:	SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER		La	b Sample ID:	1609141-0	02A
Sample wt/v	ol: <u>5</u>	(g/mL)	ML	La	b File ID:	<u>6\F81343.</u>	<u>D</u>
Level: (1	ow/med)	LOW		Da	te Received:	09/21/16	
% Moisture:	not dec.			Da	te Analyzed:	09/23/16	
GC Column:	DB-624	ID:	<u>0.18</u> (m	m) Di	lution Factor:	1.00	
Soil Extrac	t Volume:		(µL)	So	il Aliquot Volu	umo	(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

Lab Name: PACE ANALY	Cont	ract:	L
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609141-002B
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	\$8517.D
Level: (low/med)	LOW	Date Received:	09/21/16
<pre>% Moisture:</pre>	Decanted:(Y/N) N	Date Extracted:	09/22/16
Concentrated Extract	Volume: 1000 (pL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

#### CONCENTRATION UNITS:

CAS NC.	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	10	U
83-32-5	Acenaphthene	10	U
86-73-1	Fluorene	10	Ū
85-01-8	Phenanthrene	10	U
120-12-	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)pervlene	10	U

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

FOFM I SV- 1

#### 1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-20S

Lab Name:	PACE ANALYI	ICAL	c	Contrac	et:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS208
Matrix: (so:	il/water)	WATER			Lab Sample ID:	1609E46-00	<u>4</u> A
Sample wt/v	ol: <u>5</u>	(g/mL)	ML		Lab File ID:	6\F81327.D	
Level: (lo	ow/med)	LOW			Date Received:	09/16/16	
% Moisture:	not dec.				Date Analyzed:	09/23/16	
GC Column:	DB-624	ID:	<u>0.18</u> (1	mm)	Dilution Factor:	1.00	
Soil Extract	t Volume:		(µL)		Soil Aliquot Volu	ume	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u> Q
71-4	3-2 Benzene	1 0
108-8	8-3 Toluene	1 U
100-4	1-4 Ethylbenzene	1 U
1330-2	0-7 Xylene (total)	1 U

HINW-20S

Lab Name: PACE ANAL	TICAL C	Contract:	
Lab Code: 10478	Case No.: KEY-UR	<u>S</u> SAS No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609E46-004B
Sample wt/vcl:	1000 (g/mL)	mL Lab File ID:	<u>\$8508.D</u>
Level: (low/med)	LOW	Date Received:	09/16/16
% Moisture:	Decanted: (Y/N)	Date Extracted:	09/22/16
Concentrated Extract	Volume: <u>1000</u> (µ	L) Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>μg/I</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	υ
129-00-0	Pyrene	10	υ
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	Eenzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indenc(1,2,3-cd)pyrene	10	IJ
53-70-3	Dibenzc(a, h) anthracene	10	υ
191-24-2	Benzo(g,n,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

## EPA SAMPLE NO.

HIMW-201

CONCENTRATION UNITS:

Lab Name: PACE ANALY	TICAL Contra	et:	X
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609E46-005A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	6\F81326.D
Level: (low/med)	LOW	Date Received:	09/16/16
% Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ime (μL)

 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
 Ethylbenmene
 1
 U

 1330-20-7
 Xylene (total)
 6
 6

## OLM04.2 KEY-URS208 S24 of 95

u	т	N154		a	т
11	Ŧ	MIN	-4		Τ.

Lab Name: PACE ANALY	TICAL Con	tract:	L
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609E46-005B
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	<u>\$8509.D</u>
Level: (low/med)	LCW	Date Received:	09/16/16
<pre>% Moisture:</pre>	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	09/22/16
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>µg/L</u>	2
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	IJ

(1) Cannot be separated from Diphenylamine

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-022

Lab Name: PACE ANALY	TICAL Contra	act:	
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609141-007A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>6\F81348.D</u>
Level: (low/med)	LOW	Date Received:	09/21/16
% Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (mm)	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>	ः <b>Q</b>
1	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

HINW-022

Lab Name: PACE ANALY	TICAL Cor	tract:	
Lab Code: 10478	Case No.: <u>KEY-URS</u>	SAS No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609141-007B
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	<u>R36013.D</u>
Level: (low/med)	LOW	Date Received:	03/21/16
<pre>% Moisture:</pre>	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	09/23/16
Concentrated Extract	Volume: 1000 (µI,)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

#### CONCENTRATION UNITS:

CAS NO.	COMFOUND	(µg/L or µg/Kg) µg/L	Q
91-20-3	Naphthalene	10	IJ
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	IJ
83-32-9	Acenaphthene	10	U
£6-73-7	Fluorene	10	U
85-01-8	Ehenanthrene	i 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
205-39-2	Benzo(b)flucranthane	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	0 3
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

12/8/16

EPA SAMPLE NO.

HIMW-023

Lab Name: PACE ANALY	<u>FICAL</u> Contra	Act:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609I41-006A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	<u>6\F81347.D</u>
Level: (low/med)	LOW	Date Received:	09/21/16
% Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (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 1	υ

SEMIVOLAT	ILE ORGANICS ANAL	YSIS DATA	SHEET	HIMW-023
Lab Name: PACE ANALY	TICA	Contract		
Lab Code: <u>10478</u>	Case No.: KEY-I	JRS SAS	No.;	SDG Nc.: KEY-URS208
Matrix: (soil/water)	WATER		Lab Sample ID:	1609141-006B
Sample wt/vol:	1000 (g/mL)	mL	Lab File ID:	R36060.D
Level: (low/med)	LOW		Date Received:	03/21/16
<pre>% Moisture:</pre>	Decanted:(Y/N)	N	Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	10/01/16
Injection Volume:	<u>1</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>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)iluoranthene	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	υJ
53-70-3	Dibenzo(a, h) anthracene	10	U
103 24 2	Benzo(g,h,i)perylene	10	U

OLMC4.2

#### 1A

EPA SAMPLE NO.

# VOLATILE ORGANICS ANALYSIS DATA SHEET

HIMW-024

Lab Name:	PACE ANALYI	ICAL	Co	ontract:			
Lab Code:	10478	Case No.:	KEY-URS	SAS No.	:	SDG No.:	KEY-URS208
Matrix: (so:	il/water)	WATER		Lab	Sample ID:	1609141-00	<u>1A</u>
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML	Lat	File ID:	<u>6\F81342.D</u>	
Level: (lo	ow/med)	LOW		Dat	e Received:	09/21/16	
% Moisture:	not dec.			Dat	e Analyzed:	09/23/16	
GC Column:	DB-624	ID:	<u>0.18</u> (m	m) Dil	ution Factor:	1.00	
Soil Extract	t Volume:		(µL)	Soi	l Aliquot Volu	ame	(µL)

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

EFA SAMPLE NC.

HIMW-024

Lab Name: PACE ANAI	LYTICAL Cont	tract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS208
Matrix: (soil/water	WATER	Lab Sample ID:	1609I41-001B
Sample wt/vol:	<u>1000</u> (g/mL) <u>mL</u>	Lab File ID:	<u>88516.D</u>
Level: (low/mcd)	LCW	Date Received:	09/21/16
<pre>% Moisture:</pre>	Decanted: (Y/N) N	Date Extracted:	09/22/16
Concentrated Extract	t Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>µg/L</u>	Q
91-20-3	Naphthalene	5	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	Ū.
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	Fyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(p)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	Benzc(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

FORM I SV- 1

.

EPA SAMPLE NO.

HIMW-025

Lab Name:	PACE ANALYI	ICAL	Co	ontract	C:	
Lab Code:	10478	Case No.:	KEY-URS	SAS N	o.:	SDG No.: KEY-URS208
Matrix: (so:	il/water)	WATER		L	ab Sample ID:	1609141-005A
Sample wt/vo	ol: <u>5</u>	(g/mL)	ML	L	ab File ID:	6\F81346.D
Level: (lo	ow/med)	LOW		Di	ate Received:	09/21/16
<pre>% Moisture:</pre>	not dec.			Di	ate Analyzed:	09/23/16
GC Column:	DB-624	ID:	<u>0.18</u> (m	m) D:	ilution Factor:	1.00
Soil Extract	Volume:		(µL)	Se	oil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u> Q	
71-4	3-2 Benzene	4	
108-8	8-3 Toluene	1 U	
100-4	1-4 Ethylbenzene	1 U	
1330-2	0-7 Xylene (total)	1 0	

n10w-020	HI	MW	-	0	2	5
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Lab Name: PACE ANAL	YTICAL	Contract:	
Lab Code: 10478	Case No.: KEY-U	RS SAS No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609141-005B
Sample wt/vol:	<u>1000</u> (g/mL)	<u>mL</u> Lab File ID:	R36011.D
Level: (low/med)	LOW	Date Received:	09/21/16
<pre>% Moisture:</pre>	Decanted: (Y/N)	<u>1</u> Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u> (	pL) Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	Extraction: (Typ	e) <u>CONT</u>

CONCENTRATION UNITS:

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

12/8/16

## 1**A**

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-0261

Lab Nane:	PACE ANALYT	Cor	tract:	
Lab Code:	10478	Case No.: KEY-URS	SAS No.	SDG No.: KEY-URS209
Matrix: (so	il/water)	WATER	Lab Sample ID:	1609J84-001A
Sample wt/v	01: <u>5</u>	(g/mL) ML	Lab File ID:	<u>6\F81354.D</u>
Level: (1	ow/med)	LOW	Date Received:	09/22/16
% Moisture:	not dec.		Date Analyzed:	09/23/16
GC Column:	DB-624	ID: 0.18 (mm	) Dilution Factor:	1.00
Soil Extrac	t Volume:	(µL)	Soil Aliquot Volu	me (µL)

CAS N	10.	COMPOUND	(pq)	/L or µg/Kg) <u>UG/L</u>	Q
	71-43-2	Benzene		1	U I
	108-88-3	Toluene		1	U
	100-41-4	Ethylbenzene		1	U
	1330-20-7	Xylene (total)		1	U

## HIMW-0251

Lab Name: PACE ANALY	TICAL	Contract	t:	
Lab Code: 10478	Case Nc.: KEY-	URS SAS	8 No.:	SDG No.: KEY-URS209
Matrix: (scil/water)	WATER		Lab Sample ID:	1609J84-001B
Sample wt/vol:	1000 (g/mL)	mL	Lab File ID:	R36014.D
Level: (low/med)	LOW		Date Received:	09/22/16
% Moisture:	Decanted:(Y/N)	N	Date Extracted:	09/23/16
Concentrated Extract	Volume: 1000	(µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>μg/L</u>	Q
91-20-3	Naphthalene	3	J
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	1 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	1 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	UJ
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

2/9/16

## 1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-026D

Lab Name:	PACE ANALY	Con Con	tract:	
Lab Code:	10478	Case No.: KEY-URS	AS No.:	SDG No.: KEY-URS209
Matrix: (so	oil/water)	WATER	Lab Sample ID:	1609J84-002A
Sample wt/v	rol: <u>5</u>	(g/mL) <u>ML</u>	Lab File ID:	<u>6\F81355.D</u>
Level: (1	.ow/med)	LOW	Date Received:	09/22/16
t Moisture:	not dec.		Date Analyzed:	09/23/16
GC Column:	DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extrac	t Volume:	(µL)	Soil Aliquot Volu	ume (µL)

CAS NO	).	COMPOUND	(µg/L or µg/Kg) U	<u>9/1</u> Q
	71-43-2	Benzene	1	U
	108-88-3	Toluene	4	
	100-41-4	Ethylbenzene	1	U
	1330-20-7	Xylene (total)	59	

EPA	SAMPLE	NO.
-----	--------	-----

HIMW-026D

Lab Name: PACE ANALY	TICAL	Contract		
Lab Code: 10473	Case No.: KEY-U	KS SAS	Nc.:	SDG No.: KEY-URS209
Matrix: (soil/water)	WATER		Lab Sample ID:	1609J84-002B
Sample wt/vol:	1000 (g/mL)	<u>n.L.</u>	Lab File ID:	R36015.D
Level: (low/med)	LOW		Date Received:	09/22/16
<pre>% Moisture:</pre>	Decanted:(Y/N)	N	Date Extracted:	09/23/16
Concentrated Extract	Volume: 1000 (	μ <b>L</b> )	Date Analyzed:	09/27/16
Injection Volume:	: <u>1</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>µg</u>	<u>/</u> L Q
91-20-	3 Naphthalene	260 140	×D
91-57-	6 2-Methylnaphthalene	69	
208-96-	8 Acenaphthylene	44	
83-32-	Acenaphthene	3	J
86-73-	7 Fluorene	10	
85-01-	8 Phenanthrene	12	1
120-12-	7 Anthracene	10	U
206-44-	0 Fluoranthene	10	U
129-00-	0 Pyrene	10	U
56-55-	Benzo(a) anthracene	10	υ
218-01-	9 Chrysene	10	υ
205-99-	2 Benzo(b)fluoranthene	10	υ
207-08-	9   Benzo(k)fluoranthene	10	U
50-32-	B Benzo(a)pyrene	10	U
193-39-	5   Indeno(1,2,3-cd)pyrene	10	05
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

12/9/16

	EPA SAMP	EPA SAMPLE NO.		
SEMIVOLAT	HIMW-026	HIMW-Q26DDL		
Lab Name: FACE ANAL)	TICAL Cont	ract:	L	
Lab Code: 19478	Case No.: KEY-URS	SAS No.:	SDG No.:	KEY-VRS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-0	02BDL
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	R36061.D	
Level: (low/med)	LOW	Date Received:	09/22/16	
<pre>% Mcisture:</pre>	Decanted: (Y/N) N	Date Extracted:	09/23/16	
Concentrated Extract	Volume: 1000 (µL)	Date Analyzed:	10/01/16	
Injecticn Volume:	<u>1</u> (µL)	Dilution Factor:	5.00	
GPC Cleanup: (Y/N)	<u>n</u> pH:	Extraction: (Type	) CONT	
		CONCE	NTRATION UN	ITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg)	µg/L Q
91-20-3	Naphthalene		260	D
91-57-6	2-Methylpaphthalene	1 1 mm 1 1 1 mm 1 1 1 mm 1 1 1	89	D
208-96-8	Acenauhthylene		51	D
200 90 0	Aconaphthene		50	U
96-73-7	Fluorene		11	DJ
85-01-8	Phenanthrene	(434-00 III III III III III III III III III	12	DJ
120-12-7	Anthracene		50	U
206-44-0	Fluoranthen		50	U
129-00-0	Pyrete		50	U
56-55-3	Benzo (a) anthracene		50	U
218-01-9	Chrysene		50	U
205-99-2	Benzo (b) fluoranthene		50	U
203 79 2	Benzo (k) fluoranthene		50	υ
50-32-9	Benzo (a) pyrene		50	U
193_30_5	Indeno (1, 2, 3-cd) pyrene		50	υ
53-70-3	Dibenzo (a, b) anthracene		50	U I
101-24-2	Banzo (a, h, i) parvlene	X	50	Ū
131-24-2	Denzo (y, n, 1/ per yrene			1

(1) Cannot be separated from Diphenylamine

12/12/16

OLM04.2

#### EPA SAMPLE NO.

HIMW-027S

Lab Name:	PACE ANALYI	ICAL	Cont	ract:			
Lab Code:	10478	Case No.:	KEY-URS SA	AS No.: _		SDG No.:	KEY-URS209
Matrix: (so	il/water)	WATER		Lab Sa	ample ID:	<u>1609J84-00</u>	07A
Sample wt/v	ol: <u>5</u>	(g/mL)	) <u>MIL</u>	Lab Fi	ile ID:	6\F81360.I	2
Level: (1	ow/med)	LOW		Date B	Received:	09/22/16	
% Moisture:	not dec.			Date A	Analyzed:	09/24/16	
GC Column:	DB-624	ID:	0.18 (mm)	Diluti	ion Factor:	1.00	
Soil Extrac	t Volume:		(µL)	Soil J	Aliquot Volu	ne ozrane i mini	(µL)

CAS NO.		COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
71	-43-2	Benzene	17	
108	- 38-3	Toluene	8	
100	-41-4	Ethylbenzene	270 290	=D
1330	-20-7	Xylene (total)	200 330	D

12/9/15
	14		EPA SAMPLE NO.
VOLATI	LE ORGANICS ANALYSIS DATA	SHBET	HIMW-027SDL
Lab Name: PACE ANA	LYTICAL Contr	act:	
Lab Code: <u>10478</u>	Case No.: <u>KEY-URS</u> SAS	3 No.:	SDG No.: KEY-URS209
Matrix: (soil/water)	MATER	Lab Sample ID:	1609J84-007ADL
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	6\F81454.D
Level: (low/med)	LOW	Date Received:	09/22/16
% Moisture: not dec.		Date Analyzed:	09/29/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	2.00
Soil Extract Volume:	(µL)	Soil Aliquot Vol	ume (µL)
		CONCEI	VTRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) UG/L Q
	Destaura		17
/1-43-2	Benzene		
108-88-3	Toluene		e D
100-41-4	Ethylbenzene		290 D
1330-20-7	Xylene (total)		330 D
			lalle
			$\backslash$

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-027S

Lab Name: PACE ANAL	YTICAL (	Contract:	
Lab Code: 10478	Case No.: KEY-UR	SAS No.:	SDG NO.: KEY-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-007B
Sample wt/vc1:	1000 (g/mL)	mL Lab File ID:	<u>R36020.D</u>
Level: (low/med)	LOW	Date Received:	C9/22/16
% Moisture:	Decanted: (Y/N)	Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u> (p	aL) Date Analyzed:	09/27/16
Injection Volume:	<u>1</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>µg/L</u>	Q	
91-20-3	Naphthalene	490 210	ED	
91-57-6	2-Methylnaphthalene	74		
208-96-8	Acenaphthylene	3	J	
83-32-9	Acenaphthene	56		
86-73-7	Fluorene	28		
85-01-8	Phenanthrene	33		
120-12-7	Anthracene	6	J	
206-44-0	Fluoranthene	2	J	
129-00-0	Pyrene	3	J	
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	Ū	
50-32-8	Benzo (a) pyrene	10	IJ	
193-39-5	Indeno(1,2,3-cd)pyrene	10	UJ	
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

12/9/16

	1C		EPA SAMPLE	NO.
SEMIVOLAI	TILE ORGANICS ANALYSIS DAT	A SHEET	HIMW-027SDI	.1
Lab Name: PACE ANAL	YTICAL Contrac	ct:		
Lab Code: <u>10478</u>	Case No.: KEY-URS SA	S No.:	SDG No .: KE	(-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-007B	DL
Sample wt/vol:	<u>1300</u> (g/mL) <u>mL</u>	Lab File ID:	R36065.D	
Level: (low/med)	LOW	Date Received:	09/22/16	
<pre>% Moisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	09/23/16	
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	10/01/16	
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	20.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT	
		CONCEN	ITRATION UNITS	5:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) µg.	<u>/L</u> Q
91-20-3	Naphthalene		490	D
91-57-6	2-Methylnaphthalene		80	DJ
208-96-3	Acenaphthylene	/	200	U
83-32-9	Acenaphthene		49	DJ
86-73-7	Fluorene		24	DJ
85-01-8	Phenanthrene		30	DJ
120-12-7	Anthracene	/	200	υ
206-44-0	Fluoranthene		200	U
129-00-0	Pyrene	1	200	U
56-55-3	Benzo (a) anthracene		200	U
218-01-9	Chrysene		200	U
205-99-2	Benzo (b) fluoranthene		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	X	200	U
53-70-3	Dibenzo(a, h) anthracene	/ \	200	U

(1) Cannot be separated from Diphenylamine

OLM04.2

### KEY-URS209 S32 of 53

12/12/14

1A VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

HIMW-027I

Lab Name:	PACE ANALYI	ICAL	Contra	ct:	
Lab Code:	10478	Case No.:	KEY-URS SAS	No.:	SDG No.: KEY-URS208
Matrix: (so:	il/water)	WATER		Lab Sample ID:	1609141-004A
Sample wt/ve	ol: <u>5</u>	(g/mL)	ML	Lab File ID:	6\F81345.D
Level: (lo	ow/med)	LOW		Date Received:	09/21/16
t Moisture:	not dec.			Date Analyzed:	09/23/16
GC Column:	DB-624	ID:	0.18 (mm)	Dilution Factor:	1.00
Soil Extract	t Volume:		(µL)	Soil Aliquot Volu	me (µL)

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

EPA SAMPLE NO.

U	Ŧ	MIN	_	0	2	7	7
H	1	NW	_	U	2	1	T

Lab Name: PACE ANALY	TICAL Cont	ract:	L
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS203
Matrix: (soil/water)	WATER	Lab Sample ID:	1609141-004B
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	S8519.D
Level: (low/med)	LOW	Date Received:	09/21/16
<pre>% Moisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	09/22/16
Concentrated Extract	Volume: 1000 (uL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GFC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT

### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/ī or µg/Kg) <u>µg/L</u>	Q
91-20-3	Naphthalene	10	IJ
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	Ū
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	1.0	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

1A

### VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIMW-0285

Lab Name:	PACE ANALYI	ICAL	Co	ntra	et:		
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:	SDG No.:	KEY-URS209
Matrix: (so	il/water)	WATER			Lab Sample ID:	<u>1609J84-00</u>	)5 <u>A</u>
Sample wt/v	ol: <u>5</u>	(g/mL)	) <u>ML</u>		Lab File ID:	<u>6\F81358.I</u>	2
Level: (1	ow/med)	LOW			Date Received:	09/22/16	
% Moisture:	not dec.				Date Analyzed:	09/23/16	
GC Column:	DB-624	ID:	<u>0.18</u> (mr	n)	Dilution Factor:	1.00	
Soil Extrac	t Volume:		(µL)		Soil Aliquot Volu	ше	(µL)

CAS NO	•	COMPOUND	(µg/L	or	µg/Kg)	UG/L	2	
	71-43-2	Benzene			6	1		
11121 (21) (21)	108-88-3	Toluene			2			
	100-41-4	Ethylbenzene			180			
	1330-20-7	Xylene (total)			18	i.,		

### EPA SAMPLE NO.

HINW-028S

CONCENTRATION UNITS:

SEMIVOLATILE	ORGANICS	ANALYSIS	DATA	SHEET	

Lab Name: PACE ANALY	Cont	ract:	
Lab Code: <u>10478</u>	Case No.: KEY-URS	SAS No.:	SDG No.: KEY-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-005B
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File IC:	R36018.D
Level: (low/med)	LOW	Date Received:	09/22/16
8 Moisture:	Decanted:(Y/N) N	Date Extracted:	09/23/16
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	09/27/16
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:	Extraction: (Type	) CONT

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/1</u>	<u>Γ</u> Ω
91-20-3	Naphthalene	250 130	ED
91-57-6	2-Methylnaphthalene	35	
208-96-8	Acenaphthylene	1	J
83-32-9	Acenaphthene	26	
86-73-7	Fluorene	12	
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
213-01-9	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	Ū
193-39-5	Indeno(1,2,3-cd)pyrene	10	υJ
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(q,h,i)pervlene	1.0	U

(1) Cannot be separated from Diphenylamine

FORM I SV- 1

12/9/14

	EPA SAMPLE NO.			
SEMIVOLAT	HIMW-028SDI			
Lab Name: PACE ANAL	YTICAL Cont	ract:		
Lab Code: <u>10478</u>	Case No.: KEURS	SAE No.:	SUG NO .: 1	EY-URS209
Matrix: (spil/water)	WATER	Lab Sample ID:	1609384-00	5BDL
Sample wt/vol:	1000 (g/mL) <u>mL</u>	Lab File ID:	R36064.D	
Level: (low/med)	LOW	Date Received:	09/22/16	
<pre>% Mcisture:</pre>	Decanted:(Y/N) <u>N</u>	Date Extracted:	09/23/16	
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	10/01/16	
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	5.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	CONT	29
		CONCE	TEATTON UNI	TTS:
a. a. 118	CONDOLINIO	(ng/I	or ug (Kg)	
CAS NO.	COMPCOND	(104)		19/12 2
91-20-3	Naphthalene		290	
91-57-6	2-Methylnaphthalene		40	Du
208-96-8	Acenaphthylene		50	
83-32-9	Acenaphthene		28	DJ
<b>B6-73</b> -7	Flugrene		14	DJ
85-01-8	Phenanthrene		17	DJ
120-12-7	Anthracene		50	U
205-44-0	Fluoranthane		50	U
100-00-0	Purpage		50	U
<u> </u>	Reprotalanthracena		50	Ū
212-01-0	Chrycono		50	<u>u</u>
205 00 0	Bonzo (b) Eluoranthone		50	<u>-</u>
203-99-2	Bongo (k) fluorantheno		50	11
207-08-9	Benzo (x) Li uoranchene		50	0
50-32-8	Benzola/pyrene		50	
193-39-5	Indeno(1,2,3-cd)pyrene	/	50	U
53-70-3	Dibenzo(a, n) anthracene	e	50	
191-24-2	Benzo(g, h, 1) per Xlene		90	

(1) Cannot be separated from Diphenylamine

OLM04.2

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### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

### EPA SAMPLE NO.

HIMW-0281

Lab Name: PACE ANALY	FICAL Contra	ct:	0
Lab Code: <u>10478</u>	Case No.: KEY-URS SAS	No.:	SDG NO.: KEY-URS209
Matrix: (soil/water)	WATER	Lab Sample ID:	1609J84-006A
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	6\F81359.D
Level: (low/med)	LOW	Date Received:	09/22/16
* Moisture: not dec.		Date Analyzed:	09/23/16
GC Column: DB-624	ID: 0.18 (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

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

			1C			EPA SAMFLE NO.
	SEMIVOLAT	ILE ORGA	NICS ANAI	YSIS	DATA SHEET	HIMW-028I
Lab Name:	PACE ANALY	TICAL		Cont	.ract:	
Lab Code: <u>1</u>	0478	Case	No.: <u>KEY</u> -	URS	SAS No.:	SDG No.: KEY-URS209
Matrix: (so	il/water>	WATER			Lab Sample ID:	1609J84-006B
Sample wt/v	ol:	1000	(g/mL)	ml	Lab File ID:	R36019.D
Level: (	low/med)		LOW		Date Received:	09/22/16
% Moisture:		Decante	d:(Y/N)	N	Date Extracted:	09/23/16
Concentrate	d Extract	Volume:	1000	(μL)	Date Analyzed:	09/27/16
Injection V	olume:	1	(µL)		Dilution Factor:	1.00
GPC Cleanup	): (Y/N)	N	pH: _		Extraction: (Type	e) <u>CONT</u>
					CONC	ENTRATION UNITS:
CAS NO		COMP	JUND		(ug/)	Lor µg/Kg) µg/L Q

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	Benzc(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	UJ
53-70-3	Dibenzo(a, h) anthracene	10	U
191-24-2	Benzo(g,h,i)pervlene	10	U

(1) Cannot be separated from Diphenylamine

CLM04.2

12/2/16

1A VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

FB-092316

Lab Name:	PACE ANALYI	ICAL	Co	ontrac	:t:			
Lab Code:	10478	Case No.:	KEY-URS	SAS 1	No.:		SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER	ξ.	1	Lab Samp	le ID:	<u>1609K78-00</u>	2A
Sample wt/v	ol: <u>5</u>	(g/mL)	ML	J	Lab File	ID:	<u>6\F81363.</u>	2
Level: (le	ow/med)	LOW		I	Date Rec	eived:	09/23/16	
<pre>% Moisture:</pre>	not dec.			I	Date Ana	lyzed:	09/24/16	
GC Column:	DB-624	ID:	<u>0.18</u> (m	m) I	Dilution	Factor:	1.00	
Soil Extract	t Volume:		(µL)	5	Soil Alie	quot Volu	mə	(µL)

CZ	AS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
10000	71-43-2	Benzene	1	U
1	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
	01101101200			

FB-092316

Lab Name: PACE ANAL	YTICAL	Contract:	
Lab Code: <u>1047</u> 권	Case No.: <u>KEY-U</u> F	RS SAS No.:	SDG No.: KEY-URS208
Matrix: (soil/water)	WATER	Lab Sample ID:	1609K78-002B
Sample wt/vol:	<u>1000</u> (g/mL)	<u>mL</u> Lab File ID:	R36023.D
Level: (low/med)	LOW	Date Received:	09/23/16
% Moisture:	Decanted: (Y/N)	N Date Extracted:	09/23/16
Concentrated Extract	: Volume: <u>1000</u> (µ	1L) Date Analyzed:	09/27/16
Injection Vclume:	<u>1</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) µg/L	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	i 10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthere	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	05
53-70-3	Dibenzo(a,h)anthracene	10	σ
191-24-2	Benzo(g,h,i)perylene	10	υ

(1) Cannot be separated from Diphenylamine

FORM I SV- 1

12/8/16

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB091616

Lab Name:	PACE ANALY	TICAL		Contra	ct:		
Lab Code:	10478	Case No.:	KEY-UR	s sas	No.:	SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER			Lab Sample ID:	1609E46-00	6A
Sample wt/v	ol: <u>5</u>	(g/mL	) <u>ML</u>		Lab File ID:	<u>6\F81325.D</u>	
Level: (1	ow/med)	LOW			Date Received:	09/16/16	
% Moisture:	not dec.				Date Analyzed:	09/23/16	
GC Column:	DB-624	ID:	0.18	(mm)	Dilution 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

1A VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TB20160920

Lab Name:	PACE ANALYT	ICAL	Co	ntrac	:t:	<u> </u>		
Lab Code:	10478	Case No.:	KEY-URS	SAS 1	No.:		SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER		1	Lab Sampi	le ID:	<u>1609H36-00</u>	5A
Sample wt/v	ol: <u>5</u>	(g/mL)	ML	1	Lab File	ID:	6\F81367.D	
Level: (1	ow/med)	LOW		1	Date Reco	eived:	09/20/16	
t Moisture:	not dec.			I	Date Anal	lyzed:	09/24/16	
GC Column:	DB-624	ID:	<u>0.18</u> (mm	n) I	Dilution	Factor:	1.00	
Soil Extrac	t Volume:		(JTL)	2	Soil Alio	quot Volu	ne	(µL)

CAS NO.		COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
7	1-43-2	Benzene	1	U
10	8-88-3	Toluene	1	U
10	0-41-4	Ethylbenzene	1	U
133	0-20-7	Xylene (total)	1 1	U

1A VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TB20160921

Lab Name:	PACE ANALYI	ICAL	Co	ontract	t: <sup>]</sup>		
Lab Code:	10478	Case No.:	KEY-URS	SAS N	o.:	SDG No.:	KEY-URS208
Matrix: (so	il/water)	WATER		L	ab Sample ID:	1609141-00	<u>BA</u>
Sample wt/v	ol: <u>5</u>	(g/mL)	ML	L	ab File ID:	<u>6\F81349.D</u>	
Level: (1	ow/med)	LOW		D	ate Received:	09/21/16	
<pre>% Moisture:</pre>	not dec.			D	ate Analyzed:	09/23/16	
GC Column:	DB-624	ID:	<u>0.18</u> (m	<b>m)</b> D.	ilution Factor:	1.00	ta.
Soil Extract	t Volume:		(µL)	S	oil Aliquot Volu	ine	(µL)

CAS NO	o.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
i	71-43-2	Benzene	1	U
4 - 128 - 12	108-88-3	Toluene	1	U
	100-41-4	Ethylbenzene	1	U
	1330-20-7	Xylene (total)	1	U

## ATTACHMENT B

## **SUPPORT DOCUMENTATION**

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# CHAIN-OF-CUSTODY / Analytical Request Document

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately HEY-UFS 208	Section C Page: of	ar banks more momentan. 2082739	Undovist Company Name: REGULATORY AGENCY		Pare Quota Reference	l God Herr of a Manager. Site Location Stele	176048 00004 Pade Proline # STATE NY	Requested Analysis Filtered (Y/N)	COLLECTED Preservatives Z NN		APLE TEMP AT C PLE TEMP AT C PLE TEMP AT C PLC PLC PLC PLC PLC PLC PLC PL		11 11 11 11 11 11 11 11 11 11 11 11 11		13351742 2 XX	V 13051174 2 2 2 1 XX		Privile 2 2 X	BY AFFILIATION DATE TIME ACCOUNTIONS DATE TIME SAMPLE CONDITIONS	22 K. HE. OM 9/16/16 1410 / 2/1 1/ 1/ 1/ 2. 4	( 9/16/16/5:10 / 10.0 9/10/10 5:10	SAMPLER NAME AND SIGNATURE	
CHAIN-OF-CI The Chain-of-Custody is	Section B Required Project Information	Report To. Peter Fair banks	CODY TO: JON SUN dovist		Purchase Order No.:	Project Name, Donal Good Herris Rad	Proceeding 2.0. 11176048. 00004		codes 원 요. CoulECTED		의 고등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등				1335	A A A 13021		WT PIIGIC		Metropoland Articom 3/16/14	Coll Land all all all all all all all all all al	BIGINIAL SAMPLER NAME AND SIGNATU	PRINT Name of SAMPLE
Pace Analytical*	Section A Required Client Information:	Company AECOM	Address:	T	Jon. Sundquister accomen	716-923-1207	Hoguested Due Data Art Colo		Section D Matrix Required Cliant Information MATRIX	Driftwing W. Water Waste Vater Product Soli/Solid	SAMPLE ID Vin (A.Z. n.9./-) Air Sample (Ds MUST BE UNIQUE Tissue Other	171 MIL-14-F	121 + MW + 2	3 41MW- 13I	4 HIMM- 205	· HINN / JOH	7	11 TB 091616	ADDITIONAL COMMENTS				•

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# CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical"		The Chain-of-Custody is	a LEGAL DOCI	JMENT All relevant	fields must be comple	ted accurately	$\mathbf{X}$	EY-UR	S 208
Section A Required Cilent Information	Section B Required Project information		Section C				Page:	) of	
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			Address	,		T NPDES			UC WATER
JON. SUNDAVISTO ACCOM	Purchase Order No.:		Pace Cuote Reterence:				L-RCRA	C OTHER	
716-923-1207 Fax	Project Name, ONAL (NA)	temosterd	Pace Project Manager			Site Location			
Requested Due Date (TAT: Stanla Q	Proved Number 92.0.111769	8.00004	Pace Protite #:			STATE.	ン		
					Requeste	d Analysis Filter	(NIN) pa		
Section D Matrix C Required Client Information MATRIX /	Codes Cooper Cooper CO	LECTED		<sup>D</sup> reservatives	1 N /A			g	
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PRINT Name of SAMPLER: MEDIAN DA. SCOL

SAMPLER NAME AND SIGNATURE

ORIGINAL

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# CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical		The Chain-of-Custody	Is a LEGAL DOC	JMENT All relevant fi	elds must be complet	ed accurately.	7	D'	YU	
Section A Required Chent Information:	Section B Required Protect Information:		Section C				Page:			25
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716 - 923 - 120th	Project Harry Owal Gr	d Henristal	Pace Project Manager:			Site Location				
Requested Due Date AT	Project Number 16 04 11920. 1117	6088. 000 04	Pere Profile #	-		STATE.	₹		Ser and	
					Requested	Analysis Filter	(N/N) pa		and there	
Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		Dreservatives	1 N A			1	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
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"Important Note, By signing this form y	ou are accepting Pace's NET 30 day payment terms	and agreeting to la ++ charge-s of 1.5% per i	month for any involces	i no' paid u'thin 30 days					ev.07, 15-May	2007

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CHAIN-OF-CHETONY /

Pace Long Island

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

### SDG NARRATIVE FOR VOLATILE ORGANICS SAMPLES RECEIVED: 9/16/16 - 9/23/16 SDG #: KEY-URS208

For Sample(s):

HIMW-08S	HIMW-015D	HIMW-022
HIMW-08D	HIMW-015I	TB20160921
HIMW-08I	HIMW-027I	DUP20160922
HIMW-012S	HIMW-025	HIMW-5S
TB20160920	HIMW-023	FB-092316
HIMW-024		
	HIMW-08S HIMW-08D HIMW-08I HIMW-012S TB20160920 HIMW-024	HIMW-08SHIMW-015DHIMW-08DHIMW-015IHIMW-08IHIMW-027IHIMW-012SHIMW-025TB20160920HIMW-023HIMW-024HIMW-024

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

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

Sample HIMW-08I was submitted for matrix spike/ matrix spike duplicate (MS/MSD) analysis. All percent recovery and RPD limits were met. Lab fortified blanks were analyzed, and recoveries indicate good method efficiency.

In the initial calibrations, average response factors were employed.

