

**NRG Potomac River, LLC**  
8301 Professional Place  
Suite 230  
Landover, MD 20785

April 25, 2016

*Via email delivery only*

Mr. Alex Wardle  
Virginia Department of Environmental Quality (DEQ)  
Northern Regional Office  
13901 Crown Court  
Woodbridge, VA 22193

**Re: First Quarter 2016 CAP Implementation Monitoring Report  
NRG Potomac River Generating Station  
1400 North Royal Street  
Alexandria, VA 22314  
PC#2013-3154**

Dear Mr. Wardle:

NRG Potomac River LLC (PRGS) is pleased to submit the First Quarter 2016 CAP Implementation Monitoring Report (CMR).

The following activities were conducted during the First Quarter of 2016:

- Monthly liquid level gauging and manual light non-aqueous phase liquid (LNAPL) bailing of select site monitoring wells;
- Comprehensive gauging of all accessible site monitoring wells on March 14, 2016;
- Biostimulation headspace vapor monitoring of select site monitoring wells to measure the presence of volatile organic compounds (VOCs), oxygen, carbon dioxide, and methane on March 14, 2016;
- Routine quarterly sampling of groundwater from select site monitoring wells for petroleum hydrocarbons and from select wells for biostimulation parameters, in accordance with the groundwater sampling plan, on March 14 – 16, 2016;
- CAP implementation remedial system permitting, installation, start up, and operation activities:
  - Final system installation activities completed in February 2016;
  - System shakedown and start up in February and March 2016 with Operation and Maintenance of the system through March;
  - Sanitary sewer discharge coordination and permitting, with final approval in March 2016; and
  - National Park Service Special Use permit obtained in February 2016.

If you have any questions or require additional information please contact me at (301)843-4439 or by email at [Debra.Knight@nrg.com](mailto:Debra.Knight@nrg.com). For any technical questions, if you prefer, you can contact our consultants at GES directly.

Sincerely,

A handwritten signature in blue ink that reads "Debra L. Knight". The signature is written in a cursive, flowing style.

Debra L. Knight  
Environmental Specialist, NRG

Cc: J. Rodriguez, DOEE; K. Tran, City Of Alexandria, VA; P. McCallum, NPS



Groundwater  
& Environmental Services, Inc.

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**1<sup>ST</sup> QUARTER CAP IMPLEMENTATION MONITORING  
REPORT**

*APRIL 2016*

**POTOMAC RIVER GENERATING STATION  
1400 NORTH ROYAL STREET  
ALEXANDRIA, VA**

**PC# 2013-3154**

*PREPARED FOR:*

**DEBRA L. KNIGHT  
NRG POTOMAC RIVER LLC  
12620 CRAIN HIGHWAY  
NEWBURG, MD 20664**

*SUBMITTED TO:*

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY  
NORTHERN REGIONAL OFFICE  
13901 CROWN COURT  
WOODBIDGE, VA 22193-1453**

*PREPARED BY:*

**GROUNDWATER & ENVIRONMENTAL SERVICES, INC.  
1350 BLAIR DRIVE, SUITE A  
ODENTON, MD 21113**

**APRIL 25, 2016**

**SITE NAME:** Potomac River Generating Station

**SITE LOCATION:** 1400 North Royal Street, Alexandria, VA

**VDEQ PC#** 2013-3154

**DATE OF REPORT:** April 25, 2016

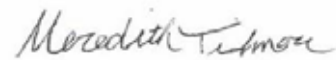
**LAND USE CLASSIFICATION:** Industrial

**CURRENT PROPERTY OWNER:** NRG Potomac River LLC  
8301 Professional Place, Suite 250  
Landover, MD 20785

**CONSULTANT:** Groundwater & Environmental Services, Inc.  
1350 Blair Drive, Suite A  
Odenton, MD 21113  
(800) 220-3606

**RELEASE INFORMATION:** Release from two former 25,000 gallon Number  
2 fuel oil underground storage tanks

Prepared by:



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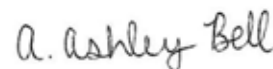
Meredith Tidmore, EIT  
Associate Engineer

Reviewed by:



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Dan Drennan, PE  
Project Engineer



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Senior Project Manager



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## **1.0 INTRODUCTION**

Groundwater & Environmental Services, Inc. (GES) has prepared this 1<sup>st</sup> Quarter 2016 CAP Implementation Monitoring Report (CMR) on behalf of NRG Potomac River LLC (NRG), documenting environmental monitoring and corrective action activities performed at the Potomac River Generating Station (PRGS), located at 1400 North Royal Street, Alexandria, VA (the site). Site activities were performed to address a subsurface petroleum release regulated by the Virginia Department of Environmental Quality (VDEQ) Northern Regional Office (NRO) under Pollution Complaint (PC) #2013-3154. The site is the location of a decommissioned power generating facility. A Site Location Map is provided as **Figure 1**, a Site Layout Map, depicting pertinent features of the site and adjacent areas, is provided as **Figure 2**, and a Site Map is provided as **Figure 3**.

Specifically, this summary report documents the following activities conducted during the 1<sup>st</sup> Quarter 2016:

- Monthly liquid level gauging and manual LNAPL bailing of select site groundwater wells to measure elevations of groundwater and light non-aqueous phase liquid (LNAPL) hydrocarbons, if present;
- Comprehensive gauging of all accessible site groundwater wells;
- Biostimulation headspace vapor monitoring of select site groundwater wells to measure the presence of volatile organic compounds (VOCs), oxygen, carbon dioxide, and methane;
- Routine quarterly sampling of groundwater from select site groundwater wells for total petroleum hydrocarbons – diesel range organics (TPH-DRO) and from select wells for biostimulation parameters; and
- CAP Implementation remedial system permitting, installation, start up, and operation activities.

### **1.1 SITE HISTORY**

The site was developed as a power generating facility in the 1940s. The first generating unit was constructed by 1949, and the last of the five units was brought online in 1954. The facility used Number 2 (No. 2) fuel oil to preheat its generating unit boilers and coal as its primary fuel to generate electricity. The No. 2 fuel oil was stored in two adjoining 25,000-gallon underground storage tanks (USTs) centrally located within the power plant complex, as shown on the Site Map provided as **Figure 3**. On October 1, 2012, the coal power plant ceased operation.

PC #2013-3154 was opened by the VDEQ following the detection of petroleum hydrocarbons during closure activities associated with the two 25,000-gallon fuel oil USTs. The VDEQ requested that a Site Characterization Report (SCR) be prepared to characterize the extent of contamination at the site. URS Corporation (URS) submitted a Site Conceptual Model (SCM) on June 11, 2013, which included a discussion of the initial detection of petroleum hydrocarbons during the closures of the two No. 2 fuel oil USTs, as well as descriptions of the various subsurface utilities in the vicinity of the USTs.

The VDEQ subsequently requested the submittal of a Site Characterization Report Addendum (SCRA), as stated in a directive letter dated July 10, 2013. This SCRA was submitted on February 14, 2014, by URS and described the activities associated with a subsurface characterization of the site using laser-induced fluorescence (LIF), the advancement of soil borings for soil sampling at the site, and the installation of fourteen monitoring wells. The site history, recent field activities, laboratory analytical results, a preliminary risk assessment, and an assessment of remedial options were also discussed in the SCRA.

After review of the SCRA, on March 4, 2014, the VDEQ requested that a Corrective Action Plan (CAP) be developed for the site. GES and Geosyntec Consultants (Geosyntec), on September 5, 2014, submitted Part I of a CAP, (CAP-I) summarizing the site characterization data and evaluation; presenting an updated SCM based on this data; and providing a presentation, assessment, and evaluation of the viable remedial technologies that can be employed, consistent with the CAP requirements. Subsequently, Part II of the CAP (CAP-II) was submitted to the VDEQ on December 23, 2014. The CAP was approved by the VDEQ on March 17, 2015, and was assigned CAP tracking number 513. The CAP approval letter required quarterly groundwater monitoring.

## ***1.2 SURROUNDING PROPERTIES***

The surrounding properties in the immediate vicinity of the site are primarily residential and commercial, with some buildings used as office space. To the north, south, and west, the site is bordered by a mixture of condominium and office buildings. To the east, the site is bordered by the National Park Service's (NPS) Mt. Vernon Trail, beyond which lies the Potomac River.

## **2.0 SITE CHARACTERIZATION AND MONITORING ACTIVITIES**

The 1<sup>st</sup> Quarter 2016 scope of work was developed in coordination with the VDEQ as outlined in an Activity Authorization Form (AAF) approved by the VDEQ on January 12, 2016. The following site characterization and monitoring activities were conducted during this monitoring period:

- January, February, and March 2016:
  - Monthly gauging of select groundwater wells. Hand bailing of LNAPL from select groundwater wells. During the January, February, and March gauging events, system wells with pumps were not bailed even if measurable LNAPL was present. The LNAPL in those wells was to be removed by the remediation system when it was turned on.
- March 14, 2016:
  - Site-wide gauging and biostimulation headspace vapor monitoring and collection of down-well field parameters of select groundwater wells.
- March 14 – 16, 2016:
  - Gauging and groundwater sampling of all accessible site groundwater wells containing sufficient water for sampling and not containing a measureable thickness of light non-aqueous phase liquid (LNAPL).

## **2.1 WELL GAUGING AND LNAPL BAILING**

An oil-water interface probe capable of measuring groundwater and LNAPL to 0.01 feet was used to gauge the site groundwater wells. During the 1<sup>st</sup> Quarter 2016, all accessible site groundwater wells were gauged during a comprehensive gauging event prior to groundwater sampling. Select groundwater wells that historically exhibited measureable LNAPL or elevated dissolved phase hydrocarbon concentrations were also gauged on a monthly basis. Following system startup on March 14, 2016, the five pumping wells were gauged on a weekly basis to confirm the water table was being drawn down to the pump intakes so any LNAPL present was being recovered. Gauging events conducted during the 1<sup>st</sup> Quarter 2016 are summarized below:

- Gauging of select wells monthly:
  - January 27, 2016
  - February 15, 2016
- Site-wide gauging of all accessible wells:
  - March 14, 2016
- Sampling of all accessible wells:
  - March 14 – 16, 2016
- Gauging of the five pumping wells:
  - March 21, 2016
  - March 30, 2016



A Well Construction Table is included as **Table 1**, and the 1<sup>st</sup> Quarter 2016 Groundwater Gauging Data Summary is presented as **Table 2**. LNAPL was detected in groundwater wells MW-01S, MW/RW-05, MW/RW-10S, MW-25S, MW/RW-25, RW-25S, MW-27, and MW/RW-51 during the 1<sup>st</sup> Quarter 2016, with a maximum thickness of 0.30 feet in MW/RW-25. During the January, February, and March gauging events, trace amounts of LNAPL were bailed from MW-25S. No LNAPL was bailed from any wells connected to the remediation system.