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

Date Reported: October 31, 2016

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Ursula Middel Quality Analyst

### 5B SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name:	PACE ANA	ALYTICAL		Contract:		
Lab Code:	10478	Case No.:	KEY-URS	SAS No.:	SDG No.:	KEY-URS208
Lab File II	: <u>R3600</u>	D7.D		DFTPP Injection	Date:	09/26/16
Instrument	ID: <u>HP</u>	597 <u>3</u> R		DFTPP Injection	Time:	23:30

12 C		% RELATI	IVE .
m/e	ION ABUNDANCE CRITERIA	ABUNDAN	CE
51	30.0 - 60.0% of mass 198	31.2	
68	Less than 2% of mass 69	0.0 (0.0	))1
69	Mass 69 relative abundance	33.4	
70	Less than 2% of mass 69	0.2 (0.5	5)1
127	40.0 - 60.0% of mass 198	44.6	
197	Less than 1% of mass 198	0.0	-
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.2	
275	10.0 - 30.0% of mass 198	24.0	
365	Greater than 1% of mass 198	2.3	
441	Present, but less than mass 443	14.1	
442	40.0 - 110.0% of mass 198	. 95.8	
443	17.0 - 23.0% of mass 442	19.2 (20.	0)2
1-Value	is % mass 69	2-Value is % mass 442	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA	LAB	LAB	DATE	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	SSTD025	SSTD025	R38008.D	09/26/16	23:49
02	MB-58331	MB-58331	R38009.D	09/27/16	0:17
03	LFB-58331	LFB-58331	R36010.D	09/27/16	0:45
04	HIMW-025	1609141-005B	R36011.D	09/27/18	1:13
05	HIMW-022	1609 41-007B	R38013.D	09/27/16	2:09
06	DUP20160922	1809J97-001B	R36021.D	09/27/16	5:50
07	HIMW-5S	1609K78-001B	R36022.D	09/27/16	6:17
08	FB-092316	1809K78-002B	R36023.D	09/27/16	6:45

page <u>1</u> of <u>1</u>

FORM V SV

OLM04.2

### 5B SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name:	PACE A	NALYTICAL		Contract:	<u> </u>	
Lab Code:	10478	Case No.:	KEY-URS	SAS No.:	SDG No.:	KEY-URS208
Lab File :	ID: <u>R360</u>	<u>)58.D</u>		DFTPP Injection	Date:	10/01/16
Instrument	tID: <u>H</u>	IP5973R		DFTPP Injection	Time:	3:25

		% RELATIVE
m/e	ION ABUNDANCE CRITERIA	ABUNDANCE
51	30.0 - 60.0% of mass 198	32.8
68	Less than 2% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	34.7
70	Less than 2% of mass 69	0.1 (0.4)1
127	40.0 - 60.0% of mass 198	45.4
197	Less than 1% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	23.6
365	Greater than 1% of mass 198	1.9
441	Present, but less than mass 443	11.5
442	40.0 - 110.0% of mass 198	78.8
443	17.0 - 23.0% of mass 442	16.4 (20.8)2
1-Value	a is % mass 69 2-Value is % mass	5 442

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

ſ	EPA	LAB	LAB	DATE	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	SSTD025	SSTD025	R36059.D	10/01/16	3:44
02	HIMW-023	1609141-008B	R36060 D	10/01/16	4:12
03	DUP20160922DL	1609J97-001BDL	R36066.D	10/01/18	6:58

## page <u>1</u> of <u>1</u>

OLM04.2

### SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	PACE ANALY	TICAL		Co	ontract	:	·	
Lab Code:	10478	Case No.:	KEY-URS	SAS	No.:		SDG No.:	KEY-URS208
Instrument 1	ID: <u>HP597</u>	'3R	Calibrat	cion Da	ate: <u>9/2</u>	6/2016	Time: <u>2</u>	3:49
Lab File ID:	R36008.1	2		Init.	Calib.	Date(s):	07/28/16	07/28/16
EPA Sample N	No. (SSTD050	##): <u>ss</u>	D025	Init.	Calib.	Times:	18:58	21:41
GC Column:	Rxi-5SILMS		ID: <u>0.25</u>	(mm)				

			MIN		MAX
COMPOUND	RRF	RRF50	RRF	€D	\$D
Naphthalene	0.926	0.988	0.700	6.7	20.0
2-Methylnaphthalene	0.710	0.740	0.400	4.3	20.0
Acenaphthylene	1.658	1.721	0.900	3.8	20.0
Acenaphthene	1.098	1.147	0.900	4.5	20.0
Fluorene	1.280	1.398	0.900	9.2	20.0
Phenanthrene	1.037	1.106	0.700	6.6	20.0
Anthracene	1.074	1.164	0.700	8.3	20.0
Fluoranthene	1.198	1.282	0.600	7.0	20.0
Pyrene	1.194	1.117	0.600	-6.5	20.0
Benzo(a)anthracene	1.225	1.158	0.800	-5.4	20.0
Chrysene	1.083	0.996	0.700	-8.0	20.0
Benzo(b)fluoranthene	1.389	1.445	0.700	4.0	20.0
Benzo(k)fluoranthene	1.118	1.181	0.700	5.7	20.0
Benzo(a)pyrene	1.180	1.226	0.700	3.9	20.0
Indeno(1,2,3-cd)pyrene	0.850	1.053	0.500	23.9	20.0
Dibenzo(a,h)anthracene	0.781	0.865	0.400	10.7	20.0
Benzo(g,h,i)perylene	0.756	0.789	0.500	4.4	20.0

All other compounds must meet a minimum RRF of 0.010.

FORM VII SV- 1

KEY-URS208 A363 of 409

7C

### 7C

### SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	PACE ANALY	TICAL		Contract	:		
Lab Code:	<u>10478</u>	Case No.:	KEY-URS	SAS No.:		SDG No.:	KEY-URS208
Instrument 3	ID: <u>HP597</u>	'3R	Calibrat	ion Date: 10/	1/2016	Time: 3	3:44
Lab File ID:	R36059.1	2		Init. Calib.	Date(s):	07/28/16	07/28/16
EPA Sample N	No.(SSTD050	##): <u>SS</u>	D025	Init. Calib.	Times:	<u>18:58</u>	21:41
GC Column:	Rxi-5SILMS		ID: 0.25	(mm)			

		1	MIN	l i	MAX
COMPOUND	RRF	RRF50	RRF	₽D	<del>ያ</del> D
Naphthaiene	0.926	1.007	0.700	8.7	20.0
2-Methylnaphthalene	0.710	0.744	0.400	4.9	20.0
Acenaphthylene	1.658	1.728	0.900	4.2	20.0
Acenaphthene	1.098	1.165	0.900	6.1	20.0
Fluorene	1.280	1.400	0.900	9.4	20.0
Phenanthrene	1.037	1.141	0.700	10.0	20.0
Anthracene	1.074	1.166	0.700	8.5	20.0
Fluoranthene	1.198	1.316	0.600	9.9	20.0
Pyrene	1.194	1.109	0.600	-7.1	20.0
Benzo(a)anthracene	1.225	1.146	0.800	-6.4	20.0
Chrysene	1.083	0.986	0.700	-8.9	20.0
Benzo(b)fluoranthene	1.389	1.412	0.700	1.6	20.0
Benzo(k)fluoranthene	1.118	1.213	0.700	8.5	20.0
Benzo(a)pyrene	1.180	1.239	0.700	5.0	20.0
Indeno(1,2,3-cd)pyrene	0.850	1.114	0.500	31.1	20.0
Dibenzo(a,h)anthracene	0.781	0.932	0.400	19.3	20.0
Benzo(g,h,i)perylene	0.756	0.832	0.500	10.1	20.0

All other compounds must meet a minimum RRF of 0.010.

FORM VII SV- 1

OLM04.2



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

### SDG NARRATIVE FOR VOLATILE ORGANICS SAMPLES RECEIVED: 9/22/16 SDG #: KEY-URS209

For Sample(s):

HIMW-026I	HIMW-028S
HIMW-026D	HIMW-028I
HIMW-05I	HIMW-027S
HIMW-05D	

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

All Q. C. data and calibrations met the requirements of the method 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. Lab fortified blank(s) was/were analyzed, and recoveries indicate good method efficiency.

Sample(s) was/were reanalyzed at dilutions as required to keep the concentration of targeted analytes within the calibration range. Both sets of data are reported, if dilutions were performed. The dilutions were distinguished with the suffix "DL".

In the initial calibrations, average response factors were employed.

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

Date Reported: October 31, 2016

\*\*\*\*\*\*\*\* Intelde

Pace Long Island

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

### SDG NARRATIVE FOR SEMIVOLATILE ANALYSES SAMPLES RECEIVED: 9/22/16 SDG #: KEY-URS209

For Samples:

HIMW-026I HIMW-026D HIMW-05I HIMW-05D HIMW-028S HIMW-28I HIMW-027S

The above samples were analyzed for the STARS list of base-neutral extractables by EPA method 8270D and reported with the deliverables of NYSDEC ASP Rev. 2005, Category B.

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

No sample was submitted for matrix spike/matrix spike duplicate (MS/MSD) analysis. Lab fortified blanks (LFB) were analyzed and results indicate good method efficiency.

Sample HIMW-05D had a low surrogate recovery for 2-Fluorobiphenyl in the sample as well as its dilution.

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

In the continuous calibration verifications (CCV), some compounds had variability above 20%. Results for these analytes are regarded estimated and are flagged with the qualifier "Z".

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

Date Reported: October 6, 2016

Joann Slavin General Manager

### 5B SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name:	PACE ANALYTICAL		Contract:	
Lab Code: 1	0478 Case No.	KEY-URS	SAS No.: SDG No.:	KEY-URS209
Lab File ID:	R36007.D	22	DFTPP Injection Date:	09/26/16
Instrument ]	D: <u>HP5973R</u>		DFTPP Injection Time:	23:30

-		% RELATIVE
m/e	ION ABUNDANCE CRITERIA	ABUNDANCE
51	30.0 - 60.0% of mass 198	31.2
68	Less than 2% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	33.4
70	Less than 2% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	44.6
197	Less than 1% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	24.0
365	Greater than 1% of mass 198	2.3
441	Present, but less than mass 443	14.1
442	40.0 - 110.0% of mass 198	95.8
443	17.0 - 23.0% of mass 442	19.2 (20.0)2
1-Value	e is % mass 69 2-Value is % m	ass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

Γ	EPA	LAB	LAB	DATE	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	SSTD025	SSTD025	R36008.D	09/26/16	23:49
02	MB-56331	MB-58331	R36009.D	09/27/16	0:17
03	LFB-56331	LFB-56331	R36010.D	09/27/16	0:45
04	HIMW-0281	1609J84-001B	R36014.D	09/27/16	2:36
05	HIMW-026D	1609J84-002B	R36015.D	09/27/16	3:04
06	HIMW-051	1609J84-003B	R36016.D	09/27/16	3:32
07	HIMW-05D	1609J84-004B	R36017.D	09/27/16	3:59
08	HIMW-026S	1609J84-005B	R36018.D	09/27/16	4:27
09	HIMW-026I	1609J84-006B	R36019.D	09/27/16	4:55
10	HIMW-027S	1609J84-007B	R36020.D	09/27/16	5:22

page <u>1</u> of <u>1</u>

FORM V SV

OLMC4.2

7D

### SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	PACE ANALY	TICAL			Co	ontract	:		
Lab Code:	10478	Case No.	: <u>KE</u>	Y-URS	SAS	No.:		SDG No.:	KEY-URS209
Instrument 1	ED: <u>HP597</u>	3R	Ca	librat	ion Da	ate: <u>9/2</u>	6/2016	Time:	23:49
Lab File ID:	<u>R36008.</u>	2			Init.	Calib.	Date(s):	07/28/16	07/28/16
EPA Sample N	10. (SSTD <b>0</b> 50	##): <u>ss</u>	TD02	5	Init.	Calib.	Times:	18:5 <b>8</b>	<u>21:41</u>
GC Column:	Rxi-5SILMS		ID:	<u>0.25</u>	(mm)				

···		1	MTN		YAM
COMPOUND	RRF	RRF50	RRF	€D	%D
Naphthalene	0.926	0.988	0.700	6.7	20.0
2-Methylnaphthalene	0.710	0.740	0.400	4.3	20.0
Acenaphthylene	1.658	1.721	0.900	3.8	20.0
Acenaphthene	1.098	1.147	0.900	4.5	20.0
Fluorene	1.280	1.398	0.900	9.2	20.0
Phenanthrene	1.037	1.106	0.700	6.6	20.0
Anthracene	1.074	1.164	0.700	8.3	20.0
Fluoranthene	1.198	1.282	0.600	7.0	20.0
Pyrene	1.194	1.117	0.600	-6.5	20.0
Benzo(a)anthracene	1.225	1.158	0.800	-5.4	20.0
Chrysene	1.083	0.996	0,700	-8.0	20.0
Benzo(b)fluoranthene	1.389	1.445	0.700	4.0	20.0
Benzo(k)fluoranthene	1.118	1.181	0.700	5.7	20.0
Benzo(a)pyrene	1.180	1.226	0.700	3.9	20.0
Indeno(1,2,3-cd)pyrene	0.850	1.053	0.500	23.9	> 20.0
Dibenzo(a,h)anthracene	0.781	0.865	0.400	10.7	20.0
Benzo(g,h,i)perylene	0.756	0.789	0.500	4.4	20.0

All other compounds must meet a minimum RRF of 0.010.

FORM VII SV- 1

OLM04.2

## APPENDIX A DATA USABILITY SUMMARY REPORT FOURTH QUARTER 2016

## 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

FEBRUARY 2017

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### TABLES

(Following Text)

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

## APPENDICES

(Following Tables)

Attachment A Validated Form 1's

Attachment B Support Documentation

### I. INTRODUCTION

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

This DUSR discusses the usability of the analytical data for twenty-nine (29) groundwater samples, two (2) field duplicates, two (2) matrix spike/matrix spike duplicate (MS/MSD) pairs, one (1) field blank, and six (6) trip blanks collected by URS personnel on December 13-22, 2016. Six (6) of the groundwater samples (i.e., HIMW-26I, -26D, -27S, -27I, -28S, and -28I) were collected as part of the oxygen treatment system design evaluation, while the remaining twenty three (23) groundwater samples were collected as part of the 2016 4<sup>th</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 and
- Polynuclear aromatic hydrocarbons (PAHs) USEPA Method SW8270D.

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

- Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Rev. 4, October 2014 and
- Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22, Rev. 4, August 2008.

The limited data validation included a review of completeness of all required deliverables; holding times; quality control (QC) results (instrument tunes, calibration standards, blanks, matrix spike recoveries,

field duplicate analyses, laboratory control sample (LCS) recoveries, and surrogate/internal standard recoveries) to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

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

### III. DATA DELIVERABLE COMPLETENESS

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

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

All samples were received by the laboratory intact, properly preserved, and under proper chain-ofcustody (COC), except for the following instance.

The laboratory incorrectly transcribed the field duplicate ID for DUP20161221 from the COC to their LIMS system (i.e., DUP2016221). The sample ID was manually revised during the data review.

All samples were analyzed/extracted within the required holding times.

### V. NON-CONFORMANCES

The PAH continuing calibrations (CCAL) exhibited percent difference exceedances (i.e., >20% D) for benzo(k)fluoranthene, dibenz(a,h,)anthracene, and/or indeno(1,2,3-cd)pyrene. The associated results for

the affected samples were qualified "UJ". Documentation supporting the qualification of data (i.e., Form 5 and 7) is presented in Attachment B.

### VI. SAMPLE RESULTS AND REPORTING

All sample results were reported in accordance with method requirements and were adjusted for sample size and dilution factors. Results detected below the quantitation limits were qualified 'J' by the laboratory, while results reported from secondary dilution analyses were qualified 'D' during the data review.

Field duplicates were collected from monitoring well locations HIMW-05I and HIMW-025, 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 'UJ' during the data validation, which should be considered conditionally usable. URS does not recommend the re-collection of any samples at this time.

**Prepared By:** 

Peter R. Fairbanks, Senior Chemist

Date: 2/23/17 Date: 2/23/17

**Reviewed By:** 

George E. Kisluk, Senior Chemist

### DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- D The sample results are reported from a separate secondary dilution analysis.
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
#### Page 1 of 7

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

Location ID			HIMW-003D	HIMW-0031	HIMW-003S	HIMW-005D	HIMW-005I
Sample ID			HIMW-03D	HIMW-03I	HIMW-03S	HIMW-05D	DUP20161221
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (	ft)		•	-	-	•	•
Date Sampled		-	12/16/16	12/16/16	12/16/16	12/20/16	12/21/16
Parameter	Units	Criteria*					Field Duplicate (1-1)
Volatile Organic Compounds	Ι			2			
Benzene	UG/L	•	1.0 U	1.0 U	1.0 U	1.0 U	2.0
Ethylbenzene	UG/L	-	1.0 U				
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.8	1.0 U
Xylene (total)	UG/L	-	1.0 U	1.0 U	1.0 U	54.5	69.1
Total BTEX	UG/L	100	ND	ND	ND	56.3	71.1
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	•	5.0 U	5.0 U	5.0 U	187 D	253 D
Acenaphthene	UG/L	•	5.0 U	5.0 U	5.0 U	3.5 J	12.0
Acenaphthylene	UG/L	•	5.0 U	5.0 U	5.0 U	50.6	214 D
Anthracene	UGAL	·	5.0 U	5.0 U	5.0 U	5.0 U	2.6 J
Benzo(a)anthracene	UG/L	•	5.0 U				
Benzo(a)pyrene	UG/L	·	5.0 U				
Benzo(b)fluoranthene	UG/L	•	5.0 U				
Benzo(g,h,i)perylene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ
Benzo(k)fluoranthene	UG/L	-	5.0 U				
Chrysene	UG/L		5.0 U				
Dibenz(a,h)anthracene	UG/L	•	5.0 U				
Fluoranthene	UGAL		5.0 U				
Fluorene	UG/L	•	5.0 U	5.0 U	5.0 U	7.9	28.5
Indeno(1,2,3-cd)pyrene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ
Naphthalene	UG/L	·	5.0 U	5.0 U	5.0 U	1,800 D	1,350 D
Phenanthrene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 U	20.1
Pyrene	UG/L		5.0 U				
Total Polynuclear Aromatic Hydrocarbons	UGAL	100	ND	ND	ND	2,049	1,880.2

\*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

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

#### Page 2 of 7

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

Location ID			HIMW-005I	HIMW-005S	HIMW-008D	HIMW-008I	HIMW-008S
Sample ID			HIMW-05I	HIMW-05S	HIMW-08D	HIMW-08I	HIMW-08S
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (	ft)		-	1	•		•
Date Sampled			12/21/16	12/21/16	12/15/16	12/15/16	12/15/16
Parameter	Units	Criteria*			а А		11
Volatile Organic Compounds							
Benzene	UG/L	•	1.7	1.0 U	1.0 U	1.0 U	84.2
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	11.7
Toluene	UG/L	•	1.0 U	1.0 U	1.0 U	1.0 U	18.9
Xylene (total)	UG/L	•	69.3	1.0 U	1.0 U	1.0 U	22.1
Total BTEX	UG/L	100	71	ND	ND	ND	
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	245 D	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthene	UG/L	•	12.4	5.0 U	5.0 U	5.0 U	1.5 J
Acenaphthylene	UG/L	-	217 D	5.0 U	5.0 U	5.0 U	2.2 J
Anthracene	UG/L	-	2.8 J	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UGAL	-	5.0 U				
Benzo(a)pyrene	UGAL		5.0 U				
Benzo(b)fluoranthene	UG/L	•	5.0 U				
Benzo(g,h,i)perylene	UG/L	-	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U				
Chrysene	UG/L	-	5.0 U				
Dibenz(a,h)anthracene	UG/L	•	5.0 U				
Fluoranthene	UGAL	•	5.0 U				
Fluorene	UG/L	-	28.8	5.0 U	5.0 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	•	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	·	1,370 D	5.0 U	5.0 U	5.0 U	7.4
Phenanthrene	UGAL	-	19.8	5.0 U	5.0 U	5.0 U	5.0 U
Pyrene	UGAL	•	5.0 U				
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	1,895.8	ND	ND	ND	11.1

\*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

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

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

Location ID			HIMW-012S	HIMW-013D	HIMW-013I	HIMW-013S	HIMW-014D
Sample ID		10	HIMW-12S	HIMW-13D	HIMW-131	HIMW-13S	HIMW-14D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (	ft)			-	•	-	•
Date Sampled			12/13/16	12/14/16	12/14/16	12/14/16	12/13/16
Parameter	Units	Criteria*					
Volatile Organic Compounds							
Benzene	UG/L		1.0 U	2.5	1.0 U	1.0 U	1.0 U
Ethylbenzene	UG/L	•	1.0 U				
Toluene	UG/L	•	1.0 U				
Xylene (total)	UG/L	-	1.0 U				
Total BTEX	UG/L	100	ND	2.5	ND .	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	-	5.0 U				
Acenaphthene	UG/L		5.0 U	5.0	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	5.0 U	10.3	5.0 U	5.0 U	5.0 U
Anthracene	UGAL	-	5.0 U				
Benzo(a)anthracene	UG/L	2	5.0 U				
Benzo(a)pyrene	UG/L	-	5.0 U				
Benzo(b)fluoranthene	UGAL		5.0 U				
Benzo(g,h,i)perylene	UGAL	•	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo(k)fluoranthene	UG/L	•	5.0 U				
Chrysene	UG/L		5.0 U				
Dibenz(a,h)anthracene	UG/L	÷.,	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ
Fluoranthene	UG/L	-	5.0 U				
Fluorene	UG/L	-	5.0 U				
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ
Naphthalene	UG/L	•	5.0 U				
Phenanthrene	UG/L	•	5.0 U				
Pyrene	UG/L	-	5.0 U				
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	15.3	ND	ND	ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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D - Result reported from a secondary dilution analysis.

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

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#### Page 4 of 7

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

Location ID			HIMW-0141	HIMW-015D	HIMW-015I	HIMW-020I	HIMW-020S	
Sample ID			HIMW-14I	HIMW-15D	HIMW-15I	HIMW-20I	HIMW-20S	
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Depth Interval (	ft)			-	•	•	•	
Date Sampled			12/13/16	12/14/16	12/14/16	12/19/16	12/19/16	
Parameter	Units	Criteria*						
Volatile Organic Compounds								
Benzene	UG/L		4.1	1.0 U	1.1	1.0 U	1.0 U	
Ethylbenzene	UG/L	•	1.0 U					
Toluene	UG/L	·	1.0 U					
Xylene (total)	UG/L	•	1.0 U					
Total BTEX	UG/L	100	4.1	ND	1.1	ND	ND	
Semivolatile Organic Compounds								
2-Methylnaphthalene	UG/L	•	5.0 U					
Acenaphthene	UG/L	•	7.6	5.0 U	5.0 U	5.0 U	5.0 U	
Acenaphthylene	UG/L	•	8.8	5.0 U	7.6	5.0 U	5.0 U	
Anthracene	UG/L	-	5.0 U					
Benzo(a)anthracene	UGAL	·	5.0 U					
Benzo(a)pyrene	UGAL	-	5.0 U					
Benzo(b)fluoranthene	UG/L	•	5.0 U					
Benzo(g,h,i)perylene	UG/L	•	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	
Benzo(k)fluoranthene	UG/L	·	5.0 U					
Chrysene	UG/L	•	5.0 U					
Dibenz(a,h)anthracene	UG/L	·	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	
Fluoranthene	UG/L	-	5.0 U					
Fluorene	UG/L	-	2.8 J	5.0 U	5.0 U	5.0 U	5.0 U	
Indeno(1,2,3-cd)pyrene	UG/L		5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	
Naphthalene	UG/L	•	5.0 U					
Phenanthrene	UG/L	•	2.7 J	5.0 U	5.0 U	5.0 U	5.0 U	
Pyrene	UG/L	•	5.0 U					
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	21.9	ND	7.6	ND	ND	

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

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

Location ID			HIMW-022	HIMW-023	HIMW-024	HIMW-025	HIMW-025
Sample ID		1.00.41	HIMW-22	HIMW-23	HIMW-24	DUP-121916	HIMW-25
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (	ft)		-	•		-	
Date Sampled			12/13/16	12/15/16	12/19/16	12/19/16	12/19/16
Parameter	Units	Criteria*				Field Duplicate (1-1)	
Volatile Organic Compounds				-			
Benzene	UG/L	•	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	•	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	-	1.0 U	1.0 U	1.1	1.0 U	1.0 U
Total BTEX	UG/L	100	ND	ND	1.1	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	•	5.0 U	5.0 U	2.9 J	5.0 U	5.0 U
Acenaphthene	UGAL	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthylene	UG/L	-	5.0 U	5.0 U	1.8 J	5.0 U	5.0 U
Anthracene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)pyrene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(g,h,i)perylene	UG/L		5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	UG/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	UG/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Fluorene	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L		5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Naphthalene	UG/L	·	5.0 U	5.0 U	120 D	5.0 U	5.0 U
Phenanthrene	UG/L	•	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pyrene	UG/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	ND	ND		ND	ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

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# TABLE A-1 VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS

NATIONAL GRID - REMITSTEAD INTERSECTION STREET FORMER MOR ST	NATIONAL	GRID -	- HEMPST	EAD I	NTERSE	CTION S	STREET	FORMER	MGP	SIT
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Location ID			HIMW-026D	HIMW-0261	HIMW-027I	HIMW-027S	HIMW-0281
Sample ID			HIMW-26D	HIMW-26I	HIMW-027I	HIMW-027S	HIMW-28I
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (1	ft)		-				-
Date Sampled			12/20/16	12/20/16	12/22/16	12/22/16	12/21/16
Parameter	Units	Criteria*					
Volatile Organic Compounds				2			
Benzene	UG/L	-	1.0 U	1.0 U	1.0 U	14.8	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U	1.0 U	219 D	1.0 U
Toluene	UG/L	-	6.0	1.0 U	1.0 U	5.7	1.0 U
Xylene (total)	UG/L	•	46.1	1.0 U	1.0 U	207	1.0 U
Total BTEX	UG/L	100	52.1	ND	ND		ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	•	33.6	5.0 U	5.0 U	87.1 D	5.0 U
Acenaphthene	UG/L	•	1.1 J	5.0 U	5.0 U	50.4	5.0 U
Acenaphthylene	UG/L	•	3.1 J	5.0 U	5.0 U	3.1 J	5.0 U
Anthracene	UG/L	·	5.0	5.0 U	5.0 U	8.2	5.0 U
Benzo(a)anthracene	UG/L	-	5.0 U				
Benzo(a)pyrene	UG/L	•	5.0 U				
Benzo(b)fluoranthene	UG/L	•	5.0 U				
Benzo(g,h,i)perylene	UGAL	•	5.0 UJ				
Benzo(k)fluoranthene	UG/L	-	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
Chrysene	UG/L	•	5.0 U				
Dibenz(a,h)anthracene	UG/L	••	5.0 U				
Fluoranthene	UGAL	•	5.0 U	5.0 U	5.0 U	2.9 J	5.0 U
Fluorene	UG/L	•	4.0 J	5.0 U	5.0 U	31.2	5.0 U
Indeno(1,2,3-cd)pyrene	UG/L	-	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 UJ
Naphthalene	UG/L	-	74.4	5.0 U	5.0 U	484 D	5.0 U
Phenanthrene	UGAL	•	5.3	5.0 U	5.0 U	44.2	5.0 U
Pyrene	UG/L	•	5.0 U	5.0 U	5.0 U	4.0 J	5.0 U
Total Polynuclear Aromatic Hydrocarbons	UGAL	100	126.5	ND	ND		ND

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

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# TABLE A-1VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTSNATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			HIMW-028S
Sample ID			HIMW-28S
Matrix			Groundwater
Depth Interval (	ft)		
Date Sampled	[		12/21/16
Parameter	Units	Criteria*	
Volatile Organic Compounds	[		
Benzene	UG/L	·	4.9
Ethylbenzene	UG/L		70.4
Toluene	UG/L	Ŀ	1.0 U
Xyiene (total)	UG/L	Ŀ	3.7
Total BTEX	UG/L	100	79
Semivolatile Organic Compounds			
2-Methylnaphthalene	UG/L	<u> </u>	23.7
Acenaphthene	UG/L	·	23.6
Acenaphthylene	UGAL	•	1.6 J
Anthracene	UG/L	·	3.9 J
Benzo(a)anthracene	UG/L	7	5.0 U
Benzo(a)pyrene	UGAL	•	5.0 U
Benzo(b)fluoranthene	UG/L	-	5.0 U
Benzo(g,h,i)perylene	UG/L	•	5.0 UJ
Benzo(k)fluoranthene	UG/L	•	5.0 U
Chrysene	UG/L	C ·	5.0 U
Dibenz(a,h)anthracene	UG/L	·	5.0 U
Fluoranthene	UG/L		5.0 U
Fluorene	UG/L	·	16.0
Indeno(1,2,3-cd)pyrene	UG/L	•	5.0 UJ
Naphthalene	UG/L	•	175 D
Phenanthrene	UGAL	·	21.5
Pyrene	UG/L	·	5.0 U
Total Polynuclear Aromatic	UG/L	100	265.3

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value.

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

D - Result reported from a secondary dilution analysis.

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

## TABLE A-2 VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS NATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID			FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID			20161213TB	20161215TB	20161216 TB	FB20161221	TB20161220
Matrix			Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (1	ft)		•	-			-
Date Sampled			12/13/16	12/15/16	12/16/16	12/20/16	12/20/16
Parameter	Units	Criteria*	Trip Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)	Field Błank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds							
Benzene	UG/L		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	UGAL	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	•	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total BTEX	UG/L	100	ND	ND	ND	ND	ND
Semivolatile Organic Compounds							
2-Methylnaphthalene	UG/L	•	NA	NA	NA	5.0 U	NA
Acenaphthene	UG/L	-	NA	NA	NA	5.0 U	NA
Acenaphthylene	UG/L	•	NA	NA	NA	5.0 U	NA
Anthracene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(a)anthracene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(a)pyrene	UG/L	•	NA	NA	NA	5.0 U	NA
Benzo(b)fluoranthene	UG/L	-	NA	NA	NA	5.0 U	NA
Benzo(g,h,i)perylene	UG/L	-	NA	NA	NA	5.0 UJ	NA
Benzo(k)fluoranthene	UG/L	-	NA	NA	NA	5.0 U	NA
Chrysene	UG/L	-	NA	NA	NA	5.0 U	NA
Dibenz(a,h)anthracene	UG/L	•	NA	NA	NA	5.0 U	NA
Fluoranthene	UG/L	•	NA	NA	NA	5.0 U	NA
Fluorene	UG/L	•	NA	NA	NA	5.0 U	NA
Indeno(1,2,3-cd)pyrene	UG/L		NA	NA	NA	5.0 UJ	NA
Naphthalene	UGAL	•	NA	NA	NA	5.0 U	NA
Phenanthrene	UG/L	•	NA	NA	NA	5.0 U	NA
Pyrene	UGAL	-	NA	NA	NA	5.0 U	NA
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	NA	NA	NA	ND	NA

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

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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

Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

# TABLE A-2VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTSNATIONAL GRID - HEMPSTEAD INTERSECTION STREET FORMER MGP SITE

Location ID	FIELDQC	FIELDQC		
Sample ID	1		TB20161221	TB20161222
Matrix			Water Quality	Water Quality
Depth Interval (	ft)		-	-
Date Sampled			12/21/16	12/22/16
Parameter	Units	Criteria*	Trip Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds				······
Benzene	UG/L	-	1.0 U	1.0 U
Ethylbenzene	UG/L	-	1.0 U	1.0 U
Toluene	UG/L	•	, 1.0 U	1.0 U
Xylene (total)	UG/L	•	1.0 U	1.0 U
Total BTEX	UG/L	100	ND	ND
Semivolatile Organic Compounds				
2-Methylnaphthalene	UG/L	·	NA	NA
Acenaphthene	UG/L	-	NA	NA
Acenaphthylene	UGAL	-	NA	NA
Anthracene	UG/L	-	NA	NA
Benzo(a)anthracene	UG/L	8.1	NA	NA
Benzo(a)pyrene	UG/L		NA	NA
Benzo(b)fluoranthene	UG/L	-	NA	• NA
Benzo(g,h,i)perylene	UG/L	-	NA	NA
Benzo(k)fluoranthene	UG/L	-	NA	NA
Chrysene	UG/L	-	NA	NA
Dibenz(a,h)anthracene	UG/L	•	NA	NA
Fluoranthene	UG/L	-	NA	NA
Fluorene	UG/L	-	NA	NA
Indeno(1,2,3-cd)pyrene	UG/L	·	NA	NA
Naphthalene	UG/L	·	NA	NA
Phenanthrene	UG/L	•	NA	NA
Pyrene	UG/L	•	NA	NÄ
Total Polynuclear Aromatic Hydrocarbons	UG/L	100	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. UJ - Not detected. The reported quantitation limit is an estimated value. Made By\_PRF 02/23/17; Checked By\_AMK 02/23/17

**Detection Limits shown are PQL** 

# ATTACHMENT A

# VALIDATED FORM 1'S



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-14D	Lab ID: 706	914001	Collected:	12/13/1	16 09:20	Received: 12	2/13/16 15:15	Matrix: Water	
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8	270D Prepar	ation Me	ethod: El	PA 3510C			
Acenaphthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	83-32-9	
Acenaphthylene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	UJ	5.0	1	12/19/16 09:00	12/20/16 18:11	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	u	5.0	1	12/19/16 09:00	12/20/16 18:11	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	206-44-0	
Fluorene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	UT	5.0	1	12/19/16 09:00	12/20/16 18:11	193-39-5	
2-Methylnaphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	91-20-3	
Phenanthrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:11	129-00-0	
Surrogates			1.12/17						
Nitrobenzene-d5 (S)	67	%.	21001	35-114	1	12/19/16 09:00	12/20/16 18:11	4165-60-0	
2-Fluorobiphenyl (S)	64	%.	B	43-116	1	12/19/16 09:00	12/20/16 18:11	321-60-8	
p-Terphenyl-d14 (S)	78	%.	3	3-141	1	12/19/16 09:00	12/20/16 18:11	1718-51-0	
Phenol-d5 (S)	25	%.	1	10-110	1	12/19/16 09:00	12/20/16 18:11	4165-62-2	
2-Fluorophenol (S)	37	%.	2	21-110	1	12/19/16 09:00	12/20/16 18:11	367-12-4	
2,4,6-Tribromophenol (S)	84	%.	1	0-123	1	12/19/16 09:00	12/20/16 18:11	118-79-6	
2-Chlorophenol-d4 (S)	66	%.	3	33-110	1	12/19/16 09:00	12/20/16 18:11	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	51	%.	1	6-110	1	12/19/16 09:00	12/20/16 18:11	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/19/16 15:39	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/19/16 15:39	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/19/16 15:39	108-88-3	
Xylene (Total) Surrogates	<1.0	ug/L		1.0	1		12/19/16 15:39	1330-20-7	
1,2-Dichloroethane-d4 (S)	85	%.	6	8-153	1		12/19/16 15:39	17060-07-0	
4-Bromofluorobenzene (S)	93	%.	7	9-124	1		12/19/16 15:39	460-00-4	
Toluene-d8 (S)	82	%.	6	9-124	1		12/19/16 15:39	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 706914

Sample: HIMW-14I	Lab ID: 706	914002	Collected:	12/13/1	6 10:30	Received: 12	2/13/16 15:15 M	Matrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 827	0D Prepara	ation Me	thod: EF	PA 3510C			
Acenaphthene	7.6	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	83-32-9	
Acenaphthylene	8.8	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L U	J	5.0	1	12/19/16 09:00	12/20/16 18:39	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L U	5	5.0	1	12/19/16 09:00	12/20/16 18:39	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	206-44-0	
Fluorene	2.8J	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L U	5	5.0	1	12/19/16 09:00	12/20/16 18:39	193-39-5	
2-Methylnaphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	91-20-3	
Phenanthrene	2.7J	ug/L		5.0	1	12/19/16 09:00	12/20/16 18:39	85-01-8	
Pyrene	<5.0	ug/L	10	5.0	1	12/19/16 09:00	12/20/16 18:39	129-00-0	
Surrogates			2/23/14						
Nitrobenzene-d5 (S)	76	%.	~ 3	5-114	1	12/19/16 09:00	12/20/16 18:39	4165-60-0	
2-Fluorobiphenyl (S)	77	%.	4	3-116	1	12/19/16 09:00	12/20/16 18:39	321-60-8	
p-Terphenyi-d14 (S)	87	%.	3	3-141	1	12/19/16 09:00	12/20/16 18:39	1718-51-0	
Phenol-d5 (S)	34	%.	1	0-110	1	12/19/16 09:00	12/20/16 18:39	4165-62-2	
2-Fluorophenol (S)	55	%.	2	1-110	1	12/19/16 09:00	12/20/16 18:39	367-12-4	
2,4,6-Tribromophenol (S)	85	%.	1	0-123	1	12/19/16 09:00	12/20/16 18:39	118-79-6	
2-Chlorophenol-d4 (S)	72	%.	3	3-110	1	12/19/16 09:00	12/20/16 18:39	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	72	%.	1	6-110	1	12/19/16 09:00	12/20/16 18:39	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260	DC/5030C						
Benzene	4.1	ug/L		1.0	1		12/19/16 15:19	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/19/16 15:19	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/19/16 15:19	108-88-3	
Xylene (Total)	<1.0	ug/L		1.0	1		12/19/16 15:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	79	%.	6	8-153	1		12/19/16 15:19	17060-07-0	
4-Bromofluorobenzene (S)	89	%.	7	9-124	1		12/19/16 15:19	460-00-4	
Toluene-d8 (S)	82	%.	6	9-124	1		12/19/16 15:19	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-12S	Lab ID: 706	914003	Collected:	12/13/	16 12:10	Received: 12	2/13/16 15:15 N	Aatrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82	270D Prepara	ation Me	ethod: El	PA 3510C			
Acenaphthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	83-32-9	
Acenaphthylene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	415	5.0	1	12/19/16 09:00	12/20/16 19:08	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	UJ	5.0	1	12/19/16 09:00	12/20/16 19:08	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	206-44-0	
Fluorene	<5.0	ug/L	11 00102	5.0	1	12/19/16 09:00	12/20/16 19:08	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	uJ	5.0	1	12/19/16 09:00	12/20/16 19:08	193-39-5	
2-Methylnaphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	91-20-3	
Phenanthrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:08	129-00-0	
Surrogates			2 レクトキ	N					
Nitrobenzene-d5 (S)	67	%.	3	5-114	1	12/19/16 09:00	12/20/16 19:08	4165-60-0	
2-Fluorobiphenyl (S)	69	%.	4	3-116	1	12/19/16 09:00	12/20/16 19:08	321-60-8	
p-Terphenyl-d14 (S)	74	%.	3	3-141	1	12/19/16 09:00	12/20/16 19:08	1718-51-0	
Phenol-d5 (S)	29	%.	1	0-110	1	12/19/16 09:00	12/20/16 19:08	4165-62-2	
2-Fluorophenol (S)	43	%.	2	1-110	1	12/19/16 09:00	12/20/16 19:08	367-12-4	
2,4,6-Tribromophenol (S)	84	%.	1(	0-123	1	12/19/16 09:00	12/20/16 19:08	118-79-6	
2-Chlorophenol-d4 (S)	72	%.	3	3-110	1	12/19/16 09:00	12/20/16 19:08	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	58	%.	1	6-110	1	12/19/16 09:00	12/20/16 19:08	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/19/16 14:59	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/19/16 14:59	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/19/16 14:59	108-88-3	
Xylene (Total) Surrogates	<1.0	ug/L		1.0	1		12/19/16 14:59	1330-20-7	
1,2-Dichloroethane-d4 (S)	85	%.	68	8-153	1		12/19/16 14:59	17060-07-0	
4-Bromofluorobenzene (S)	88	%.	79	9-124	1		12/19/16 14:59	460-00-4	
Toluene-d8 (S)	87	%.	69	9-124	1		12/19/16 14:59	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**

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Project: National Grid Hempstead Site

Pace Project No : 706914

Sample: HIMW-22	Lab ID: 70	6914004	Collected:	12/13/1	16 13:30	Received: 12	2/13/16 15:15	Matrix: Water	
Parameters	Results	Units	Repor	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Me	thod: EPA 8	270D Prepar	ration Me	ethod: Ef	PA 3510C			
Acenaphthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	83-32-9	
Acenaphthylene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	206-44-0	
Fluorene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	193-39-5	
2-Methylnaphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	91-20-3	
Phenanthrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/19/16 09:00	12/20/16 19:37	129-00-0	
Surrogates									
Nitrobenzene-d5 (S)	72	%.		35-114	1	12/19/16 09:00	12/20/16 19:37	4165-60-0	
2-Fluorobiphenyl (S)	60	%.		43-116	1	12/19/16 09:00	12/20/16 19:37	321-60-8	
p-Terphenyl-d14 (S)	71	%.	:	33-141	1	12/19/16 09:00	12/20/16 19:37	1718-51-0	
Phenol-d5 (S)	30	%.		10-110	1	12/19/16 09:00	12/20/16 19:37	4165-62-2	
2-Fluorophenol (S)	45	%.		21-110	1	12/19/16 09:00	12/20/16 19:37	367-12-4	
2,4,6-Tribromophenol (S)	70	%.		10-123	1	12/19/16 09:00	12/20/16 19:37	118-79-6	
2-Chlorophenol-d4 (S)	71	%.		33-110	1	12/19/16 09:00	12/20/16 19:37	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%.		16-110	1	12/19/16 09:00	12/20/16 19:37	2199-69-1	
8260C Volatile Organics	Analytical Met	hod: EPA 82	260C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/19/16 14:38	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/19/16 14:38	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/19/16 14:38	108-88-3	
Xylene (Total)	<1.0	ug/L		1.0	1		12/19/16 14:38	1330-20-7	
Surrogates		(16)+1							
1,2-Dichloroethane-d4 (S)	86	%.	e	58-153	1		12/19/16 14:38	17060-07-0	
4-Bromofluorobenzene (S)	88	%.	7	79-124	1		12/19/16 14:38	460-00-4	
Toluene-d8 (S)	78	%.	E	59-124	1		12/19/16 14:38	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: 20161213TB	Lab ID: 706	914005	Collected: 12/12/	16 13:30	Received:	12/13/16 15:15	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Meth	nod: EPA 82	260C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/19/16 14:18	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/19/16 14:18	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/19/16 14:18	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/19/16 14:18	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		12/19/16 14:18	17060-07-0	
4-Bromofluorobenzene (S)	88	%.	79-124	1		12/19/16 14:18	460-00-4	
Toluene-d8 (S)	80	%.	69-124	1		12/19/16 14:18	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 706914

Sample: HIMW-15D	Lab ID: 706	914006	Collected: 12/14/	16 08:10	Received: 12	2/15/16 15:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82	270D Preparation M	ethod: El	PA 3510C	54	25	le const
Acenaphthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:30	129-00-0	
Surrogates		10000000						
Nitrobenzene-d5 (S)	67	%.	35-114	1	12/20/16 09:18	12/20/16 23:30	4165-60-0	
2-Fluorobiphenyl (S)	64	%.	43-116	1	12/20/16 09:18	12/20/16 23:30	321-60-8	
p-Terphenyl-d14 (S)	83	%.	33-141	1	12/20/16 09:18	12/20/16 23:30	1718-51-0	
Phenol-d5 (S)	30	%.	10-110	1	12/20/16 09:18	12/20/16 23:30	4165-62-2	
2-Fluorophenol (S)	45	%.	21-110	1	12/20/16 09:18	12/20/16 23:30	367-12-4	
2,4,6-Tribromophenol (S)	93	%.	10-123	1	12/20/16 09:18	12/20/16 23:30	118-79-6	
2-Chlorophenol-d4 (S)	65	%.	33-110	1	12/20/16 09:18	12/20/16 23:30	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	48	%.	16-110	1	12/20/16 09:18	12/20/16 23:30	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 18:54	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 18:54	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 18:54	108-88-3	
Xyiene (Total)	<1.0	ug/L	1.0	1		12/21/16 18:54	1330-20-7	
Surrogates		(125)						
1,2-Dichloroethane-d4 (S)	84	%.	68-153	1		12/21/16 18:54	17060-07-0	
4-Bromofluorobenzene (S)	90	%.	79-124	1		12/21/16 18:54	460-00-4	
Toluene-d8 (S)	82	%.	69-124	1		12/21/16 18:54	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-15I	Lab ID: 706	914007	Collected: 12/14/1	6 09:45	Received: 12	2/15/16 15:00	Matrix: Water	-
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82	70D Preparation Me	thod: E	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	83-32-9	
Acenaphthylene	7.6	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/20/16 23:59	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	76	%.	35-114	1	12/20/16 09:18	12/20/16 23:59	4165-60-0	
2-Fluorobiphenyl (S)	70	%.	43-116	1	12/20/16 09:18	12/20/16 23:59	321-60-8	
p-Terphenyl-d14 (S)	91	%.	33-141	1	12/20/16 09:18	12/20/16 23:59	1718-51-0	
Phenol-d5 (S)	34	%.	10-110	1	12/20/16 09:18	12/20/16 23:59	4165-62-2	
2-Fluorophenol (S)	50	%.	21-110	1	12/20/16 09:18	12/20/16 23:59	367-12-4	
2,4,6-Tribromophenol (S)	108	%.	10-123	1	12/20/16 09:18	12/20/16 23:59	118-79-6	
2-Chlorophenol-d4 (S)	73	%.	33-110	1	12/20/16 09:18	12/20/16 23:59	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	53	%.	16-110	1	12/20/16 09:18	12/20/16 23:59	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	1.1	ug/L	1.0	1		12/21/16 18:34	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 18:34	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 18:34	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 18:34	1330-20-7	
Surrogates	84	0/	69 469	4		10/01/16 10:04	17060 07 0	
A Promofiliarebases (D)	01	70.	00-103			12/21/10 18:34	460.00.4	
4-bromonuorobenzene (S)	90	70.	/9-124	1		12/21/10 18:34	400-00-4	
Ioluene-d8 (S)	83	7p.	69-124	1		12/21/10 18:34	2037-20-5	

#### **REPORT OF LABORATORY ANALYSIS**



National Grid Hempstead Site Project: 706914

Deee	Deel	ant	Nin .	
Face	<b>FIO</b>	eci	INO	

Sample: HIMW-13D	Lab ID: 706	914008	Collected: 12/14/1	6 12:4	D Received: 12	2/15/16 15:00	Matrix: Water	ter	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8270 MSSV	Analytical Met	hod: EPA 82	270D Preparation Me	thod: E	PA 3510C				
Acenaphthene	5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	83-32-9		
Acenaphthylene	10.3	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	208-96-8		
Anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	120-12-7		
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	56-55-3		
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	50-32-8		
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	205-99-2		
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	191-24-2		
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	207-08-9		
Chrysene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	218-01-9		
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	53-70-3		
Fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	206-44-0		
Fluorene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	86-73-7		
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	193-39-5		
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	91-57-6		
Naphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	91-20-3		
Phenanthrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	85-01-8		
Pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:28	129-00-0		
Surrogates		1000 <del>-</del>							
Nitrobenzene-d5 (S)	78	%.	35-114	1	12/20/16 09:18	12/21/16 00:28	4165-60-0		
2-Fluorobiphenyl (S)	68	%.	43-116	1	12/20/16 09:18	12/21/16 00:28	321-60-8		
p-Terphenyl-d14 (S)	93	%.	33-141	1	12/20/16 09:18	12/21/16 00:28	1718-51-0		
Phenol-d5 (S)	34	%.	10-110	1	12/20/16 09:18	12/21/16 00:28	4165-62-2		
2-Fluorophenol (S)	52	%.	21-110	1	12/20/16 09:18	12/21/16 00:28	367-12-4		
2,4,6-Tribromophenol (S)	110	%.	10-123	1	12/20/16 09:18	12/21/16 00:28	118-79-6		
2-Chlorophenol-d4 (S)	75	%.	33-110	1	12/20/16 09:18	12/21/16 00:28	93951-73-6		
1,2-Dichlorobenzene-d4 (S)	51	%.	16-110	1	12/20/16 09:18	12/21/16 00:28	2199-69-1		
8260C Volatile Organics	Analytical Meth	nod: EPA 82	60C/5030C						
Benzene	2.5	ug/L	1.0	1		12/21/16 18:14	71-43-2		
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 18:14	100-41-4		
Toluene	<1.0	ug/L	1.0	1		12/21/16 18:14	108-88-3		
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 18:14	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	83	%.	68-153	1		12/21/16 18:14	17060-07-0		
4-Bromofluorobenzene (S)	92	%.	79-124	1		12/21/16 18:14	460-00-4		
Toluene-d8 (S)	80	%.	69-124	1		12/21/16 18:14	2037-26-5		

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-13I	Lab ID: 706	914009 Co	ollected: 12/14/1	6 13:40	Received: 12	2/15/16 15:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8270D	Preparation Me	ethod: E	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	207-08-9	8
Chrysene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/20/16 09:18	12/21/16 00:57	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	80	%.	35-114	1	12/20/16 09:18	12/21/16 00:57	4165-60-0	
2-Fluorobiphenyl (S)	72	%.	43-116	1	12/20/16 09:18	12/21/16 00:57	321-60-8	
p-Terphenyl-d14 (S)	94	%.	33-141	1	12/20/16 09:18	12/21/16 00:57	1718-51-0	
Phenol-d5 (S)	38	%.	10-110	1	12/20/16 09:18	12/21/16 00:57	4165-62-2	
2-Fluorophenol (S)	56	%.	21-110	1	12/20/16 09:18	12/21/16 00:57	367-12-4	
2,4,6-Tribromophenol (S)	107	%.	10-123	1	12/20/16 09:18	12/21/16 00:57	118-79-6	
2-Chlorophenol-d4 (S)	79	%.	33-110	1	12/20/16 09:18	12/21/16 00:57	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	57	%.	16-110	1	12/20/16 09:18	12/21/16 00:57	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260C/	/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 17:54	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 17:54	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 17:54	108-88-3	
Xylene (Total) Surrogates	<1.0	ug/L	1.0	1		12/21/16 17:54	1330-20-7	
1,2-Dichloroethane-d4 (S)	84	%.	68-153	1		12/21/16 17:54	17060-07-0	
4-Bromofluorobenzene (S)	92	%.	79-124	1		12/21/16 17:54	460-00-4	
Toluene-d8 (S)	84	%.	69-124	1		12/21/16 17:54	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No ·

No · 706914

Sample: HIMW-13S	Lab ID: 706	914010	Collected:	12/14/1	16 14:40	Received: 12	2/15/16 15:00	Matrix: Water	
Parameters	Results	Units	Report	t Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Met	hod: EPA 82	270D Prepar	ation Me	ethod: Ef	PA 3510C			
Acenaphthene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	83-32-9	
Acenaphthylene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	206-44-0	
Fluorene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	193-39-5	
2-Methylnaphthalene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	91-20-3	
Phenanthrene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/20/16 09:18	12/21/16 01:25	129-00-0	
Surrogates									
Nitrobenzene-d5 (S)	71	%.	:	35-114	1	12/20/16 09:18	12/21/16 01:25	4165-60-0	
2-Fluorobiphenyl (S)	68	%.	4	43-116	1	12/20/16 09:18	12/21/16 01:25	321-60-8	
p-Terphenyl-d14 (S)	93	%.	3	3-141	1	12/20/16 09:18	12/21/16 01:25	1718-51-0	
Phenol-d5 (S)	33	%.	•	10-110	1	12/20/16 09:18	12/21/16 01:25	4165-62-2	
2-Fluorophenol (S)	49	%.	2	21-110	1	12/20/16 09:18	12/21/16 01:25	367-12-4	
2,4,6-Tribromophenol (S)	101	%.	1	0-123	1	12/20/16 09:18	12/21/16 01:25	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	3	33-110	1	12/20/16 09:18	12/21/16 01:25	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	51	%.	1	16-110	1	12/20/16 09:18	12/21/16 01:25	2199-69-1	
8260C Volatile Organics	Analytical Met	10d: EPA 82	60C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/21/16 17:33	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/21/16 17:33	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/21/16 17:33	108-88-3	
Xylene (Total)	<1.0	ug/L		1.0	1		12/21/16 17:33	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	83	%.	6	8-153	1		12/21/16 17:33	17060-07-0	
4-Bromofluorobenzene (S)	94	%.	7	9-124	1		12/21/16 17:33	460-00-4	
Toluene-d8 (S)	83	%.	6	9-124	1		12/21/16 17:33	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-08D	Lab ID: 706	914011 C	ollected: 12/15/1	16 08:30	Received: 12	2/15/16 15:00 M	Matrix: Water	197
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8270	D Preparation Me	ethod: E	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	86-73-7	
Indeno(1.2.3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/22/16 23:22	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	71	%.	35-114	1	12/21/16 09:26	12/22/16 23:22	4165-60-0	
2-Fluorobiphenyl (S)	67	%.	43-116	1	12/21/16 09:26	12/22/16 23:22	321-60-8	
p-Terphenyl-d14 (S)	103	%.	33-141	1	12/21/16 09:26	12/22/16 23:22	1718-51-0	
Phenol-d5 (S)	34	%.	10-110	1	12/21/16 09:26	12/22/16 23:22	4165-62-2	
2-Fluorophenol (S)	49	%.	21-110	1	12/21/16 09:26	12/22/16 23:22	367-12-4	
2,4,6-Tribromophenol (S)	100	%.	10-123	1	12/21/16 09:26	12/22/16 23:22	118-79-6	
2-Chlorophenol-d4 (S)	71	%.	33-110	1	12/21/16 09:26	12/22/16 23:22	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	54	%.	16-110	1	12/21/16 09:26	12/22/16 23:22	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260C	/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 17:13	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 17:13	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 17:13	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 17:13	1330-20-7	
Surrogates		7.8%						
1,2-Dichloroethane-d4 (S)	88	%.	68-153	1		12/21/16 17:13	17060-07-0	
4-Bromofluorobenzene (S)	91	%.	79-124	1		12/21/16 17:13	460-00-4	
Toluene-d8 (S)	82	%.	69-124	1		12/21/16 17:13	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



National Grid Hempstead Site Project:

Sample: HIMW-08I	Lah ID:	706914012	Collected:	12/15/1	6 09:45	Received: 12	15/16 15:00 M	Atrix: Water	_
Cample. Timer-con	20010.	100014012	ooncolca.	12/10/1	0 00.40				_
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical	Method: EPA 82	270D Prepara	ation Me	thod: EF	PA 3510C			
Acenaphthene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	83-32-9	
Acenaphthylene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	208-96-8	
Anthracene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	120-12-7	
Benzo(a)anthracene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	56-55-3	
Benzo(a)pyrene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	205-99-2	
Benzo(g,h,i)perylene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	191-24-2	
Benzo(k)fluoranthene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	207-08-9	
Chrysene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	218-01-9	
Dibenz(a,h)anthracene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	53-70-3	
Fluoranthene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	206-44-0	
Fluorene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	193-39-5	
2-Methylnaphthalene	<5.0	) ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	91-20-3	
Phenanthrene	<5.0	ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/21/16 09:26	12/22/16 23:51	129-00-0	
Surrogates									
Nitrobenzene-d5 (S)	72	. %.	3	85-114	1	12/21/16 09:26	12/22/16 23:51	4165-60-0	
2-Fluorobiphenyl (S)	67	%.	4	3-116	1	12/21/16 09:26	12/22/16 23:51	321-60-8	
p-Terphenyl-d14 (S)	103	%.	3	3-141	1	12/21/16 09:26	12/22/16 23:51	1718-51-0	
Phenol-d5 (S)	35	i %.	1	0-110	1	12/21/16 09:26	12/22/16 23:51	4165-62-2	
2-Fluorophenol (S)	49	%.	2	1-110	1	12/21/16 09:26	12/22/16 23:51	367-12-4	
2,4,6-Tribromophenol (S)	96	%.	1	0-123	1	12/21/16 09:26	12/22/16 23:51	118-79-6	
2-Chlorophenol-d4 (S)	70	%.	3	3-110	1	12/21/16 09:26	12/22/16 23:51	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	54	%.	1	6-110	1	12/21/16 09:26	12/22/16 23:51	2199-69-1	
8260C Volatile Organics	Analytical I	Method: EPA 82	60C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/21/16 16:53	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/21/16 16:53	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/21/16 16:53	108-88-3	
Xylene (Total)	<1.0	ug/L		1.0	1		12/21/16 16:53	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	84	%.	6	8-153	1		12/21/16 16:53	17060-07-0	
4-Bromofluorobenzene (S)	90	%.	7	9-124	1		12/21/16 16:53	460-00-4	
Toluene-d8 (S)	82	%.	6	9-124	1		12/21/16 16:53	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-08S	Lab ID: 706	914013	Collected: 12/15	/16 11:10	Received: 12	2/15/16 15:00 M	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Met	nod: EPA 82	70D Preparation N	lethod: E	PA 3510C			
Acenaphthene	1.5J	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	83-32-9	
Acenaphthylene	2.2J	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	91-57-6	
Naphthalene	7.4	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:20	129-00-0	
Surrogates		-0						
Nitrobenzene-d5 (S)	81	%.	35-114	1	12/21/16 09:26	12/23/16 00:20	4165-60-0	
2-Fluorobiphenyl (S)	77	%.	43-116	1	12/21/16 09:26	12/23/16 00:20	321-60-8	
p-Terphenyl-d14 (S)	103	%.	33-141	1	12/21/16 09:26	12/23/16 00:20	1718-51-0	
Phenol-d5 (S)	41	%.	10-110	1	12/21/16 09:26	12/23/16 00:20	4165-62-2	
2-Fluorophenol (S)	56	%.	21-110	1	12/21/16 09:26	12/23/16 00:20	367-12-4	
2,4,6-Tribromophenol (S)	119	%.	10-123	1	12/21/16 09:26	12/23/16 00:20	118-79-6	
2-Chlorophenol-d4 (S)	78	%.	33-110	1	12/21/16 09:26	12/23/16 00:20	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	57	%.	16-110	1	12/21/16 09:26	12/23/16 00:20	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	84.2	ug/L	1.0	1		12/21/16 16:33	71-43-2	
Ethylbenzene	11.7	ug/L	1.0	1		12/21/16 16:33	100-41-4	
Toluene	18.9	ug/L	1.0	1		12/21/16 16:33	108-88-3	
Xylene (Total)	22.1	ug/L	1.0	1		12/21/16 16:33	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	81	%.	68-153	1		12/21/16 16:33	17060-07-0	
4-Bromofluorobenzene (S)	95	%.	79-124	1		12/21/16 16:33	460-00-4	
Toluene-d8 (S)	82	%.	69-124	1		12/21/16 16:33	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 706914

Sample: HIMW-23	Lab ID: 706914014		Collected: 12/15/16 13:20		Received: 12	2/15/16 15:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Mether	nod: EPA 82	70D Preparation Me	ethod: El	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 120-12-7	81.1
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 00:49	9 129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	80	%.	35-114	1	12/21/16 09:26	12/23/16 00:49	4165-60-0	
2-Fluorobiphenyl (S)	73	%.	43-116	1	12/21/16 09:26	12/23/16 00:49	321-60-8	
p-Terphenyl-d14 (S)	100	%.	33-141	1	12/21/16 09:26	12/23/16 00:49	1718-51-0	
Phenol-d5 (S)	32	%.	10-110	1	12/21/16 09:26	12/23/16 00:49	4165-62-2	
2-Fluorophenol (S)	49	%.	21-110	1	12/21/16 09:26	12/23/16 00:49	367-12-4	
2,4,6-Tribromophenol (S)	103	%.	10-123	1	12/21/16 09:26	12/23/16 00:49	118-79-6	
2-Chlorophenol-d4 (S)	76	%.	33-110	1	12/21/16 09:26	12/23/16 00:49	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%.	16-110	1	12/21/16 09:26	12/23/16 00:49	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 826	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 16:12	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 16:12	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 16:12	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 16:12	1330-20-7	
Surrogates		1753D						
1,2-Dichloroethane-d4 (S)	82	%.	68-153	1		12/21/16 16:12	17060-07-0	
4-Bromofluorobenzene (S)	89	%.	79-124	1		12/21/16 16:12	460-00-4	
Toluene-d8 (S)	81	%.	69-124	1		12/21/16 16:12	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: 20161215TB	Lab ID: 706914015		Collected: 12/15/	Collected: 12/15/16 13:00		red: 12/15/16 15:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Meth	nod: EPA 82	260C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 15:52	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 15:52	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 15:52	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 15:52	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	85	%.	68-153	1		12/21/16 15:52	17060-07-0	
4-Bromofluorobenzene (S)	93	%.	79-124	1		12/21/16 15:52	460-00-4	
Toluene-d8 (S)	81	%.	69-124	1		12/21/16 15:52	2037-26-5	

#### REPORT OF LABORATORY ANALYSIS



Project: National Grid Hempstead Site

Pace Project No.: 706914

Sample: HIMW-027S	Lab ID: 707	551001	Collected:	12/22/1	6 08:55	Received: 12	2/22/16 14:00	Matrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8	270D Prepara	ation Me	thod: El	PA 3510C			
Acenaphthene	50.4	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	83-32-9	
Acenaphthylene	3.1J	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	208-96-8	
Anthracene	8.2	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	UJ	5.0	1	12/27/16 09:21	12/28/16 21:02	191-24-2	CC
Benzo(k)fluoranthene	<5.0	ug/L	UJ	5.0	1	12/27/16 09:21	12/28/16 21:02	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	53-70-3	
Fluoranthene	2.9J	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	206-44-0	
Fluorene	31.2	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L		5.0	1	12/27/16 09:21	12/28/16 21:02	193-39-5	
2-Methylnaphthalene	87.1	ug/L	D	50.0	10	12/27/16 09:21	12/29/16 18:58	91-57-6	
Naphthalene	484	ug/L	2	50.0	10	12/27/16 09:21	12/29/16 18:58	91-20-3	
Phenanthrene	44.2	ug/L	0	5.0	1	12/27/16 09:21	12/28/16 21:02	85-01-8	
Pyrene	4.0J	ug/L	. 12	5.0	1	12/27/16 09:21	12/28/16 21:02	129-00-0	
Surrogates			2/23/12						
Nitrobenzene-d5 (S)	77	%.	1	35-114	1	12/27/16 09:21	12/28/16 21:02	4165-60-0	
2-Fluorobiphenyl (S)	63	%.	4	3-116	1	12/27/16 09:21	12/28/16 21:02	321-60-8	
p-Terphenyl-d14 (S)	79	%.	3	3-141	1	12/27/16 09:21	12/28/16 21:02	1718-51-0	
Phenol-d5 (S)	33	%.	1	0-110	1	12/27/16 09:21	12/28/16 21:02	4165-62-2	
2-Fluorophenol (S)	50	%.	2	21-110	1	12/27/16 09:21	12/28/16 21:02	367-12-4	
2,4,6-Tribromophenol (S)	90	%.	1	0-123	1	12/27/16 09:21	12/28/16 21:02	118-79-6	
2-Chlorophenol-d4 (S)	76	%.	3	3-110	1	12/27/16 09:21	12/28/16 21:02	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	47	%.	1	6-110	1	12/27/16 09:21	12/28/16 21:02	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8	260C/5030C						
Benzene	14.8	ug/L		1.0	1		12/23/16 16:50	71-43-2	
Ethylbenzene	219	ug/L	D	2.0	2		12/23/16 20:33	100-41-4	
Toluene	5.7	ug/L		1.0	1		12/23/16 16:50	108-88-3	
Xylene (Total)	207	ug/L		1.0	1		12/23/16 16:50	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	6	8-153	1		12/23/16 16:50	17060-07-0	
4-Bromofluorobenzene (S)	99	%.	7	9-124	1		12/23/16 16:50	460-00-4	
Toluene-d8 (S)	96	%.	6	9-124	1		12/23/16 16:50	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**

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Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: HIMW-0271	Lab ID: 707	551003 C	ollected: 12/22/*	16 10:20	Received: 1	2/22/16 14:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82700	Preparation Me	ethod: Ef	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/27/16 09:2	1 12/28/16 23:03	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/27/16 09:21	1 12/28/16 23:03	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L the	5.0	1	12/27/16 09:21	12/28/16 23:03	191-24-2	CC
Benzo(k)fluoranthene	<5.0	ug/L la	5.0	1	12/27/16 09:21	12/28/16 23:03	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/27/16 09:21	12/28/16 23:03	85-01-8	
Pyrene	<5.0	ug/L	112 5.0	1	12/27/16 09:21	12/28/16 23:03	129-00-0	
Surrogates		2	231170					
Nitrobenzene-d5 (S)	66	%.	35-114	1	12/27/16 09:21	12/28/16 23:03	4165-60-0	
2-Fluorobiphenyl (S)	64	%.	43-116	1	12/27/16 09:21	12/28/16 23:03	321-60-8	
p-Terphenyl-d14 (S)	64	%.	33-141	1	12/27/16 09:21	12/28/16 23:03	1718-51-0	
Phenol-d5 (S)	31	%.	10-110	1	12/27/16 09:21	12/28/16 23:03	4165-62-2	
2-Fluorophenol (S)	47	%.	21-110	1	12/27/16 09:21	12/28/16 23:03	367-12-4	
2,4,6-Tribromophenol (S)	73	%.	10-123	1	12/27/16 09:21	12/28/16 23:03	118-79-6	
2-Chlorophenol-d4 (S)	74	%.	33-110	1	12/27/16 09:21	12/28/16 23:03	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	46	%.	16-110	1	12/27/16 09:21	12/28/16 23:03	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260C	/5030C					
Benzene	<1.0	ug/L	1.0	1		12/23/16 17:08	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/23/16 17:08	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/23/16 17:08	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/23/16 17:08	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	68-153	1		12/23/16 17:08	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		12/23/16 17:08	460-00-4	
Toluene-d8 (S)	98	%.	69-124	1		12/23/16 17:08	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**

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Project: National Grid Hempstead Site

#### Pace Project No.: 706914

Sample: TB20161222	Lab ID: 707551004		Collected: 12/22/	Collected: 12/22/16 10:20		Received: 12/22/16 14:00		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Meth	nod: EPA 82	260C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/23/16 16:32	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/23/16 16:32	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/23/16 16:32	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/23/16 16:32	1330-20-7	
Surrogates		120						
1,2-Dichloroethane-d4 (S)	101	%.	68-153	1		12/23/16 16:32	17060-07-0	
4-Bromofluorobenzene (S)	99	%.	79-124	1		12/23/16 16:32	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		12/23/16 16:32	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**

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Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-03S	Lab ID: 707078001		Collected: 12/16/16 10:50		Received: 12	2/16/16 13:35	i/16 13:35 Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meti	nod: EPA 82	270D Preparation Me	ethod: Ef	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	8 83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	3 206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	8 86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	8 193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	8 85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:18	129-00-0	
Surrogates		<u>,</u>						
Nitrobenzene-d5 (S)	88	%.	35-114	1	12/21/16 09:26	12/23/16 01:18	4165-60-0	
2-Fluorobiphenyl (S)	78	%.	43-116	1	12/21/16 09:26	12/23/16 01:18	321-60-8	
p-Terphenyl-d14 (S)	90	%.	33-141	1	12/21/16 09:26	12/23/16 01:18	1718-51-0	
Phenol-d5 (S)	38	%.	10-110	1	12/21/16 09:26	12/23/16 01:18	4165-62-2	
2-Fluorophenol (S)	61	%.	21-110	1	12/21/16 09:26	12/23/16 01:18	367-12-4	
2,4,6-Tribromophenol (S)	113	%.	10-123	1	12/21/16 09:26	12/23/16 01:18	118-79-6	
2-Chlorophenol-d4 (S)	86	%.	33-110	1	12/21/16 09:26	12/23/16 01:18	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	66	%.	16-110	1	12/21/16 09:26	12/23/16 01:18	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/20/16 18:53	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/20/16 18:53	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/20/16 18:53	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/20/16 18:53	1330-20-7	
1 2-Dichloroethane-d4 (S)	84	0/	68,153	4		12/20/16 18-53	17060-07-0	
4-Bromofluorobenzene (S)	04	%	70-133			12/20/16 18:53	460-00-4	
	91	02	60.124	4		12/20/16 19:53	2037_26_6	
	01	70.	09-124			12/20/10 10:03	2037-20-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-03I	Lab ID: 707078002 C		Collected: 12/16/1	16 09:55	Received: 12			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Met	nod: EPA 8270	D Preparation Me	ethod: El	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 01:47	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	85	%.	35-114	1	12/21/16 09:26	12/23/16 01:47	4165-60-0	
2-Fluorobiphenyl (S)	77	%.	43-116	1	12/21/16 09:26	12/23/16 01:47	321-60-8	
p-Terphenyl-d14 (S)	90	%.	33-141	1	12/21/16 09:26	12/23/16 01:47	1718-51-0	
Phenol-d5 (S)	36	%.	10-110	1	12/21/16 09:26	12/23/16 01:47	4165-62-2	
2-Fluorophenol (S)	58	%.	21-110	1	12/21/16 09:26	12/23/16 01:47	367-12-4	
2,4,6-Tribromophenol (S)	109	%.	10-123	1	12/21/16 09:26	12/23/16 01:47	118-79-6	
2-Chlorophenol-d4 (S)	84	%.	33-110	1	12/21/16 09:26	12/23/16 01:47	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	69	%.	16-110	1	12/21/16 09:26	12/23/16 01:47	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260	C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/20/16 19:13	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/20/16 19:13	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/20/16 19:13	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/20/16 19:13	1330-20-7	
Surrogates		(1/2)				1.		
1,2-Dichloroethane-d4 (S)	83	%.	68-153	1		12/20/16 19:13	17060-07-0	
4-Bromofluorobenzene (S)	93	%.	79-124	1		12/20/16 19:13	460-00-4	
Toluene-d8 (S)	86	%.	69-124	1		12/20/16 19:13	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**

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Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-03D	Lab ID: 707	078003 Co	ollected: 12/16/1	6 08:45	Received: 12	2/16/16 13:35	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8270D	Preparation Me	thod: El	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 02:15	129-00-0	
Surrogates		-						
Nitrobenzene-d5 (S)	86	%.	35-114	1	12/21/16 09:26	12/23/16 02:15	4165-60-0	
2-Fluorobiphenyl (S)	76	%.	43-116	1	12/21/16 09:26	12/23/16 02:15	321-60-8	
p-Terphenyl-d14 (S)	91	%.	33-141	1	12/21/16 09:26	12/23/16 02:15	1718-51-0	
Phenol-d5 (S)	36	%.	10-110	1	12/21/16 09:26	12/23/16 02:15	4165-62-2	
2-Fluorophenol (S)	57	%.	21-110	1	12/21/16 09:26	12/23/16 02:15	367-12-4	
2,4,6-Tribromophenol (S)	111	%.	10-123	1	12/21/16 09:26	12/23/16 02:15	118-79-6	
2-Chlorophenol-d4 (S)	83	%.	33-110	1	12/21/16 09:26	12/23/16 02:15	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	67	%.	16-110	1	12/21/16 09:26	12/23/16 02:15	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260C/	5030C					
Benzene	<1.0	ug/L	1.0	1		12/20/16 19:33	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/20/16 19:33	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/20/16 19:33	108-88-3	
Xylene (Total) Surrogates	<1.0	ug/L	1.0	1		12/20/16 19:33	1330-20-7	
1,2-Dichloroethane-d4 (S)	83	%.	68-153	1		12/20/16 19:33	17060-07-0	
4-Bromofluorobenzene (S)	95	%.	79-124	1		12/20/16 19:33	460-00-4	
Toluene-d8 (S)	84	%.	69-124	1		12/20/16 19:33	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: 20161216 TB	Lab ID: 707	7078004	Collected: 12/16/1	6 11:00	Received:	12/16/16 13:35	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Met	hod: EPA 82	260C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/20/16 19:53	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/20/16 19:53	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/20/16 19:53	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/20/16 19:53	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	84	%.	68-153	1		12/20/16 19:53	17060-07-0	
4-Bromofluorobenzene (S)	91	%.	79-124	1		12/20/16 19:53	460-00-4	
Toluene-d8 (S)	82	%.	69-124	1		12/20/16 19:53	2037-26-5	

#### REPORT OF LABORATORY ANALYSIS

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Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-24	Lab ID: 707078005 Co		Collected: 12	collected: 12/19/16 08:25		2/20/16 14:45	Matrix: Water	
Parameters	Results	Units	Report Lin	nit DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82	70D Preparatio	n Method:	EPA 3510C			
Acenaphthene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	83-32-9	
Acenaphthylene	1.8J	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	208-96-8	
Anthracene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	207-08-9	
Chrysene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	53-70-3	
Fluoranthene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	206-44-0	
Fluorene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	193-39-5	
2-Methylnaphthalene	2.9J	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	91-57-6	
Naphthalene	120	ug/L	D 1	0.0 2	12/21/16 09:26	01/04/17 21:45	91-20-3	
Phenanthrene	<5.0	ug/L	-	5.0 1	12/21/16 09:26	12/23/16 02:44	85-01-8	
Pyrene	<5.0	ug/L		5.0 1	12/21/16 09:26	12/23/16 02:44	129-00-0	
Surrogates			123/172					
Nitrobenzene-d5 (S)	85	%.	35-1	14 1	12/21/16 09:26	12/23/16 02:44	4165-60-0	
2-Fluorobiphenyl (S)	78	%.	43-1	16 1	12/21/16 09:26	12/23/16 02:44	321-60-8	
p-Terphenyl-d14 (S)	105	%.	33-1	41 1	12/21/16 09:26	12/23/16 02:44	1718-51-0	
Phenol-d5 (S)	34	%.	10-1	10 1	12/21/16 09:26	12/23/16 02:44	4165-62-2	
2-Fluorophenol (S)	54	%.	21-1	10 1	12/21/16 09:26	12/23/16 02:44	367-12-4	
2,4,6-Tribromophenol (S)	114	%.	10-1	23 1	12/21/16 09:26	12/23/16 02:44	118-79-6	
2-Chlorophenol-d4 (S)	80	%.	33-1	10 1	12/21/16 09:26	12/23/16 02:44	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	65	%.	16-1	10 1	12/21/16 09:26	12/23/16 02:44	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	50C/5030C					
Benzene	<1.0	ug/L		1.0 1		12/21/16 19:35	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0 1		12/21/16 19:35	100-41-4	
Toluene	<1.0	ug/L		1.0 1		12/21/16 19:35	108-88-3	
Xylene (Total)	1.1	ug/L		1.0 1		12/21/16 19:35	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	84	%.	68-1	53 1		12/21/16 19:35	17060-07-0	
4-Bromofluorobenzene (S)	88	%.	79-1	24 1		12/21/16 19:35	460-00-4	
Toluene-d8 (S)	83	%.	69-1	24 1		12/21/16 19:35	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-25	Lab ID: 707	078006	Collected: 12/19/	16 10:50	Received: 1	2/20/16 14:45	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Met	hod: EPA 8270	D Preparation M	ethod: E	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:13	129-00-0	
Surrogates		7						
Nitrobenzene-d5 (S)	79	%.	35-114	1	12/21/16 09:26	12/23/16 03:13	4165-60-0	
2-Fluorobiphenyl (S)	71	%.	43-116	1	12/21/16 09:26	12/23/16 03:13	321-60-8	
p-Terphenyl-d14 (S)	95	%.	33-141	1	12/21/16 09:26	12/23/16 03:13	1718-51-0	
Phenol-d5 (S)	37	%.	10-110	1	12/21/16 09:26	12/23/16 03:13	4165-62-2	
2-Fluorophenol (S)	57	%.	21-110	1	12/21/16 09:26	12/23/16 03:13	367-12-4	
2,4,6-Tribromophenol (S)	101	%.	10-123	1	12/21/16 09:26	12/23/16 03:13	118-79-6	
2-Chlorophenol-d4 (S)	79	%.	33-110	1	12/21/16 09:26	12/23/16 03:13	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	63	%.	16-110	1	12/21/16 09:26	12/23/16 03:13	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260	C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 19:55	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 19:55	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 19:55	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 19:55	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	80	%.	68-153	1		12/21/16 19:55	17060-07-0	
4-Bromofluorobenzene (S)	91	%.	79-124	1		12/21/16 19:55	460-00-4	
Toluene-d8 (S)	83	%.	69-124	1		12/21/16 19:55	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-20S	Lab ID: 707078007		Collected: 12/19/16 12:15		5 Received: 12	Received: 12/20/16 14:45 Matrix: Wate		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meti	nod: EPA 82	270D Preparation	/lethod: E	EPA 3510C			
Acenaphthene	<5.0	ug/L	5.0	) 1	12/21/16 09:26	12/23/16 03:42	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	) 1	12/21/16 09:26	12/23/16 03:42	208-96-8	
Anthracene	<5.0	ug/L	5.0	) 1	12/21/16 09:26	12/23/16 03:42	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 03:42	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	79	%.	35-114	1	12/21/16 09:26	12/23/16 03:42	4165-60-0	
2-Fluorobiphenyl (S)	70	%.	43-116	1	12/21/16 09:26	12/23/16 03:42	321-60-8	
p-Terphenyl-d14 (S)	89	%.	33-141	1	12/21/16 09:26	12/23/16 03:42	1718-51-0	
Phenol-d5 (S)	37	%.	10-110	1	12/21/16 09:26	12/23/16 03:42	4165-62-2	
2-Fluorophenol (S)	57	%.	21-110	1	12/21/16 09:26	12/23/16 03:42	367-12-4	
2,4,6-Tribromophenol (S)	105	%.	10-123	1	12/21/16 09:26	12/23/16 03:42	118-79-6	
2-Chlorophenol-d4 (S)	77	%.	33-110	1	12/21/16 09:26	12/23/16 03:42	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	62	%.	16-110	1	12/21/16 09:26	12/23/16 03:42	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 20:15	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 20:15	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 20:15	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 20:15	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	81	%.	68-153	1		12/21/16 20:15	17060-07-0	
4-Bromofluorobenzene (S)	90	%.	79-124	1		12/21/16 20:15	460-00-4	
Toluene-d8 (S)	83	%.	69-124	1		12/21/16 20:15	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-20I Parameters	Lab ID: 707078008		Collected: 12/19/16 13:25		Received: 12/20/16 14:45		Matrix: Water	
	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 82		0D Preparation Method: EF		PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/21/16 09:26	12/23/16 04:11	129-00-0	
Surrogates		1.5						
Nitrobenzene-d5 (S)	86	%.	35-114	1	12/21/16 09:26	12/23/16 04:11	4165-60-0	
2-Fluorobiphenyl (S)	79	%.	43-116	1	12/21/16 09:26	12/23/16 04:11	321-60-8	
p-Terphenyl-d14 (S)	102	%.	33-141	1	12/21/16 09:26	12/23/16 04:11	1718-51-0	
Phenol-d5 (S)	40	%.	10-110	1	12/21/16 09:26	12/23/16 04:11	4165-62-2	
2-Fluorophenol (S)	61	%.	21-110	1	12/21/16 09:26	12/23/16 04:11	367-12-4	
2,4,6-Tribromophenol (S)	115	%.	10-123	1 -	12/21/16 09:26	12/23/16 04:11	118-79-6	
2-Chlorophenol-d4 (S)	84	%.	33-110	1	12/21/16 09:26	12/23/16 04:11	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	70	%.	16-110	1	12/21/16 09:26	12/23/16 04:11	2199-69-1	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Benzene	<1.0	ug/L	1.0	1		12/21/16 20:36	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 20:36	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 20:36	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 20:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	81	%.	68-153	1		12/21/16 20:36	17060-07-0	
4-Bromofluorobenzene (S)	91	%.	79-124	1		12/21/16 20:36	460-00-4	
Toluene-d8 (S)	81	%.	69-124	1		12/21/16 20:36	2037-26-5	