Groundwater depths ranged from 0.30 feet below ground surface (bgs) in MW-105 to 33.60 feet bgs in MW/RW-51 during the 1<sup>st</sup> Quarter 2016, which is consistent with historical data from the site. Site-wide gauging was conducted on March 14, 2016, in accordance with the tidal cycle of the Potomac River. High tide occurred at 1:08 pm on March 14, 2016. Site wells were gauged as quickly as possible by multiple personnel, and gauging was conducted bracketing the river's high tide. This approach was used to minimize the impact of tidal influence on groundwater elevation data. Monitoring wells MW-16S and MW-108 were dry during the March 14, 2016 comprehensive gauging event.

Two groundwater contour maps representing shallow zone data and deep zone data, respectively, from the March 14, 2016 comprehensive gauging event are presented as **Figure 4** and **Figure 5**. The shallow zone groundwater contour map indicates that groundwater flow is predominantly in the northeasterly direction with variable flow to the north, east, northeast, and southeast. The deep zone groundwater contour map indicates that groundwater flow is predominantly in the northeasterly direction. The hydraulic gradient at the site was calculated to be 0.0414 feet per foot in the shallow zone and 0.0158 feet per foot in the deep zone. The shallow zone hydraulic gradient was calculated between MW-105 and RW-30S; the deep zone hydraulic gradient was calculated between RW-05 and TW-02.

## **2.2 HEADSPACE VAPOR MONITORING**

Monitoring well biostimulation vapor headspace analysis was conducted at select groundwater wells during the March 14, 2016, comprehensive gauging event using a photoionization detector (PID) and a GEM 2000 landfill gas meter. The PID was fitted with a 10.6 electron volt bulb and was calibrated using a factory-supplied calibration gas standard (100 parts per million [ppm] isobutylene) prior to each field use.

To obtain reproducible and stable readings, a vapor monitoring well cap was inserted securely into the well, and the PID and landfill gas meter were used to record VOC, oxygen, carbon dioxide, and methane concentrations. This arrangement allows for the withdrawal of air from the well through the PID and landfill gas meter pumps while minimizing the exchange of ambient air. The PID and landfill gas meter responses were recorded in the field book after the stabilization period.

Detailed PID and landfill gas meter response data are presented in **Table 3**.

## **2.3 GROUNDWATER SAMPLING**

On March 14 – 16, 2016, groundwater samples were collected from 19 groundwater monitoring/recovery wells (MW-08S, MW/RW-10S, MW-14, MW-27, MW/RW-31, MW-51S, MW/RW-72S, MW/RW-72, MW-106, MW-121, MW-122, MW/RW-123S, RW-1, RW-05S, RW-28S, RW-30S, RW-116S, RW-118S, and RW-119S) using disposable bailers and seven temporary wells (TW-02, TW-03, TW-04, TW-

05, TW-06, TW-07, and TW-14) using a peristaltic pump and dedicated polyethylene tubing. Monitoring wells MW-109S, MW-109, MW-110S, MW-110, MW-111, MW-112S, MW-112, MW-113, and MW-114 were not sampled, as their locations in the basement of the plant were temporarily inaccessible to GES personnel due to hazardous environmental conditions. Monitoring/recovery wells MW-01S, MW/RW-05, MW-25S, RW-25S, MW/RW-25, and MW/RW-51 were not sampled during the 1<sup>st</sup> Quarter 2016 sampling event, as the wells contained measurable thicknesses of LNAPL. Monitoring wells MW-108, RW-117S, and TW-12S were not sampled, as the wells were dry.

Each monitoring well was gauged prior to purging and sampling, and gauging data is presented in **Table 2**. Prior to the collection of groundwater samples, a minimum of three well volumes of water was purged from each monitoring well using purge bailers or a peristaltic pump and dedicated polyethylene tubing. Purge bailers were decontaminated prior to purging each well. Select wells containing minimal volumes of water were not purged, and grab samples were immediately collected. Purge water was containerized in 55-gallon drums and stored onsite to be treated by the remediation system. Groundwater samples were collected directly in laboratory provided bottleware, packaged on ice in coolers, and transported under proper chain of custody to Eurofins Lancaster Labs. Samples were requested to be analyzed for the following:

- Standard quarterly parameters
  - TPH-DRO
- Biostimulation parameters
  - Alkalinity
  - Nitrate ( $\text{NO}_3^{1-}$ )
  - Nitrite ( $\text{NO}_2^{1-}$ )
  - Manganese ( $\text{Mn}^{2+}$ )
  - Ferrous Iron ( $\text{Fe}^{2+}$ )
  - Sulfate ( $\text{SO}_4^{2-}$ )
  - Methane

The Groundwater Monitoring Plan is summarized in **Table 4**. Historical Groundwater Analytical Data is summarized in **Table 5** and is discussed further in **Section 2.5**. Historical Groundwater Biostimulation Analytical Data is provided as **Table 6**.

The complete laboratory reports and chain of custody documentation for the groundwater sampling event are presented as **Attachment A**.

## **2.4 GROUNDWATER ANALYTICAL FINDINGS**

During the 1<sup>st</sup> Quarter 2016, 26 wells were sampled for TPH-DRO. Benzene, toluene, ethylbenzene, total xylenes, methyl tert-butyl ether (MTBE), tert-butyl alcohol, 1,2-dibromoethane, 1,2-dichloroethane, and naphthalene data are also included in the Historical Groundwater Analytical Data (**Table 5**) for reference for TW-02 through TW-07 and TW-14, which were sampled by Geosyntec in accordance with requirements from the District of Columbia Department of Energy & Environment. Those results will not be discussed here. Two TPH-DRO contour maps representing shallow zone data and deep zone data, respectively, from the 1<sup>st</sup> Quarter 2016 sampling event are presented as **Figure 6** and **Figure 7**. The

results from the collection and analysis of groundwater samples from wells sampled during the 1<sup>st</sup> Quarter 2016 are presented below:

- TPH-DRO was detected in 25 of the 26 groundwater wells, with a maximum concentration of 67,000 micrograms per liter (µg/L) recorded in recovery well MW-51S;

Biostimulation data and field parameters were taken from select wells within the shallow and deep zone aquifers in order to evaluate the natural attenuation potential of the aquifers and to determine the dominant terminal electron accepting process. Historical Groundwater Biostimulation Analytical Data Summary is presented as **Table 6**, and Historical Groundwater Field Parameters Data Summary is presented as **Table 3**.

The following chart details the anticipated changes in groundwater chemistry in order of reaction preference during various stages of biodegradation from aerobic to highly anaerobic conditions. Increased concentrations of alkalinity, nitrite, dissolved manganese, ferrous iron, and methane and decreased concentrations of oxidation reduction potential (ORP), dissolved oxygen (DO), nitrate, and sulfate are indicators of anaerobic activity.

	Time →					
	← Distance from Source					
	Aerobic Respiration	Nitrate Reduction	Manganese Reduction	Ferric Iron Reduction	Sulfate Reduction	Methan- ogenesis
	Aerobic	Anaerobic				
Electron Acceptor	O <sub>2</sub>	NO <sub>3</sub> <sup>-</sup>	Mn <sup>4+</sup>	Fe <sup>3+</sup> (solid)	SO <sub>4</sub> <sup>2-</sup>	CO <sub>2</sub>
Metabolic By-Product	CO <sub>2</sub>	N <sub>2</sub> , CO <sub>2</sub>	Mn <sup>2+</sup>	Fe <sup>2+</sup> (dissolved)	H <sub>2</sub> S	CH <sub>4</sub> (methane)
Expected Relationship with High BTEX	O <sub>2</sub> ↓	NO <sub>3</sub> <sup>-</sup> ↓	Mn <sup>2+</sup> ↑	Fe <sup>2+</sup> ↑	SO <sub>4</sub> <sup>2-</sup> ↓	CH <sub>4</sub> ↑

The observed concentrations of DO, ORP, carbonate alkalinity, nitrate nitrogen, nitrite nitrogen, manganese, ferrous iron, sulfate as SO<sub>4</sub><sup>2-</sup>, and methane provide supporting evidence that anaerobic degradation is occurring within the dissolved hydrocarbon plume and that aerobic conditions exist outside of the plume for both the shallow and deep zone aquifers. Based on a review of the biostimulation data and the field parameters, the following observations have been made:

- The groundwater quality data from monitoring wells MW-112S (shallow zone aquifer) and MW-114 (deep zone aquifer) are considered to be representative of background conditions due to the historical relative absence of dissolved-phase hydrocarbons in these wells and aerobic conditions within these wells.

- Monitoring wells MW-11, MW-14, MW-33 and MW-70 show either current or historic low levels of contamination and are upgradient or side-gradient of the main body of the plume. They have historically shown slight changes in some of the biostimulation parameters and appear to be fringe wells. Biostimulation parameters were not measured in these wells during the 1<sup>st</sup> Quarter 2016.
- DO concentrations indicate an anaerobic environment within the dissolved hydrocarbon plume in both the shallow and deep zone aquifers. DO concentrations were considered anaerobic (< 1.0 mg/L) in five of the eight measured shallow zone aquifer wells (MW-01S, MW/RW-10S, MW-51S, MW/RW-123S, and RW-116S) and in all seven of the measured deep zone aquifer wells (MW-14, MW-27, RW-72, MW-106, MW-121, MW-122, and RW-1) during the 1<sup>st</sup> Quarter 2016 sampling event. The three shallow wells with DO concentrations indicative of aerobic conditions were MW/RW-72S, RW-05S, and RW-28S. These wells are all total phase extraction wells and are located in proximity to biosparge locations. It is possible that running the system during system shakedown activities was responsible for the increased DO concentrations in these wells. DO concentrations in the background wells, MW-112S and MW-114, have historically been aerobic, which indicates an aerobic environment outside of the dissolved-phase hydrocarbon plume.
- ORP values are decreased from background conditions in both the shallow and deep aquifer zones. ORP values from all eight of the shallow zone aquifer wells and six of the seven deep zone aquifer wells were negative during the 1<sup>st</sup> Quarter 2016 sampling event, which indicates that the shallow and deep zone aquifers are both generally in a reducing condition. The only deep well that showed a positive ORP value was monitoring well MW-106.
- Alkalinity concentrations were elevated as compared to background conditions in the four shallow zone aquifer wells where it was measured (MW-01, MW/RW-10S, MW-51S, and MW/RW-72S) and in four of the six deep zone aquifer wells where it was measured (MW-14, MW-27, TW-05, and TW-06), which indicates biodegradation is occurring. Alkalinity concentrations were lower than background wells in monitoring well MW-106 and consistent with background wells in temporary well TW-03.
- Nitrate concentrations in the four shallow zone aquifer wells where it was measured (MW-01S, MW/RW-10S, MW-51S, and MW/RW-72S) and in the six deep zone aquifer wells where it was measured (MW-14, MW-27, MW-106, TW-03, TW-05, and TW-06) indicate that nitrate reduction is essentially complete in these areas. Nitrite concentrations were slightly elevated in all four of the shallow zone aquifer wells where it was measured (MW-01S, MW/RW-10S, MW-51S, MW/RW-72S) and in five of the six deep wells where it was measured (MW-14, MW-27, TW-03, TW-05, and TW-06). The nitrite concentration in deep well MW-106 was fairly consistent with background concentrations.
- Dissolved manganese concentrations in the four shallow zone aquifer wells where it was measured (MW-01S, MW/RW-10S, MW-51S and MW/RW-72S) and in the six deep zone aquifer wells where it was measured (MW-14, MW-27, MW-106, TW-03, TW-05, and TW-06) show relatively increased concentrations over historic concentrations in background wells. Historically, wells in the source zone and those downgradient, in both the shallow and deep zone aquifers, have shown increased manganese concentrations relative to background.