#### **REPORT OF LABORATORY ANALYSIS**


Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-05D	Lab ID: 70707	78009	Collected:	12/20/1	6 09:20	Received: 12	2/20/16 14:45	Matrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Metho	d: EPA 8	270D Prepar	ation Me	ethod: El	PA 3510C			
Acenaphthene	3.5J	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	83-32-9	
Acenaphthylene	50.6	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	us	5.0	1	12/22/16 09:04	12/30/16 13:26	191-24-2	CC
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	206-44-0	
Fluorene	7.9	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	UJ	5.0	1	12/22/16 09:04	12/30/16 13:26	193-39-5	
2-Methylnaphthalene	187 D	ug/L		125	25	12/22/16 09:04	01/04/17 22:14	91-57-6	M1
Naphthalene	1800 D	ug/L		125	25	12/22/16 09:04	01/04/17 22:14	91-20-3	M1
Phenanthrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 13:26	129-00-0	
Surrogates			103/17						
Nitrobenzene-d5 (S)	104	%.	2/2/	35-114	1	12/22/16 09:04	12/30/16 13:26	4165-60-0	
2-Fluorobiphenyl (S)	78	%.	-	\$3-116	1	12/22/16 09:04	12/30/16 13:26	321-60-8	
p-Terphenyl-d14 (S)	75	%.	3	3-141	1	12/22/16 09:04	12/30/16 13:26	1718-51-0	
Phenol-d5 (S)	34	%.		0-110	1	12/22/16 09:04	12/30/16 13:26	4165-62-2	
2-Fluorophenol (S)	52	%.	2	21-110	1	12/22/16 09:04	12/30/16 13:26	367-12-4	
2,4,6-Tribromophenol (S)	122	%.	1	0-123	1	12/22/16 09:04	12/30/16 13:26	118-79-6	
2-Chlorophenol-d4 (S)	72	%.	3	33-110	1	12/22/16 09:04	12/30/16 13:26	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%.	1	6-110	1	12/22/16 09:04	12/30/16 13:26	2199-69-1	
8260C Volatile Organics	Analytical Metho	d: EPA 8	260C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/21/16 20:56	71-43-2	M1
Ethylbenzene	<1.0	ug/L		1.0	1		12/21/16 20:56	100-41-4	
Toluene	1.8	ug/L		1.0	1		12/21/16 20:56	108-88-3	
Xylene (Total)	54.5	ug/L		1.0	1		12/21/16 20:56	1330-20-7	MS
Surrogates		1.000							
1,2-Dichloroethane-d4 (S)	84	%.	6	8-153	1		12/21/16 20:56	17060-07-0	
4-Bromofluorobenzene (S)	95	%.	7	9-124	1		12/21/16 20:56	460-00-4	
Toluene-d8 (S)	83	%.	6	9-124	1		12/21/16 20:56	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-26D	Lab ID: 707	078010	Collected:	12/20/1	6 11:50	Received: 12	2/20/16 14:45 M	Matrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8	270D Prepara	ation Me	thod: El	PA 3510C			
Acenaphthene	1.1J	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	83-32-9	
Acenaphthylene	3.1J	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	208-96-8	
Anthracene	5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	U.J -	5.0	1	12/22/16 09:04	12/30/16 14:51	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	206-44-0	
Fluorene	4.0J	ug/L	/	5.0	1	12/22/16 09:04	12/30/16 14:51	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	UJ	5.0	1	12/22/16 09:04	12/30/16 14:51	193-39-5	
2-Methylnaphthalene	33.6	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	91-57-6	
Naphthalene	74.4	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	91-20-3	
Phenanthrene	5.3	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 14:51	129-00-0	
Surrogates		-	1 1/2						
Nitrobenzene-d5 (S)	82	%.	2/25/2 3	35-114	1	12/22/16 09:04	12/30/16 14:51	4165-60-0	
2-Fluorobiphenyl (S)	84	%.	4	3-116	1	12/22/16 09:04	12/30/16 14:51	321-60-8	
p-Terphenyl-d14 (S)	73	%.	3	3-141	1	12/22/16 09:04	12/30/16 14:51	1718-51-0	
Phenol-d5 (S)	16	%.	1	0-110	1	12/22/16 09:04	12/30/16 14:51	4165-62-2	
2-Fluorophenol (S)	55	%.	2	1-110	1	12/22/16 09:04	12/30/16 14:51	367-12-4	
2,4,6-Tribromophenol (S)	125	%.	1	0-123	1	12/22/16 09:04	12/30/16 14:51	118-79-6	SO
2-Chlorophenol-d4 (S)	75	%.	3	3-110	1	12/22/16 09:04	12/30/16 14:51	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	66	%.	1	6-110	1	12/22/16 09:04	12/30/16 14:51	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	260C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/21/16 21:56	71-43-2	
Ethylbenzene	0.77J	ug/L		1.0	1		12/21/16 21:56	100-41-4	
Toluene	6.0	ug/L		1.0	1		12/21/16 21:56	108-88-3	
Xylene (Total)	46.1	ug/L		1.0	1		12/21/16 21:56	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	77	%.	6	8-153	1		12/21/16 21:56	17060-07-0	
4-Bromofluorobenzene (S)	84	%.	7	9-124	1		12/21/16 21:56	460-00-4	
Toluene-d8 (S)	78	%.	6	9-124	1		12/21/16 21:56	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: HIMW-26I	Lab ID: 707	078011	Collected: 12/20/1	6 13:15	5 Received: 12	2/20/16 14:45	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8	270D Preparation Me	ethod: E	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	UJ 5.0	1	12/22/16 09:04	12/30/16 15:20	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	il 5.0	1	12/22/16 09:04	12/30/16 15:20	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:20	85-01-8	
Pyrene	<5.0	ug/L	1,2 5.0	1	12/22/16 09:04	12/30/16 15:20	129-00-0	
Surrogates			2 2311					
Nitrobenzene-d5 (S)	78	%.	35-114	1	12/22/16 09:04	12/30/16 15:20	4165-60-0	
2-Fluorobiphenyl (S)	78	%.	43-116	1	12/22/16 09:04	12/30/16 15:20	321-60-8	
p-Terphenyl-d14 (S)	72	%.	33-141	1	12/22/16 09:04	12/30/16 15:20	1718-51-0	
Phenol-d5 (S)	33	%.	10-110	1	12/22/16 09:04	12/30/16 15:20	4165-62-2	
2-Fluorophenol (S)	51	%.	21-110	1	12/22/16 09:04	12/30/16 15:20	367-12-4	
2,4,6-Tribromophenol (S)	122	%.	10-123	1	12/22/16 09:04	12/30/16 15:20	118-79-6	
2-Chlorophenol-d4 (S)	71	%.	33-110	1	12/22/16 09:04	12/30/16 15:20	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	67	%.	16-110	1	12/22/16 09:04	12/30/16 15:20	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 22:17	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 22:17	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 22:17	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 22:17	1330-20-7	
1.2 Dichleroothana d4 (S)	DC	0/	60 460	4		10/01/16 00.47	17060 07 0	
A Bromefuerahaaraaa (S)	00	70.	00-103	1		12/21/10 22:17	17060-07-0	
4-bromonuorobenzene (5)	89	70.	79-124	1		12/21/16 22:17	400-00-4	
ioiuene-da (S)	19	%.	69-124	1		12/21/16 22:17	2037-20-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Gri	d Hempstead Site		~					
Pace Project No.: 707078		H11	MW-25					
Sample: DUP-121916	Lab ID: 707	078012	Collected: 12/19/1	6 07:00	Received: 1	2/20/16 14:45	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82	270D Preparation Me	ethod: El	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	WJ 5.0	1	12/22/16 09:04	12/30/16 15:48	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	UJ 5.0	1	12/22/16 09:04	12/30/16 15:48	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/22/16 09:04	12/30/16 15:48	129-00-0	
Surrogates			2/23/14					
Nitrobenzene-d5 (S)	81	%.	35-114	1	12/22/16 09:04	12/30/16 15:48	4165-60-0	
2-Fluorobiphenyl (S)	79	%.	43-116	1	12/22/16 09:04	12/30/16 15:48	321-60-8	
p-Terphenyl-d14 (S)	85	%.	33-141	1	12/22/16 09:04	12/30/16 15:48	1718-51-0	
Phenol-d5 (S)	35	%.	10-110	1	12/22/16 09:04	12/30/16 15:48	4165-62-2	
2-Fluorophenol (S)	55	%.	21-110	1	12/22/16 09:04	12/30/16 15:48	367-12-4	
2,4,6-Tribromophenol (S)	119	%.	10-123	1	12/22/16 09:04	12/30/16 15:48	118-79-6	
2-Chlorophenol-d4 (S)	74	%.	33-110	1	12/22/16 09:04	12/30/16 15:48	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	70	%.	16-110	1	12/22/16 09:04	12/30/16 15:48	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 22:37	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 22:37	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 22:37	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 22:37	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	84	%.	68-153	1		12/21/16 22:37	17060-07-0	
4-Bromofluorobenzene (S)	93	%.	79-124	1		12/21/16 22:37	460-00-4	
Toluene-d8 (S)	83	%.	69-124	1		12/21/16 22:37	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: TB20161220	Lab ID: 70	07078013	Collected: 12/20/	16 14:00	Received:	12/20/16 14:45	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Me	ethod: EPA 82	60C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/21/16 22:57	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/21/16 22:57	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/21/16 22:57	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/21/16 22:57	1330-20-7	
Surrogates		020 <del>00</del> 2000201						
1,2-Dichloroethane-d4 (S)	84	%.	68-153	1		12/21/16 22:57	17060-07-0	
4-Bromofluorobenzene (S)	92	%.	79-124	1		12/21/16 22:57	460-00-4	
Toluene-d8 (S)	81	%.	69-124	1		12/21/16 22:57	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**

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Project: National Grid Hempstead Site

Pace Project No.: 707078

Sample: FB20161221	Lab ID: 707	078014	Collected:	12/20/1	16 14:00	Received: 12	2/20/16 14:45	Matrix: Water	<u></u>
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 82	270D Prepara	ation Me	ethod: Ef	PA 3510C			
Acenaphthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	83-32-9	
Acenaphthylene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	208-96-8	
Anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	-	5.0	1	12/22/16 09:04	12/30/16 16:16	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	W	5.0	1	12/22/16 09:04	12/30/16 16:16	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	206-44-0	
Fluorene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	UT	5.0	1	12/22/16 09:04	12/30/16 16:16	193-39-5	
2-Methylnaphthalene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	91-57-6	
Naphthalene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	91-20-3	
Phenanthrene	<5.0	ug/L		5.0	1	12/22/16 09:04	12/30/16 16:16	85-01-8	
Pyrene	<5.0	ug/L	in ale	5.0	1	12/22/16 09:04	12/30/16 16:16	129-00-0	
Surrogates			22211	2					
Nitrobenzene-d5 (S)	72	%.	3	5-114	1	12/22/16 09:04	12/30/16 16:16	4165-60-0	
2-Fluorobiphenyl (S)	70	%.	4	3-116	1	12/22/16 09:04	12/30/16 16:16	321-60-8	
p-Terphenyl-d14 (S)	89	%.	3	3-141	1	12/22/16 09:04	12/30/16 16:16	1718-51-0	
Phenol-d5 (S)	33	%.	1	0-110	1	12/22/16 09:04	12/30/16 16:16	4165-62-2	
2-Fluorophenol (S)	50	%.	2	1-110	1	12/22/16 09:04	12/30/16 16:16	367-12-4	
2,4,6-Tribromophenol (S)	114	%.	1	0-123	1	12/22/16 09:04	12/30/16 16:16	118-79-6	
2-Chlorophenol-d4 (S)	67	%.	3	3-110	1	12/22/16 09:04	12/30/16 16:16	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	60	%.	1	6-110	1	12/22/16 09:04	12/30/16 16:16	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 82	60C/5030C						
Benzene	<1.0	ug/L		1.0	1		12/23/16 13:51	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/23/16 13:51	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/23/16 13:51	108-88-3	
Xylene (Total)	<1.0	ug/L		1.0	1		12/23/16 13:51	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	6	8-153	1		12/23/16 13:51	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	7	9-124	1		12/23/16 13:51	460-00-4	
Toluene-d8 (S)	98	%.	6	9-124	1		12/23/16 13:51	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707460

Sample: HIMW-05I Lab ID: 707460001 Collected: 12/21/16 08:40 Received: 12/21/16 14:40	Matrix: Water	
Parameters Results Units Report Limit DF Prepared Analyzed	CAS No.	Qual
8270 MSSV Analytical Method: EPA 8270D Preparation Method: EPA 3510C		
Acenaphthene 12.4 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	:36 83-32-9	
Acenaphthylene 217 ug/L D 125 25 12/23/16 09:38 01/04/17 19	23 208-96-8	
Anthracene 2.8J ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 120-12-7	
Benzo(a)anthracene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	:36 56-55-3	
Benzo(a)pyrene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 50-32-8	
Benzo(b)fluoranthene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 205-99-2	
Benzo(g,h,i)perylene <5.0 ug/L (LJ 5.0 1 12/23/16 09:38 12/28/16 14	36 191-24-2	
Benzo(k)fluoranthene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 207-08-9	
Chrysene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 218-01-9	
Dibenz(a,h)anthracene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 53-70-3	
Fluoranthene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 206-44-0	
Fluorene 28.8 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 86-73-7	
Indeno(1,2,3-cd)pyrene <5.0 ug/L U 3 5.0 1 12/23/16 09:38 12/28/16 14	36 193-39-5	
2-Methylnaphthalene 245 ug/L D 125 25 12/23/16 09:38 01/04/17 19	23 91-57-6	
Naphthalene 1370 ug/L 125 25 12/23/16 09:38 01/04/17 19	23 91-20-3	
Phenanthrene 19.8 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 85-01-8	
Pyrene <5.0 ug/L 5.0 1 12/23/16 09:38 12/28/16 14	36 129-00-0	
Surrogates		
Nitrobenzene-d5 (S) 92 %. 35-114 1 12/23/16 09:38 12/28/16 14:	36 4165-60-0	
2-Fluorobiphenyl (S) 78 %. 43-116 1 12/23/16 09:38 12/28/16 14:	36 321-60-8	
p-Terphenyl-d14 (S) 84 %. 33-141 1 12/23/16 09:38 12/28/16 14:	36 1718-51-0	
Phenol-d5 (S) 32 %. 10-110 1 12/23/16 09:38 12/28/16 14:	36 4165-62-2	
2-Fluorophenol (S) 52 %. 21-110 1 12/23/16 09:38 12/28/16 14:	36 367-12-4	
2,4,6-Tribromophenol (S) 124 %. 10-123 1 12/23/16 09:38 12/28/16 14:	36 118-79-6 SC	0
2-Chlorophenol-d4 (S) 71 %. 33-110 1 12/23/16 09:38 12/28/16 14:	36 93951-73-6	
1,2-Dichlorobenzene-d4 (S) 55 %. 16-110 1 12/23/16 09:38 12/28/16 14:	36 2199-69-1	
8260C Volatile Organics Analytical Method: EPA 8260C/5030C		
Benzene 1.7 ug/L 1.0 1 12/23/16 14:	27 71-43-2	
Ethylbenzene <1.0 ug/L 1.0 1 12/23/16 14:	27 100-41-4	
Toluene <1.0 ug/L 1.0 1 12/23/16 14:	27 108-88-3	
Xylene (Total) 69.3 ug/L 1.0 1 12/23/16 14: Surrogates	27 1330-20-7	
1.2-Dichloroethane-d4 (S) 100 % 68-153 1 12/23/16 14	27 17060-07-0	
4-Bromofluorobenzene (S) 105 % 79-124 1 12/23/16 14	27 460-00-4	
Toluene-d8 (S) 99 %. 69-124 1 12/23/16 14:	27 2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707460

Sample: HIMW-05S	Lab ID: 707	460002	Collected: 12/21/1	6 10:05	Received: 12	2/21/16 14:40	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 827	0D Preparation Me	thod: E	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L ()	5.0	1	12/23/16 09:38	12/28/16 15:04	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	85-01-8	
Pyrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:04	129-00-0	
Surrogates		50.	2/23/142					
Nitrobenzene-d5 (S)	81	%.	35-114	1	12/23/16 09:38	12/28/16 15:04	4165-60-0	
2-Fluorobiphenyl (S)	76	%.	43-116	1	12/23/16 09:38	12/28/16 15:04	321-60-8	
p-Terphenyl-d14 (S)	80	%.	33-141	1	12/23/16 09:38	12/28/16 15:04	1718-51-0	
Phenol-d5 (S)	33	%.	10-110	1	12/23/16 09:38	12/28/16 15:04	4165-62-2	
2-Fluorophenol (S)	52	%.	21-110	1	12/23/16 09:38	12/28/16 15:04	367-12-4	
2,4,6-Tribromophenol (S)	130	%.	10-123	1	12/23/16 09:38	12/28/16 15:04	118-79-6	S3
2-Chlorophenol-d4 (S)	75	%.	33-110	1	12/23/16 09:38	12/28/16 15:04	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	56	%.	16-110	1	12/23/16 09:38	12/28/16 15:04	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 826	DC/5030C					
Benzene	<1.0	ug/L	1.0	1		12/23/16 14:45	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/23/16 14:45	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/23/16 14:45	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/23/16 14:45	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	68-153	1		12/23/16 14:45	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		12/23/16 14:45	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		12/23/16 14:45	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**

ace Analytical www.pacelabs.com

Project: National Grid Hempstead Site

Pace Project No.: 707460

Sample: HIMW-28I	Lab ID: 7074	460003 Co	llected: 12/21/1	6 11:50	Received: 12	2/21/16 14:40 M	Aatrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	nod: EPA 8270D	Preparation Me	thod: El	PA 3510C			
Acenaphthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	205-99-2	
Benzo(g,h,i)perylene	<5.0	Ug/L UJ	5.0	1	12/23/16 09:38	12/28/16 15:32	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L UJ	5.0	1	12/23/16 09:38	12/28/16 15:32	193-39-5	
2-Methylnaphthalene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	91-57-6	
Naphthalene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	91-20-3	
Phenanthrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 15:32	85-01-8	
Pyrene	<5.0	ug/L	123/17 5.0	1	12/23/16 09:38	12/28/16 15:32	129-00-0	
Surrogates			212					
Nitrobenzene-d5 (S)	77	%.	35-114	1	12/23/16 09:38	12/28/16 15:32	4165-60-0	
2-Fluorobiphenyl (S)	74	%.	43-116	1	12/23/16 09:38	12/28/16 15:32	321-60-8	
p-Terphenyl-d14 (S)	83	%.	33-141	1	12/23/16 09:38	12/28/16 15:32	1718-51-0	
Phenol-d5 (S)	31	%.	10-110	1	12/23/16 09:38	12/28/16 15:32	4165-62-2	
2-Fluorophenol (S)	49	%.	21-110	1	12/23/16 09:38	12/28/16 15:32	367-12-4	
2,4,6-Tribromophenol (S)	127	%.	10-123	1	12/23/16 09:38	12/28/16 15:32	118-79-6	S3
2-Chiorophenol-d4 (S)	73	%.	33-110	1	12/23/16 09:38	12/28/16 15:32	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	54	%.	16-110	1	12/23/16 09:38	12/28/16 15:32	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260C/	5030C					
Benzene	<1.0	ug/L	1.0	1		12/23/16 15:02	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/23/16 15:02	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/23/16 15:02	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/23/16 15:02	1330-20-7	
Surrogates		13200						
1,2-Dichloroethane-d4 (S)	101	%.	68-153	1		12/23/16 15:02	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		12/23/16 15:02	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		12/23/16 15:02	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site

Pace Project No.: 707460

Sample: HIMW-28S	Lab ID: 707	460004 (	Collected: 12/21/1	6 13:25	Received: 12	2/21/16 14:40	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Meth	od: EPA 8270	D Preparation Me	ethod: EF	PA 3510C			
Acenaphthene	23.6	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	83-32-9	
Acenaphthylene	1.6J	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	208-96-8	
Anthracene	3.9J	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	207-08-9	
Chrysene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	53-70-3	
Fluoranthene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	206-44-0	
Fluorene	16.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	193-39-5	
2-Methylnaphthalene	23.7	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	91-57-6	
Naphthalene	175	ug/L	20.0	4	12/23/16 09:38	01/04/17 20:20	91-20-3	
Phenanthrene	21.5	ug/L	5.0	1	12/23/16 09:38	12/28/16 17:54	85-01-8	
Pyrene	<5.0	ug/L -	123/17 5.0	1	12/23/16 09:38	12/28/16 17:54	129-00-0	
Surrogates		L	12. 2					
Nitrobenzene-d5 (S)	82	%.	35-114	1	12/23/16 09:38	12/28/16 17:54	4165-60-0	
2-Fluorobiphenyl (S)	80	%.	43-116	1	12/23/16 09:38	12/28/16 17:54	321-60-8	
p-Terphenyl-d14 (S)	91	%.	33-141	1	12/23/16 09:38	12/28/16 17:54	1718-51-0	
Phenol-d5 (S)	35	%.	10-110	1	12/23/16 09:38	12/28/16 17:54	4165-62-2	
2-Fluorophenol (S)	54	%.	21-110	1	12/23/16 09:38	12/28/16 17:54	367-12-4	
2,4,6-Tribromophenol (S)	116	%.	10-123	1	12/23/16 09:38	12/28/16 17:54	118-79-6	
2-Chlorophenol-d4 (S)	78	%.	33-110	1	12/23/16 09:38	12/28/16 17:54	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	59	%.	16-110	1	12/23/16 09:38	12/28/16 17:54	2199-69-1	
8260C Volatile Organics	Analytical Meth	od: EPA 8260	C/5030C					
Benzene	4.9	ug/L	1.0	1		12/23/16 15:20	71-43-2	
Ethylbenzene	70.4	ug/L	1.0	1		12/23/16 15:20	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/23/16 15:20	108-88-3	
Xylene (Total)	3.7	ug/L	1.0	1		12/23/16 15:20	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	68-153	1		12/23/16 15:20	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		12/23/16 15:20	460-00-4	
Toluene-d8 (S)	97	%.	69-124	1		12/23/16 15:20	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**



Project: Nati	onal Grid Hempstead Site			_	0				
Pace Project No.: 707	460	HI	MW-0	5+	-				
Sample: DUP2016221	Lab ID: 7074	60005	Collected:	12/21/1	6 07:00	Received: 12	2/21/16 14:40 M	latrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Metho	od: EPA 82	270D Prepara	ation Me	ethod: Ef	PA 3510C			
Acenaphthene	12.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	83-32-9	
Acenaphthylene	214 💭	ug/L		125	25	12/23/16 09:38	01/04/17 19:51	208-96-8	
Anthracene	2.6J	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	120-12-7	
Benzo(a)anthracene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	56-55-3	
Benzo(a)pyrene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	207-08-9	
Chrysene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	53-70-3	
Fluoranthene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	206-44-0	
Fluorene	28.5	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	193-39-5	
2-Methylnaphthalene	253 D	ug/L		125	25	12/23/16 09:38	01/04/17 19:51	91-57-6	
Naphthalene	1350 5	ug/L		125	25	12/23/16 09:38	01/04/17 19:51	91-20-3	
Phenanthrene	20.1	ua/L		5.0	1	12/23/16 09:38	12/28/16 16:00	85-01-8	
Pyrene	<5.0	ug/L		5.0	1	12/23/16 09:38	12/28/16 16:00	129-00-0	
Surrogates			102/17	1					
Nitrobenzene-d5 (S)	87	%.	2/221 3	35-114	1	12/23/16 09:38	12/28/16 16:00	4165-60-0	
2-Fluorobiphenyl (S)	77	%.	4	3-116	1	12/23/16 09:38	12/28/16 16:00	321-60-8	
p-Terphenyl-d14 (S)	80	%.	3	3-141	1	12/23/16 09:38	12/28/16 16:00	1718-51-0	
Phenol-d5 (S)	29	%.	1	0-110	1	12/23/16 09:38	12/28/16 16:00	4165-62-2	
2-Fluorophenoi (S)	47	%.	2	1-110	1	12/23/16 09:38	12/28/16 16:00	367-12-4	
2,4,6-Tribromophenol (S)	127	%.	1	0-123	1	12/23/16 09:38	12/28/16 16:00	118-79-6	SO
2-Chlorophenol-d4 (S)	67	%.	3	3-110	1	12/23/16 09:38	12/28/16 16:00	93951-73-6	
1,2-Dichlorobenzene-d4 (	S) 54	%.	1	6-110	1	12/23/16 09:38	12/28/16 16:00	2199-69-1	
8260C Volatile Organics	Analytical Metho	d: EPA 82	60C/5030C						
Benzene	2.0	ug/L		1.0	1		12/23/16 15:38	71-43-2	
Ethylbenzene	<1.0	ug/L		1.0	1		12/23/16 15:38	100-41-4	
Toluene	<1.0	ug/L		1.0	1		12/23/16 15:38	108-88-3	
Xylene (Total)	69.1	ug/L		1.0	1		12/23/16 15:38	1330-20-7	
Surrogates		1.578							
1,2-Dichloroethane-d4 (S)	100	%.	6	8-153	1		12/23/16 15:38	17060-07-0	
4-Bromofluorobenzene (S	) 103	%.	7	9-124	1		12/23/16 15:38	460-00-4	
Toluene-d8 (S)	99	%.	6	9-124	1		12/23/16 15:38	2037-26-5	

**REPORT OF LABORATORY ANALYSIS** 



Project: National Grid Hempstead Site

Pace Project No.: 707460

Sample: TB20161221	Lab ID: 707	460006	Collected: 12/21/	16 13:25	Received:	12/21/16 14:40	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Meth	nod: EPA 82	260C/5030C					
Benzene	<1.0	ug/L	1.0	1		12/23/16 14:09	71-43-2	
Ethylbenzene	<1.0	ug/L	1.0	1		12/23/16 14:09	100-41-4	
Toluene	<1.0	ug/L	1.0	1		12/23/16 14:09	108-88-3	
Xylene (Total)	<1.0	ug/L	1.0	1		12/23/16 14:09	1330-20-7	
Surrogates		2000 <b>-</b> 0000						
1,2-Dichloroethane-d4 (S)	98	%.	68-153	1		12/23/16 14:09	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		12/23/16 14:09	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		12/23/16 14:09	2037-26-5	

# **REPORT OF LABORATORY ANALYSIS**

# ATTACHMENT B

# SUPPORT DOCUMENTATION

Pace Analytical				( T	CHAIN The Chain-G	I-OF-(	CU / is a	ST(	OD AL	W	An O‡	aly ¥:	tic 7	al 1	Rei	aue	st D	ocui	ment		-						
Section A Section A Section A Regulated Client Information: Results Re	ection B equired Project	t Infor	malion:					Secti Invoic	loi				11								Pag	e: 🛔	4	of	1		
Company AECOM -B	port To: P	to	Fair	han	les			Allent	tio														T;	92	314	1	
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Section D Matrix Cod Required Client Information MATRIX / CC		(dWC		COLLE	CTED				L	Pre	əsər	vative	es		VIN	Z. 2	2						V		04	-7	
Drinking Water Water Waste Water Product Soil/Solid SAMPLE ID Oil	R D S 방 A A A A A A A A A A A A A A A A A A	(G=GRAB C=C(	COMPOS	SITE r	COMPOS END/GR	ITE AB	T COLLECTION	ERS							st 4	(790)	10178					ine (Y/N)					
(A-Z, 0-9 /,-) Air Sample IDs MUST BE UNIQUE Tessue Other	Q C S 2	SAMPLE TYPE	DATE	TIME	DATE	тіме	SAMPLE TEMP A	# OF CONTAINE	Unpreserved	H <sub>2</sub> SO4	HCI	NaOH	Methanol	Other	Analysis Te	BTEX (	HHA					Residual Chlori	Р	ace F	Project N	o./ Lab	5 I.D.
HIMW-14D	WT	G			1413/14	920	14	4	-2		2	TT				XY							-	a	1		
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Pace Analytical Client	Sample Condition U	DON RECE PM: JSA Due Date: 12/28/16 CLIENT: AECOM-B
Courier: Fed Ex CUPS USPS Tracking #: Custody Seal on Cooler/Box Present:	Client Commercial	Pace Other <u>Optional</u> Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap	Bubble Bags 🔲 None	Other
Thermometer Used: TH077 Th	1078 Type of Ice: We E	Blue None Samples on ice, cooling process has begun
Cooler Temperature: 4,20	<u>'C</u>	Date and Initials of person examining
Temp should be above freezing to 6°C	Co	omments:
Chain of Custody Present:	Sizes DNO DNA 1	
Chain of Custody Filled Out.		
Chain of Custody Relinquished	Yes DNO DNA 3	
Sampler Name & Signature on COC:	Dies DNO DNA 4	
Samples Arrived within Hold Time:	Yes DNO DNA 5	
Short Hold Time Analysis (<72hr):	TYes DINO DINA 6	
Rush Turn Around Time Requested:	TYes No DNA 7	
Sufficient Volume:	Yes DNO DNA 8.	
Correct Containers Used:	Vies DNO DNIA 9.	
-Pace Containers Used	Tes DNO DNA	
Containers Intact.	NYCS DNO DNA 10	
Filtered volume received for Dissolved test	S DYES DNO BUIA 11	
Sample Labels match COC:	Exes DNO DNA 12	
-Includes date/time/ID/Analysis Ma	atrix SL WT OIL	
All containers needing preservation have been che	Cked Dyes DNO DNA 13.	
All containers needing preservation are found to compliance with EPA recommendation.		ial when Lot # of added npleted: preservative:
Exceptions: VOA) micro, TOC, O&G		Date and Time preservative added
Samples checked for dechlorination:	Dyes DNo SUA 14.	
Headspace in VOA Vials ( >6mm)	TYes DNO DNA 15	
Trip Blank Present:	Thes DNO DNA 16	
Trip Blank Custody Seals Present	TYes DIID Set	1
Pace Trip Blank Lot # (if purchased):		
Client Notification/ Resolution:	Date/Time	Field Data Required? Y / N

\* PM (Project Manager) review is documented electronically in LIMS.

# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

0 Pace Analytical

Section A	Section B							Sectio	on C										Page		1	of /	
Required Client Information:	Required Proje	ct infor	mation:		1.1			Involce Al*chu	a Inform	nation:		1 10.0									192	2314	8
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SAMPLE ID (A-Z, 0-9 /) Oil Wipe Air Sample IDs MUST BE UNIQUE Other	OL WP AR TS OT	ETYPE (G=					E TEMP AT CI	ONTAINERS	ervisd			50	vsis Test	X 82	1 87			H		al Chic			
43 of	MATRI	SAMPLE	DATE	TIME	DATE	TIME	SAMPLE	# OF C	Unpres H-SO.	NH	NaOH	Methar	L Analy	BTE	14					Residu	Pace	Project N	o./ Lab I.D.
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3 of 46					PRINT Nat	ne of SAM	PLER	6	ny Fr	red a	m			D	ATE Sign	ed 12	-1151	114		Temp In	Receive Ice (Y/	Custo Sealed C (Y/N	Samples
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612 - 0.007-0.000 - 0.007-0.000			NO# · 706914
Sa	mple Condition	Upon Receipt	Due Date: 12/28/16
Pace Analytical Client Name	AFC	ain 1	TITENT: AECOM-B
onone Hume	1724	<u></u>	
		Fire Other	
Tracking #:			Proj. Due Date:
Custody Seal on Cooler/Box Present:	Line Seals	s intact: eycs	ng
Packing Material: Bubble Wrap	Bags ①None	Cother	
Thermometer Used: TH072 TH078	Type of Ice: We	Blue None	Samples on ice, cooling process has begun
Cooler Temperature: 3.2			Date and Initials of person examining
Temp should be above freezing to 6°C		Comments:	contents: 20 12 HS/10
Chain of Custody Present:		1.	
Chain of Custody Filled Out:		2	
Chain of Custody Relinquished	OYes ONO ON/A	3.	
Sampler Name & Signature on COC		4.	
Samples Arrived within Hold Time		5.	
Short Hold Time Analysis (<72hr):		6.	
Rush Turn Around Time Requested:		7	
Sufficient Volume		8	
Correct Containers Used:	DYes DNO DNIA	9	
-Pace Containers Used.	□Yes □No □N/A		
Containers Intact:		10.	
Filtered volume received for Dissolved tests	□Yes □No □N/A	11	
Sample Labels match COC:		12	
-Includes date/time/ID/Analysis Matnx SL	WT OIL		
All containers needing preservation have been checked	DYes DNo DN/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation	□Yes □No □N/A	Initial when completed:	Lot # of added preservative:
			<b>D</b> -1
Exceptions: VOA, micro, TOC, O&G			preservative added
Samples checked for dechlorination		14.	
Headspace in VOA Vials ( >6mm)	DYes DNo DN/A	15.	
Trip Blank Present:		16	
Trip Blank Custody Seals Present	□Yes □No □N/A		
Pace Trip Blank Lot # (if purchased)	•		
Client Notification/ Resolution:			Field Data Required? Y / N
Person Contacted	Date/	Time	
Comments/ Resolution:			
Frankrike A. S. Stranger, S. S. Stranger, M. S. Stranger, M. S.			

\* PM (Project Manager) review is documented electronically in LIMS.