- Ferrous iron concentrations in the four shallow zone aquifer wells where it was measured (MW-01S, MW/RW-10S, MW-51S, and MW/RW-72S) and in the six deep zone aquifer wells where it was measured (MW-14, MW-27, MW-106, TW-03, TW-05, and TW-06) show significantly increased concentrations as compared to historical background well concentrations. Historical data from other shallow and deep zone wells show elevated ferrous iron concentrations in both shallow and deep zone wells in the source zone and downgradient.
- Sulfate as  $\text{SO}_4^{2-}$  concentrations in the four shallow zone aquifers wells where it was measured (MW-01S, MW/RW-10S, MW-51S, and MW/RW-72S) and in the six deep zone aquifer wells where it was measured (MW-14, MW-27, MW-106, TW-03, TW-05, and TW-06) do not show significant decreases in concentrations as compared to background. In the case of wells MW/RW-10S, MW-51S, MW-27, MW/RW-72S, MW-106, TW-03, TW-05, and TW-06, sulfate as  $\text{SO}_4^{2-}$  concentrations are higher than historical concentrations in background wells. This is consistent with historical data collected from across the site, which shows that generally sulfate as  $\text{SO}_4^{2-}$  concentrations are consistent with or higher than historic sulfate as  $\text{SO}_4^{2-}$  concentrations in background wells, suggesting that sulfate continues to be available as an electron acceptor.
- Methane concentrations in the four shallow zone aquifer wells where it was measured (MW-01S, MW/RW-10S, MW-51S, and MW/RW-72S) and in the six deep zone aquifer wells where it was measured (MW-14, MW-27, MW-106, TW-03, TW-05, and TW-06) are significantly higher than historic methane concentrations measured in background wells, indicating that methanogenesis is occurring within both the shallow and deep zone aquifers. This is consistent with historic data collected from across the site.

Overall, the biostimulation data and field parameters indicate that an active microbial population is present at the site and that the dissolved-phase hydrocarbons within the shallow and deep zone aquifers are attenuating via biodegradation. It appears that methanogenesis is likely currently the predominant form of attenuation occurring at the site. However, operation of both the biosparge system and the total phase extraction system will stimulate aerobic biodegradation moving forward and the increased DO concentrations in MW/RW-72S, RW-05S, and RW-28S following limited system operation confirm the introduction of additional oxygen into the subsurface.



### ***3.0 REMEDIATION SYSTEM INSTALLATION AND START UP ACTIVITIES***

Remediation system installation activities performed during the 1<sup>st</sup> Quarter 2016, in accordance with the CAP-II, which was approved by the VDEQ on March 17, 2015, include:

- National Park Service permitting and coordination;
- Final system installation activities;
- Sanitary sewer discharge approval coordination;
- System shakedown and a batched startup for effluent sample collection;
- Full system startup and operation.

#### ***3.1 NATIONAL PARK SERVICE COORDINATION***

On May 6, 2015, NRG and GES met with the NPS to discuss the NPS property Scope of Work (SOW) required to implement the approved CAP. NPS approved of the general SOW and confirmed the necessity of obtaining a Special Use Permit. The Special Use Permit application was submitted in June 2015. A draft permit was issued in December 2015.

NRG requested minor changes to the permit, and a revised permit was sent on January 6, 2016. No further changes were requested by NRG or GES, and the permit was authorized on February 11, 2016.

#### ***3.2 REMEDIAL SYSTEM INSTALLATION***

During the 1<sup>st</sup> Quarter 2016, all remaining installation tasks associated with the remediation system were completed, with the exception of those activities requiring access to NPS property. Final connections of the heat trace to the heat trace breaker panel were completed on January 5, 2016 by a licensed electrician contracted by Stone Environmental. A product drum was installed on January 12, 2016, and reflective barricades were installed surrounding the drum. Baker Corp delivered a 6,500 gallon poly tank and spill containment berm on January 21, 2016. Product Recovery Management, Inc. (PRM) installed leak detection alarms and an emergency stop button on the remediation trailer on February 1 and 2, 2016.

#### ***3.3 REMEDIAL SYSTEM START UP***

Initial system shakedown and start up activities were performed on February 3 and 4, 2016. The first Post Oil Water Separator (OWS) and Effluent water samples were collected on February 4 and 5, 2016. NRG, the VADEQ, and the Alexandria Fire Department met with GES on February 4, 2016 for a site visit and a review of the system. Additional system shakedown and start up activities were performed on March 3, 4, and 7, 2016. On March 3, 2016, maintenance was performed on the pumps in RW-31 and MW/RW-51 and the floor sump was relocated. On March 4, 2016, the VADEQ was given a tour of the system and additional piping modifications were made. Full system startup with discharge to the sanitary sewer occurred on March 14, 2016. Between March 14 and March 18, 2016, the system was started and allowed to run intermittently. For the first several nights it was shut down before personnel left the site to

ensure that there were no leaks or other issues while the system was unattended. Sound levels were measured at the closest property line along the fence bordering the NPS trail. Sound measurements showed that noise levels at the closest property boundary were 55 decibels (dB) or less and that noise levels at the property boundary closest to Marina Towers were 30 dB, considered to be background. VOC monitoring with a PID was also conducted at the property boundary with all readings being recorded as 0.0 ppm. Beginning March 21, 2016, the system was allowed to operate continuously.

### **3.4 ALEXANDRIA RENEWAL ENTERPRISES COORDINATION**

During the 4<sup>th</sup> Quarter 2015, Alexandria Renewal Enterprises (AlexRenew) determined that the proposed duration of the discharge required a permit. GES submitted the permit application and all required or requested documents and information.

On December 31, 2015, AlexRenew requested additional information about the sanitary sewer field verification, engineering calculations showing that the capacity of the sewer would be sufficient for the proposed flow, and clarification on analytical results. The additional information and data were provided to AlexRenew by GES on January 5, 2016. On January 13, 2016, AlexRenew issued an approval letter with an outline of the conditions for the discharge and requiring a pre-discharge sample to ensure that the system effluent meets the required discharge limits. On January 18, 2016, GES provided a response addressing each of the eleven conditions in the letter and requested clarifications on certain points. GES received a response with the requested clarifications on March 8, 2016.

GES collected samples from the system effluent on February 4, 5, and 16, 2016 while the system effluent was being pumped into a tank and not discharged. The results were submitted to AlexRenew on February 26, 2016. All results were under the limits outlined in the AlexRenew approval letter. On March 8, 2016, AlexRenew requested clarification on the preservation methods utilized for each sample, why pH was not analyzed for the samples collected on February 4, 2016, and where in the treatment process the Post OWS and Effluent samples were collected. GES provided a response addressing each of these, on March 10, 2016. On March 11, 2016, AlexRenew gave approval to discharge to the sanitary sewer. GES began discharging to the sanitary sewer on March 14, 2016.

### **3.5 BULK HEAD WALL SEEP SEALING**

A total of six seep areas have been identified in the steel bulkhead wall along the Potomac River. In order to prevent the potential for impacted groundwater to migrate into the Potomac River, the seeps are being sealed during April and May 2016. Additionally, some rigging holes were identified and will be sealed along with gaps around the piping in outfalls 003, 009, and 010. The specifics of this work will be discussed in more detail in the 2<sup>nd</sup> Quarter 2016 CMR.

### **3.6 PERMIT SUMMARY**

Special Use Permit

Required for: Offsite air sparge well installation and remediation system piping on the Mt. Vernon Trail and bulk head seep sealing

Issued by: National Parks Service

Progress: Special Use Permit NCR GWMP 6000-15-088 has been approved, effective 2/11/2016 – 10/31/2018.

Building Permit (2):

Required for: Pre-fabricated systems/enclosures (Building Plan OR Existing Commercial Tenant Improvement OR Industrialized Building/Construction Trailer).

Issued by: The City of Alexandria, Permit Center

Progress: Building Permit BLD2015-01702 has been approved, effective 9/18/2015 – 3/18/2016.

Certificate of Occupancy (2):

Required for: Authorization to occupy building

Issued by: The City of Alexandria, Department of Code Administration

Progress: The City of Alexandria confirmed that no Certificate of Occupancy is required.

Letter of Authorization:

Required for: Sanitary sewer discharges less than 25,000 gallons per day with low risk of negatively impacting the sanitary sewer system.

Issued by: Fairfax County Industrial Waste Section, Alexandria Sanitation Authority/Alexandria Renewal Enterprises (AlexRenew)

Progress: On September 14, 2015, AlexRenew provided verbal approval pending receipt of trial start-up discharge results. On November 3, 2015, AlexRenew stated that a permit would be required and that additional information and a formal Application for Significant Industrial User Permit was necessary.

Significant Industrial User Permit:

Required for: Sanitary sewer discharges less than 25,000 gallons per day with low risk of negatively impacting the sanitary sewer system.

Issued by: AlexRenew

Progress: AlexRenew issued an approval letter on January 13, 2016, pending results from initial system effluent sampling. Following receipt of the preliminary system effluent sampling results, final approval to discharge was granted on March 11, 2016.

Electrical Permit:

Required for: Installation of a power drop to the site.

Issued by: The City of Alexandria

Progress: The City of Alexandria approved and issued the permit.

Power Service Application

Required for: Power service to the site.

Issued by: Dominion Power

Progress: The Dominion power connection is complete.

## Air Permit

A Minor New Source Review permit will be required for the site if the uncontrolled emissions exceed 25 tons per year for VOCs for a new source. The specific emission units on the remediation system are the Tandem Eurus MB4506 and the MB4509 Rotary Lobe Blowers, which are located in series. The discharge vapor will contain hydrocarbons that are volatilized off of the impacted soil. The total hydrocarbon mass estimate for TPH-DRO within the soil was determined to be 24,444 kilograms (53,890 pounds). The estimated system operation duration is 22 months. Not all of the soil mass will be remediated by the remediation system and only a fraction of the TPH-DRO compounds volatilize into the air. However, the total hydrocarbon soil mass was used in calculations to determine an upper bound or maximum projected uncontrolled emission rate, which is shown below:

$$\text{Maximum emission rate} = (53,890 \text{ pounds} \times 12 \text{ months per year}) / (22 \text{ months} \times 2,000 \text{ pounds}) = 14.70 \text{ tons per year}$$

Because even the maximum uncontrolled emissions are projected to be less than 25 tons per year, a Minor New Source Review permit is not required. However, GES does plan to conduct regular testing for nuisance odors outside the system and at the property boundary. If nuisance odors are detected after start-up, with consultation with the City of Alexandria and VDEQ, additional treatment may be added to the system as a precautionary measure.

### **3.7 FUTURE ACTIVITIES (2<sup>ND</sup> QUARTER 2016)**

- Post system start-up sampling of select wells during April 2016 to evaluate the effects of system startup.
- Routine quarterly groundwater sampling for petroleum and biostimulation parameters in accordance with the approved groundwater sampling plan;
- Monthly gauging of select wells;
- System operation;
- Weekly O&M through April 2016 and semi-weekly O&M thereafter;
- Additional air sparge well installation in proximity to the NPS Trail, additional biosparge system piping installation, and bulkhead seep sealing in April 2016; and
- Submittal of quarterly CMR.

### **3.8 UPDATED CAP IMPLEMENTATION SCHEDULE**

April 2016	-Connect sparge wells SP-09 to SP-15
April 2016	-Seal Seeps
2 <sup>nd</sup> Quarter 2016	-System O&M

#### **4.0 REMEDIATION SYSTEM OPERATION**

The remediation system consists of three separate systems: total phase extraction (TPE), pump and treat (P&T), and biosparge. The locations of the wells used for each system are shown on the Site Map (**Figure 3**). The TPE, P&T, and biosparge systems operated intermittently until March 21, 2016, when the initial startup period was over. System O&M was performed on March 24 and 30, 2016.

The TPE system operated for approximately 10 days out of 11 days during the reporting period, with a system uptime of 90%. The average vapor flow rate for the reporting period was 341 standard cubic feet per minute (scfm). The cumulative groundwater flow for the reporting period was 2,572 gallons (gal) with an average flow rate of 0.18 gallons per minute (gpm). The estimated vapor >C4-C10 hydrocarbon recovery for the reporting period was 262 pounds (lbs), and the estimated groundwater TPH-DRO recovery for the reporting period was 5.4 lbs. A TPE Operational Summary is included as **Table 7**.

The P&T system operated for approximately 10 days out of 11 days during the reporting period, with a system uptime of 86%. The cumulative groundwater flow for the reporting period was 43,907 gal, with an average flow rate of 3.2 gpm. The estimated groundwater TPH-DRO recovery for the reporting period was 20.5 lbs. A P&T Operational Summary is included as **Table 8**.

The biosparge system operated for approximately 11 days out of 12 days during the reporting period, with a system uptime of 94%. The average flow for each of the sparge wells (SP-01 through SP-08) was 0.8 scfm. A Biosparge Operational Summary is included as **Table 9**.

The total estimated hydrocarbon recovery to date is 345 lbs (49 gallons). This includes 26 lbs of dissolved-phase, 262 lbs of vapor-phase, and 57 lbs of liquid-phase. The liquid-phase recovery is inclusive of previously bailed LNAPL and recovery from the TPE and P&T systems. Dissolved-phase hydrocarbon recovery was estimated using the Influent TPE TPH-DRO and Influent P&T TPH-DRO concentrations. The liquid-phase hydrocarbon recovery was estimated using the amount of LNAPL recovered in the product drum. Vapor-phase hydrocarbon recovery is estimated using the influent TPE >C4-C10 hydrocarbon concentration. A Hydrocarbon Recovery Summary is included as **Table 10**.

##### **Hydrocarbon Recovery:**

Dissolved-Phase Hydrocarbons (Period/Cumulative): 26 lbs / 26 lbs

Vapor-Phase Hydrocarbons (Period/Cumulative): 262 lbs / 262 lbs

Liquid-Phase Hydrocarbons (Period/Cumulative): 57 lbs / 57 lbs

Total Hydrocarbon Recovery (Period/Cumulative): 345 lbs / 345 lbs

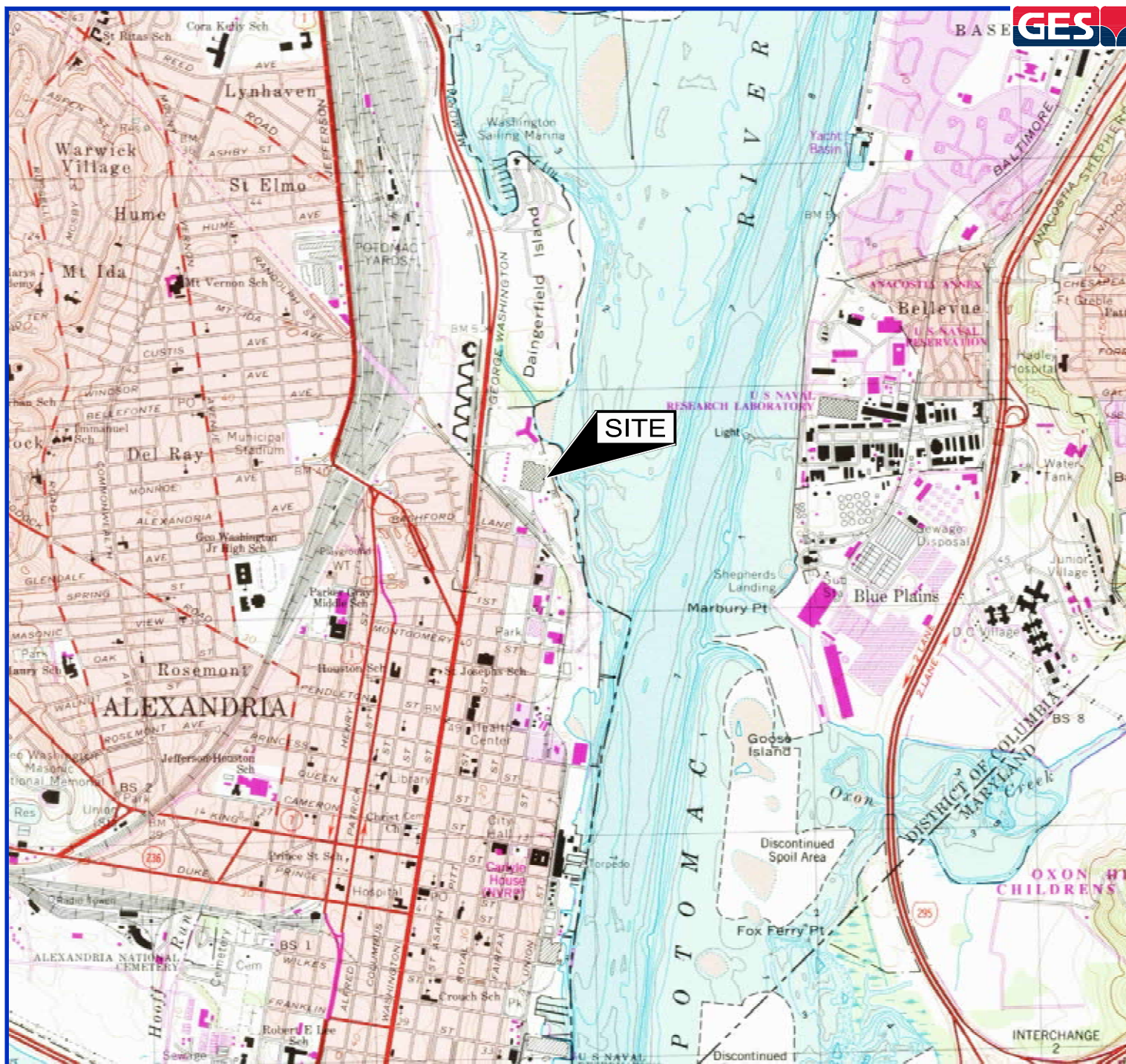


## **5.0 CONCLUSIONS**

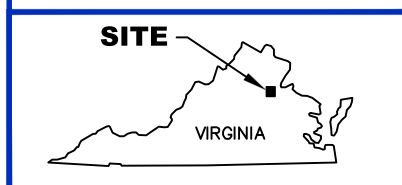
GES has completed this 1<sup>st</sup> Quarter 2016 CMR for the Potomac River Generating Station, located at 1400 North Royal Street, Alexandria, Virginia. The following is a summary of pertinent findings from the 1<sup>st</sup> Quarter 2016 monitoring and remedial activities conducted at the site:

- LNAPL was observed in eight of the site monitoring wells (MW-01S, MW-05/RW-05, MW/RW-10S, MW-25S, MW-25/RW-25, MW-27, MW-51/RW-51, and RW-25S) during the 1<sup>st</sup> Quarter 2016.
- Groundwater flow in the shallow zone is predominantly in the northeasterly direction with variable flow to the north, east, northeast, and southeast. Groundwater flow in the deep zone is predominantly in the northeasterly direction.
- TPH-DRO was detected in 25 of the 26 groundwater wells sampled, with a maximum concentration of 67,000 µg/L in MW-51S.
- The analysis of biostimulation parameters indicated that an active microbial population is present at the site and that the dissolved-phase hydrocarbons within the shallow and deep zone aquifers are currently being reduced predominantly through methanogenesis. However, elevated DRO concentrations in TPE wells MW/RW-72S, RW-05S, and RW-28S suggest that system operation will stimulate aerobic degradation moving forward.
- System installation was completed in February 2016, and start-up was completed in March 2016.
- System O&M was performed on March 24 and 30, 2016.
- A Special Use Permit was received from the NPS on February 11, 2016.
- GES began discharging to the sanitary sewer on March 14, 2016 with the approval of AlexRenew.