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# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

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	"Important Note: By signing this form you are ad	cepting Pace's NET	T 30 day	payment lenns	and agreein	g to late charg	es of 1 5% pe	er mon	th for 3	A.	no	w birq	ithin 30	days					1	2.17	1.		F-ALL	-Q-020rev	.07, 15-May	-2007

0 Pace Analytical

Pri: JSA       Due Date: 01/09/17         Client Name:				10/ .10/331
Client Name: <u>JECOM</u> Fluget #  Courter: Fed Ex [11PS UNPS   Client   Dommercial XPexe Other  Tracking #: Custody Seal on Cooler/Box Present: Yes _ 1/k Seals intact: Xycs [] no  Proj. Name Proj. Nam	Pace Analytical	mple Condition Up	on Receipt	PM: JSA Due Date: 01/09/17 CLIENT: AECOM-B
Courier:       Fed Ex [11PS 10:PS 10:Ps 10:Ps 10:Ps 10:Ps 10:Ps 10:Ps 20:Ps 00:Ps 10:Ps 20:Ps 20:P	Client Name	HELOM		F10ject #
Packing Material: Bubble Wrap Bubble Wrap Bubble Bags None Cher Thermometer Used: TH077 Th078 Type of LC VEE Blue None Bamples on ice, cooling process has begun Cooler Temperature: 4.2° Content of Contents (2 - 22 - 1/L TL) Temp should be above freezing to 6°C Comments: Chain of Custody Present: 04.2° Chain of Custody Present: 04.2° Chain of Custody Present: 04.2° Chain of Custody Present: 04.4 Samples Arrived within Hold Time: 04.6 Sufficient Volume: 04.6 Sufficient Volume: 04.6 Sufficient Volume: 04.6 Sufficient Volume: 04.6 Containers Used: 04.6 Containers Used: 04.6 Containers Used: 04.7 Sufficient Volume: 04.6 Containers Used: 04.6 Containers Used: 04.6 Containers Used: 04.7 Sufficient Volume: 04.6 Containers Used: 04.6 Containers Insect: 04.7 Sufficient Volume Coci: 04.6 Containers Insect: 04.7 Sufficient Volume: 04.6 Containers Insect: 04.7 Sufficient Volume: 04.6 Containers Insect: 04.7 Sufficient Volume Coci: 04.6 Containers Insect: 04.7 Sufficient Volume Coci: 04.6 Containers Insect: 04.7 Sufficient Volume received for Dissolved tests 04.6 Containers Insect: 04.7 Sufficient Volume received for Dissolved tests 04.7 Sufficient Volutes date/meni/O/Analysis Matrix SL WT/OLL All containers needing preservation are found to be in 04.7 Sufficient Volume received for dechorination 04.7 Sufficient Volume rec	Courier: Fed Ex FUPS USPS FOlier Tracking #: Custody Seal on Cooler/Box Present: Xyes	nt Ebommercial XP	ace Other t:ycs	Optional - Proj. Due Date: Proj. Name: ] no
Themmeter Used:       TH077       Th078       Type of L52+VEF       Blue       None       Samples on ice, cooling process has begun         Cooler formerature:       4.2       Comments:       Date and Initials of person examining contents (2-22-1/L) TL         Chain of Custody Present       I/set Bille       None       1         Chain of Custody Pilled Out       I/set Bille       None       2         Chain of Custody Pilled Out       I/set Bille       None       3         Samples Arrived within Hold Time:       I/set Bille       None       5         Short Hold Time Analysis (<72hr):	Packing Material: Bubble Wrap	Bags None O	her	
Cooler Temperature:       4.2.2       Date and Initials of person examining contents (2-22-1/c	Thermometer Used: TH077 (TH078)	Type of Ice: WE: BIL	ie None	] Samples on ice, cooling process has begun
Temp should be above freezing to 6*C       Comments:       Contents:       Contents: <td>Cooler Temperature: 4.2 C</td> <td></td> <td></td> <td>Date and Initials of person examining</td>	Cooler Temperature: 4.2 C			Date and Initials of person examining
Chain of Custody Present       Image: Disc Disc Disc Disc Disc Disc Disc Disc	Temp should be above freezing to 6°C	Corr	iments:	
Chain of Custody Filled Out:       Image: Disc Disc Disc Disc Disc Disc Disc Disc	Chain of Custody Present			
Chain of Custody Relinquished       Image: Structure on COC:       Image: Str	Chain of Custody Filled Out:	Dies DNO DNA 2		
Sampler Name & Signature on COC:       Eve:       INo       INva       4.         Samples Arrived within Hold Time:       Zires       INo       INva       5.         Short Hold Time Analysis (<72hr):	Chain of Custody Relinquished	TYes DNO DNIA 3		
Samples Arrived within Hold Time:       Image Dive       5         Short Hold Time Analysis (<72hr):	Sampler Name & Signature on COC:	Dies DNO DNA 4.		
Short Hold Time Analysis (<72hr):	Samples Arrived within Hold Time:	Zies DNO DNA 5.		
Rush Turn Around Time Requested:       Ives       Ives <td>Short Hold Time Analysis (&lt;72hr):</td> <td></td> <td></td> <td></td>	Short Hold Time Analysis (<72hr):			
Sufficient Volume:       Inters Dive       Inters	Rush Turn Around Time Requested:	DYES DINO DINA 7		
Correct Containers Used:       If yes       INA       9         -Pace Containers Used:       If yes       INA       10         Containers Intact:       If yes       INA       11         Sample Labels match COC:       If yes       INA       12         -Includes date/time/ID/Analysis       Matrix       SL       WTOLL       13.         All containers needing preservation have been checked       If yes       INA       Intilla when completed:       Lot # of added preservative:         All containers needing preservation are found to be in completed:       If yes       INA       Intilla when completed:       Lot # of added preservative:         Exceptions:       VOA, micro, TOC, O&G       If yes       INA       IA.         Headspace in VOA Vials (>6mm):       If yes       INA       IA.         Trip Blank Present:       If yes       INA       IA.         Trip Blank Custody Seals Present       If yes       INA       IA.         Pace Trip Blank Lot # (if purchased):       If yes       INA       IA.         Client Notification/Resolution:       Pate/Time       Field Data Required?       Y       Y         Person Contacted	Sufficient Volume:	LEYes DNo DNA 8.		
Pace Containers Used     Pres     Pace Containers Used     Pres     Pace Containers Intact:     Pres     Pace Containers Intact:     Pres     Pace Containers Intact:     Pres     Pace	Correct Containers Used:	TAYES DINO DINA 9		
Containers Intact:       Image: Second	-Pace Containers Used	BYes DNO DN/A		
Filtered volume received for Dissolved tests       Image: Dissolved	Containers Intact:	LYES DNO DIA 10		
Sample Labels match COC:       Image: Display the second sec	Filtered volume received for Dissolved tests	DYES DINO DINIA 11		
-Includes date/time/ID/Analysis Matrix SL VT)OIL   All containers needing preservation have been checked   Image: Compliance with EPA recommendation.   Compliance with EPA recommendation.   Image: Compliance with EPA recommendation.   Preservative:   Initial when   Compliance with EPA recommendation.   Preservative:   Initial when   Compliance with EPA recommendation.   Preservative:   Initial when   Compliance with EPA recommendation.   Preservative:   Date and Time   preservative added   Samples checked for dechlorination   Press   Image: Compliance with EPA recommendation.   Preservative:   Date and Time   preservative added   Samples checked for dechlorination   Press   Image: Compliance with EPA recommendation   Presservative:   Date and Time   preservative added   Samples checked for dechlorination Presservative added Samples checked for dechlorination Presservative added Samples checked for dechlorination Presservative: Presservative added Samples checked for dechlorination Presservative: Presservativ	Sample Labels match COC	Pres DNo DNA 12		
All containers needing preservation have been checked       Image:	-Includes date/time/ID/Analysis Matrix SL	. WT OIL		
All containers needing preservation are found to be in compliance with EPA recommendation.       Initial when completed:       Lot # of added preservative:         Exceptions: VOA, micro, TOC, O&G       Date and Time preservative added         Samples checked for dechlorination       IVes       IN/A         Headspace in VOA Vials (>6mm)'       IVes       IN/A         Trip Blank Present:       IVes       IN/A         Trip Blank Custody Seals Present       IVes       IN/A         Pace Trip Blank Lot # (if purchased):       IVes       IN/A         Client Notification/ Resolution:       Person Contacted       Field Data Required?       Y / N         Person Contacted	All containers needing preservation have been checked	CYes DNo DNA 13.		
Exceptions: VOA, micro, TOC, O&G     Date and Time preservative added       Samples checked for dechlorination     IYes     INo     IVA       Headspace in VOA Vials ( >6mm)     IYes     INo     IN/A     I5.       Trip Blank Present:     IYes     INo     IN/A     I6.       Trip Blank Custody Seals Present     IYes     INo     IN/A       Pace Trip Blank Lot # (if purchased)     IN/A     I6.	All containers needing preservation are found to be in compliance with EPA recommendation.		when leted:	Lot # of added preservative:
Samples checked for dechlorination       IYes       INo       IVA       14.         Headspace in VOA Vials (>6mm) <sup>+</sup> IYes       INo       INIA       15.         Trip Blank Present:       I'i'us       INo       INIA       16.         Trip Blank Custody Seals Present       I'us       INo       INIA       16.         Pace Trip Blank Lot # (if purchased)       I'us       INo       INIA       16.         Client Notification/ Resolution:       Field Data Required?       Y       /       N         Person Contacted	Exceptions: VCA, micro, TOC, O&G			Date and Time preservative added
Headspace in VOA Vials (>6mm)       IYes Divo IN/A       15.         Trip Blank Present:       IYes INo IN/A       16.         Trip Blank Custody Seals Present       IYes INo IN/A       16.         Pace Trip Blank Lot # (if purchased);       IYes INo IN/A       16.         Client Notification/ Resolution:       Field Data Required?       Y / N         Person Contacted       Date/Time       Image: Image	Samples checked for dechlorination	DYes DNo ZN/A 14.		
Trip Blank Present: Trip Blank Custody Seals Present Pace Trip Blank Lot # (if purchased): Client Notification/ Resolution: Person Contacted Comments/ Resolution	Headspace in VOA Vials ( >6mm)	DYes ZINO DNIA 15.	a lake an a s	
Trip Blank Custody Seals Present Pace Trip Blank Lot # (if purchased)  Client Notification/ Resolution: Person Contacted Comments/ Resolution	Trip Blank Present:	Ditos DNO DNA 16.		
Pace Trip Blank Lot # (if purchased):       /         Client Notification/ Resolution:       Field Data Required?         Person Contacted	Trip Blank Custody Seals Present	THE DNO DINA		
Client Notification/ Resolution: Field Data Required? Y / N Person Contacted Date/Time Comments/ Resolution	Pace Trip Blank Lot # (if purchased)	_/		
Person Contacted Date/Time	Client Notification/ Resolution:			Field Data Required? Y / N
Comments/ Resolution	Person Contacted	Date/Time		
	Comments/ Resolution			

WO# . 707551



Project:	National Grid Hempstead Site
Pace Project No .:	706914

Method: EPA 8270D Description: 8270 MSSV Client: AECOM Date: February 17, 2017

### General Information:

16 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Sample Preparation:

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

#### QC Batch: 7684

CC: The continuing calibration for this compound is outside of method control limits. The result is estimated.

- LCS (Lab ID: 38697)
  - · Benzo(g,h,i)perylene
  - Dibenz(a,h)anthracene
  - Fluoranthene
  - · Indeno(1,2,3-cd)pyrene

#### QC Batch: 7762

CC: The continuing calibration for this compound is outside of method control limits. The result is estimated.

- BLANK (Lab ID: 38890)
  - 2,4,6-Tribromophenol (S)
- · LCS (Lab ID: 38891)
  - 2,4,6-Tribromophenol (S)

#### QC Batch: 8535

CC: The continuing calibration for this compound is outside of method control limits. The result is estimated.

- BLANK (Lab ID: 43137)
- Benzo(g,h,i)perylene
- HIMW-0271 (Lab ID: 707551003)
  - Benzo(g,h,i)perylene
- HIMW-027S (Lab ID: 707551001)
  - Benzo(g,h,i)perylene
- HIMW-027S MS/MSD (Lab ID: 707551002)
  - · Benzo(g,h,i)perylene
  - · Benzo(k)fluoranthene
- · LCS (Lab ID: 43138)
- · Benzo(g,h,i)perylene
  - · Benzo(k)fluoranthene

# **REPORT OF LABORATORY ANALYSIS**

ace Analytica ww.pacelabs.com

Project: National Grid Hempstead Site Pace Project No.: 706914

Method:EPA 8270DDescription:8270 MSSVClient:AECOMDate:February 17, 2017

# QC Batch: 8535

CC: The continuing calibration for this compound is outside of method control limits. The result is estimated.

- MS (Lab ID: 43139)
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
- MSD (Lab ID: 43140)
  - Benzo(g,h,i)perylene
  - · Benzo(k)fluoranthene

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### QC Batch: 8535

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707551002

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
  - MS (Lab ID: 43139)
    - Naphthalene

• MSD (Lab ID: 43140)

- 2-Methylnaphthalene
- Naphthalene

Additional Comments:

## REPORT OF LABORATORY ANALYSIS



Project: National Grid Hempstead Site Pace Project No.: 706914

 Method:
 EPA 8260C/5030C

 Description:
 8260C Volatile Organics

 Client:
 AECOM

 Date:
 February 17, 2017

#### General Information:

19 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable): All criteria were within method requirements with any exceptions noted below.

#### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

## Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### QC Batch: 8043

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707078009

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
  - MS (Lab ID: 40433)
    - Benzene

#### QC Batch: 8250

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707381002,707551002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

· MSD (Lab ID: 43638)

Ethylbenzene

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

# REPORT OF LABORATORY ANALYSIS



Project:	National Grid Hempstead Site
Pace Project No .:	706914
-	and the second sec

Method:EPA 8260C/5030CDescription:8260C Volatile OrganicsClient:AECOMDate:February 17, 2017

This data package has been reviewed for quality and completeness and is approved for release.

# **REPORT OF LABORATORY ANALYSIS**

# MSSV Full Scan - FORM V SVOA-1 SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New Yo	rk SDG No.: 706914	Contract: National Grid Hempstead Site	
Lab File ID: 8270-122016.B\S9372.0	D [	DFTPP Injection Date: 12/20/2016	

Instrument ID: 70MSS4

DFTPP Injection Time: 09:43

	Contraction of the second se		
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABU	NDANCE
51	30.00 - 60.00% of mass 198	31.69	5.10-5-49-3
68	Less than 2.00% of mass 69	0.00	(0.00) <sup>1</sup>
69	Base Peak, 100.00% relative abundance	32.12	
70	Less than 2.00% of mass 69	0.08	(0.24) <sup>1</sup>
127	40.00 - 60.00% of mass 198	43.43	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.40	
275	10.00 - 30.00% of mass 198	25.01	
365	1.00 - 100.00% of mass 198	2.52	
441	0.10 - 100.00% of mass 442	10.64	
442	40.00 - 110.00% of mass 198	73.50	
443	17.00 - 23.00% of mass 442	14.31	(19.47) <sup>2</sup>

1 - Value is % mass 69

2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
8305731CCV	8305731CCV	8270-122016.B\S9373.D	12/20/2016	10:01
38696BLANK	38696BLANK	8270-122016.B\S9375.D	12/20/2016	10:58
38697LCS	38697LCS	8270-122016.B\S9376.D	12/20/2016	11:27
HIMW-14D	706914001	8270-122016.B\S9390.D	12/20/2016	18:11
HIMW-14I	706914002	8270-122016.B\S9391.D	12/20/2016	18:39
HIMW-12S	706914003	8270-122016.B\S9392.D	12/20/2016	19:08
HIMW-22	706914004	8270-122016.B\S9393.D	12/20/2016	19:37

# MSSV Full Scan - FORM V SVOA-1 SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

 Lab Name:
 Pace Analytical - New York
 SDG No.:
 706914
 Contract:
 National Grid Hempstead Site

 Lab File ID:
 8270-122816.B\S9526.D
 DFTPP Injection Date:
 12/28/2016

Instrument ID: 70MSS4

DFTPP Injection Time: 17:03

		and the second sec	
m/e	ION ABUNDANCE CRITERIA	% RELATIVE A	BUNDANCE
51	30.00 - 60.00% of mass 198	31.01	
68	Less than 2.00% of mass 69	0.00	(0.00) <sup>1</sup>
69	Base Peak, 100.00% relative abundance	32.21	<u>E</u>
70	Less than 2.00% of mass 69	0.16	(0.51) <sup>1</sup>
127	40.00 - 60.00% of mass 198	43.43	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.91	
275	10.00 - 30.00% of mass 198	24.62	
365	1.00 - 100.00% of mass 198	2.23	
441	0.10 - 100.00% of mass 442	9.35	
442	40.00 - 110.00% of mass 198	61.24	
443	17.00 - 23.00% of mass 442	11.94	(19.50) <sup>2</sup>

1 - Value is % mass 69

2 - Value is % mass 442

TIME ANALYZED	DATE ANALYZED	LAB FILE ID	LAB SAMPLE ID	SAMPLE NO.
17:21	12/28/2016	8270-122816.B\S9527.D	8337502CCV	8337502CCV
19:05	12/28/2016	8270-122816.B\S9530.D	43137BLANK	43137BLANK
19:35	12/28/2016	8270-122816.B\S9531.D	43138LCS	43138LCS
21:02	12/28/2016	8270-122816.B\S9534.D	707551001	HIMW-027S
21:32	12/28/2016	8270-122816.B\S9535.D	707551002	HIMW-027S MS/MSD
22:02	12/28/2016	8270-122816.B\S9536.D	43139MS	43139MS
22:32	12/28/2016	8270-122816.B\S9537.D	43140MSD	43140MSD
23:03	12/28/2016	8270-122816.B\S9538.D	707551003	HIMW-027I
	12/28/2016 12/28/2016 12/28/2016 12/28/2016	8270-122816.B\S9535.D 8270-122816.B\S9536.D 8270-122816.B\S9537.D 8270-122816.B\S9538.D	707551002 43139MS 43140MSD 707551003	HIMW-027S MS/MSD 43139MS 43140MSD HIMW-027I

# MSSV Full Scan - FORM V SVOA-1 SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York SDG No.: 706914 Contract: National Grid Hempstead Site Lab File ID: 8270-122916.B\S9549.D DFTPP Injection Date: 12/29/2016 Instrument ID: 70MSS4

DFTPP Injection Time: 11:13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE	
III/C		// REDAIL	BONDANOL
51	30.00 - 60.00% of mass 198	32.01	
68	Less than 2.00% of mass 69	0.00	(0.00) <sup>1</sup>
69	Base Peak, 100.00% relative abundance	33.74	
70	Less than 2.00% of mass 69	0.16	(0.49) <sup>1</sup>
127	40.00 - 60.00% of mass 198	43.36	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.66	
275	10.00 - 30.00% of mass 198	23.10	
365	1.00 - 100.00% of mass 198	2.37	
441	0.10 - 100.00% of mass 442	9.18	
442	40.00 - 110.00% of mass 198	61.46	
443	17.00 - 23.00% of mass 442	11.90	(19.36) <sup>2</sup>

1 - Value is % mass 69

2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
8341910CCV	8341910CCV	8270-122916.B\S9550.D	12/29/2016	11:33
HIMW-027S	707551001	8270-122916.B\S9565.D	12/29/2016	18:58
HIMW-027S MS/MSD	707551002	8270-122916.B\S9566.D	12/29/2016	19:27

SAMPLE NO.

# MSSV FULL SCAN - FORM VII SVOA-1 MSSV FULL SCAN CONTINUING CALIBRATION DATA

8305731CCV

Lab Name: Pace Analytical - New York

Lab File ID: 8270-122016.B\S9373.D

Instrument ID: 70MSS4

York	Calibration Date:	12/20/2016	_Time:	10:01	
GC Column: Col 1	Init. Calib. Date(s):	11/10/2016		11/10/2016	
73.D	Init. Calib. Time(s):	07:53		10:40	

SDG No.: 706914

COMPOUND	CURVE	RRF or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.19049	1.21588	0.9000	2.1321	20.0000
Acenaphthylene	Averaged	1.85784	2.01561	0.9000	8.4920	20.0000
Anthracene	Averaged	1.10821	1.24028	0.7000	11.9180	20.0000
Benzo(a)anthracene	Averaged	1.20894	1.27914	0.8000	5.8061	20.0000
Benzo(a)pyrene	Averaged	1.16955	1.31814	0.7000	12.7046	20.0000
Benzo(b)fluoranthene	Averaged	1.37640	1.46722	0.7000	6.5981	20.0000
Benzo(g,h,i)perylene	Averaged	0.87909	1.13385	0.5000 🤇	28.9796	20.0000
Benzo(k)fluoranthene	Averaged	1.17449	1.37050	0.7000	16.6888	20.0000
Chrysene	Averaged	1.05913	1.20909	0.7000	14.1584	20.0000
Dibenz(a,h)anthracene	Averaged	0.90939	1.09388	0.4000 🤇	20.2866	20.0000
Fluoranthene	Averaged	1.19220	1.38439	0.6000	16.1205	20.0000
Fluorene	Averaged	1.31327	1.40292	0.9000	6.8268	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	0.96729	1.34991	0.5000	39.5556	20.0000
2-Methyinaphthalene	Averaged	0.69989	0.74090	0.4000	5.8593	20.0000
Naphthalene	Averaged	1.00068	1.08921	0.7000	8.8464	20.0000
Phenanthrene	Averaged	1.04332	1.12264	0.7000	7.6023	20.0000
Pyrene	Averaged	1.26393	1.35011	0.6000	6.8186	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.34942	1.43344	0.0100	6.2262	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.95217	0.93270	0.0100	-2.0445	20.0000
2-Fluorobiphenyl (S)	Averaged	1.34038	1.38753	0.0100	3.5177	20.0000
2-Fluorophenol (S)	Averaged	1.21914	1.38813	0.0100	13.8612	20.0000
Nitrobenzene-d5 (S)	Averaged	0.33943	0.33469	0.0100	-1.3962	20.0000
Phenol-d5 (S)	Averaged	1.47724	1.68505	0.0100	14.0672	20.0000
p-Terphenyl-d14 (S)	Averaged	0.93804	0.90497	0.0100	-3.5257	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.19375	0.18668	0.0100	-3.6512	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

# MSSV FULL SCAN - FORM VII SVOA-1 MSSV FULL SCAN CONTINUING CALIBRATION DATA

8337502CCV

Lab Name: Pace Analytical - New York	Calibration Date:	12/28/2016	Time:	17:21
Instrument ID: 70MSS4 GC Column: Col 1	Init. Calib. Date(s):	11/10/2016		11/10/2016
Lab File ID: 8270-122816.B\S9527.D	Init. Calib. Time(s):	07:53		10:40

SDG No.: 706914

			A STATE OF A			
COMPOUND	CURVE	RRF or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.19049	1.15443	0.9000	-3.0290	20.0000
Acenaphthylene	Averaged	1.85784	1.94542	0.9000	4.7139	20.0000
Anthracene	Averaged	1.10821	1.25897	0.7000	13.6041	20.0000
Benzo(a)anthracene	Averaged	1.20894	1.33539	0.8000	10.4591	20.0000
Benzo(a)pyrene	Averaged	1.16955	1.30864	0.7000	11.8928	20.0000
Benzo(b)fluoranthene	Averaged	1.37640	1.40022	0.7000	1.7308	20.0000
Benzo(g,h,i)perylene	Averaged	0.87909	0.66782	0.5000	-24.0330	20.0000
Benzo(k)fluoranthene	Averaged	1.17449	1.74055	0.7000	48.1959	20.0000
Chrysene	Averaged	1.05913	1.12476	0.7000	6.1965	20.0000
Dibenz(a,h)anthracene	Averaged	0.90939	0.76881	0.4000	-15.4592	20.0000
Fluoranthene	Averaged	1.19220	1.42433	0.6000	19.4706	20.0000
Fluorene	Averaged	1.31327	1.29459	0.9000	-1.4222	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	0.96729	0.88537	0.5000	-8.4694	20.0000
2-Methylnaphthalene	Averaged	0.69989	0.70529	0.4000	0.7713	20.0000
Naphthalene	Averaged	1.00068	1.10927	0.7000	10.8517	20.0000
Phenanthrene	Averaged	1.04332	1.12940	0.7000	8.2504	20.0000
Pyrene	Averaged	1.26393	1.38186	0.6000	9.3304	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.34942	1.17170	0.0100	-13.1705	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.95217	0.90669	0.0100	-4.7760	20.0000
2-Fluorobiphenyl (S)	Averaged	1.34038	1.36595	0.0100	1.9079	20.0000
2-Fluorophenol (S)	Averaged	1.21914	0.98204	0.0100	-19.4487	20.0000
Nitrobenzene-d5 (S)	Averaged	0.33943	0.31984	0.0100	-5.7707	20.0000
Phenol-d5 (S)	Averaged	1.47724	1.36683	0.0100	-7.4738	20.0000
p-Terphenyl-d14 (S)	Averaged	0.93804	0.96498	0.0100	2.8719	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.19375	0.15411	0.0100	-20.4609	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

0 Pace Analytical° 1

# CHAIN-OF-CUSTODY / Analytical Reque: The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be

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"Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to tate charges of 1 5% per month for any 32 cold within 30 days

and the second s	Sar	nple Condition	Upon Rec	WO#:	707078
Face Analytical	Client Name	: AFLOW	)	PM: JSA CLIENT:	Due Date: 01/03/17 AECOM-B
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Custody Seal on Cooler/Box	Present:	L no Seals	intact: ycs	s 🗌 no	指定也没能够消除了这些法
Packing Material: Bubble	Wrap Zotople I	Bags DiNone	Other		
Thermometer Used: THO	77 THO78	Type of Ice:	Blue None	5amp	ples on ice, cooling process has begun
Cooler Temperature:(	210			D	ate and initials of person examining contents;
Tama chauld ha ahous freezión in f	8°C :		Comments:	1	

Chain of Custody Relinquished	KIYes			3.	
Sampler Name & Signature on COC	Pres			4.	
Samples Arrived within Hold Time:	Dyes			5.	
Short Hold Time Analysis (<72hr):	DYes	Øĥ₀		6.	
Rush Turn Around Time Requested:	□Yes	DN0		7.	
Sufficient Volume:	Pres	□No		8.	
Correct Containers Used:	Pres			9.	
-Pace Containers Used:	ØYes				
Containers Intact:	, □ Yes			10.	
Filtered volume received for Dissolved tests	□Yes	□No	ENIA	11.	
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix SL	D'on	⊡‰ L		12	
All containers needing preservation have been checked.	□Yes		-	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	□Yes	□No		Initial when completed:	Lot # of added preservative:
Exceptions VOA, micro, TOC, O&G					Date and Time preservative added:
Samples checked for dechlorination:	QYes		BOTN/A	14.	
Headspace in VOA Vials ( >6mm)	□Yes	<b>B</b> No		15.	
Trip Blank Present:	Yes			16	
Trip Blank Custody Seals Present	Yes		(Dyn		
Pace Trip Blank Lot # (if purchased)			1		

Client Notification/ Resolution: Person Contacted:

Date/Time.

Comments/ Resolution:

\* PM (Project Manager) review is documented electronically in LIMS.

Y / N

Field Data Required?

# CHAIN-OF-CUSTODY / Analytical Reque

Pace Analytical www.pscelabs.com

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be

nent rately

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	tindera								-	-		-						R	ea							
	Section D Matrix Con	das					1.e									-	=		Ξ							
	Required Fact Information MATRIX / C	ODE	to laft	WO		COLL	ECTED					Pr	sen	ativ	s		ž	2	_							
	SAMPLE ID (A2.004)	DW WT WW P SL	ee valid codes	GRAB C=C	COMPO	SITE r	Compos End/gr	ATE AB	OLLECTION	5							1									
ITEM #	SAMPLE ID Oil Wipe (A-Z, 0-9 /) Air Sample IDs MUST BE UNIQUE Tissue Other	OL WP AR TS OT	MATRIX CODE (s	SAMPLE TYPE (G=	DATE	TIME	DATE	TIME	SAMPLE TEMP AT C	# OF CONTAINERS	Unpreserved	HND.	HCI	NaOH	Methanol	Other	LAnalysis Test	BTEX	PALT							
1	HIMW-24		WT	G		-	14/9/16	0325	13	4	2	+	2		1	T	<b>F</b>	X	x							
2	HIMW-25	h	T	6		(1997) (1997)	12/19/11	1050	13	4	2	T	2		T	T		X	×							
3	HIMW -205		M	4			12/19/16	1215	13	4	2		2					X	X							
4	HIMW-20I	L	NT.	4			12/19/16	1325	13	4	2		2	-				X	×							
5	HIMW-05D	i	ώT	4			12/20/10	A20	12	4	2		2					X	×							
6	HIMW-OSD MS/USD		UT	4			12/16	0930	12	8	4		4					x	×							
7	HIMW-026D	1	WT	4			12/20/16	1150	12	4	2		2	-				X.	K							
8	HIMU-026I		~	4			12/20/1	1315	12	4	2		2					X	×							
9	DUP-121916		w-	6			12/19/16	0700	13	4	2		2	-				×	×							
10	TB20161220		WT	ç			12/20/10	1400	12	2		_	2	$\square$	4	_		X								
11	FB26161220		w	4			12/20/16	1400	12	4	2	-	2		+	+		X	K							
12	ADDITIONAL COMMENTS		REL	INQU	ISHED BY	AFFILIAT	TION	DATE	<u> </u>	Т	IME	+			ACCI	PTE	DBY	/AF	FIL							
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	D 2	1 '																	_							
	e OF	RIGINA	L			SAMPL	ER NAME A	ND SIGNA	TUR	E							-									
	of a							ne of SAMP	LER	:	M	ig.	m	T	h	1	1.	D	ATI							



				WO#:	707078
5	Sam	ple Condition	Upon Receipt	PM: JSA	Due Date: 01/03/17
. Pace Analytical	Client Name:	AECOM			ACCON-B
Courier: Fed Ex LUPS	USPS Client		XPace Other		Optional Brèi Due Date
Tracking #: Custody Seal on Cooler/Box	Present: Types	L no Seals	intact: 🔏 ycs	🗋 ng	Proj. Name:
Packing Material: Bubble	Nrap Rubble Ba	gs 🗌 None	Cother		_
Thermometer Used: IHU Cooler Temperature:	1.0°C	Type of Ice: Wel	Jue None	Date a	and Initials of person examining tents:

Chain of Custody Relinquished	<b>EXES</b>			3	
Sampler Name & Signature on COC:	Yes	□No		4	
Samples Arrived within Hold Time:	Yes			5	
Short Hold Time Analysis (<72hr):	Dyes	QNO		6.	
Rush Turn Around Time Requested:	Dyes	QNO		7.	
Sufficient Volume.	Yes	□No		8.	
Correct Containers Used:	Yes	□No		9.	
-Pace Containers Used:	Dires	⊡No			
Containers Intact:	Yes			10.	
Filtered volume received for Dissolved tests	□Yes		ANA	11.	
Sample Labels match COC:	Yes	□No		12.	
-Includes date/time/ID/Analysis Matrix S	(wi) oi	L			
All containers needing preservation have been checked	⊖ □Yes		QNA	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	□Yes			Initial when completed:	Lot # of added preservative:
Exceptions: VOA, micro, TOC, O&G			•		Date and Time preservative added:
Samples checked for dechlorination:	□Yes		QN/A	14.	3 
Headspace in VOA Vials ( >6mm):	□Yes	QN0		15.	
Trip Blank Present:	Yes	DN0		16	
Trip Blank Custody Seals Present Pace Trip Blank Lot # (if purchased)	□Yes	<b>□</b> No	<b>FINIA</b>		

Client Notification/ Resolution: Field Data Required? Y / N
Person Contacted: \_\_\_\_\_\_ Date/Time \_\_\_\_\_\_
Comments/ Resolution: \_\_\_\_\_\_

\* PM (Project Manager) review is documented electronically in LIMS.



Project: National Grid Hempstead Site Pace Project No.: 707078

Method: EPA 8270D Description: 8270 MSSV Client: AECOM Date: February 17, 2017

#### General Information:

12 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

#### Initial Calibrations (Including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

#### QC Batch: 8057

CC: The continuing calibration for this compound is outside of method control limits. The result is estimated.

- HIMW-05D (Lab ID: 707078009)
- Benzo(g,h,i)perylene
- . LCS (Lab ID: 40457)
  - 2,4,6-Tribromophenol (S)
  - Benzo(g,h,i)perylene
  - Indeno(1,2,3-cd)pyrene
- MS (Lab ID: 40459)
  - · Benzo(g,h,i)perylene
  - · Indeno(1,2,3-cd)pyrene
- MSD (Lab ID: 40460)
  - · Benzo(g,h,i)perylene
  - Indeno(1,2,3-cd)pyrene

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 8057

- S0: Surrogate recovery outside laboratory control limits.
  - · HIMW-26D (Lab ID: 707078010)
  - 2,4,6-Tribromophenol (S)

. LCS (Lab ID: 40457)

• 2,4,6-Tribromophenol (S)

# **REPORT OF LABORATORY ANALYSIS**

ice Analytic WW.Dac

Project: National Grid Hempstead Site Pace Project No.: 707078

Method:EPA 8270DDescription:8270 MSSVClient:AECOMDate:February 17, 2017

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### QC Batch: 8057

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707078009

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 40459)
  - 2-Methylnaphthalene
  - Naphthalene
- MSD (Lab ID: 40460)
  - 2-Methylnaphthalene
  - Naphthalene

Additional Comments:

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site Pace Project No.: 707078

#### Method: EPA 8260C/5030C

 Description:
 8260C Volatile Organics

 Client:
 AECOM

 Date:
 February 17, 2017

#### General Information:

14 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (Including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### QC Batch: 8043

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707078009

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
  - MS (Lab ID: 40433)
    - Benzene

# QC Batch: 8250

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707381002,707551002

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
  - · MSD (Lab ID: 43638)
    - Ethylbenzene

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

# **REPORT OF LABORATORY ANALYSIS**



Project: National Grid Hempstead Site Pace Project No.: 707078

Method:EPA 8260C/5030CDescription:8260C Volatile OrganicsClient:AECOMDate:February 17, 2017

This data package has been reviewed for quality and completeness and is approved for release.

# **REPORT OF LABORATORY ANALYSIS**
## MSSV Full Scan - FORM V SVOA-1 SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

 Lab Name:
 Pace Analytical - New York
 SDG No.:
 707078
 Contract:
 National Grid Hempstead Site

 Lab File ID:
 8270-123016.B\R37337.D
 DFTPP Injection Date:
 12/30/2016

 Instrument ID:
 70MSS3
 DFTPP Injection Time:
 11:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE A	BUNDANCE
51	30.00 - 60.00% of mass 198	38.97	
68	Less than 2.00% of mass 69	0.00	(0.00) <sup>1</sup>
69	Base Peak, 100.00% relative abundance	38.46	
70	Less than 2.00% of mass 69	0.29	(0.75) <sup>1</sup>
127	40.00 - 60.00% of mass 198	42.64	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.88	
275	10.00 - 30.00% of mass 198	26.89	
365	1.00 - 100.00% of mass 198	3.03	
441	0.10 - 100.00% of mass 442	16.51	
442	40.00 - 110.00% of mass 198	115.97	
443	17.00 - 23.00% of mass 442	22.84	(19.70) <sup>2</sup>

1 - Value is % mass 69

2 - Value is % mass 442

				×
SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
8368338CCV	8368338CCV	8270-123016.B\R37338.D	12/30/2016	11:32
40456BLANK	40456BLANK	8270-123016.B\R37340.D	12/30/2016	12:29
40457LCS	40457LCS	8270-123016.B\R37341.D	12/30/2016	12:57
HIMW-05D	707078009	8270-123016.B\R37342.D	12/30/2016	13:26
40459MS	40459MS	8270-123016.B\R37343.D	12/30/2016	13:55
40460MSD	40460MSD	8270-123016.B\R37344.D	12/30/2016	14:23
HIMW-26D	707078010	8270-123016.B\R37345.D	12/30/2016	14:51
HIMW-26I	707078011	8270-123016.B\R37346.D	12/30/2016	15:20
DUP-121916	707078012	8270-123016.B\R37347.D	12/30/2016	15:48
FB20161221	707078014	8270-123016.B\R37348.D	12/30/2016	16:16

SAMPLE NO.

### MSSV FULL SCAN - FORM VII SVOA-1 MSSV FULL SCAN CONTINUING CALIBRATION DATA

8368338CCV

Time: 11:32

Lab Name: Pace Analytical - New York

Instrument	ID.	70MSS3
in ou un on t	· • ·	10110000

ument II	D: <u>70MSS3</u>	GC Column: Col 1	Init. Calib. Date(s):	12/07/2016	12/07/2016
File ID:	8270-123016.B	R37338.D	Init. Calib. Time(s):	01:01	07:11

Calibration Date: 12/30/2016

SDG No.: 707078

Lab

COMPOUND	CURVE	RRF or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.12705	1.08354	0.9000	-3.8603	20.0000
Acenaphthylene	Averaged	1.70029	1.64174	0.9000	-3.4437	20.0000
Anthracene	Averaged	1.00637	1.06468	0.7000	5.7941	20.0000
Benzo(a)anthracene	Averaged	1.15119	1.18063	0.8000	2.5575	20.0000
Benzo(a)pyrene	Averaged	1.12757	1.15834	0.7000	2.7284	20.0000
Benzo(b)fluoranthene	Averaged	1.40893	1.25693	0.7000	-10.7881	20.0000
Benzo(g,h,i)perylene	Averaged	0.63889	0.83881	0.5000	31.2932	20.0000
Benzo(k)fluoranthene	Averaged	1.20903	1.15926	0.7000	-4.1165	20.0000
Chrysene	Averaged	1.03298	0.94146	0.7000	-8.8601	20.0000
Dibenz(a,h)anthracene	Linear	25	25.54219	0.4000	2.1688	20.0000
Fluoranthene	Averaged	1.11617	1.24977	0.6000	11.9690	20.0000
Fluorene	Averaged	1.31666	1.19598	0.9000	-9,1661	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	0.85388	1.09843	0.5000 (	28.6391	20.0000
2-Methylnaphthalene	Averaged	0.71064	0.69587	0.4000	-2.0778	20.0000
Naphthalene	Averaged	0.95727	0.95583	0.7000	-0.1508	20.0000
Phenanthrene	Averaged	0.96582	0.99971	0.7000	3.5088	20.0000
Pyrene	Averaged	1.18360	1.19669	0.6000	1.1060	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.29102	1.29546	0.0100	0.3437	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.90201	0.85740	0.0100	-4.9453	20.0000
2-Fluorobiphenyl (S)	Averaged	1.24617	1.23443	0.0100	-0.9422	20.0000
2-Fluorophenol (S)	Averaged	1.17213	1.23011	0.0100	4.9467	20.0000
Nitrobenzene-d5 (S)	Averaged	0.37163	0.37624	0.0100	1.2393	20.0000
Phenol-d5 (S)	Averaged	1.51253	1.40716	0.0100	-6.9667	20.0000
p-Terphenyl-d14 (S)	Averaged	0.78352	0.81463	0.0100	3.9711	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.11640	0.17104	0.0100	46.9458	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be com W0#:707460

Se Re	uired Client Information	Section E Required F	B Projent trian	malien:					Sectio	on C Informa	ition														
Co	npany: AECOM	Report To:	Pet	er Fa	iv bu	ule			Attentio	cr							.70	17460	<b>1</b> 311						-
Add	ress:	Copy To:	Jon	Sun	Lau	ist			Compl	irry Nam	ie: /	PEZ	20	n			RI	EGULAT	ORY	AGE	NCY				
	Buffalo, NY				t				Addres	ss:								NPDE	S	V GF	ROUN	D WATE	R	DRINKING	G WATER
Em	atter, fair Lanks au m. u	Purchase (	Order No :						Pace Qi Referen	uote								UST		RC	RA			OTHER .	
1	11:956 - 56 st Fax:	Project 'In	Fation	all.	riti t	kemps	tead	2	Pace Pr Manage	roject er:							s	ite Loca	tion			Γ			
Re	wested Due Date TAT: Standiwork	Project Nu	mber:						Pace Pr	rofile #:								STA	TE:	N	Y	_			
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	Important Note: By signing this form you are accu	pling Pace's I	NET 30 day p	ayment lerms	and agreein	g to late charge	os of 1 5% p	er mon	th for en	1	: not p	ald withi	in 30 day	ys								F-ALL-	Q-020rev	07, 15-May	-2007

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Pace Analytical

				WO#:707460
Pace Analytical Client Nam	e: AE	dition	) Upon Rece	PM: JSA Due Date: 01/06/17 CLIENT: AECOM-B
Courier: Fed Ex UPS USPS Cliff Tracking #: Custody Seal on Cooler/Box Present: Yes Packing Material: Bubble Wrap Bubble Thermometer Used: TH077 TH078 Cooler Temperature: L () C	ent Comme L IIC Bags Type of ICe	Seals Seals Vone	XPace Other s intact: Xycs Other Blue None	Optional Proj. Due Date: Proj. Name: Samples on ice, cooling process has begun Date and Initials of person examining
			Commenter	contents:
Chain of Custody Brogott	Nov - Du			
Chain of Custody Present:			1	the second
Chain of Custody Filled Out:	LITES LINO		2	
Chain of Custody Relinquished			3.	
Sampler Name & Signature on COC	Duges LINO		14. 5	and the second
Samples Arrived within Hold Time			5.	
Short Hold Time Analysis ( 2nr):</td <td></td> <td></td> <td>0.</td> <td>and the second second</td>			0.	and the second
Rush Turn Around Time Requested:			//	an a
			8.	
Correct Containers Used	Dyres LINO		9	
-Pace Containers Used	Dyres □No			
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Filtered volume received for Dissolved tests		Diya	11	· · · · · · · · · · · · · · · · · · ·
Sample Labels match COC:	Dyes DNo		12.	
-Includes date/time/ID/Analysis Matrix S All containers needing preservation have been checked	L/WT OIL			
All containers needing preservation are found to be in	□Yes □No	ANN	13 Initial when	Lot # of added
compliance with EFA recommendation.		1		Date and Time
Exceptions: VOA, micro, TOC, O&G				preservative added
Samples checked for dechlorination:	OYes ONo		14.	A MARINE AND A MARINE AND A MARINE AND A MARINE
Headspace in VOA Vials ( >6mm)	TYes Stelo		15	
Trip Blank Present:	Yes No		16	
Trip Blank Custody Seals Present	Yes No	DN/A		
Pace Trip Blank Lot # (if purchased):				an an ann an Arthur an Arthur agus an Arthur an Art
Client Notification/ Resolution: Person Contacted Comments/ Resolution		_Date/	Fime	Field Data Required? Y / N
				· · · · · · · · · · · · · · · · · · ·



#### **PROJECT NARRATIVE**

Project: National Grid Hempstead Site Pace Project No.: 707460

Method:EPA 8270DDescription:8270 MSSVClient:AECOMDate:February 17, 2017

#### General Information:

5 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Sample Preparation:

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

#### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### QC Batch: 8322

CC: The continuing calibration for this compound is outside of method control limits. The result is estimated.