## FIGURES



REFERENCE: "ALEXANDRIA, VIRGINIA"  
7.5' QUADRANGLE, USGS, (1965, PHOTOREVISED 1983,  
BATHYMETRY 1982).



QUADRANGLE LOCATION  
NO SCALE

DRAFTED BY:

JW

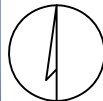
CHECKED BY:

NG

REVIEWED BY:

AC

NORTH



## SITE LOCATION MAP

### FORMER POTOMAC RIVER GENERATING STATION ALEXANDRIA, VIRGINIA

Groundwater & Environmental Services, Inc.  
1350 BLAIR DR., SUITE A, CROFTON, MD 21113

SCALE IN FEET



DATE

7-17-15

FIGURE

1



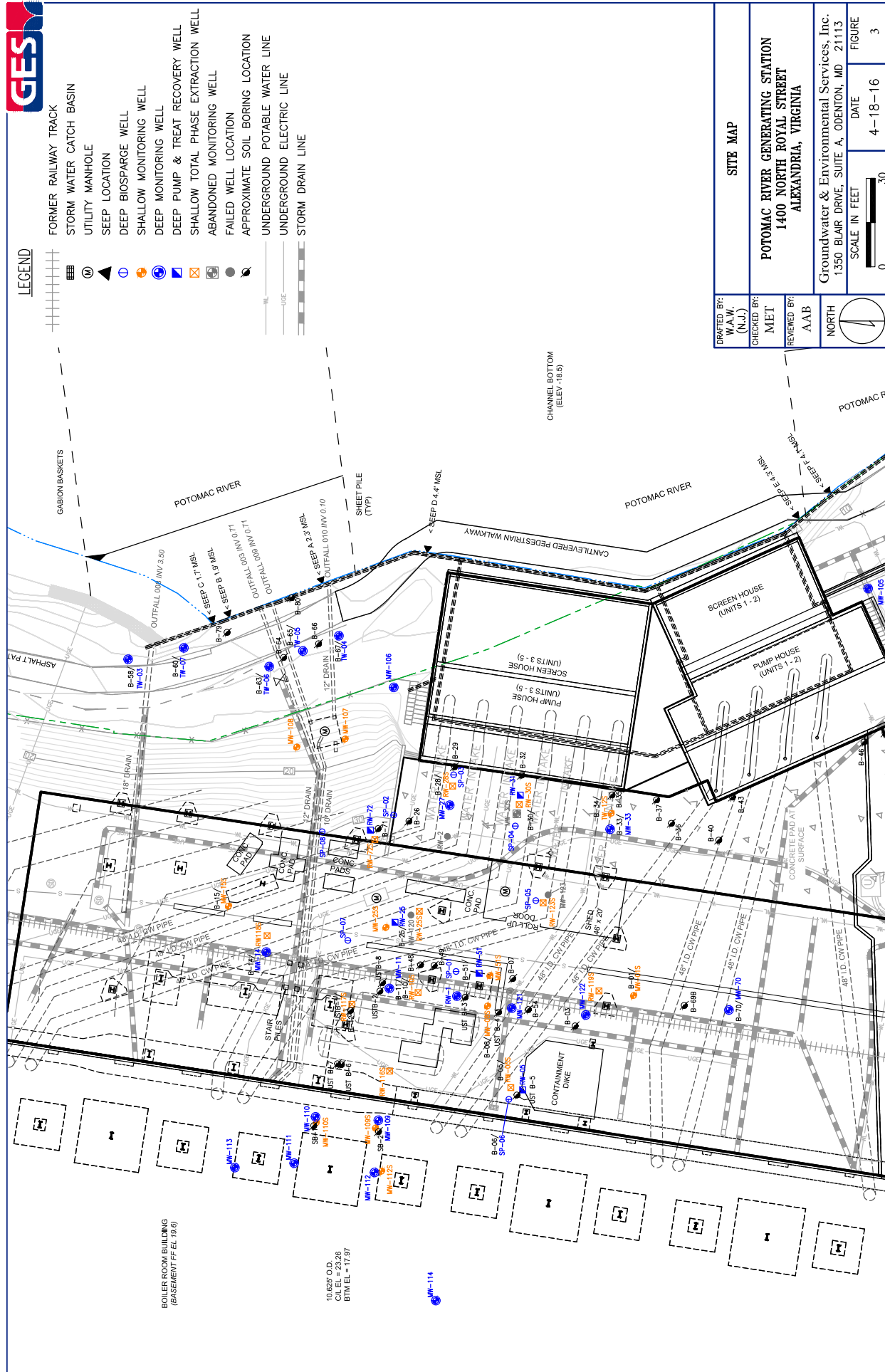
LEGEND

- FORMER RAILWAY TRACK
- STORM WATER CATCH BASIN
- UTILITY MANHOLE
- SEEP LOCATION
- DEEP BIOSPARGE WELL
- SHALLOW MONITORING WELL
- DEEP MONITORING WELL
- DEEP PUMP & TREAT RECOVERY WELL
- SHALLOW TOTAL PHASE EXTRACTION WELL
- ABANDONED MONITORING WELL
- FAILED WELL LOCATION
- APPROXIMATE SOIL BORING LOCATION
- UNDERGROUND POTABLE WATER LINE
- UNDERGROUND ELECTRIC LINE
- STORM DRAIN LINE



DRAFTED BY: W.A.W. (N.J.)	SITE LAYOUT MAP
CHECKED BY: MET	POTOMAC RIVER GENERATING STATION 1400 NORTH ROYAL STREET ALEXANDRIA, VIRGINIA
REVIEWED BY: A.A.B.	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
NORTH	SCALE IN FEET (APPROXIMATE)
0 50	DATE 4-18-16
	FIGURE 2











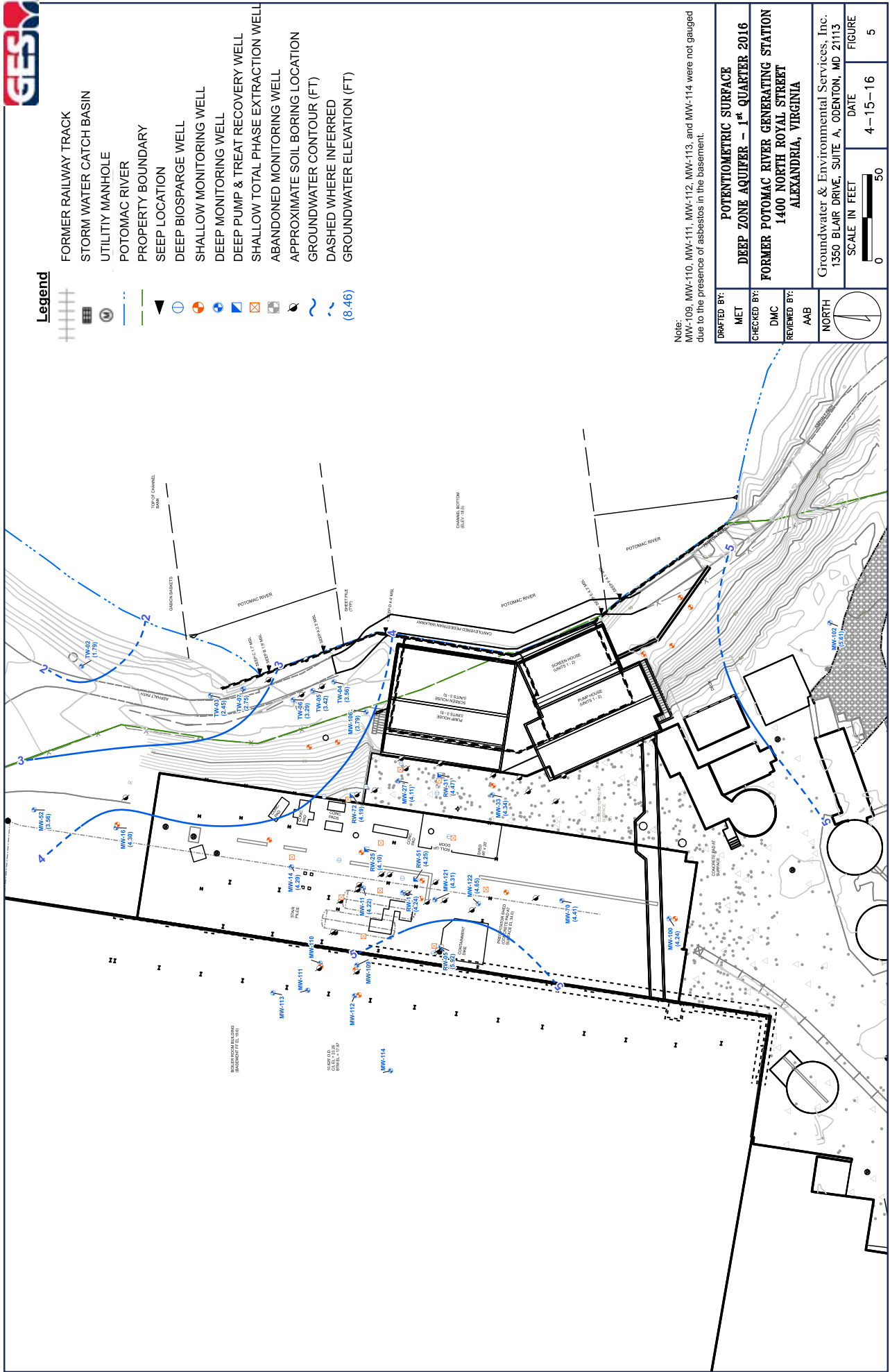
**Note:**  
MW-10S and MW-108 were dry.  
MW-107 was not used to make groundwater contours due to anomalous gauging data.  
MW-109S, MW-110S, and MW-112S were not gauged due to the presence of asbestos in the basement.