· LCS (Lab ID: 41752)

- · 2,4,6-Tribromophenol (S)
- Benzo(g,h,i)perylene
- Indeno(1,2,3-cd)pyrene

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 8322

- S0: Surrogate recovery outside laboratory control limits.
  - · DUP2016221 (Lab ID: 707460005)
  - 2,4,6-Tribromophenol (S)
  - · HIMW-05I (Lab ID: 707460001)
    - 2,4,6-Tribromophenol (S)
- S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples.
  - · HIMW-05S (Lab ID: 707460002)
    - 2,4,6-Tribromophenol (S)
  - · HIMW-28I (Lab ID: 707460003)
    - 2,4,6-Tribromophenol (S)

#### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

#### **REPORT OF LABORATORY ANALYSIS**

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#### **PROJECT NARRATIVE**

Project: National Grid Hempstead Site Pace Project No.: 707460

 Method:
 EPA 8270D

 Description:
 8270 MSSV

 Client:
 AECOM

 Date:
 February 17, 2017

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

#### **REPORT OF LABORATORY ANALYSIS**

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#### **PROJECT NARRATIVE**

Project:	National Grid Hempstead Site
Pace Project No .:	707460

Method: EPA 8260C/5030C Description: 8260C Volatile Organics

Client: AECOM Date: February 17, 2017

#### **General Information:**

6 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable): All criteria were within method requirements with any exceptions noted below.

#### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### QC Batch: 8250

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 707381002,707551002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 43638)
  - Ethylbenzene

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

#### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

#### **REPORT OF LABORATORY ANALYSIS**

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## MSSV Full Scan - FORM V SVOA-1 SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - New York	SDG No.: 707460	Contract:	National Grid Hempstead Site
Lab File ID: 8270-122816.B\R37313.D		DFTPP Injection Date:	12/28/2016
Instrument ID: 70MSS3		DFTPP Injection Time:	10:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE A	BUNDANCE
51	30.00 - 60.00% of mass 198	41.31	
68	Less than 2.00% of mass 69	0.00	(0.00) <sup>1</sup>
69	Base Peak, 100.00% relative abundance	40.48	
70	Less than 2.00% of mass 69	0.19	(0.47) <sup>1</sup>
127	40.00 - 60.00% of mass 198	43.58	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative abundance	100.00	
199	5.00 - 9.00% of mass 198	6.89	
275	10.00 - 30.00% of mass 198	26.22	
365	1.00 - 100.00% of mass 198	3.08	
441	0.10 - 100.00% of mass 442	14.77	
442	40.00 - 110.00% of mass 198	100.71	
443	17.00 - 23.00% of mass 442	19.97	(19.83) <sup>2</sup>

1 - Value is % mass 69

2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
8368411CCV	8368411CCV	8270-122816.B\R37314.D	12/28/2016	10:48
41751BLANK	41751BLANK	8270-122816.B\R37316.D	12/28/2016	11:45
41752LCS	41752LCS	8270-122816.B\R37317.D	12/28/2016	12:13
HIMW-05I	707460001	8270-122816.B\R37322.D	12/28/2016	14:36
HIMW-05S	707460002	8270-122816.B\R37323.D	12/28/2016	15:04
HIMW-28I	707460003	8270-122816.B\R37324.D	12/28/2016	15:32
DUP2016221	707460005	8270-122816.B\R37325.D	12/28/2016	16:00
HIMW-28S	707460004	8270-122816.B\R37329.D	12/28/2016	17:54

SAMPLE NO.

## MSSV FULL SCAN - FORM VII SVOA-1 MSSV FULL SCAN CONTINUING CALIBRATION DATA

8368411CCV

Lab Name: Pace Analytical - New York

Lab Name: F	Pace Analytical - New	Calibration Date:	12/28/2016	_Time:	10:48	
Instrument ID	: <u>70MSS3</u>	_GC Column: Col 1	Init. Calib. Date(s):	12/07/2016		12/07/2016
Lab File ID:	8270-122816.B\R37	314.D	Init. Calib. Time(s):	01:01		07:11

SDG No.: 707460

COMPOUND	CURVE	RRF or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.12705	1.11039	0.9000	-1.4774	20.0000
Acenaphthylene	Averaged	1.70029	1.64812	0.9000	-3.0681	20.0000
Anthracene	Averaged	1.00637	1.06065	0.7000	5.3944	20.0000
Benzo(a)anthracene	Averaged	1.15119	1.17705	0.8000	2.2463	20.0000
Benzo(a)pyrene	Averaged	1.12757	1.18010	0.7000	4.6589	20.0000
Benzo(b)fluoranthene	Averaged	1.40893	1.36772	0.7000	-2.9250	20.0000
Benzo(g,h,i)perylene	Averaged	0.63889	0.81437	0.5000	27.4676)	20.0000
Benzo(k)fluoranthene	Averaged	1.20903	1.10501	0.7000	-8.6039	20.0000
Chrysene	Averaged	1.03298	0.94035	0.7000	-8.9677	20.0000
Dibenz(a,h)anthracene	Linear	25	24.80001	0.4000	-0.7999	20.0000
Fluoranthene	Averaged	1.11617	1.25673	0.6000	12.5929	20.0000
Fluorene	Averaged	1.31666	1.22258	0.9000	-7.1456	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	0.85388	1.05851	0.5000	(23.9646)	20.0000
2-Methylnaphthalene	Averaged	0.71064	0.70711	0.4000	-0.4963	20.0000
Naphthalene	Averaged	0.95727	0.96217	0.7000	0.5118	20.0000
Phenanthrene	Averaged	0.96582	1.01584	0.7000	5.1794	20.0000
Pyrene	Averaged	1.18360	1.19147	0.6000	0.6650	20.0000
2-Chlorophenol-d4 (S)	Averaged	1.29102	1.24684	0.0100	-3.4220	20.0000
1,2-Dichlorobenzene-d4 (S)	Averaged	0.90201	0.86332	0.0100	-4.2899	20.0000
2-Fluorobiphenyl (S)	Averaged	1.24617	1.28041	0.0100	2.7481	20.0000
2-Fluorophenol (S)	Averaged	1.17213	1.16250	0.0100	-0.8217	20.0000
Nitrobenzene-d5 (S)	Averaged	0.37163	0.37835	0.0100	1.8069	20.0000
Phenol-d5 (S)	Averaged	1.51253	1.39916	0.0100	-7.4952	20.0000
p-Terphenyl-d14 (S)	Averaged	0.78352	0.80943	0.0100	3.3069	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.11640	0.16209	0.0100	39.2486	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

## **APPENDIX B**

# OXYGEN SYSTEM OPERATION & MAINTENANCE MEASUREMENTS,

# THIRD AND FOURTH QUARTERS

#### SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed By	ature: perature: y:	7/29 11 R: ~8 ~6 Mike	/2016 :45 ain 7° F 8° F 8° F Ryan								
	<b>O</b> <sub>2</sub> <b>G</b>	<mark>enerator (A</mark> i	irSep)				Compressor	(Kaesar Rota	y Screw	)	
Hours			16,743.0		Compressor T	Tank *			100	-	(psi)
Feed Air Pressure *			90	(psi)	Delivery Air	(rea	dings below	are made from	control pa	anel)	(nsi)
Cycle Pressure *			70	(psi)	Element Outle	et Temperatu	ire		192		(oF)
Oxygen Receiver Pressu	Running Hou Loading Hou	rs rs			19,578 12,639		(hours) (hours)				
Oxygen Purity 82.0 (percent) * maximum reading during loading cycle											
	Inication Bonk 1	1		O <sub>2</sub> Inject	ion System #1				Inicoti	an Bank 2	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	31	OW-1-5S	67.3	30	18	OW-1-9D	88.5	30	30
OW-1-2	96.5	35	19	OW-1-6S	67.0	30	19	OW-1-10D	87.2	30	25
OW-1-3	96.3	35	30	OW-1-7S	66.9	30	19	OW-1-11D	86.1	30	31
OW-1-4	95.0	30	31	OW-1-8S	66.7	25	18	OW-1-12D	85.3	30	30
OW-1-5D	93.9	40	31	OW-1-9S	66.0	35	18	OW-1-13D	84.7	35	29
OW-1-6D	92.4 30 30 OW-1-10S					30	12	OW-1-14D	84.1	35	29
OW-1-7D	91.1	30	30	OW-1-11S	54.1	30	14	OW-1-15D	83.3	40	28
OW-1-8D	89.6	30	31	OW-1-128	53.6	30	15	OW-1-16D	82.5	45	15
Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were set at 3 minutes.							than the pressur	es provided in the h	ydrostatic 1	ables prepared	by URS

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

	Date: 7/29/2016										
				O <sub>2</sub> Injectio	on System #1						
I	njection Bank	4			Injection Bank 5				Injectio	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	1-13S 53.1 30 15 OW-1-17D 79.5 25 14								49.3	35	13
OW-1-14S         52.7         30         14         OW-1-18D         78.3         25         27         OW										30	13
OW-1-15S 52.2 30 13 OW-1-19D 78.9 25 27									48.8	30	13
OW-1-16SR	51.8	30	28	OW-1-20D	79.5	30	28	OW-1-24S	48.4	30	13
OW-1-17S	50.7	30	25	OW-1-21D	79.5	35	26	OW-1-25S	48.8	45	13
OW-1-18S	50.2	30	12	OW-1-22D	79.5	30	OW-1-26SR	48.3	40	13	
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	13
OW-1-20S         49.3         30         10         OW-1-24D         78.2         30         29         OW-1-28S         48.3         30								30	13		

Comments:

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

	O <sub>2</sub> Injection System #1											
I	Injection Bank 7         Injection Bank 8         Injection Bank 9           ID         Depth         scfh         psi         ID         Depth         scfh         psi											
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi	
OW-1-25D	78.1	30	28	OW-1-29S	48.5	30	13	OW-1-33D	83.2	35	29	
OW-1-26D	78.1	30	27	OW-1-30S	48.8	30	14	OW-1-34D	84.5	30	30	
OW-1-27D	77.9	30	28	OW-1-31S	49.3	30	13	OW-1-35D	85.0	30	30	
OW-1-28D	OW-1-28D         78.0         30         27         OW-1-32S         49.3         30         13         OW-1-36D         85.0         30         29											
OW-1-29D	78.4	30	28	OW-1-33S	49.7	45	14	OW-1-37D	84.0	30	29	
OW-1-30D	79.0	30	37	OW-1-34S	50.1	50	13	OW-1-38D	82.0	30	28	
OW-1-31D	80.5	30	20	OW-1-35S	50.3	40	14	OW-1-39D	78.0	30	27	
OW-1-32D	OW-1-32D         81.6         30         29         OW-1-36S         50.3         35         13         OW-1-40D         76.0         30         27											
Comments: All injection Corporation	omments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.											

Date:

7/29/2016

#### SYSTEM #1

					C	<b>D<sub>2</sub> Injectio</b>	on System #1						
	Iı	njection Bank 1	0			]	Injection Bank 1	l	1		Injectio	n Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3′	75	50.5	30	13	OW-1-41	1D	73.6	35	23	OW-1-43	67.4	30	20
OW-1-3	8S	50.6	30	13	OW-1-42	2D	71.0	45	22	OW-1-44	66.6	30	19
OW-1-39	9S	50.7	30	14	OW-1-4	15	65.7	30	20	OW-1-51R	60.6	30	17
OW-1-40	0S	51.1	40	14	OW-1-4	16	64.3	30	20	OW-1-52	59.3	30	17
OW-1-4	1 <b>S</b>	51.5	30	14	OW-1-4	17	63.4	30	18	OW-1-53	60.0	30	17
OW-1-42	28	51.3	30	14	OW-1-4	18	62.5	40	18	OW-1-54	60.0	30	17
					OW-1-4	19	61.5	30	18	0			
					OW-1-5	50	61.0	20	17				
Comments:	All injection	n point flows we n after collecting	ere adjusted to t g readings. Inje	he target flow ra ction time at Ba	ate of ~30 scfh prov nk #11 was set at 6	vided that the minutes.	e pressure reading	was no greater	than the pressur	res provided in the h	nydrostatic	tables prepared	by URS
					C	D <sub>2</sub> Injectio	on System #1						
	Mor	nitoring Points	Log			Mo	onitoring Points I	Jog			Monitorin	g Points Log	
ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)	ID	DTW	DO (n Bott	ng/L) om	PID (ppm)	ID		DO M	(mg/L) iddle
MP-1-1D	29.34			0	MP-1-5	29.13	20.	12	0	MP-1-11	)	1	2.59
MP-1-1S	29.38	12		0	MP-1-6	21.36	7.2	3	0	MP-1-2I	)	3	5.83
MP-1-2D	23.47			0.1	MP-1-7	24.68	19.	93	0	MP-1-3I	)	1	1.01
MP-1-2S	23.64	22	.44	0.1	MP-1-8	22.17	2.1	4	0	MP-1-4I	)	2	5.78
MP-1-3D	21.91			0									
MP-1-3S	21.85	20	.02	0									
MP-1-4D	24.63			0									
MP-1-4S	24.66	13	.88	0.2									
Comments:	DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1- 4D (~35 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).												

#### SYSTEM #1

							Date	e: 7/	/29/2016
			0	PERATIONAL	NOTES				
GA5 Air (	Compressor								
	1) Oil Leve * Unload 2) Oil Leve	l Checked with system un l system, wait until Delive l with system unloaded	loaded* ery Air Pressure is less than	9 psi	Yes	<u>X</u>	No		
		Low (red)		Normal (green)		X	High (orange)	)	
	3) Oil adde	d	Yes	_	No	X			
	5) Oil filter	changed	Yes	_	No No	$\frac{\Lambda}{X}$			
	6) Air filter	Changed	Yes		No	X			
	7) Oil separ	ator changed	Yes	_	No	Χ			
	8) Termina	l strips checked	Yes X		No				
AS-80 O <sub>2</sub>	Generator								
	1) Profiler	changed	Yes		No	X			
	2) Coalesci	ng changed	Yes	_	No	X			
			GE	NERAL SYSTEN	<b>I NOTES</b>				
m 1									
Trailer	1)	Performed general house	ekeeping (i.e. sweep, collec	t trash inside and o	out, etc.) Yes	X	N	lo	
	2)	Abnormal conditions ob	served (e.g. vandalism)						
	3)	Other major activities co	ompleted						
			<u> </u>						
	4)	Supplies needed							
	5)	Visitors							
Record re transport	outine activitio ed off-site, oil	es such as any alarm/shi /filter/gasket and/or any	itdowns, sampling, maint other abnormal operatin	enance, material g conditions:					
7-19-16 R terminal c system op Cut down	emoved existin ontacts along v erated on autor heavy brush a	ng wiring feeding comput with control wires and phe matic. Restarted system a nd vines wrapping around	er in control panel, along w one lines. Tested and found nd let pressure build. Teste shed.	ith all control wirin I no response on co ed each bank and n	ng and phone ontrol pad. Sp nade minor ao	e lines. Insta poke to Mat djustments t	alled new computer on rix and made some mi o controls and valves.	a existing racks a inor adjustments Left system run	nd connected to all to wiring and ning at end of day.
7-29-16 F separator equipmen	ound system ru that pulled out t and cleaned u	nning. Soaked up small of cap. Replaced auto dr p all garbage and leaves f	amount of oil and water fro ain float in 2nd knock out b rom around fence areas. C	m separator unit fo owl as float was st leaned up water on	or disposal. T uck open. A floor of shee	ightened be djusted AC due to leak	elts on booster pump a unit as shed was found ting roof.	nd compressor. d too hot. Wipe	Repaired tubing in d down all
OW-1-195	S remains off d	ue to leaking line.							
PID was c isobutylen	hecked with 10 he and reading	00 ppm isobutylene prior was 100 ppm.	to calibration and unit was	reading 98 ppm. Z	Zeroed unit w	ith fresh air	and was reading 0.0 p	opm. Calibrated	with 100 ppm
Electric M	leter # 96-934-	323 tied into Pole #4							
Action Ite	ems:								
11									

#### SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed B	ature: perature: y:	8/26. 12 Su ~9 ~6 Mike	/2016 :45 nny 5° F 8° F Ryan									
	O <sub>2</sub> Ge	enerator (Ai	irSep)				Compressor	(Kaesar Rota	y Screw	)		
Hours			16,897.0		Compressor 7	ſank *			110	-	(psi)	
Feed Air Pressure *			70	(psi)		(rea	dings below	are made from o	control pa	anel)		
Cucle Pressure *			65	(nei)	Delivery Air	et Temperatu	Iro		115	-	(psi)	
Oxygen Receiver Pressur	75 (psi)	Running Hou Loading Hou	rs rs			19,834 12,766		(hours) (hours)				
Oxygen Purity * maximum reading during loa	ding cycle		67.5	_(percent)	* maximum read	ing during load	ing cycle					
				O <sub>2</sub> Inject	ion System #1							
	Injection Bank	sefh	nsi	ID	Injection Bank 2	sefb	nsi	ID	Injection	on Bank 3	nsi	
OW-1-1	95.5	35	31	OW-1-5S	67.3	35	18	OW-1-9D	88.5	30	30	
OW-1-2	96.5	35	20	OW-1-6S	67.0	40	19	OW-1-10D	87.2	40	26	
OW-1-3	96.3	35	30	OW-1-7S	66.9	30	19	OW-1-11D	86.1	30	31	
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	30	30	OW-1-9S	66.0	35	18	OW-1-13D	84.7	30	29	
OW-1-6D	OW-1-6D 92.4 30 31 OW-1-10S					35	12	OW-1-14D	84.1	35	30	
OW-1-7D	91.1	30	31	OW-1-11S	54.1	45	14	OW-1-15D	83.3	45	30	
OW-1-8D	89.6	30	30	OW-1-128	53.6	30	10	OW-1-16D	82.5	30	14	
Comments: All injectio Corporatio	on point flows we n after collecting	ere adjusted to t readings. Inje	he target flow r ction times at B	ate of ~30 scfh provided that th ank #1 and Bank #3 were set a	ne pressure reading t 3 minutes.	was no greater	than the pressur	es provided in the h	nydrostatic (	ables prepared	by URS	

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

	Date: 8/26/2016										
				O <sub>2</sub> Injectio	on System #1						
I	njection Bank	4			Injection Bank 5				Injectio	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	30	15	OW-1-17D	79.5	45	15	OW-1-21S	49.3	30	13
OW-1-14S	52.7	30	14	OW-1-18D	78.3	45	26	OW-1-22S	49.3	35	13
OW-1-15S         52.2         40         12         OW-1-19D         78.9         40         26         OW-1-23S         48.8         40										13	
OW-1-16SR	51.8	45	28	OW-1-20D	79.5	35	28	OW-1-24S	48.4	35	13
OW-1-17S	50.7	35	26	OW-1-21D	79.5	35	26	OW-1-25S	48.8	40	13
OW-1-18S	OW-1-18S 50.2 30 12 OW-1-22D 79.5 25 27								48.3	40	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	26	OW-1-27S	48.3	25	13
OW-1-20S	OW-1-20S         49.3         40         10         OW-1-24D         78.2         30         26         OW-1-28S         48.3         30         13										

Comments:

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

	O <sub>2</sub> Injection System #1												
I	njection Bank	7			Injection Bank 8				Injectio	on Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi		
OW-1-25D	78.1	30	28	OW-1-29S	48.5	25	13	OW-1-33D	83.2	30	29		
OW-1-26D	78.1	30	27	OW-1-30S	48.8	30	14	OW-1-34D	84.5	30	29		
OW-1-27D         77.9         30         28         OW-1-31S         49.3         25         13         OW-1-35D         85.0         30         29													
OW-1-28D	OW-1-28D         78.0         40         27         OW-1-32S         49.3         30         13         OW-1-36D         85.0         30         30										30		
OW-1-29D	78.4	45	27	OW-1-33S	49.7	30	14	OW-1-37D	84.0	35	28		
OW-1-30D	79.0	30	36	OW-1-34S	50.1	25	12	OW-1-38D	82.0	30	28		
OW-1-31D	OW-1-31D         80.5         30         20         OW-1-35S         50.3         35         13         OW-1-39D         78.0         30         28												
OW-1-32D	OW-1-32D         81.6         30         29         OW-1-36S         50.3         35         13         OW-1-40D         76.0         30         27												
All injectio	n point flows we	ere adjusted to t	the target flow r	ate of ~30 scfh provided that the	pressure reading	was no greater f	than the pressur	es provided in the h	vdrostatic t	ables prepared	by URS		

Comments

Corporation after collecting readings.

Date: 8/26/2016

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

					C	D <sub>2</sub> Injectio	on System #1						
	Iı	njection Bank 1	.0			]	Injection Bank 11				Injectio	on Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37	S	50.5	30	13	OW-1-41	ID	73.6	30	23	OW-1-43	67.4	30	20
OW-1-38	S	50.6	30	13	OW-1-42	2D	71.0	30	22	OW-1-44	66.6	30	19
OW-1-39	S	50.7	40	13	OW-1-4	5	65.7	35	20	OW-1-51R	60.6	40	17
OW-1-40	S	51.1	45	14	OW-1-4	6	64.3	35	17	OW-1-52	59.3	35	17
OW-1-41	S	51.5	40	14	OW-1-47 63.4 30 17 OW-1-53 60.0						30	17	
OW-1-42	S	51.3	40	13	OW-1-4	8	62.5	30	18	OW-1-54	60.0	30	17
					OW-1-4	9	61.5	30	17				
					OW-1-5	0	61.0	30	17				
Comments:	All injection Corporation	n point flows we n after collecting	ere adjusted to 1 g readings. Inje	the target flow raction time at Ba	ate of ~30 scfh prov nk #11 was set at 6	ided that the minutes.	pressure reading	was no greater	than the pressur	res provided in the h	ydrostatic 1	ables prepared	by URS
					0	D <sub>2</sub> Injectio	on System #1						
	Mor	nitoring Points	Log			Mo	onitoring Points I	.og			Monitorin	g Points Log	
ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)	PID (ppm)         ID         DTW         DO (mg/L) Bottom         PID (ppm)         ID         DO (mg/L) Middle						(mg/L) iddle		

ID	DTW	Bottom	PID (ppm)	ID	DTW	Bottom	PID (ppm)	ID	Middle
MP-1-1D	29.90		0	MP-1-5	29.61	21.98	0	MP-1-1D	16.49
MP-1-1S	29.81	20.65	0.4	MP-1-6	21.84	2.05	0	MP-1-2D	14.45
MP-1-2D	24.34		0.6	MP-1-7	25.20	5.69	0	MP-1-3D	10.11
MP-1-2S	24.41	15.66	0.3	MP-1-8	26.74	4.11	0	MP-1-4D	2.15
MP-1-3D	22.38		0						
MP-1-3S	22.31	9.57	0						
MP-1-4D	25.15		0						
MP-1-4S	25.17	3.18	0						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-5 (78 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

#### SYSTEM #1

						Date:	8/26/2016
				OPERATIONAL	NOTES		
CA5 Air Co				OI ERATIONAL I	NOILS		
GA3 AIr Co	<ol> <li>Oil Levei</li> <li>* Unload</li> <li>Oil Levei</li> <li>* Unload</li> <li>Oil Levei</li> <li>3) Oil addee</li> <li>4) Oil chang</li> <li>5) Oil filter</li> <li>6) Air filter</li> <li>7) Oil separ</li> <li>8) Terminal</li> </ol>	l Checked with system un system, wait until Delive l with system unloaded Low (red) d ged changed changed rator changed strips checked	oaded* ry Air Pressure is less than Yes Yes Yes Yes Yes Yes Xes	n 9 psi Normal (green)	Yes X No X No X No X No X No X No X No X No X	No High (orange)	
AS-80 O2 G	enerator						
	<ol> <li>Profiler c</li> <li>Coalescin</li> </ol>	changed ng changed	Yes Yes	_	No X No X		
			GI	ENERAL SYSTEM	<b>I NOTES</b>		
<u>Trailer</u>	1)	Performed general house	keeping (i.e. sweep, colled	ct trash inside and c	out, etc.) Yes <u>X</u>	No	
	2)	Abnormal conditions obs	erved (e.g. vandalism)				
	3)	Other major activities co	mpleted				
	4)	Supplies needed					
	5)	Visitors					
Record rou transported	tine activitie l off-site, oil	es such as any alarm/shu /filter/gasket and/or any	tdowns, sampling, main other abnormal operati	tenance, material ng conditions:			
8-26-16 Fou Pump motor	nd system ru started smol	nning. Soaked up small a king and burning. Show c	mount of oil and water fro lown booster pump and sy	om separator unit fo /stem.	or disposal. Found bo	oster pump not working. Reset	breaker and tested unit.
8-30-16 Ren off until pun	noved booste np can be rep	er pump from system and opaired.	lelivered to D&D Electric	Motors for pricing	to either rebuild the p	nump if possible or to provide a	replacement. System remains
OW-1-19S r	remains off d	ue to leaking line.					
PID was che isobutylene	ecked with 10 and reading	00 ppm isobutylene prior t was 100 ppm.	o calibration and unit was	reading 98 ppm. Z	Zeroed unit with fresh	air and was reading 0.0 ppm. C	Calibrated with 100 ppm
Electric Met	er # 96-934-	323 tied into Pole #4					
Action Item	is:						

#### SYSTEM #1

Date: Time: Weather: Outdoor Temper Inside Trailer Temp Performed B	ature: perature: y:	10/3/ 12 Clo ~73 ~70 Mike	2016 :55 udy 3° F 0° F Ryan	- - - - -							
	0 <sub>2</sub> Ge	enerator (Ai	rSep)				Compressor	(Kaesar Rotai	y Screw	)	
Hours				-	Compressor T	fank *					(psi)
Feed Air Pressure *				(psi)	Daliyary Air	(rea	dings below	are made from o	control pa	inel)	(nci)
Cycle Pressure *				(psi)	Element Outle	et Temperatu	ire				(oF)
Oxygen Receiver Pressu	re *			(psi)	Running Hour Loading Hour	rs rs					(hours) (hours)
Oxygen Purity * maximum reading during loa	ading cycle			_(percent)	* maximum read	ing during load	ing cycle				
	Injection Bank 1			O <sub>2</sub> Injectio	Injection Bank 2				Injectio	on Bank 3	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5			OW-1-5S	67.3			OW-1-9D	88.5		
OW-1-2	96.5			OW-1-6S	67.0			OW-1-10D	87.2		
OW-1-3	96.3			OW-1-7S	66.9			OW-1-11D	86.1		
OW-1-4	95.0			OW-1-8S	66.7			OW-1-12D	85.3		
OW-1-5D	93.9			OW-1-9S	66.0			OW-1-13D	84.7		
OW-1-6D	92.4			OW-1-10S	54.6			OW-1-14D	84.1		
OW-1-7D	7-1-7D 91.1 OW-1-11S							OW-1-15D	83.3		
OW-1-8D 89.6 OW-1-12S					53.6			OW-1-16D	82.5		
Comments: All injectio Corporatio	rate of ~30 scfh provided that the Bank #1 and Bank #3 were set at	e pressure reading 3 minutes.	was no greater	than the pressur	es provided in the h	nydrostatic t	ables prepared	by URS			

#### SYSTEM #1

Date: 10/3/2016												
				O <sub>2</sub> Injectio	on System #1							
I	njection Bank 4	4			Injection Bank 5				Injectio	on Bank 6		
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi	
OW-1-13S	53.1			OW-1-17D	79.5			OW-1-21S	49.3			
OW-1-14S	52.7			OW-1-18D	78.3			OW-1-22S	49.3			
OW-1-15S	52.2			OW-1-19D	78.9			OW-1-23S	48.8			
OW-1-16SR	51.8			OW-1-20D	79.5			OW-1-24S	48.4			
OW-1-17S	50.7			OW-1-21D	79.5			OW-1-25S	48.8			
OW-1-18S	50.2			OW-1-22D	79.5			OW-1-26SR	48.3			
OW-1-19S	49.7			OW-1-23D	78.7			OW-1-27S	48.3			
OW-1-20S	49.3			OW-1-24D	78.2			OW-1-28S	48.3			
Comments: All injectio Corporation	n point flows we n after collecting	ere adjusted to t g readings. Inje	he target flow raction times at B	ate of ~30 scfh provided that the ank #5 were set at 3 minutes.	pressure reading	was no greater t	than the pressure	es provided in the h	ydrostatic t	ables prepared	by URS	
I	njection Bank	7			Injection Bank 8				Injectio	n Bank 9		
ID	Depth	scfh	psi	ID	Depth	aafh	· · ·					
OW-1-25D	78.1	30	ID         Depth         scfh         psi         ID         Depth         scfh         psi           ID         ID									
OW-1-26D		50	28	OW-1-29S	48.5	25	13	OW-1-33D	<b>Depth</b> 83.2	<b>scfh</b> 30	<b>psi</b> 29	
	78.1	30	28	OW-1-29S OW-1-30S	48.5	25 30	13 14	OW-1-33D OW-1-34D	Depth           83.2           84.5	scfh 30 30	<b>psi</b> 29 29	
OW-1-27D	78.1 77.9	30	28 27 28	OW-1-29S OW-1-30S OW-1-31S	48.5 48.8 49.3	25 30 25	13 14 13	OW-1-33D OW-1-34D OW-1-35D	Depth           83.2           84.5           85.0	scfh           30           30           30           30	psi           29           29           29           29           29	
OW-1-27D OW-1-28D	78.1 77.9 78.0	30 30 40	28 27 28 27 27	OW-1-29S OW-1-30S OW-1-31S OW-1-32S	48.5 48.8 49.3 49.3	25 30 25 30	13 14 13 13 13	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D	Depth           83.2           84.5           85.0           85.0	scfh           30           30           30           30           30           30           30           30	psi           29           29           29           29           30	
OW-1-27D OW-1-28D OW-1-29D	78.1 77.9 78.0 78.4	30 30 30 40 45	28 27 28 27 27 27	OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S	48.5 48.8 49.3 49.3 49.3 49.7	25 30 25 30 30 30	psi           13           14           13           14           13           14           13           14	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D           OW-1-37D	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           29           29           29           30           28	
OW-1-27D OW-1-28D OW-1-29D OW-1-30D	78.1 77.9 78.0 78.4 79.0	30 30 30 40 45 30	28 27 28 27 27 27 36	OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S OW-1-34S	48.5 48.8 49.3 49.3 49.7 50.1	25 30 25 30 30 25 25	psi           13           14           13           14           13           14           13           14           13           14           13           14           12	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D           OW-1-37D           OW-1-38D	Depth           83.2           84.5           85.0           85.0           84.0           82.0	scfh           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30	psi           29           29           29           30           28           28	
OW-1-27D OW-1-28D OW-1-29D OW-1-30D OW-1-31D	78.1 77.9 78.0 78.4 79.0 80.5	30 30 40 45 30 30 30	28 27 28 27 27 27 36 20	OW-1-29S OW-1-30S OW-1-31S OW-1-32S OW-1-33S OW-1-34S OW-1-35S	48.5 48.8 49.3 49.3 49.7 50.1 50.3	25 30 25 30 30 25 30 25 35	psi           13           14           13           14           13           14           13           14           13           14           13           14           13           14           13           14           12           13	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D           OW-1-37D           OW-1-38D           OW-1-39D	Depth           83.2           84.5           85.0           85.0           84.0           82.0           78.0	scfh           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           35           30           30           30	psi           29           29           29           30           28           28           28           28           28           28           28           28           28	
OW-1-27D OW-1-28D OW-1-29D OW-1-30D OW-1-31D OW-1-32D	78.1 77.9 78.0 78.4 79.0 80.5 81.6	30 30 40 45 30 30 30 30	28 27 28 27 27 27 36 20 29	OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S           OW-1-33S           OW-1-34S           OW-1-35S           OW-1-36S	48.5 48.8 49.3 49.3 49.7 50.1 50.3 50.3	25 30 25 30 30 25 35 35 35	psi           13           14           13           14           13           14           13           14           13           14           13           14           13           14           12           13           13           13	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D           OW-1-37D           OW-1-38D           OW-1-39D           OW-1-40D	Depth           83.2           84.5           85.0           85.0           85.0           78.0           76.0	scfh           30	psi           29           29           29           30           28           28           28           28           28           27	
OW-1-27D OW-1-28D OW-1-29D OW-1-30D OW-1-31D OW-1-32D Comments: All injectio Corporation	78.1 77.9 78.0 78.4 79.0 80.5 81.6	30 30 40 45 30 30 30 30 ere adjusted to t g readings.	28 27 28 27 27 27 36 20 29 he target flow ra	OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S           OW-1-33S           OW-1-34S           OW-1-35S           OW-1-36S	48.5 48.8 49.3 49.3 49.7 50.1 50.3 50.3 pressure reading	25 30 25 30 30 25 35 35 35 was no greater 1	psi           13           14           13           14           13           14           13           14           13           14           13           14           13           14           12           13           13           13           13           13           13           13	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D           OW-1-37D           OW-1-38D           OW-1-39D           OW-1-40D	Depth           83.2           84.5           85.0           85.0           84.0           82.0           78.0           76.0	scfh           30	psi           29           29           29           30           28           28           28           28           28           28           29           30	
OW-1-27D OW-1-28D OW-1-29D OW-1-30D OW-1-31D OW-1-32D Comments: All injection	78.1 77.9 78.0 78.4 79.0 80.5 81.6 n point flows we n after collecting	30 30 40 45 30 30 30 ere adjusted to t g readings.	28 27 28 27 27 27 36 20 29 he target flow r	OW-1-29S           OW-1-30S           OW-1-31S           OW-1-32S           OW-1-33S           OW-1-34S           OW-1-35S           OW-1-36S	48.5 48.8 49.3 49.3 49.7 50.1 50.3 50.3 pressure reading	25 30 25 30 30 25 35 35 35 was no greater t	psi           13           14           13           14           13           14           13           14           13           14           13           14           13           14           12           13           13           13           13           13           13           13	ID           OW-1-33D           OW-1-34D           OW-1-35D           OW-1-36D           OW-1-37D           OW-1-38D           OW-1-39D           OW-1-40D           es provided in the h	Depth           83.2           84.5           85.0           85.0           84.0           82.0           78.0           76.0	scfh           30	psi           29           29           29           30           28           28           28           28           28           28           29           30           6	

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

O <sub>2</sub> Injection System #1 Injection Bank 10 Injection Bank 11 Injection Bank 12													
	Ir	njection Bank 1	0			I	njection Bank 11				Injectio	n Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-37	S	50.5			OW-1-41	ID	73.6			OW-1-43	67.4		
OW-1-38	S	50.6			OW-1-42	2D	71.0			OW-1-44	66.6		
OW-1-39	S	50.7			OW-1-45		65.7			OW-1-51R	60.6		
OW-1-40	S	51.1			OW-1-46		64.3			OW-1-52	59.3		
OW-1-41	S	51.5			OW-1-4	7	63.4			OW-1-53	60.0		
OW-1-42	S	51.3			OW-1-4	-8	62.5			OW-1-54	60.0		
					OW-1-4	9	61.5						
					OW-1-5	0	61.0						
Comments:	All injection Corporation	n point flows we n after collecting	ere adjusted to t g readings. Inje	he target flow ra ction time at Ba	ate of ~30 scfh prov nk #11 was set at 6	ided that the minutes.	pressure reading	was no greater	than the pressur	es provided in the h	nydrostatic t	ables prepared	by URS
					0	02 Injectio	on System #1						
	Mor	nitoring Points	Log		Monitoring Points Log						Monitorin	g Points Log	
ID	DTW	DO (1 Bot	ng/L) tom	PID (ppm)	ID	DO (m Botte	ng/L) om	PID (ppm)	ID		DO ( Mi	(mg/L) iddle	
MP-1-1D	30.54			0.2	MP-1-5 30.34		15.1	1	0	MP-1-11	0	12	2.21

MP-1-1D	30.54		0.2	MP-1-5	30.34	15.11	0	MP-1-1D	12.21
MP-1-1S	30.62	14.12	0.3	MP-1-6	22.16	8.20	0	MP-1-2D	1.68
MP-1-2D	24.91		0	MP-1-7	25.91	6.07	0	MP-1-3D	3.55
MP-1-2S	25.15	8.52	0	MP-1-8	27.42	1.79	0	MP-1-4D	3.10
MP-1-3D	23.11		0						
MP-1-3S	23.06	1.10	0.2						
MP-1-4D	25.86		0.2						
MP-1-4S	25.89	2.00	0						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-5 (78 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