DRAFTED BY: MET	POTENTIOMETRIC SURFACE SHALLOW ZONE AQUIFER - 1 <sup>st</sup> QUARTER 2016 FORMER POTOMAC RIVER GENERATING STATION 1400 NORTH ROYAL STREET ALEXANDRIA, VIRGINIA		
CHECKED BY: DMC	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113		
REVIEWED BY: AAB	SCALE IN FEET 		
NORTH 	DATE 4-15-16	FIGURE 4	



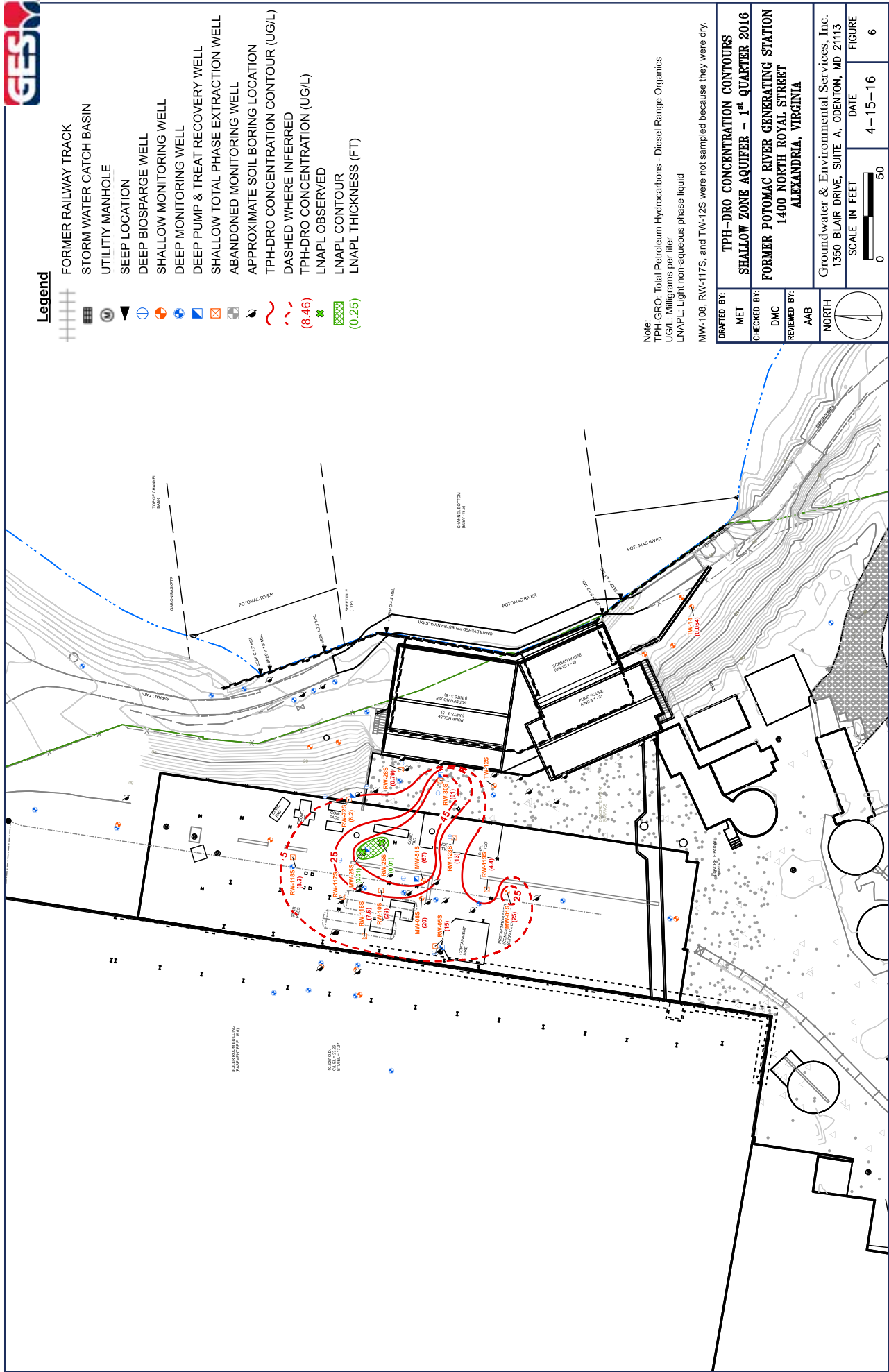
### Legend

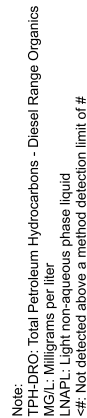
- FORMER RAILWAY TRACK
- STORM WATER CATCH BASIN
- UTILITY MANHOLE
- POTOMAC RIVER
- PROPERTY BOUNDARY
- SEEP LOCATION
- DEEP BIOSARGE WELL
- SHALLOW MONITORING WELL
- DEEP MONITORING WELL
- DEEP PUMP & TREAT RECOVERY WELL
- SHALLOW TOTAL PHASE EXTRACTION WELL
- ABANDONED MONITORING WELL
- APPROXIMATE SOIL BORING LOCATION
- GROUNDWATER CONTOUR (FT)
- DASHED WHERE INFERRED
- GROUNDWATER ELEVATION (FT)





Note:  
MW-109, MW-110, MW-111, MW-112, MW-113, and MW-114 were not gauged  
due to the presence of asbestos in the basement.

DRAFTED BY:	MET	POTENTIOMETRIC SURFACE
CHECKED BY:	DMC	DEEP ZONE AQUIFER - 1 <sup>st</sup> QUARTER 2016
REVIEWED BY:	AAB	FORMER POTOMAC RIVER GENERATING STATION
		1400 NORTH ROYAL STREET
		ALEXANDRIA, VIRGINIA
NORTH		Groundwater & Environmental Services, Inc.
		1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
SCALE IN FEET	0 50	DATE
		4-15-16
		FIGURE
		5





DRAFTED BY: MET	TPH-DRO CONCENTRATION CONTOURS DEEP ZONE AQUIFER - 1 <sup>st</sup> QUARTER 2016		
CHECKED BY: DMC	FORMER POTOMAC RIVER GENERATING STATION 1400 NORTH ROYAL STREET ALEXANDRIA, VIRGINIA		
REVIEWED BY: AAB	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113		
NORTH 	SCALE IN FEET 	DATE 4-15-16	FIGURE 7

## TABLES

Table 1

**WELL CONSTRUCTION TABLE**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Well type	Aquifer Zone Designation	Date Installed	Well Diameter (in)	Total Depth of Well from Ground Surface (ft)	Length of Casing (ft)	Length of Screen (ft)
MW-01S	MW	Shallow	7/29/2014	4	27	17	10
MW-05 / RW-05	P&T	Deep	8/1/2014	4	35	25	10
MW-08S	MW	Shallow	7/23/2014	4	25	15	10
MW-10S / RW-10S	TPE	Shallow	7/28/2014	4	27	17	10
MW-11	MW	Deep	7/24/2014	4	35	25	10
MW-14	MW	Deep	7/29/2014	4	38.5	28.5	10
MW-15S	MW	Shallow	7/31/2014	4	26	16	10
MW-16S	MW	Shallow	8/13/2014	2	25	15	10
MW-16	MW	Deep	8/14/2014	2	36	26	10
MW-25S	MW	Shallow	8/5/2014	4	26	16	10
MW-25 / RW-25	P&T	Deep	7/24/2014	4	35	25	10
MW-27	MW	Deep	7/21/2014	4	35	25	10
MW-31 / RW-31	P&T	Deep	8/5/2014	4	36	26	10
MW-33	MW	Deep	8/5/2014	4	35	25	10
MW-51S	MW	Shallow	8/6/2014	4	25.5	15.5	10
MW-51 / RW-51	P&T	Deep	7/22/2014	4	37	27	10
MW-52	MW	Deep	8/14/2014	2	36	26	10
MW-70	MW	Deep	8/13/2014	2	36	26	10
MW-72S / RW-72S	TPE	Shallow	8/7/2014	4	25	15	10
MW-72 / RW-72	P&T	Deep	7/30/2014	4	35	25	10
MW-100S	MW	Shallow	8/12/2014	2	24.5	14.5	10
MW-100	MW	Deep	8/12/2014	2	37.5	27.5	10
MW-102	MW	Deep	8/11/2014	2	37	27	10



Table 1

**WELL CONSTRUCTION TABLE**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Well type	Aquifer Zone Designation	Date Installed	Well Diameter (in)	Total Depth of Well from Ground Surface (ft)	Length of Casing (ft)	Length of Screen (ft)
MW-103	MW	Shallow	7/23/2014	2	15	5	10
MW-104	MW	Shallow	7/24/2014	2	12	2	10
MW-105	MW	Shallow	7/24/2014	2	10	1	9
MW-106	MW	Deep	7/22/2014	2	10	3	7
MW-107	MW	Shallow	7/22/2014	2	11	3	8
MW-108	MW	Shallow	7/23/2014	2	10	4	6
MW-109S	MW	Shallow	8/20/2014	4	13.5	3.5	10
MW-109	MW	Deep	8/19/2014	4	24	14	10
MW-110S	MW	Shallow	8/20/2014	4	13	3	10
MW-110	MW	Deep	8/20/2014	4	24	14	10
MW-111	MW	Deep	8/18/2014	2	22	12	10
MW-112S	MW	Shallow	8/12/2014	4	13	3	10
MW-112	MW	Deep	8/12/2014	4	24	14	10
MW-113	MW	Deep	8/19/2014	2	23	13	10
MW-114	MW	Deep	8/21/2014	2	23	13	10
MW-121	MW	Deep	7/2/2015	4	37	27	10
MW-122	MW	Deep	6/24/2015	4	37	27	10
MW-123S / RW-123S	TPE	Shallow	7/7/2015	4	25	21	4
TW-02	MW	Deep	12/12/2013	1	24	14	10
TW-03	MW	Deep	12/12/2013	1	15	5	10
TW-04	MW	Deep	12/13/2013	1	15	5	10
TW-05	MW	Deep	12/13/2013	1	10	0	10
TW-06	MW	Deep	12/13/2013	1	15	5	10





Table 1

**WELL CONSTRUCTION TABLE**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Well type	Aquifer Zone Designation	Date Installed	Well Diameter (in)	Total Depth of Well from Ground Surface (ft)	Length of Casing (ft)	Length of Screen (ft)
TW-07	MW	Deep	12/13/2013	1	15	5	10
TW-12S	MW	Shallow	12/18/2013	1	25	15	10
TW-14	MW	Shallow	1/15/2014	1	5.5	0.5	5
RW-1	MW	Deep	10/2/2014	4	41	26	15
RW-05S	TPE	Shallow	6/29/2015	4	26	21	5
RW-25S	TPE	Shallow	7/7/2015	4	25	20	5
RW-28S	TPE	Shallow	7/6/2015	4	27	22	5
RW-30S	TPE	Shallow	6/23/2015	4	29	24	5
RW-116S	TPE	Shallow	6/26/2015	4	26	21	5
RW-117S	TPE	Shallow	6/23/2015	4	25	20	5
RW-118S	TPE	Shallow	6/25/2015	4	25	20	5
RW-119S	TPE	Shallow	6/29/2015	4	26	21	5
SP-01	SP	Deep	10/2/2014	2	35	32	3
SP-02	SP	Deep	9/30/2014	2	36	33	3
SP-03	SP	Deep	6/30/2015	2	36	33	3
SP-04	SP	Deep	7/1/2015	2	36	33	3
SP-05	SP	Deep	7/8/2015	2	36	33	3
SP-06	SP	Deep	6/30/2015	2	36	33	3
SP-07	SP	Deep	6/25/2015	2	36	33	3
SP-08	SP	Deep	7/8/2015	2	36	33	3





Table 1

WELL CONSTRUCTION TABLE

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Notes:

Field parameters include pH, specific conductance, temperature, oxidation reduction potential (ORP), dissolved oxygen (DO), headspace carbon dioxide concentration, headspace volatile organic compound concentration, headspace oxygen concentration

Volatile organic compound (VOC) groundwater samples were analyzed for benzene, toluene, ethylbenzene, total xylenes, and naphthalene.

Bio stimulation parameters include alkalinity, nitrate nitrogen, manganese, ferrous iron, sulfate as SO<sub>4</sub><sup>2-</sup>, and methane.

- = Not available
- ft = Feet
- in = Inches
- NA = Not applicable
- MW = Monitoring Well
- P&T = Pump & Treat Well
- SP = Air Sparge Point
- TPE = Total Phase Extraction Well
- TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics
- VDEQ = Virginia Department of Environmental Quality
- DDOE = District Department of the Environment



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-01S	08/08/2014	30.78	22.67	-	-	-	26.58	8.11	-	
	08/11/2014	30.78	22.62	-	-	-	-	8.16	-	
	08/15/2014	30.78	22.60	-	-	-	-	8.18	-	
	08/18/2014	30.78	22.88	-	-	-	-	7.90	-	
	08/25/2014	30.87	22.27	-	-	-	-	8.60	-	
	09/02/2014	30.87	22.28	-	-	-	-	8.59	-	
	09/15/2014	30.87	22.61	-	-	-	-	8.26	-	
	09/22/2014	30.87	22.75	-	-	-	-	8.12	-	
	09/24/2014	30.87	22.95	-	-	-	-	7.92	-	
	10/01/2014	30.87	22.94	-	-	-	26.59	7.93	-	
	10/10/2014	30.87	23.06	-	-	-	-	7.81	-	
	10/20/2014	30.87	23.53	-	-	-	26.58	7.34	-	
	02/24/2015	30.87	25.89	25.74	0.15	-	26.65	4.98	15:24	LNAPL not manually bailed
	02/26/2015	30.87	25.61	25.51	0.10	-	-	5.26	16:10	LNAPL not manually bailed
	03/04/2015	30.87	25.63	25.52	0.11	-	-	5.24	14:21	LNAPL not manually bailed
	03/11/2015	30.87	25.51	25.39	0.12	-	-	5.36	13:00	LNAPL not manually bailed
	03/18/2015	30.87	25.14	25.03	0.11	-	-	5.73	11:19	LNAPL not manually bailed
	03/26/2015	30.87	25.07	24.98	0.09	-	26.60	5.80	10:35	LNAPL not manually bailed
	04/02/2015	30.87	25.06	24.96	0.10	-	26.60	5.81	11:33	LNAPL not manually bailed
	04/08/2015	30.87	25.10	24.96	0.14	-	26.64	5.77	9:27	LNAPL not manually bailed
	04/13/2015	30.87	24.92	24.83	0.09	-	-	5.95	10:35	LNAPL not manually bailed
	04/23/2015	30.87	24.38	24.35	0.03	-	26.55	6.49	12:04	LNAPL not manually bailed
	04/29/2015	30.87	24.38	24.34	0.04	-	26.60	6.49	14:29	LNAPL not manually bailed
	05/04/2015	30.87	24.32	24.28	0.04	-	-	6.55	11:55	LNAPL not manually bailed
	05/11/2015	30.87	24.37	24.31	0.06	-	-	6.50	10:55	LNAPL not manually bailed
	05/21/2015	30.87	24.46	24.41	0.05	-	-	6.41	12:15	LNAPL not manually bailed
	05/28/2015	30.87	24.65	24.54	0.11	-	26.55	6.22	11:50	LNAPL not manually bailed
	06/02/2015	30.87	24.52	24.46	0.06	-	-	6.35	13:16	LNAPL not manually bailed
	06/09/2015	30.87	24.12	24.10	0.02	-	-	6.75	10:43	LNAPL not manually bailed
	06/16/2015	30.87	24.05	24.04	0.01	-	-	6.82	11:37	LNAPL not manually bailed
	06/26/2015	30.87	23.72	-	-	-	26.50	7.15	10:43	LNAPL not manually bailed
	07/01/2015	30.87	23.25	23.24	0.01	-	-	7.62	12:34	LNAPL not manually bailed
	07/08/2015	30.87	22.93	TRACE	TRACE	TRACE	-	7.94	11:50	
	07/13/2015	30.87	22.72	-	-	-	-	8.15	9:42	
	07/20/2015	30.87	22.40	-	-	-	-	8.47	9:37	
	07/28/2015	30.87	22.43	-	-	-	26.69	8.44	10:56	
	08/04/2015	30.87	22.46	22.45	0.01	TRACE	26.56	8.41	10:35	
	08/11/2015	30.87	22.50	TRACE	TRACE	TRACE	26.61	8.37	10:39	
	08/18/2015	30.87	22.63	-	-	-	-	8.24	10:46	
	08/24/2015	30.87	22.69	-	-	-	-	8.18	10:43	
	09/02/2015	30.87	22.90	22.88	0.02	TRACE	26.62	7.97	9:32	
	09/09/2015	30.87	22.96	22.95	0.01	-	26.60	7.91	11:17	
	09/17/2015	30.87	23.19	23.18	0.01	-	26.62	7.68	10:58	
	09/23/2015	30.87	23.07	23.06	0.01	TRACE	-	7.80	11:01	
	09/28/2015	30.87	23.10	TRACE	TRACE	-	26.10	7.77	10:08	
	10/05/2015	30.87	23.09	TRACE	TRACE	-	26.60	7.78	11:07	
	11/10/2015	30.87	23.59	-	-	-	-	7.28	13:10	
	12/01/2015	30.87	24.05	24.04	0.01	-	26.57	6.82	12:02	LNAPL not manually bailed
	01/27/2016	30.87	23.98	TRACE	TRACE	-	-	6.89	9:54	LNAPL not manually bailed
	02/15/2016	30.87	23.54	-	-	-	-	7.33	9:40	
	03/14/2016	30.87	23.27	-	-	-	26.60	7.60	11:45	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-01	12/18/2013	38.31	31.38	-	-	-	-	6.93	-	
	01/08/2014	38.31	31.80	31.79	0.01	-	-	6.52	-	
	03/07/2014	38.31	30.41	-	-	-	-	7.90	-	
	03/13/2014	38.31	31.13	-	-	-	-	7.18	-	
	03/20/2014	38.31	30.36	-	-	-	-	7.95	-	
	03/27/2014	38.31	31.22	-	-	-	-	7.09	-	
	04/03/2014	38.31	30.36	-	-	-	-	7.95	-	
	04/08/2014	38.31	30.21	-	-	-	-	8.10	-	
	04/17/2014	38.31	31.02	-	-	-	-	7.29	-	
	04/22/2014	38.31	30.18	-	-	-	-	8.13	-	
	04/29/2014	38.31	30.22	-	-	-	-	8.09	-	
	05/05/2014	38.31	30.29	-	-	-	-	8.02	-	
	05/12/2014	38.31	30.28	-	-	-	-	8.03	-	
	05/19/2014	38.31	30.16	-	-	-	-	8.15	-	
	06/02/2014	38.31	30.17	-	-	-	-	8.14	-	
	06/09/2014	38.31	30.08	-	-	-	-	8.23	-	
	06/16/2014	38.31	30.23	-	-	-	-	8.08	-	
	06/23/2014	38.31	30.02	-	-	-	-	8.29	-	
	07/02/2014	38.31	29.98	-	-	-	-	8.33	-	
	07/07/2014	38.31	30.16	-	-	-	34.52	8.15	-	
	07/14/2014	38.31	29.89	-	-	-	-	8.42	-	
	07/31/2014	38.31	30.26	-	-	-	34.50	8.05	-	
	08/01/2014	Overdrilled and replaced with MW-05								
MW-05 / RW-05	08/08/2014	31.57	25.41	-	-	-	33.94	6.16	-	
	08/11/2014	31.57	25.16	-	-	-	-	6.41	-	
	08/15/2014	31.57	24.98	-	-	-	-	6.59	-	
	08/16/2014	31.57	24.84	24.80	0.04	NA	-	6.73	-	Transducers in well for pump test
	08/18/2014	31.57	24.88	24.80	0.08	NA	-	6.69	-	Transducers in well for pump test
	08/25/2014	31.57	23.27	22.99	0.28	0.06	-	8.54	-	
	09/02/2014	31.57	23.62	23.07	0.55	0.31	-	8.43	-	
	09/15/2014	31.57	23.63	23.13	0.50	NR	-	8.38	-	
	09/19/2014	31.57	23.72	23.18	0.54	0.17	-	8.32	-	
	09/22/2014	31.57	23.25	22.97	0.28	0.06	-	8.56	-	
	09/24/2014	31.57	23.33	23.13	0.20	NR	-	8.41	-	
	10/01/2014	31.57	26.67	TRACE	TRACE	TRACE	31.94	4.90	-	
	10/10/2014	31.57	26.58	26.57	0.01	TRACE	-	4.99	-	
	10/13/2014	31.57	26.73	26.71	0.02	TRACE	-	4.86	-	
	10/20/2014	31.57	26.91	26.89	0.02	TRACE	-	4.68	-	
	10/27/2014	31.57	27.07	27.06	0.01	TRACE	-	4.51	-	
	11/07/2014	31.57	26.93	26.88	0.05	TRACE	-	4.68	-	
	11/12/2014	31.57	26.96	26.94	0.02	TRACE	-	4.63	-	
	11/21/2014	31.57	27.74	27.73	0.01	TRACE	-	3.84	-	
	11/26/2014	31.57	27.28	27.25	0.03	TRACE	-	4.32	-	
	12/05/2014	31.57	27.18	27.16	0.02	TRACE	-	4.41	-	
	12/11/2014	31.57	26.93	-	0.00	TRACE	-	4.64	-	
	12/16/2014	31.57	26.87	26.82	0.05	TRACE	-	4.74	-	
	12/23/2014	31.57	26.95	26.92	0.03	TRACE	-	4.62	-	
	12/30/2014	31.57	27.35	27.32	0.03	TRACE	-	4.22	-	