#### SYSTEM #1

					D	ate: 10/3/2016	
			<b>OPERATIONAL</b> N	NOTES			
GA5 Air Compressor							
1) Oil Le * Unlo 2) Oil Le	vel Checked with system us oad system, wait until Deliv vel with system unloaded	nloaded* ery Air Pressure is less tha	an 9 psi	Yes	No <u>X</u>	_	
	Low (red	)	Normal (green)	X	High (orang	;e)	
3) Oil add	ded	Yes		No X			
5) Oil filt	ier changed	Yes		No X			
6) Air filt	ter Changed	Yes		No X			
7) Oil sep	parator changed	Yes		No X			
8) Termin	nal strips checked	Yes		No X			
AS-80 O2 Generator							
1) Profile	er changed	Yes		No X			
2) Coales	scing changed	Yes		No X			
		G	ENERAL SYSTEM	I NOTES			
1)	Performed general hous	ekeeping (i.e. sweep, colle	ect trash inside and o	ut, etc.) Yes <u>X</u>		No	
2)	Abnormal conditions of	oserved (e.g. vandalism)					
3)	Other major activities c	ompleted					
4)	Supplies needed						
5)	Visitors						
Record routine activi transported off-site, o	ities such as any alarm/sh oil/filter/gasket and/or an	utdowns, sampling, main y other abnormal operat	ntenance, material ing conditions:				
SYSTEM OFF PEND	ING RESOLUTION OF B	OOSTER PUMP					
9-9-16 Measured dama	aged areas of roof and pick	up supplies to make repair	s. Made all repairs a	nd sealed all seams w	rith silicone.		
9-22&23-16 Painted ex	xterior of shed and all trim.	Sealed seams with silicon	ne as needed.				
10-3-16 Took monitor	ing point readings with sys	tem off. Cut down brush a	around shed.				
OW-1-19S remains of	f due to leaking line.						
PID was checked with isobutylene and readin	100 ppm isobutylene prior g was 100 ppm.	to calibration and unit wa	s reading 98 ppm. Z	Zeroed unit with fresh	air and was reading 0.0	ppm. Calibrated with 100 ppr	m
Electric Meter # 96-93	4-323 tied into Pole #4						
Action Items:							

#### SYSTEM #1

Date: Time: Weather: Outdoor Temper Inside Trailer Temp Performed B	ature: perature: y:	10/31 9: Su ~4: ~6 Mike	/2016 45 nny 5° F 0° F Ryan										
	<b>O</b> <sub>2</sub> <b>G</b>	enerator (Ai	irSep)				Compressor	(Kaesar Rotar	y Screw	)			
Hours			17,008.0		Compressor Tank * (psi)								
Feed Air Pressure *	(psi)		(rea	control pa	anel)								
Cycle Pressure *	(psi)	Delivery Air Element Outle	et Temperatu	ıre		115 185		(psi) (oF)					
Oxygen Receiver Pressu	100 (psi)	Running Hou Loading Hou	rs 's			19,977 12,863		(hours) (hours)					
Oxygen Purity * maximum reading during loa	iding cycle		75.0	(percent)	* maximum read	ing during load	ing cycle						
				O <sub>2</sub> Injecti	on System #1								
]	Injection Bank	L			Injection Bank 2 Injection Bank 3								
	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi		
OW-1-1	95.5	30	31	OW-1-5S	67.3	30	18	OW-1-9D	88.5	30	30		
OW-1-2	96.5	35	19	OW-1-6S	67.0	40	19	OW-1-10D	87.2	35	25		
OW-1-3	96.3	30	32	OW-1-7S	66.9	40	20	OW-1-11D	86.1	35	32		
OW-1-4	95.0	30	31	OW-1-8S	66.7	45	18	OW-1-12D	85.3	30	30		
OW-1-5D	93.9	30	31	OW-1-9S	66.0	30	19	OW-1-13D	84.7	30	29		
OW-1-6D	92.4 30 30 OW-1-10S				54.6	30	14	OW-1-14D	84.1	40	30		
OW-1-7D	OW-1-7D 91.1 30 30 OW-1-11S				54.1	30	15	OW-1-15D	83.3	30	29		
OW-1-8D 89.6 30 31 OW-1-12S				OW-1-12S	53.6	35	15	OW-1-16D	82.5	30	14		
Comments: All injection Corporatio	All injection point flows were adjusted to the target flow rate of ~30 scfh provided that Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were se						than the pressur	es provided in the h	ydrostatic t	ables prepared	by URS		

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

	Date: 10/31/2016												
				O <sub>2</sub> Injectio	on System #1								
I	njection Bank	4			Injection Bank 5				Injectio	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	13		
OW-1-14S	52.7	40	15	OW-1-18D	78.3	30	25	OW-1-22S	49.3	40	13		
OW-1-15S	52.2	45	13	OW-1-19D	78.9	30	26	OW-1-23S	48.8	40	14		
OW-1-16SR	51.8	40	30	OW-1-20D	79.5	30	29	OW-1-24S	48.4	30	13		
OW-1-17S	50.7	35	25	OW-1-21D	79.5	30	26	OW-1-25S	48.8	30	14		
OW-1-18S	50.2	30	13	OW-1-22D	79.5	30	26	OW-1-26SR	48.3	40	14		
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	13		
OW-1-20S	49.3	30	10	OW-1-24D	78.2	30	28	OW-1-28S	48.3	40	13		

Comments:

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

O <sub>2</sub> Injection System #1														
I	njection Bank	7			Injection Bank 8				Injectio	on Bank 9				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi			
OW-1-25D	78.1	30	28	OW-1-29S	48.5	30	13	OW-1-33D	83.2	30	30			
OW-1-26D	78.1	45	27	OW-1-30S	48.8	30	13	OW-1-34D	84.5	25	29			
OW-1-27D	77.9	30	28	OW-1-31S	49.3	30	14	OW-1-35D	85.0	30	29			
OW-1-28D	78.0	35	28	OW-1-32S	49.3	30	13	OW-1-36D	85.0	35	28			
OW-1-29D	78.4	30	29	OW-1-33S	49.7	30	14	OW-1-37D	84.0	30	28			
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	12	OW-1-38D	82.0	30	29			
OW-1-31D	80.5	30	20	OW-1-35S	50.3	30	13	OW-1-39D	78.0	30	27			
OW-1-32D	81.6	30	29	OW-1-36S	50.3	30	13	OW-1-40D	76.0	30	28			
A 11 1-1														

Comments

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

Date: 10/31/2016

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

						Injosti	n System #1						
			10			<sup>2</sup> mjecuo	n System #1					D 1 12	
	li	njection Bank I	10				njection Bank 11				Injectio	n Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3′	7S	50.5	30	12	OW-1-41	OW-1-41D		30	23	OW-1-43	67.4	30	20
OW-1-38	3S	50.6	30	13	OW-1-42D		71.0	30	22	OW-1-44	66.6	30	20
OW-1-39	9S	50.7	30	14	OW-1-4	OW-1-45		30	20	OW-1-51R	60.6	30	19
OW-1-40	)S	51.1	30	14	OW-1-4	6	64.3	30	18	OW-1-52	59.3	30	17
OW-1-4	15	51.5	25	14	OW-1-4	7	63.4	20	17	OW-1-53	60.0	30	17
OW-1-42	2S	51.3	30	14	OW-1-4	-8	62.5	35	17	OW-1-54	60.0	30	18
					OW-1-4	.9	61.5	25	17				
					OW-1-5	0	61.0	20	17				
Comments:	All injection Corporation	n point flows we n after collecting	ere adjusted to 1 g readings. Inje	the target flow raction time at Ba	ate of ~30 scfh prov nk #11 was set at 6	e of ~30 scfh provided that the pressure reading was no greater than the pressure k #11 was set at 6 minutes.					iydrostatic t	ables prepared	by URS
					O2 Injection System #1								
	Mor	nitoring Points	Log		Monitoring Points Log						Monitorin	g Points Log	
ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)	ID DTW DO (mg/L) Bottom PID (ppm)			ID		DO M	(mg/L) iddle		
MD 1 1D	20.01			0.2	MD 1.5	20.62	14.0	15	0	MD 1 11		1	1.55

MP-1-1D	30.81		0.3	MP-1-5	30.62	14.95	0	MP-1-1D	14.55
MP-1-1S	30.93	15.00	0	MP-1-6	22.80	10.61	0	MP-1-2D	5.55
MP-1-2D	25.44		0	MP-1-7	26.18	8.95	0	MP-1-3D	9.29
MP-1-2S	25.42	9.98	0.1	MP-1-8	27.70	3.95	0	MP-1-4D	9.11
MP-1-3D	23.43		0						
MP-1-3S	23.40	5.14	0.4						
MP-1-4D	26.22		0.3						
MP-1-4S	26.20	9.98	0.1						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-5 (78 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

	Date: 10/31/2016	
	OPERATIONAL NOTES	_
GA5 Air Compresso		
1) Oil I * Un 2) Oil I	Level Checked with system unloaded* Yes X No	
2) 011	Low (red) Normal (green) X High (orange)	
3) Oil a	added Yes X No	
4) Oil c 5) Oil f	changed Yes X No	
6) Air f	filter Changed Yes X No	
7) Oil s	separator changed Yes X No	
8) Tern	ninal strips checked Yes X No	
AS-80 O2 Generator		
1) Prof	iler changed Yes X No	
2) Coal	lescing changed Yes X No	
	GENERAL SYSTEM NOTES	
Trailer		
1)	Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.)	
	Yes X No	
2)	Abnormal conditions observed (e.g. vandalism)	
2)		
3)	Other major activities completed	
4)	Supplies needed	
5)	Visitors	
Record routine acti transported off-site	ivities such as any alarm/shutdowns, sampling, maintenance, material e, oil/filter/gasket and/or any other abnormal operating conditions:	
10-19.21.24&2516 (	Conducted semi-annual routine maintenance on the system. Found solenoid valve on the exhaust site not holding and needed to be replaced. Removed all	
inline check valves t	to clean out silt build up. Took apart air compressor and drained all oil and removed filter. Took apart cooling canister and cleaned out silt buildup. Installe	d
new oil filters and fi	lled with new oil. Flushed out all drain lines of sludge build up. Rebuilt auto drain at base of Air Sep unit. Replaced two bad solenoid valves in the Air Sep	)
unit. Installed rebuil	It booster pump and reconnected to system. Restarted system and left running.	
10-31-16 Found syst Found and repaired s	tem running upon arrival. Adjusted control panel timers to make sure each bank was cycling properly. Replaced auto drain float in water knock out tank. small cooling oil leak. Wiped down all equipment and cleaned up debris and leaves around shed. Left system running.	
OW-1-19S remains of	off due to leaking line.	
PID was checked wi isobutylene and read	ith 100 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm ling was 100 ppm.	
Electric Meter # 96-9	934-323 tied into Pole #4	

Action Items:

#### SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed B	ature: perature: y:	11/30 12 R: ~59 ~60 Mike	0/2016 :30 ain 9° F 5° F Ryan										
	O <sub>2</sub> Ge	enerator (Ai	irSep)				Compressor	(Kaesar Rota	y Screw	)			
Hours			17,522.0		Compressor Tank * (psi)								
Feed Air Pressure *	(psi)	(readings below are made from control panel)											
Cycle Pressure *	Cycle Pressure * 75 (psi)						Ire		111	-	(psi) (oF)		
c, de l'ressure	(Post)	Siement Outly	remperati			100	-						
Oxygen Receiver Pressu	100 (psi)	Running Hou Loading Hou	rs 's			20,603 13,334	-	(hours) (hours)					
Oxygen Purity * maximum reading during loa	ding cycle		71.9	_(percent)	* maximum read	ing during load	ing cycle						
	Injection Bank 1			O <sub>2</sub> Injecti	on System #1				Injecti	on Bank 3			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi		
OW-1-1	95.5	35	30	OW-1-5S	67.3	40	18	OW-1-9D	88.5	30	30		
OW-1-2	96.5	30	19	OW-1-6S	67.0	45	19	OW-1-10D	87.2	30	24		
OW-1-3	96.3	30	31	OW-1-7S	66.9	40	19	OW-1-11D	86.1	30	29		
OW-1-4	95.0	40	30	OW-1-8S	66.7	35	18	OW-1-12D	85.3	40	28		
OW-1-5D	93.9	30	30	OW-1-9S	66.0	30	19	OW-1-13D	84.7	30	29		
OW-1-6D	92.4 30 31 OW-1-10S				54.6	25	13	OW-1-14D	84.1	40	31		
OW-1-7D	OW-1-7D 91.1 30 31 OW-1-11S				54.1	40	15	OW-1-15D	83.3	40	28		
OW-1-8D 89.6 35 30 OW-1-12S				OW-1-12S	53.6	30	14	OW-1-16D	82.5	40	14		
Comments: All injectio Corporatio	All injection point flows were adjusted to the target flow rate of ~30 scfh provided that Corporation after collecting readings. Injection times at Bank #1 and Bank #3 were se						than the pressur	es provided in the h	nydrostatic (	tables prepared	by URS		

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

	Date: 11/30/2016										
				O <sub>2</sub> Injectio	on System #1						
I	njection Bank 4	4			Injection Bank 5				Injectio	on Bank 6	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-13S	53.1	35	15	OW-1-17D	79.5	35	14	OW-1-21S	49.3	30	13
OW-1-14S	52.7	30	15	OW-1-18D	78.3	35	26	OW-1-22S	49.3	30	13
OW-1-15S	52.2	30	13	OW-1-19D	78.9	35	26	OW-1-23S	48.8	30	13
OW-1-16SR	51.8	40	29	OW-1-20D	79.5	40	28	OW-1-24S	48.4	35	13
OW-1-17S	50.7	45	25	OW-1-21D	79.5	30	26	OW-1-25S	48.8	25	13
OW-1-18S	50.2	35	13	OW-1-22D	79.5	30	27	OW-1-26SR	48.3	25	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	30	27	OW-1-27S	48.3	30	13
OW-1-20S	49.3	30	10	OW-1-24D	78.2	30	29	OW-1-28S	48.3	30	13

Comments:

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

	O <sub>2</sub> Injection System #1												
I	njection Bank '	7			Injection Bank 8				Injectio	on Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi		
OW-1-25D	78.1	30	27	OW-1-29S	48.5	40	13	OW-1-33D	83.2	40	30		
OW-1-26D	78.1	30	28	OW-1-30S	48.8	45	13	OW-1-34D	84.5	40	30		
OW-1-27D	77.9	30	28	OW-1-31S	49.3	40	14	OW-1-35D	85.0	30	29		
OW-1-28D	78.0	35	27	OW-1-32S	49.3	30	13	OW-1-36D	85.0	30	29		
OW-1-29D	78.4	35	28	OW-1-33S	49.7	30	14	OW-1-37D	84.0	30	29		
OW-1-30D	79.0	30	37	OW-1-34S	50.1	30	13	OW-1-38D	82.0	30	28		
OW-1-31D	80.5	30	20	OW-1-35S	50.3	40	14	OW-1-39D	78.0	30	28		
OW-1-32D         81.6         40         30         OW-1-36S         50.3         30         14         OW-1-40D         76.0         30         27											27		
Comments: All injection Corporation	n point flows we n after collecting	ere adjusted to t g readings.	omments:       All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS         omments:       Cornoration after collecting readings										

Date: 11/30/2016

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

Injection Bank 10         Injection Bank 11         Injection Bank 11           ID         Depth         scfh         psi         ID         Depth         scfh         psi         ID         Depth           OW-1-37S         50.5         30         12         OW-1-41D         73.6         35         25         OW-1-43         67.4           OW-1-38S         50.6         30         14         OW-1-42D         71.0         35         22         OW-1-44         66.6	tion Bank 12	psi 21			
ID         Depth         scfh         psi         ID         Depth         scfh         psi         ID         Depth           OW-1-37S         50.5         30         12         OW-1-41D         73.6         35         25         OW-1-43         67.4           OW-1-38S         50.6         30         14         OW-1-42D         71.0         35         22         OW-1-44         66.6	30 scfh	psi			
OW-1-37S         50.5         30         12         OW-1-41D         73.6         35         25         OW-1-43         67.4           OW-1-38S         50.6         30         14         OW-1-42D         71.0         35         22         OW-1-44         66.6	30	21			
OW-1-38S 50.6 30 14 OW-1-42D 71.0 35 22 OW-1-44 66.6	_	21			
	30	20			
OW-1-39S 50.7 35 15 OW-1-45 65.7 30 20 OW-1-51R 60.6	30	17			
OW-1-40S         51.1         30         13         OW-1-46         64.3         25         18         OW-1-52         59.3	2 59.3 35				
OW-1-41S         51.5         30         14         OW-1-47         63.4         25         18         OW-1-53         60.0	35	17			
OW-1-42S         51.3         25         14         OW-1-48         62.5         30         18         OW-1-54         60.0	35	17			
OW-1-49 61.5 25 17					
OW-1-50 61.0 35 18					
Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostat Corporation after collecting readings. Injection time at Bank #11 was set at 6 minutes.	c tables prepared	by URS			
O <sub>2</sub> Injection System #1					
Monitoring Points Log Monitoring Points Log Monitoring Points Log	Monitoring Points Log				
ID         DO (mg/L) Bottom         PID (ppm)         ID         DTW         DO (mg/L) Bottom         PID (ppm)         ID	DO M	(mg/L) Iiddle			

		Dottoin				Dottolli			Midule
MP-1-1D	31.08		0.4	MP-1-5	30.80	13.75	0	MP-1-1D	24.71
MP-1-1S	31.00	22.21	0.2	MP-1-6	22.92	9.10	0	MP-1-2D	40.37
MP-1-2D	25.52		0	MP-1-7	26.20	5.51	0	MP-1-3D	13.38
MP-1-2S	25.56	17.95	0	MP-1-8	27.71	3.94	0	MP-1-4D	23.07
MP-1-3D	23.47		0						
MP-1-3S	23.44	12.05	0.2						
MP-1-4D	26.16		0.3						
MP-1-4S	26.28	15.69	0.5						

Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-5 (78 feet), MP-1-5 (78 feet), MP-1-6 (61 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).

#### SYSTEM #1

		Date: 11/30/2016
		OPERATIONAL NOTES
GA5 Air Co	ompressor	
	1) Oil Level * Unload 2) Oil Level	Checked with system unloaded*     Yes     X     No       system, wait until Delivery Air Pressure is less than 9 psi     with system unloaded     Yes     Yes
		Low (red) X     Normal (green)     High (orange)
	3) Oil addeo	I Yes X No
	<ol> <li>4) Oil chang</li> <li>5) Oil filter</li> </ol>	changed Yes No X
	6) Air filter	Changed Yes No X
	7) Oil separ	ator changed Yes No X
	8) Terminal	strips checked Yes X No
AS-80 O <sub>2</sub> C	Generator	
	1) Profiler of	hanged Yes No X
	2) Coalescin	ng changed Yes No X
		GENERAL SYSTEM NOTES
Trailer	1)	Performed general housekeeping (i.e. sweep, collect trash inside and out, etc.) Yes X No
	2)	Abnormal conditions observed (e.g. vandalism)
	3)	Other major activities completed
	4)	Supplies needed
	5)	Visitors
Record rou transporte	ıtine activitie d off-site, oil	s such as any alarm/shutdowns, sampling, maintenance, material filter/gasket and/or any other abnormal operating conditions:
11-30-16 Fo canister. W all equipme	ound system r liped down ca nt and cleane	unning upon arrival. Checked equipment and found oil leak in compressor. Cleaned up cooling oil from motor components and traced leak to flange on inister and reset all gaskets and O-rings to ensure proper seal. Filled unit with oil and restarted system to check for leaks. No leaks found. Wiped down d up debris and leaves around shed. Left system running.
OW-1-19S	remains off d	ue to leaking line.
PID was ch isobutylene	ecked with 10 and reading	00 ppm isobutylene prior to calibration and unit was reading 98 ppm. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100 ppm was 100 ppm.
Electric Me	ter # 96-934-	323 tied into Pole #4

#### SYSTEM #1

Date: Time: Weather: Outdoor Temper: Inside Trailer Temp Performed By	ature: perature: y:	12/30 13 R: ~4' ~6: Mike	//2016 :00 ain 7° F 5° F Ryan								
	<b>O</b> <sub>2</sub> <b>G</b>	enerator (Ai	irSep)				Compressor	(Kaesar Rota	y Screw	)	
Hours			18,079.0	-	Compressor 7	ſank *			100	-	(psi)
Feed Air Pressure *			100	(psi)	(readings below are made from control panel)						
Cuala Pracaura *			70	(nci)	Delivery Air	at Tamparati			124	-	(psi)
Cycle I lessure			70	(psi)	Element Out	et remperati	lie		185		(01)
Oxygen Receiver Pressur	re *			105 (psi)	Running Hou Loading Hour	rs			21,205 13,798		(hours) (hours)
Oxygen Purity * maximum reading during loa	iding cycle		78.0	_(percent)	* maximum read	ing during load	ing cycle				
	Injection Bank 1			O <sub>2</sub> Inject	ion System #1				Inicoti	on Ronk 2	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-1	95.5	30	30	OW-1-5S	67.3	30	18	OW-1-9D	88.5	30	30
OW-1-2	96.5	40	19	OW-1-6S	67.0	25	19	OW-1-10D	87.2	25	25
OW-1-3	96.3	30	30	OW-1-7S	66.9	30	18	OW-1-11D	86.1	25	30
OW-1-4	95.0	30	30	OW-1-8S	66.7	35	18	OW-1-12D	85.3	25	30
OW-1-5D	93.9	30	30	OW-1-9S	66.0	30	19	OW-1-13D	84.7	25	30
OW-1-6D	OW-1-6D 92.4 45 30 OW-1-10S					30	13	OW-1-14D	84.1	20	30
OW-1-7D 91.1 40 32 OW-1-11S					54.1	30	14	OW-1-15D	83.3	30	29
OW-1-8D 89.6 40 32 OW-1-12S					53.6	30	14	OW-1-16D	82.5	35	14
Comments: All injectio Corporatio	on point flows we n after collecting	he target flow r ction times at B	ate of ~30 scfh provided that the ank #1 and Bank #3 were set a	ne pressure reading at 3 minutes.	was no greater	than the pressur	es provided in the h	nydrostatic (	ables prepared	by URS	

#### SYSTEM #1

Hempstead Intersection Street Former MGP Site Nassau County, New York

Date: 12/30/2016											
				O <sub>2</sub> Injectio	on System #1						
I	njection Bank 4	4			Injection Bank 5				Injectio	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	13
OW-1-14S	52.7	30	15	OW-1-18D	78.3	30	26	OW-1-22S	49.3	30	13
OW-1-15S	52.2	40	13	OW-1-19D	78.9	30	26	OW-1-23S	48.8	30	13
OW-1-16SR	51.8	30	30	OW-1-20D	79.5	40	29	OW-1-24S	48.4	30	13
OW-1-17S	50.7	25	25	OW-1-21D	79.5	30	26	OW-1-25S	48.8	30	13
OW-1-18S	50.2	35	13	OW-1-22D	79.5	30	26	OW-1-26SR	48.3	30	13
OW-1-19S	49.7	OFF	OFF	OW-1-23D	78.7	45	26	OW-1-27S	48.3	25	13
OW-1-20S	49.3	30	10	OW-1-24D	78.2	40	28	OW-1-28S	48.3	25	13

Comments:

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

	O <sub>2</sub> Injection System #1												
I	njection Bank	7			Injection Bank 8				Injectio	n Bank 9			
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	psi		
OW-1-25D	78.1	20	27	OW-1-29S	48.5	30	13	OW-1-33D	83.2	40	30		
OW-1-26D	78.1	30	28	OW-1-30S	OW-1-30S 48.8 30 13 OW-1-34D 84.5		40	30					
OW-1-27D	77.9	35	28	28         OW-1-31S         49.3         35         13         OW-1-35D         85.0         30									
OW-1-28D	78.0	45	28	OW-1-32S	49.3	30	14	OW-1-36D	85.0	35	29		
OW-1-29D	78.4	40	29	OW-1-33S	49.7	30	14	OW-1-37D	84.0	35	28		
OW-1-30D	79.0	40	36	OW-1-34S	50.1	30	12	OW-1-38D	82.0	35	28		
OW-1-31D	80.5	30	20	OW-1-35S	50.3	35	13	OW-1-39D	78.0	35	28		
OW-1-32D         81.6         30         30         OW-1-36S         50.3         30         13         OW-1-40D         76.0         35         27											27		
Comments: All injection Corporation	n point flows we n after collecting	ere adjusted to t g readings.	he target flow r	ate of ~30 scfh provided that the	pressure reading	was no greater t	than the pressur	es provided in the h	ydrostatic ta	ables prepared	by URS		

Date: 12/30/2016

#### SYSTEM #1

O <sub>2</sub> Injection System #1													
	Iı	njection Bank 1	.0			1	Injection Bank 11				Injectio	n Bank 12	
ID		Depth	scfh	psi	ID		Depth	scfh	psi	ID	Depth	scfh	psi
OW-1-3′	7S	50.5	40	13	OW-1-41	ID	73.6	30	24	OW-1-43	67.4	25	20
OW-1-3	8S	50.6	30	13	OW-1-42	2D	71.0	40	22	OW-1-44	66.6	35	20
OW-1-39	9S	50.7	30	13	OW-1-4	5	65.7	40	20	OW-1-51R	60.6	45	18
OW-1-4	0S	51.1	30	13	OW-1-4	6	64.3	45	19	OW-1-52	59.3	40	17
OW-1-4	1 <b>S</b>	51.5	30	14	OW-1-4	7	63.4	45	18	OW-1-53	60.0	30	17
OW-1-42	28	51.3	30	13	OW-1-4	8	62.5	35	18	OW-1-54	60.0	30	17
	-				OW-1-4	9	61.5	30	17				
					OW-1-5	60	61.0	35	17				
Comments:	All injection	n point flows we n after collecting	ere adjusted to t g readings. Inje	he target flow ra ction time at Ba	nte of ~30 scfh prov nk #11 was set at 6	ided that the minutes.	pressure reading	was no greater	than the pressur	es provided in the h	ydrostatic t	ables prepared	by URS
					C	D <sub>2</sub> Injectio	on System #1						
	Mor	nitoring Points	Log			Mo	onitoring Points I	⊿og			Monitorin	g Points Log	
ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)	ID	DTW	DO (n Bott	ng/L) om	PID (ppm)	ID		DO M	(mg/L) iddle
MP-1-1D	31.02			0	MP-1-5	30.77	22	45	0	MP-1-11	)	1	8.92
MP-1-1S	30.93	14	.41	0	MP-1-6	22.96	9.8	1	0	MP-1-2I	)	3	6.12
MP-1-2D	25.07			0.4	MP-1-7	26.32	16.	51	0	MP-1-3I	)	1	6.99
MP-1-2S	25.26	25	.26	0.2	MP-1-8	27.84	6.6	2	0	MP-1-4I	)	2	5.42
MP-1-3D	23.55			0.2									
MP-1-3S	23.53	23	.53	0.5									
MP-1-4D	26.27			0									
MP-1-4S	26.30	26	.30	0									
Comments: DO readings were collected at the following depths: MP-1-1S (66 feet), MP-1-1D (~45 feet), MP-1-2S (46 feet), MP-1-2D (~41 feet), MP-1-3S (49 feet), MP-1-3D (~40 feet), MP-1-4S (53 feet), MP-1-4S (53 feet), MP-1-5 (78 feet), MP-1-5 (78 feet), MP-1-7 (64 feet) and MP-1-8 (58 feet).													

#### SYSTEM #1

1								Date:	12/30/2016
<u> </u>				OPERATIONAL	NOTES				
	1			OPERATIONAL	NOTES				
GA5 Air C	1) Oil Lovo	I Checked with system ur	londed*		Vac	v	No		
	* Unload	l system wait until Delive	noaueu	than 9 nei	1 68	Λ	N0		
	2) Oil Lava	d system, wait until Delive	ry All Flessule is less	ulali 9 psi					
	2) Oli Leve	I ow (red)		Normal (green)		Y	High (	(orange)	
	3) Oil adde	d	Ves	Normai (green)	No	X	iligii (i		_
	4) Oil chan	a aed	Ves		No	X			
	5) Oil filter	- changed	Ves		No	X			
	6) Air filter	Changed	Ves		No	X			
	<ol> <li>7) Oil separ</li> </ol>	rator changed	Yes		No	X			
	8) Termina	l strips checked	Yes X		No				
AS-80 O <sub>2</sub> (	Generator								
	1) Profiler	changed	Yes		No	Х			
	2) Coalesci	ng changed	Yes		No	X			
				GENERAL SYSTE	MNOTES				
				<b>GLIGERIE DIDIE</b>					
Trailer									
	1)	Performed general house	ekeeping (i.e. sweep, co	ollect trash inside and	out, etc.)				
					Yes	Х		No	_
	2)	Abnormal conditions ob	served (e.g. vandalism)	)					
	3)	Other major activities co	ompleted						
	*		*						
	4)	Supplies peeded							
	4)	Supplies needed							
	5)	Visitors							
Record ro	utine activiti	es such as any alarm/sh	itdowns, sampling, m	aintenance, material					
transporte	ed off-site, oil	/filter/gasket and/or any	other abnormal oper	rating conditions:					
10.00.167			1 11 11	1 1 41 111		1 61 6		1 . 10	
12-30-16 F	ound system	running upon arrival. For	ind problem with water	Knock out bowl blow	ing out stea	ady flow of a	ur and water. 100	ok apart and for	and float soaked with
cooling oil	. Cleaned all	components and put back	together. Found probl	em with exhaust valve	on oxygen	i generator n	ot working correc	city. Took apar	t and found small vent noies
clogged up	b. Cleaned up	unit and reinstalled. wip	ed down all equipment	and cleaned up debris	and leaves	s around shed	a. Left system rui	nning. Installed	f orange snow tence on top
or min to pr	revent cars fro	on being parked close to s	system gates.						
OW-1-19S	remains off d	lue to leaking line.							
DID was of	backed with 1	00 ppm isobutylana prior	to calibration and unit	was reading 08 ppm	Zaroad unit	t with frach a	ar and was readin	$a = 0.0$ mm $C_{0}$	librated with 100 ppm
isobutylene	e and reading	was 100 ppm.		was reading 98 ppin.	zeroed unit	t with fiesh a	an and was reading	ig 0.0 ppin. Ca	norated with 100 ppm
Electric M	eter # 96-934-	323 tied into Pole #4							
Action Ite	ms:								
1									

#### SYSTEM #2

Da Ti Wea Outdoor T Inside Traile Perform	ate: me: ather: emperature: Temperature: ned By:	7/28 12 50 ~9 ~6 Mik	8/2016 2:45 10° F 8° F e Ryan	- - - -							
	O2 Ge	<mark>nerator (Ai</mark>	rSep)				Con	pressor (Kaesa	a <mark>r Rotary</mark>	Screw)	
Hours			33,180	-	Compressor	Tank *			95		(psi)
Feed Air Press	ure *		95	(psi)			(reading	s below are ma	de from co	ontrol panel)	
Cycle Pressure	*		65	(psi)	Delivery Air Element Our	r tlet Temper	ature		105 162 33319		(psi) (°F)
Oxygen Receiv	ver Pressure *		120 (psi)	Running Hours33,017(hours)Loading Hours32,647(hours)							
Oxygen Purity * maximum reading	g during loading cyc	le	80.2	(percent)	* maximum rea	ding during loa	iding cycle				
					O <sub>2</sub> Injection	n System #2	2				
ID	Injection Ba	ink A	nei		Injection Ba	nk B	ngi	ID	In	njection Bank (	2 cofb
OW-2-2	90.2'	30	31	OW-2-98	75'	40	19	OW-2-10D	97.2'	35	28
OW-2-3	94.3'										
11		30	30	OW-2-10S	75'	40	30	OW-2-11D	100.8'	30	33
OW-2-4	94.7'	30 30	30 33	OW-2-10S OW-2-11S	75' 76.5'	40 40	30 23	OW-2-11D OW-2-12	100.8' 94'	30 30	33
OW-2-4 OW-2-5	94.7' 95.3'	30 30 35	30 33 29	OW-2-10S OW-2-11S OW-2-13S	75' 76.5' 75'	40 40 30	30 23 21	OW-2-11D OW-2-12 OW-2-13D	100.8' 94' 97'	30 30 35	33 20 36
OW-2-4 OW-2-5 OW-2-6	94.7' 95.3' 95.7'	30 30 35 30	30 33 29 31	OW-2-10S OW-2-11S OW-2-13S OW-2-15S	75' 76.5' 75' 75'	40 40 30 30	30 23 21 20	OW-2-11D OW-2-12 OW-2-13D OW-2-14	100.8' 94' 97' 96.4'	30 30 35 30	33 20 36 29
OW-2-4 OW-2-5 OW-2-6 OW-2-7	94.7' 95.3' 95.7' 96'	30 30 35 30 35 35	30 33 29 31 30	OW-2-10S OW-2-11S OW-2-13S OW-2-15S OW-2-16S	75' 76.5' 75' 75' 75.5'	40 40 30 30 30 30	30 23 21 20 20	OW-2-11D OW-2-12 OW-2-13D OW-2-14 OW-2-15D	100.8' 94' 97' 96.4' 94.6'	30 30 35 30 30	33 20 36 29 28
OW-2-4 OW-2-5 OW-2-6 OW-2-7 OW-2-8	94.7' 95.3' 95.7' 96' 96.3'	30 30 35 30 35 30 35 30	30 33 29 31 30 30	OW-2-10S OW-2-11S OW-2-13S OW-2-15S OW-2-16S OW-2-18S	75' 76.5' 75' 75' 75.5' 74.5'	40 40 30 30 30 30 30	30 23 21 20 20 30	OW-2-11D OW-2-12 OW-2-13D OW-2-14 OW-2-15D OW-2-16D	100.8' 94' 97' 96.4' 94.6' 94.1'	30 30 35 30 30 30 30	33 20 36 29 28 28
OW-2-4 OW-2-5 OW-2-6 OW-2-7 OW-2-8 OW-2-9D	94.7' 95.3' 95.7' 96' 96.3' 96.7'	30 30 35 30 35 30 30 30	30 33 29 31 30 30 31	OW-2-10S OW-2-11S OW-2-13S OW-2-15S OW-2-16S OW-2-18S OW-2-20S	75' 76.5' 75' 75.5' 74.5' 79'	40 40 30 30 30 30 30 30 30	30 23 21 20 20 30 31	OW-2-11D OW-2-12 OW-2-13D OW-2-14 OW-2-15D OW-2-16D OW-2-17	100.8' 94' 97' 96.4' 94.6' 94.1' 95'	30 30 35 30 30 30 30 30	33 20 36 29 28 28 28 30

#### SYSTEM #2

								Date:		7/28	8/2016	
					O <sub>2</sub> Injection	n System #2	2					
	Injection Ba	nk D			Injection Ba	nk E			I	njection Bank I	3	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	30	32	OW-2-22S	76'	30	20	OW-2-26D	95'	30	2	18
OW-2-19	96.1'	30	31	OW-2-24S	77.8'	30	25	OW-2-27	93.5'	30	2	9
OW-2-20D	96.6'	25	31	OW-2-268	74'	30	21	OW-2-28D	92.1'	30	2	28
OW-2-21	96.6'	35	30	OW-2-28S	76'	25	21	OW-2-29	92.2'	30	2	28
OW-2-22D	96.3'	30	30	OW-2-30S	67.8'	35	18	OW-2-30D	88'	30	2	27
OW-2-23	97.2'	30	29	OW-2-34	71'	35	21	OW-2-31	86'	30	2	27
OW-2-24D	97'	40	30	OW-2-35	69.2'	35	21	OW-2-32	84'	30	3	31
OW-2-25	96'	45	29	OW-2-36	64.8'	30	20	OW-2-33	82'	35	3	3
Comments:	All injection point f Corporation after co	flows were adju ollecting reading	sted to the target gs. Injection ban	flow rate of ~30 scf ks D & E are turned	h provided that t off.	he pressure rea	iding was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS
					O <sub>2</sub> Injection	n System #2	2					
	Injection Ba	ink G			Injection Ba	nk H			Mon	itoring Points 1	Log	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)
OW-2-37	62.8'	30	21	OW-2-45	61.1'	30	20	MP-2-1	32.22	24	.29	0.3
OW-2-38	62.1'	30	21	OW-2-46	61'	30	22	MP-2-2	33.55	17	.38	0.1
OW-2-39	60'	30	20	OW-2-47	60.5'	30	20	MP-2-38	33.46	32		0.1
OW-2-40	61.7'	35	20					MP-2-3D	33.31	36	5.17	0.4
OW-2-41	61.7'	35	21					MP-2-4	22.13	25	.12	0.2
OW-2-42	61.6'	30	19					MP-2-5	20.21	17	.95	0
OW-2-43	61.4'	30	22									
OW-2-44R	60.6'	25	22									
Comments:	All injection point to Corporation after co	flows were adju ollecting reading	sted to the target gs.	flow rate of ~30 scf	h provided that t	he pressure rea	ding was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS
#### SYSTEM #2

		Date:	7/28/2016
	OPERATIONAL N	OTES	
GAS Air Compressor	3k	Vac V No	
1) Oli Level Checkeu with System unloadeu	Descent is loss than 0 nei		
* Unioad system, wait until Derivery An	Pressure is less than 9 psi		
2) On Lever with system unloaded	Normal (graan)	V Useh (oranga)	
2) Oil addad		A righ (orange)	
3) Oll aducu	Vac		
4) On changed 5) Oil filter changed	Vas		
6) Air filter Changed	Vac		
7) Oil separator cleaned	Vec	No X	
8) Terminal strips checked		No X	
6) Terminar surps encercer	103 /	110	
AS-80 O <sub>2</sub> Generator			
1) Prefilter changed	Yes	No <u>X</u>	
2) Coalescing changed	Yes	No X	
	CENEDAL OVCTEM	NOTES	
	GENERAL SYSTEM	NOTES	
Trailer			
1) Performed general housekeeping (i.e. swe	eep. collect trash inside and out, etc	2.)	
-/	Yes X	No	
2) Abnormal conditions observed (e.g. vand	alism		
3) Other major activities completed			
· • – – –			
		_	
4) Supplies needed			
· · · · · · · · · · · · · · · · · · ·			
5) Visitors			
		_	
Record routine activities such as any alarm/shutdown	s sampling maintenance materi	ial	
transported off-site oil/filter/gasket and/or any other	shormal operating conditions:	121	
transported on site, on meer gusiet and or any other	abilor mar operating contentions.		
7-28-16 Found system running upon arrival. Soaked up s	small amount of oil and water from	separator unit. Changed fresh air filter on s	shed due to heavy dust buildup.
Wiped down all equipment and cleaned up debris around	shed. Left system running.		
PID was checked with 100 ppm isobutylene prior to calib	oration and unit was reading 98 ppn	n. Zeroed unit with fresh air and was reading	ng 0.0 ppm. Calibrated with 100
ppm isobutylene and reading was 100 ppm.			
Electric Motor # 06 020 544 tied into Pole #3			
Electric Meter # 96-929-544 tied into Pole #5			
Action Items			

### SYSTEM #2

Da Ti Wea Outdoor T Inside Trailer Perforn	ate: me: ather: emperature: Temperature: ned By:	8/25 13 5u ~8 ~6 Mike	5/2016 3:30 mny 88° F 88° F e Ryan	- - - - -										
	O2 Gei	nerator (Ai	rSep)		Compressor (Kaesar Rotary Screw)									
Hours			33,679	-	Compressor	Tank *			100		(psi)			
Feed Air Press	ure *		70	(psi)			(reading	gs below are mad	de from co	ontrol panel)				
				-	Delivery Ai	r			105		(psi)			
Cycle Pressure	*		60	(ps1)	Element Ou	tlet Temper	ature		172		(°F)			
Oxygen Receiv	ver Pressure *			125 (psi)	25     Running Hours     34,676       Loading Hours     33,151					(hours) (hours)				
Oxygen Purity * maximum reading	g during loading cycl	le	89	_(percent)	* maximum rea	ding during loa	ading cycle							
					O <sub>2</sub> Injection	n System #2	2							
ID	Injection Ba	ink A sefh	nsi	ID	Injection Ba	nk B	nsi	ID	I Denth	njection Bank (	scfh			
OW-2-2	90.2'	40	31	OW-2-9S	75'	30	18	OW-2-10D	97.2'	30	27			
OW-2-3	94.3'	45	30	OW-2-10S	75'	35	30	OW-2-11D	100.8'	35	31			
OW-2-4	94.7'	35	32	OW-2-11S	76.5'	25	23	OW-2-12	94'	35	20			
OW-2-5	95.3'	30	30	OW-2-13S	75'	30	20	OW-2-13D	97'	45	36			
OW-2-6	95.7'	20	30	OW-2-15S	75'	30	20	OW-2-14	96.4'	30	29			
OW-2-7	96'	35	30	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	29			
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	40	19	OW-2-16D	94.1'	30	27			
OW-2-9D	0.4 70	20	30	OW-2-20S	18 79' 50 22 OW-2-17 95' 30 29						29			
011272	96.7	30	50											

### SYSTEM #2

								Date:		8/2	5/2016	
					O <sub>2</sub> Injection	n System #2	2					
	Injection Ba	unk D			Injection Ba	nk E	<u> </u>		I	njection Bank I	3	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	30	20	OW-2-26D	95'	30	2	:8
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	35	25	OW-2-27	93.5'	30	2	:9
OW-2-20D	96.6'	25	31	OW-2-26S	74'	40	21	OW-2-28D	92.1'	25	2	27
OW-2-21	96.6'	30	30	OW-2-28S	76'	40	20	OW-2-29	92.2'	25	2	:8
OW-2-22D	96.3'	35	29	OW-2-30S	67.8'	30	18	OW-2-30D	88'	30	2	:8
OW-2-23	97.2'	30	31	OW-2-34	71'	30	22	OW-2-31	86'	30	2	27
OW-2-24D	97'	30	30	OW-2-35	69.2'	30	22	OW-2-32	84'	30	3	0
OW-2-25	96'	40	30	OW-2-36	64.8'	30	34	OW-2-33	82'	35	3	i3
Comments:	All injection point Corporation after c	flows were adju ollecting reading	sted to the target gs. Injection ban	flow rate of ~30 scf iks D & E are turned	h provided that t off.	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ured by URS
					O <sub>2</sub> Injection	n <mark>System #</mark> 2	2					
	Injection Ba	ınk G			Injection Ba	nk H			Mon	itoring Points	Log	
Б	Depth	scfh	psi	Ю	Depth	scfh	psi	ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)
OW-2-37	62.8'	40	22	OW-2-45	61.1'	30	21	MP-2-1	32.70	26	i.78	20.3
OW-2-38	62.1'	25	22	OW-2-46	61'	35	21	MP-2-2	34.05	28	.12	7.0
OW-2-39	60'	35	20	OW-2-47	60.5'	35	20	MP-2-3S	33.94	38	.32	2.5
OW-2-40	61.7'	40	20					MP-2-3D	34.08	39	.21	2.1
OW-2-41	61.7'	40	20					MP-2-4	22.61	28	.27	6.2
OW-2-42	61.6'	30	18					MP-2-5	20.81	32		15.4
OW-2-43	61.4'	30	21									
OW-2-44R	60.6'	30	20									
Comments:	All injection point Corporation after c	flows were adju ollecting reading	sted to the target gs.	flow rate of ~30 scf	h provided that t	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ured by URS

#### SYSTEM #2

		Date:	8/25/2016
		JOTES	
245 Air Compressor	OPERATIONAL P	NOTES	
1) Oil Level Checked with system unloade	d*	Ves X No	
* Unload system wait until Delivery Ai	r Pressure is less than 9 nei		
2) Oil Level with system unloaded	r ressure is less than 9 psi		
2) On Level with system unloaded	V Normal (arran)	High (area as)	
2) Oil addad	Normal (green)	High (orange)	
3) Oli added			
4) Oll changed	Yes		
5) Oil filter changed	Yes		
6) Air filter Changed	Yes	No X	
7) Oil separator cleaned	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	INOTES	
Trailer			
1) Performed general housekeeping (i.e. sv	veep, collect trash inside and out, et	c.)	
	Yes X	No	
2) Abnormal conditions observed (e.g. van	dalism		
· · · · · · · · · · · · · · · · · · ·			
3) Other major activities completed			
5) Outer major activities completed			
4) Supplies needed			
5) Visitors			
Record routine activities such as any alarm/shutdow	ns, sampling, maintenance, mater	ial	
ransported off-site, oil/filter/gasket and/or any other	r abnormal operating conditions:		
ransported on site, on meer gasket and or any other	ushormul operating conditions.		
3-25-16 Found system running upon arrival. Soaked up	small amount of oil and water from	n separator unit. Added small amount of	oi lot compressor unit. Repaired sm
eak in auto drain. Wiped down all equipment and clear	ned up debris around shed. Left sys	tem running.	·····
······································			
PID was checked with 100 ppm isobutylene prior to cal	ibration and unit was reading 98 pm	m Zeroed unit with fresh air and was rea	ding 0.0 ppm Calibrated with 100
isobutylene and reading was 100 ppm	ionation and ann was reading >0 pp.		ang olo ppini canorated with 100
Electric Meter # 96-929-544 tied into Pole #3			
Action Items:			

### SYSTEM #2

Da Ti Wea Outdoor T Inside Trailer Perform	ate: me: ather: 'emperature: r Temperature: med By:	10/3 1 Cl ~6 ~7 Mik	8/2016 1:15 oudy 59° F 70° F e Ryan	5  n										
	O2 Ge	<mark>nerator (Ai</mark>	rSep)		Compressor (Kaesar Rotary Screw)									
Hours			34,480	-	Compressor	Tank *			105		(psi)			
Feed Air Press	ure *		100	(psi)			(reading	gs below are mad	de from co	ontrol panel)				
C I D	υ			- 	Delivery Ai	r d o T			110		(psi)			
Cycle Pressure	*		65	(ps1)	Element Ou	tlet Temper	ature		172		(°F)			
Oxygen Receiv	ver Pressure *			120	Running Ho	ours			35,610	_	(hours)			
				(psi)	Loading Ho	urs			33,954	-	(hours)			
Oxygen Purity * maximum reading	g during loading cyc	le	80.1	_(percent)	* maximum rea	ding during loa	ading cycle							
	Intertier De				O <sub>2</sub> Injection	n System #2	2			nin tine Daula (	7			
ID	Depth	nk A scfh	psi	ID	Depth	пк в scfh	psi	ID	Depth	scfh	scfh			
OW-2-2	90.2'	30	31	OW-2-98	75'	35	18	OW-2-10D	97.2'	30	27			
OW-2-3	94.3'	40	29	OW-2-10S	75'	30	30	OW-2-11D	100.8'	30	33			
OW-2-4	94.7'	30	33	OW-2-11S	76.5'	30	20	OW-2-12	94'	30	21			
OW-2-5	95.3'	30	32	OW-2-13S	75'	30	21	OW-2-13D	97'	25	36			
OW-2-6	95.7'	30	30	OW-2-15S	75'	30	20	OW-2-14	96.4'	30	28			
1			1	11	6S 75.5' 40 20 OW-2-15D 94.6' 35									
OW-2-7	96'	35	29	OW-2-16S	75.5'	40	20	OW-2-15D	94.6'	35	28			
OW-2-7 OW-2-8	96' 96.3'	35 35	29 31	OW-2-16S OW-2-18S	75.5' 74.5'	40 40	20 20	OW-2-15D OW-2-16D	94.6' 94.1'	35	28			
OW-2-7 OW-2-8 OW-2-9D	96' 96.3' 96.7'	35 35 30	29 31 30	OW-2-16S OW-2-18S OW-2-20S	75.5' 74.5' 79'	40 40 45	20 20 22	OW-2-15D OW-2-16D OW-2-17	94.6' 94.1' 95'	35 35 30	28 29 30			

### SYSTEM #2

								Date:		10/3	3/2016	
					O. Injection	n System #2	2					
	Injection Ba	unk D			Injection Ba	nk E	<u> </u>		I	niection Bank I	7	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	30	28	OW-2-26D	95'	30	2	28
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	30	OW-2-27	93.5'	40	2	9
OW-2-20D	96.6'	30	32	OW-2-268	74'	30	29	OW-2-28D	92.1'	45	2	27
OW-2-21	96.6'	35	30	OW-2-28S	76'	30	28	OW-2-29	92.2'	40	2	28
OW-2-22D	96.3'	40	28	OW-2-30S	67.8'	35	28	OW-2-30D	88'	30	2	27
OW-2-23	97.2'	40	30	OW-2-34	71'	35	27	OW-2-31	86'	30	2	27
OW-2-24D	97'	25	30	OW-2-35	69.2'	30	30	OW-2-32	84'	30	3	0
OW-2-25	96'	25	28	OW-2-36	64.8'	35	33	OW-2-33	82'	30	3	3
Comments:	All injection point to Corporation after co	flows were adju ollecting reading	sted to the target gs. Injection ban	flow rate of ~30 scf ks D & E are turned	h provided that t off.	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS
					O <sub>2</sub> Injection	n System #2	2					
	Injection Ba	ınk G			Injection Ba	nk H			Mon	itoring Points l	Log	1
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (i Bot	mg/L) tom	PID (ppm)
OW-2-37	62.8'	40	20	OW-2-45	61.1'	30	21	MP-2-1	33.40	23	.47	0
OW-2-38	62.1'	40	21	OW-2-46	61'	30	21	MP-2-2	34.74	27	.82	0.2
OW-2-39	60'	40	19	OW-2-47	60.5'	30	20	MP-2-38	34.60	39	.11	0.1
OW-2-40	61.7'	30	21					MP-2-3D	34.76	41	.48	0
OW-2-41	61.7'	30	20					MP-2-4	23.33	33	.91	0
OW-2-42	61.6'	30	19					MP-2-5	21.48	36	5.21	0
OW-2-43	61.4'	30	22									
OW-2-44R	60.6'	30	20									
Comments:	All injection point Corporation after c	flows were adju ollecting reading	sted to the target gs.	flow rate of ~30 scf	h provided that t	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS

#### SYSTEM #2

		Date:	10/3/2016
	OPERATIONAL NO	TFS	
GA5 Air Compressor	OF ERATIONAL NO	TES	
1) Oil Level Checked with system unlo	aded*	Yes X No	
* Unload system wait until Delivery	Air Pressure is less than 9 psi	<u>105 11 110 </u>	
2) Oil Level with system unloaded	The ressure is less than 9 psi		
2) On Eever white system unrouted	red) X Normal (green)	High (orange)	
3) Oil added	Yes X	No	
4) Oil changed	Ves	No	
5) Oil filter changed	Vec		
6) Air filter Changed	Vec		
7) Oil separator cleaned	Vac		
8) Terminal strins checked	Voc V		
8) Terminal surps checked			
AS-80 O <sub>2</sub> Generator			
1) Prefilter changed	Yes	No X	
2) Coalescing changed	Yes	No X	
	GENERAL SYSTEM N	IOTES	
<u>Frailer</u>			
1) Performed general housekeeping (i.e	. sweep, collect trash inside and out, etc.)		
	Yes X	No	
2) Abnormal conditions observed (e.g.	vandalism		
2) Other major activities completed			
5) Onler major activities completed			
4) Supplies needed			
.) Supplies lieded			
5) Visitors			
Record routine activities such as any alarm/shutd	owns, sampling, maintenance, material	l	
transported on-site, on/inter/gasket and/or any of	ner abhörmal operating conditions:		
9-23-16 Started painting exterior of shed. Sealed are	as around electric panel with silicone.		
10-3-16 Found system running upon arrival Soaked	up small amount of oil and water from s	enarator unit Added small amount of oil	to compressor unit Repaired sm
leak in hose of manifold. Wiped down all equipmen	t and cleaned up debris around shed. Finite	ished painting exterior of shed. Left syst	em running.
PID was checked with 100 ppm isobutylene prior to ppm isobutylene and reading was 100 ppm.	calibration and unit was reading 98 ppm.	Zeroed unit with fresh air and was readi	ng 0.0 ppm. Calibrated with 100
Electric Meter # 96-929-544 tied into Pole #3			
Action Items:			

### SYSTEM #2

Da Tin Wea Outdoor To Inside Trailer Perforr	tte: ne: ther: emperature: Temperature: ned By:	11/1 10 Su ~5 ~6 Mike	/2016 0:30 mny 9° F 5° F e Ryan	- - - - -										
	O2 Ger	nerator (Ai	rSep)			Compressor (Kaesar Rotary Screw)								
Hours			34,796	-	Compressor	Tank *		(ps						
Feed Air Pressu	ıre *		105	(psi)			(reading	s below are mad	de from co	ontrol panel)				
Cycle Pressure	*		70	(psi)	Delivery Ai Element Ou	r tlet Temper	ature		112 159		(psi) (°F)			
Oxygen Receiv	er Pressure *			120 (psi)	Running Hours     36,001     (he       Loading Hours     34,271     (he					(hours) (hours)				
Oxygen Purity * maximum reading	during loading cyc	le	78	(percent)	* maximum rea	ding during loa	ading cycle							
					O <sub>2</sub> Injection	n System #2	2							
ID	Injection Ba	nk A scfh	psi	ID	Injection Ba	nk B scfh	psi	ID	Depth	njection Bank ( scfh	scfh			
OW-2-2	90.2'	30	31	OW-2-98	75'	25	18	OW-2-10D	97.2'	30	27			
OW-2-3	94.3'	35	30	OW-2-10S	75'	30	30	OW-2-11D	100.8'	40	22			
OW-2-4	94.7'	35	32	OW-2-11S	76.5'	35	23	OW-2-12	94'	40	20			
OW-2-5	95.3'	35	30	OW-2-13S	75'	30	21	OW-2-13D	97'	35	36			
OW-2-6	95.7'	40	30	OW-2-15S	75'	30	20	OW-2-14	96.4'	40	29			
OW-2-7	96'	30	30	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	28			
OW-2-8	96.3'	30	31	OW-2-18S	74.5'	30	20	OW-2-16D	94.1'	35	20			
OW-2-9D	96.7'	30	30	OW-2-20S	08 79' 30 22 OW-2-17 95' 30 22						22			
Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the Corporation after collecting readings.								ed in the hydrost	atic tables prepared by URS					

### SYSTEM #2

								Date:		11/	1/2016	
					O. Injection	n System #)	,					
	Injection Ba	unk D			Injection Ba	nk E				niection Bank I	7	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	30	31	OW-2-228	76'	30	20	OW-2-26D	95'	30	2	28
OW-2-19	96.1'	30	29	OW-2-248	77.8'	25	25	OW-2-27	93.5'	30	3	0
OW-2-20D	96.6'	30	31	OW-2-26S	74'	25	19	OW-2-28D	92.1'	30	2	:7
OW-2-21	96.6'	35	29	OW-2-28S	76'	30	20	OW-2-29	92.2'	30	2	!7
OW-2-22D	96.3'	25	27	OW-2-30S	67.8'	30	17	OW-2-30D	88'	30	2	:7
OW-2-23	97.2'	30	30	OW-2-34	71'	30	20	OW-2-31	86'	30	2	27
OW-2-24D	97'	30	30	OW-2-35	69.2'	40	20	OW-2-32	84'	30	3	30
OW-2-25	96'	30	30	OW-2-36	64.8'	30	20	OW-2-33	82'	30	2	!1
Comments:	All injection point to Corporation after co	flows were adju ollecting reading	sted to the target gs. Injection ban	flow rate of ~30 scf ks D & E are turned	h provided that t off.	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS
					O <sub>2</sub> Injection	n <mark>System</mark> #2	2					
	Injection Ba	nk G			Injection Ba	nk H			Mon	itoring Points	Log	
Ю	Depth	scfh	psi	ID	Depth	scfh	psi	ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	33.54	23	.99	0
OW-2-38	62.1'	20	21	OW-2-46	61'	25	20	MP-2-2	34.87	29	.21	0.1
OW-2-39	60'	25	19	OW-2-47	60.5'	30	20	MP-2-38	34.75	38	.05	0
OW-2-40	61.7'	30	20					MP-2-3D	34.89	40	0.55	0
OW-2-41	61.7'	30	20					MP-2-4	23.47	35	.11	0
OW-2-42	61.6'	30	19					MP-2-5	36.41	37	.85	0
OW-2-43	61.4'	40	21									
OW-2-44R	60.6'	30	20									
Comments:	All injection point f Corporation after co	flows were adju ollecting reading	sted to the target gs.	flow rate of ~30 scf	h provided that t	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS

#### SYSTEM #2

	Date: 11/1/2016
	NOTES
CA5 Air Compressor	NOTES
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 X	No
5) Oil filter changed Yes X	No
6) Air filter Changed Yes X	No
7) Oil separator cleaned Yes X	No
8) Terminal strips checked Yes X	No
AS-80 O. Generator	
1) Prefilter changed Yes X	No
2) Coalescing changed Yes X	No
, , , , , , , , , , , , , , , , , , ,	
GENERAL SYSTEM	1 NOTES
Tracilar	
1) Performed general housekeeping (i.e. sweep, collect trash inside and out, e	tc)
Yes X	No
2) Abnormal conditions observed (e.g. vandalism	
3) Other major activities completed	
4) Supplies needed	
5) Vicitors	
5) VISIOIS	
Decord routing activities such as any alarm/shutdowns, sampling, maintenance, moto	riol
transported off-site oil/filter/gasket and/or any other abnormal operating conditions:	1141
transported on site, on meer gashet and/or any other abilitration operating conditions.	
10-27&28-16 Shut down system to conduct semi-annual routine maintenance on system.	look apart air compressor and drained all cooling oil and removed filers.
Removed cooling canister and cleaned out sludge buildup in base. Disconnect all cooling	ines and auto drain lines and flushed out sludge buildup. Repaired melted wir
on senor in air compressor. Wiped down motor compartment, changed air filters, and repla	iced screens at check valves. Installed new oil filter and filled unit with new of
Rebuilt two auto drains that were clogged. Checked out Air Sep unit and replaced both in	ers. Repaired small leak in check valve. Restarted system and left running.
11-1-16 Found system running upon arrival. Reset pressure reading on Air Sep unit at reg	ulator. Repaired leak on stainless steel hoe connector. Wiped down all
equipment and cleaned up debris around shed. Left system running.	
PID was checked with 100 ppm isobutylene prior to calibration and unit was reading 98 pp	m. Zeroed unit with fresh air and was reading 0.0 ppm. Calibrated with 100
ppm isobutylene and reading was 100 ppm.	
Electric Mater # 06 020 544 tied into Dele #2	
Electric Meter # 90-929-344 tied into Pole #3	
Action Items:	

### SYSTEM #2

Da Tin Wea Outdoor To Inside Trailer Perforr	ate: me: tther: emperature: • Temperature: ned By:	11/2 1 R ~5 ~6 Mike	9/2016 1:50 2ain 55° F 50° F e Ryan	- - - - -										
	O2 Ger	nerator (Ai	rSep)		Compressor (Kaesar Rotary Screw)									
Hours			34,796	-	Compressor	Tank *		(psi						
Feed Air Press	ure *		110	(psi)			(reading	gs below are ma	de from co	ontrol panel)				
Cycle Pressure	*		70	(psi)	Delivery Ai Element Ou	r tlet Temper	ature		112 162	-	(psi) (°F)			
Oxygen Receiv	er Pressure *			95 (psi)	Running Hours     36,637     (hot       Loading Hours     34,345     (hot					(hours) (hours)				
Oxygen Purity * maximum reading	g during loading cyc	le	21.5	(percent)	* maximum rea	ding during loa	ading cycle							
			1	O <sub>2</sub> Injection	n System #2	2	1							
ID	Injection Ba	ink A	nei	ID	Injection Bank B Injection Bank C Injection Bank C						C sefb			
OW-2-2	90.2'	30	31	OW-2-98	75'	30	19	OW-2-10D	97.2'	30	27			
OW-2-3	94.3'	35	30	OW-2-10S	75'	30	30	OW-2-11D	100.8'	35	33			
OW-2-4	94.7'	45	32	OW-2-11S	76.5'	30	23	OW-2-12	94'	35	20			
OW-2-5	95.3'	40	30	OW-2-13S	75'	35	20	OW-2-13D	97'	35	36			
OW-2-6	95.7'	30	30	OW-2-15S	75'	40	20	OW-2-14	96.4'	30	28			
OW-2-7	96'	25	29	OW-2-16S	75.5'	30	20	OW-2-15D	94.6'	30	29			
OW-2-8	96.3'	30	30	OW-2-18S	74.5'	30	19	OW-2-16D	94.1'	30	28			
OW-2-9D	0.4 5	30	31	OW-2-20S	0S 79' 40 22 OW-2-17 95' 30 30						30			
	96.7	50												

### SYSTEM #2

								Date:		11/2	9/2016	
					O <sub>2</sub> Injection	n System #2	2					
	Injection Ba	unk D			Injection Ba	nk E	<u> </u>		I	njection Bank I	3	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	30	32	OW-2-22S	76'	30	20	OW-2-26D	95'	30	2	9
OW-2-19	96.1'	40	30	OW-2-24S	77.8'	30	25	OW-2-27	93.5'	35	3	0
OW-2-20D	96.6'	40	31	OW-2-26S	74'	30	21	OW-2-28D	92.1'	45	2	27
OW-2-21	96.6'	40	28	OW-2-28S	76'	35	22	OW-2-29	92.2'	40	2	:8
OW-2-22D	96.3'	30	29	OW-2-30S	67.8'	30	18	OW-2-30D	88'	40	2	:8
OW-2-23	97.2'	30	31	OW-2-34	71'	30	19	OW-2-31	86'	30	2	:8
OW-2-24D	97'	30	30	OW-2-35	69.2'	35	21	OW-2-32	84'	35	3	i0
OW-2-25	96'	30	30	OW-2-36	64.8'	35	20	OW-2-33	82'	30	3	i4
Comments:	All injection point Corporation after c	flows were adju ollecting reading	sted to the target gs. Injection ban	flow rate of ~30 scf iks D & E are turned	h provided that t off.	he pressure rea	iding was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ared by URS
	O <sub>2</sub> Injection System #2											
	Injection Ba	ink G			Injection Ba	nk H	16		Mon	itoring Points l	Log	1
Б	Depth	scfh	psi	Ю	Depth	scfh	psi	Ю	DTW	DO (1 Bot	mg/L) tom	PID (ppm)
OW-2-37	62.8'	30	20	OW-2-45	61.1'	30	20	MP-2-1	33.98	24	.86	0
OW-2-38	62.1'	30	21	OW-2-46	61'	30	21	MP-2-2	35.33	21	.12	0
OW-2-39	60'	30	21	OW-2-47	60.5'	35	21	MP-2-3S	35.21	30	0.07	0
OW-2-40	61.7'	30	20					MP-2-3D	35.34	28	.00	0
OW-2-41	61.7'	30	20					MP-2-4	23.91	35	.34	0
OW-2-42	61.6'	20	18					MP-2-5	22.07	33	.04	0
OW-2-43	61.4'	30	21									
OW-2-44R	60.6'	35	21									
Comments:	All injection point Corporation after c	flows were adju ollecting reading	sted to the target gs.	flow rate of ~30 scf	h provided that t	he pressure rea	ading was no	greater than the pres	sures provide	ed in the hydrost	atic tables prepa	ured by URS

#### SYSTEM #2

		Date:	11/29/2016
		OTES.	
GA5 Air Compressor	OPERATIONAL N	JIES	
1) Oil Level Checked with system unloade	*bd	Ves X No	
* Unload system, wait until Delivery Ai	r Proceure is loss than 0 nei		
2) Oil Level with system unloaded	r ressure is less than y psi		
2) On Level with system unloaded	Normal (green)	X High (orange)	
3) Oil added	Ves Norman (green)		
4) Oil changed	Ves	No X	
5) Oil filter changed	Vas		
6) Air filter Changed	Ves		
7) Oil separator cleaned	Ves	No X	
8) Terminal strins checked	Yes X	No	
o) forminar surps checked	105 /	110	
AS-80 O <sub>2</sub> Generator			
1) Prefilter changed	Yes	No X	
2) Coalescing changed	Yes	No X	
	GENERAL SYSTEM	NOTES	
m			
<u>Trailer</u>		、 、	
1) Performed general housekeeping (i.e. sv	veep, collect trash inside and out, etc.	.)	
	Yes X	INO	
2) Abnormal conditions observed (e.g. van	deliem		
2) Abnormal conditions observed (e.g. van			
3) Other major activities completed			
4) Supplies needed			
5) Visitors			
Record routine activities such as any alarm/shutdow	uns, sampling, maintenance, materi	al	
transported off-site, oil/filter/gasket and/or any othe	r abnormal operating conditions:		
in ansported on site, on, meet, gasnet and or any other	ashorman operating contactorist		
11-29-16 Found system running upon arrival. Found ox	kygen level extremely low. Traced or	ut problem to a blown fuse in the air sep con	ntrol panel. Replaced fuse as
needed. Drain oxygen tanks and restarted system. Wip	ed down all equipment and cleaned v	p debris and leaves around shed. Left syste	em running.
PID was checked with 100 ppm isobutylene prior to cal	ibration and unit was reading 98 ppm	. Zeroed unit with fresh air and was reading	g 0.0 ppm. Calibrated with 100
ppm isobutylene and reading was 100 ppm.			
Electric Meter # 96-929-544 tied into Pole #3			
A stion Itoma			
ACUON REINS:			

### SYSTEM #2

Da Tin Wea Outdoor To Inside Trailer Perforr	ate: me: ather: emperature: Temperature: ned By:	- - - - -										
O2 Generator (AirSep)					Compressor (Kaesar Rotary Screw)							
Hours			35,279	_	Compressor	Tank *			115		(psi)	
Feed Air Pressure * 105 (psi)				(readings below are made from control panel)								
C I D					Delivery Ai	Delivery Air 115					(psi)	
Cycle Pressure	*		/0	(psi)	Element Ou	tlet Temper	ature		163		(°F)	
Oxygen Receiv	Oxygen Receiver Pressure *			100	Running Ho	Running Hours 37,309					(hours)	
				(ps1)	Loading Ho	urs			34,834		(hours)	
Oxygen Purity * maximum reading	Oxygen Purity <u>79</u> (percent)					* maximum reading during loading cycla						
	, uuring rotuning eye				O <sub>2</sub> Injection	n System #2						
	Injection Ba	Injection Bank A				Injection Bank B Injection Bank C					C	
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	scfh	
0W-2-2	<b>Depth</b> 90.2'	scfh 30	<b>psi</b> 30	ID OW-2-9S	<b>Depth</b> 75'	scfh 25	<b>psi</b> 20	<b>ID</b> OW-2-10D	<b>Depth</b> 97.2'	<b>scfh</b> 30	scfh 28	
ID OW-2-2 OW-2-3	<b>Depth</b> 90.2' 94.3'	scfh 30 35	<b>psi</b> 30 30	ID OW-2-9S OW-2-10S	Depth           75'           75'	scfh 25 35	<b>psi</b> 20 30	ID OW-2-10D OW-2-11D	<b>Depth</b> 97.2' 100.8'	scfh 30 30	scfh 28 33	
D OW-2-2 OW-2-3 OW-2-4	Depth 90.2' 94.3' 94.7'	scfh           30           35           35	psi           30           30           330           333	ID           OW-2-9S           OW-2-10S           OW-2-11S	Depth           75'           75'           75'           76.5'	scfh           25           35           30	<b>psi</b> 20 30 24	ID           OW-2-10D           OW-2-11D           OW-2-12	Depth 97.2' 100.8' 94'	scfh         30           30         30           20         20	scfh 28 33 20	
OW-2-2 OW-2-3 OW-2-4 OW-2-5	Depth           90.2'           94.3'           94.7'           95.3'	sefh 30 35 35 35 35	psi           30           30           33           33           32	ID           OW-2-9S           OW-2-10S           OW-2-11S           OW-2-13S	Depth           75'           75'           76.5'           75'	scfh           25           35           30           30	psi           20           30           24           22	ID           OW-2-10D           OW-2-11D           OW-2-12           OW-2-13D	Depth           97.2'           100.8'           94'           97'	sefh           30           30           20           30	scfh 28 33 20 36	
ID           OW-2-2           OW-2-3           OW-2-4           OW-2-5           OW-2-6	Depth           90.2'           94.3'           94.7'           95.3'           95.7'	scfh           30           35           35           35           35           40	psi           30           30           33           33           32           30	ID           OW-2-9S           OW-2-10S           OW-2-11S           OW-2-13S           OW-2-15S	Depth           75'           75'           76.5'           75'           75'           75'	scfh           25           35           30           30           30           30	psi           20           30           24           22           20	ID           OW-2-10D           OW-2-11D           OW-2-12           OW-2-13D           OW-2-14	Depth           97.2'           100.8'           94'           97'           96.4'	sefh           30           30           20           30           30	scfh         28           23         33           20         36           28         28	
ID           OW-2-2           OW-2-3           OW-2-4           OW-2-5           OW-2-6           OW-2-7	Depth           90.2'           94.3'           94.7'           95.3'           95.7'           96'	sefh           30           35           35           35           40           25	psi           30           30           33           32           30           30	ID           OW-2-9S           OW-2-10S           OW-2-11S           OW-2-13S           OW-2-15S           OW-2-16S	Depth           75'           75'           76.5'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'	scfh           25           35           30           30           30           30           30           30	psi           20           30           24           22           20           20	ID           OW-2-10D           OW-2-11D           OW-2-12           OW-2-13D           OW-2-14           OW-2-15D	Depth           97.2'           100.8'           94'           97'           96.4'           94.6'	sefh           30           30           20           30           30           30           30           30           30           30           30           30           30           30           30	scfh         28           28         33           20         36           28         28           28         28	
ID           OW-2-2           OW-2-3           OW-2-4           OW-2-5           OW-2-6           OW-2-7           OW-2-8	Depth           90.2'           94.3'           94.7'           95.3'           95.7'           96'           96.3'	sefh           30           35           35           35           40           25           30	psi           30           30           33           32           30           30           33           32           30           30           30           30	ID           OW-2-9S           OW-2-10S           OW-2-11S           OW-2-13S           OW-2-15S           OW-2-16S           OW-2-18S	Depth           75'           75'           76.5'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75.5'           74.5'	scfh           25           35           30           30           30           30           30           45	psi           20           30           24           22           20           20           20           20           20           20           20           20           20	ID           OW-2-10D           OW-2-11D           OW-2-12           OW-2-13D           OW-2-13D           OW-2-14           OW-2-15D           OW-2-16D	Depth           97.2'           100.8'           94'           97'           96.4'           94.6'           94.1'	sefh           30           30           20           30           30           30           30           30           30           30           30           30           30           30           30           30           30           25	sefh           28           33           20           36           28           28           28           28           28           28           28           28           28           28           28           28           28           28	
ID           OW-2-2           OW-2-3           OW-2-4           OW-2-5           OW-2-6           OW-2-7           OW-2-8           OW-2-9D	Depth           90.2'           94.3'           94.7'           95.3'           95.7'           96'           96.3'           96.7'	sefh           30           35           35           35           40           25           30           30           30	psi           30           30           33           33           32           30           30           31	ID           OW-2-9S           OW-2-10S           OW-2-11S           OW-2-13S           OW-2-15S           OW-2-16S           OW-2-18S           OW-2-20S	Depth           75'           75'           76.5'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75'           75.5'           74.5'           79'	scfh           25           35           30           30           30           30           30           30           30           30           30           30           30           30           30           30           35           45           30	psi           20           30           24           22           20           20           20           20           20           20           20           20           20           20           20           20           20           20           20           20           20           20           20           22	ID           OW-2-10D           OW-2-11D           OW-2-11D           OW-2-12           OW-2-13D           OW-2-13D           OW-2-14           OW-2-15D           OW-2-16D           OW-2-17	Depth           97.2'           100.8'           94'           97'           96.4'           94.6'           94.1'           95'	sefh           30           30           20           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30           30	sefh         28           28         33           20         36           28         28           28         28           28         30	

### SYSTEM #2

Date: 12/29/2016												
O <sub>2</sub> Injection System #2												
	Injection Ba	unk D			Injection Ba	nk E	<u> </u>	Injection Bank F				
ID	Depth	scfh	psi	ID	Depth	scfh	psi	ID	Depth	scfh	sc	fh
OW-2-18D	95.5'	30	31	OW-2-22S	76'	40	20	OW-2-26D	95'	35	2	.8
OW-2-19	96.1'	30	30	OW-2-24S	77.8'	30	25	OW-2-27	93.5'	30	2	.9
OW-2-20D	96.6'	30	31	OW-2-26S	74'	30	20	OW-2-28D	92.1'	30	2	.7
OW-2-21	96.6'	40	34	OW-2-28S	76'	30	22	OW-2-29	92.2'	30	2	.8
OW-2-22D	96.3'	40	28	OW-2-30S	67.8'	30	18	OW-2-30D	88'	35	2	.8
OW-2-23	97.2'	45	30	OW-2-34	71'	35	20	OW-2-31	86'	35	2	.8
OW-2-24D	97'	40	28	OW-2-35	69.2'	30	21	OW-2-32	84'	35	3	0
OW-2-25	96'	35	28	OW-2-36	64.8'	30	20	OW-2-33	82'	35	3	4
Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings. Injection banks D & E are turned off.												
	O, Injection System #2											
	Injection Ba	ınk G			Injection Ba	nk H		Monitoring Points Log				
Ю	Depth	scfh	psi	Ю	Depth	scfh	psi	ID	DTW	DO (1 Bot	mg/L) tom	PID (ppm)
OW-2-37	62.8'	40	20	OW-2-45	61.1'	30	20	MP-2-1	33.85	22		0.2
OW-2-38	62.1'	40	22	OW-2-46	61'	35	21	MP-2-2	37.18	19	.88	0
OW-2-39	60'	30	20	OW-2-47	60.5'	35	21	MP-2-3S	35.03	31	.28	0.4
OW-2-40	61.7'	30	20					MP-2-3D	34.98	33	.00	0.6
OW-2-41	61.7'	35	20					MP-2-4	23.73	27	.25	0
OW-2-42	61.6'	30	18					MP-2-5	21.88	25	.57	0
OW-2-43	61.4'	40	22									
OW-2-44R	60.6'	30	22									
Comments: All injection point flows were adjusted to the target flow rate of ~30 scfh provided that the pressure reading was no greater than the pressures provided in the hydrostatic tables prepared by URS Corporation after collecting readings.												

#### SYSTEM #2

		Date:	12/29/2016
	ODED A TIONAL N	OTES	
CA5 Air Compressor	UPERATIONAL N	UIES	
1) Oil Level Checked with system unloaded*	6	Vac V No	
* Unload system, wait until Delivery Air I	Procesure is loss than 0 psi		
2) Oil Level with system unloaded	ressure is less than 9 psi		
2) On Level with system unloaded	Normal (groon)	V High (orange)	
3) Oil added	Ves		
4) Oil changed	Vec	No X	
5) Oil filter changed	Vec		
6) Air filter Changed	Ves		
7) Oil separator cleaned	Ves	No X	
8) Terminal strips checked	Yes X	No	
o) Terminar surps enceked		110	
AS-80 O <sub>2</sub> Generator			
1) Prefilter changed	Yes	No X	
2) Coalescing changed	Yes	No X	
	GENERAL SYSTEM	NOTES	
Trailor			
1) Performed general housekeeping (i.e. sug	on collect trach incide and out ate		
1) renormed general nousekeeping (i.e. swee	Sep, confect trash hiside and out, etc	.) Na	
	ies <u>A</u>	NO	
2) Abnormal conditions observed (e.g. yanda	aliem		
2) Honormai conditions observed (e.g. vanda			
2) Other major activities completed			
5) Other major activities completed			
4) Supplies needed			
5) Visitors			
Record routine activities such as any alarm/shutdowns	, sampling, maintenance, materi	al	
transported off-site, oil/filter/gasket and/or any other a	bnormal operating conditions:		
12-29-16 Found system running upon arrival. Found pude	le of water on floor around separa	tor canister. Found small crack in plastic w	ater bowl. Repaired unit with
sincone and tested with no leaks. wiped down an equipm	ient and cleaned up debris and leav	es around sned. Lett system running.	
DID was sharked with 100 mm is shutulans miss to solik	notion and unit was notine 00 mm	Zanaad wait with fresh air and was readin	a 0.0 mmm. Calibrated with 100
PID was checked with 100 ppin isobutylene prior to callol	ation and unit was reading 98 ppir	1. Zeroed unit with fresh air and was reading	g 0.0 ppm. Cambrated with 100
ppm isobutylene and reading was 100 ppm.			
Flectric Meter # 96-929-544 tied into Pole #3			
Action Items:			