	01/09/2015	31.57	27.36	27.32	0.04	TRACE	-	4.21	-	
	01/16/2015	31.57	27.06	27.02	0.04	TRACE	-	4.51	-	
	01/19/2015	31.57	27.08	27.03	0.05	TRACE	-	4.49	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-05 / RW-05 (cont.)	01/26/2015	31.57	26.99	26.95	0.04	TRACE	-	4.58	-	
	02/03/2015	31.57	27.73	27.71	0.02	-	32.04	3.84	-	LNAPL not manually bailed
	02/09/2015	31.57	27.23	27.17	0.06	-	-	4.34	-	LNAPL not manually bailed
	02/18/2015	31.57	27.25	27.21	0.04	-	-	4.32	-	LNAPL not manually bailed
	02/24/2015	31.57	27.38	27.37	0.01	TRACE	-	4.19	13:51	
	03/04/2015	31.57	27.25	27.20	0.05	-	-	4.32	14:18	LNAPL not manually bailed
	03/11/2015	31.57	27.07	26.97	0.10	-	-	4.50	12:57	LNAPL not manually bailed
	03/18/2015	31.57	27.11	27.03	0.08	-	-	4.46	11:15	LNAPL not manually bailed
	03/26/2015	31.57	26.81	26.73	0.08	-	31.90	4.76	12:06	LNAPL not manually bailed
	04/02/2015	31.57	27.13	26.97	0.16	-	31.95	4.44	11:37	LNAPL not manually bailed
	04/08/2015	31.57	27.49	27.20	0.29	-	32.00	4.08	9:20	LNAPL not manually bailed
	04/13/2015	31.57	27.53	27.07	0.46	-	-	4.04	10:51	LNAPL not manually bailed
	04/23/2015	31.57	27.41	26.55	0.86	-	32.00	4.16	12:10	LNAPL not manually bailed
	04/29/2015	31.57	27.78	26.61	1.17	-	31.90	3.79	14:39	LNAPL not manually bailed
	05/04/2015	31.57	28.03	26.56	1.47	-	-	3.54	11:51	LNAPL not manually bailed
	05/11/2015	31.57	28.24	26.40	1.84	-	-	3.33	15:10	LNAPL not manually bailed
	05/13/2015	31.57	28.75	26.84	1.91	1.50	-	2.82	13:20	
	05/21/2015	31.57	26.87	26.78	0.09	-	-	4.70	12:48	LNAPL not manually bailed
	05/28/2015	31.57	28.45	27.00	1.45	-	32.00	3.12	11:54	LNAPL not manually bailed
	06/02/2015	31.57	28.52	26.62	1.90	-	-	3.05	13:11	LNAPL not manually bailed
	06/09/2015	31.57	28.67	26.12	2.55	-	-	2.90	10:55	LNAPL not manually bailed
	06/16/2015	31.57	29.17	25.86	3.31	-	-	2.40	11:48	LNAPL not manually bailed
	06/26/2015	31.57	28.51	25.55	2.96	-	32.00	3.06	10:50	LNAPL not manually bailed
	07/01/2015	31.57	27.93	24.65	3.28	-	-	3.64	12:39	LNAPL not manually bailed
	07/08/2015	31.57	27.50	23.75	3.75	-	-	4.07	8:00	Baildown test
	07/13/2015	31.57	24.16	22.98	1.18	-	-	7.41	8:10	HIT event
	07/20/2015	31.57	23.03	22.69	0.34	0.09	-	8.54	9:56	
	07/28/2015	31.57	22.75	22.55	0.20	0.09	32.07	8.82	12:40	
	08/04/2015	31.57	22.92	22.63	0.29	0.06	-	8.65	12:31	
	08/11/2015	31.57	23.57	22.60	0.97	0.09	32.05	8.00	10:43	
	08/18/2015	31.57	23.74	23.02	0.72	0.38	-	7.83	10:56	
	08/21/2015	31.57	23.46	23.15	0.31	-	-	8.11	7:55	HIT event
	08/24/2015	31.57	23.88	23.86	0.02	TRACE	-	7.69	11:00	
	09/02/2015	31.57	24.72	24.44	0.28	0.05	32.04	6.85	11:00	
	09/09/2015	31.57	24.60	24.39	0.21	0.06	32.05	6.97	11:20	
	09/17/2015	31.57	24.83	24.36	0.47	0.07	32.08	6.74	11:00	
	09/23/2015	31.57	24.88	24.70	0.18	0.02	-	6.69	11:23	
	09/28/2015	31.57	24.50	24.48	0.02	0.04	31.94	7.07	10:05	
	10/05/2015	31.57	24.41	24.31	0.10	0.05	32.01	7.16	-	
	11/10/2015	31.57	25.53	25.38	0.15	-	-	6.04	13:44	LNAPL not manually bailed
	12/01/2015	31.57	26.16	25.98	0.18	-	-	5.41	13:56	LNAPL not manually bailed
	01/27/2016	31.57	26.56	26.34	0.22	-	-	5.01	10:44	pump in well
	02/15/2016	31.57	26.99	26.98	0.01	-	-	4.58	10:31	pump in well
	03/14/2016	31.57	25.65	TRACE	TRACE	-	-	5.92	10:20	pump in well
	03/21/2016	31.57	29.70	-	-	-	-	1.87	-	O&M event
	03/30/2016	31.57	29.68	-	-	-	-	1.89	-	O&M event
TW-09S	12/18/2013	36.65	DRY	-	-	-	-	-	-	
	01/08/2014	36.65	DRY	25.54	0.46	0.10	-	-	-	
	03/07/2014	36.65	24.71	24.70	0.01	-	-	11.95	-	
	03/13/2014	36.65	25.78	24.71	1.07	0.10	-	11.80	-	
	03/20/2014	36.65	DRY	25.65	0.50	0.10	-	-	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-09S (cont.)	03/27/2014	36.65	DRY	25.58	0.54	0.10	-	-	-	
	04/03/2014	36.65	23.37	23.18	0.19	0.10	-	13.45	-	
	04/08/2014	36.65	23.39	23.23	0.16	0.10	-	13.40	-	
	04/17/2014	36.65	23.72	23.66	0.06	-	-	12.98	-	
	04/22/2014	36.65	23.53	23.40	0.13	0.10	-	13.23	-	
	04/29/2014	36.65	23.76	23.68	0.08	-	-	12.96	-	
	05/05/2014	36.65	23.23	23.17	0.06	-	-	13.47	-	
	05/12/2014	36.65	23.25	23.23	0.02	-	-	13.42	-	
	05/19/2014	36.65	23.17	23.16	0.01	-	-	13.49	-	
	06/02/2014	36.65	23.19	-	-	-	-	13.46	-	
	06/09/2014	36.65	23.17	-	-	-	-	13.48	-	
	06/16/2014	36.65	23.13	-	-	-	-	13.52	-	
	06/23/2014	36.65	23.11	-	-	-	-	13.54	-	
	07/02/2014	36.65	23.03	TRACE	TRACE	TRACE	-	13.62	-	
	07/07/2014	36.65	23.01	-	-	-	26.15	13.64	-	
	07/14/2014	36.65	23.02	-	-	-	-	13.63	-	
	07/23/2014	Overdrilled and replaced with MW-08S								
MW-08S	07/24/2014	30.86	26.59	-	-	-	-	4.27	-	
	07/31/2014	30.86	22.08	-	-	-	24.35	8.78	-	
	08/08/2014	30.86	21.33	-	-	-	24.64	9.53	-	
	08/11/2014	30.86	21.42	-	-	-	-	9.44	-	
	08/15/2014	30.86	21.41	-	-	-	-	9.45	-	
	08/18/2014	30.86	21.46	-	-	-	-	9.40	-	
	08/25/2014	30.86	21.49	-	-	-	-	9.37	-	
	09/02/2014	30.86	21.45	-	-	-	-	9.41	-	
	09/15/2014	30.86	21.58	-	-	-	-	9.28	-	
	09/22/2014	30.86	21.67	-	-	-	-	9.19	-	
	09/24/2014	30.86	21.68	-	-	-	-	9.18	-	
	10/01/2014	30.86	21.67	-	-	-	24.66	9.19	-	
	10/10/2014	30.86	21.71	-	-	-	-	9.15	-	
	10/13/2014	30.86	21.72	-	-	-	-	9.14	-	
	10/20/2014	30.86	21.80	-	-	-	24.65	9.06	-	
	10/27/2014	30.86	21.88	-	-	-	-	8.98	-	
	11/07/2014	30.86	21.84	-	-	-	-	9.02	-	
	11/12/2014	30.86	21.94	-	-	-	-	8.92	-	
	11/21/2014	30.86	21.99	-	-	-	-	8.87	-	
	11/26/2014	30.86	22.01	-	-	-	-	8.85	-	
	12/05/2014	30.86	22.03	-	-	-	-	8.83	-	
	12/11/2014	30.86	22.03	-	-	-	-	8.83	-	
	12/16/2014	30.86	22.04	-	-	-	-	8.82	-	
	12/23/2014	30.86	22.07	-	-	-	-	8.79	-	
	12/30/2014	30.86	22.10	-	-	-	-	8.76	-	
	01/09/2015	30.86	22.12	-	-	-	-	8.74	-	
	01/16/2015	30.86	22.05	-	-	-	-	8.81	-	
	01/19/2015	30.86	22.01	-	-	-	-	8.85	-	
	01/26/2015	30.86	22.08	-	-	-	-	8.78	-	
	02/03/2015	30.86	22.15	-	-	-	24.72	8.71	-	
	02/09/2015	30.86	22.14	-	-	-	-	8.72	-	
	02/18/2015	30.86	22.15	-	-	-	-	8.71	-	
	02/24/2015	30.86	22.15	-	-	-	24.64	8.71	15:48	
	03/04/2015	30.86	21.34	-	-	-	-	9.52	14:15	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-08S (cont.)	03/11/2015	30.86	21.80	-	-	-	-	9.06	12:45	
	03/18/2015	30.86	21.88	-	-	-	-	8.98	11:05	
	03/26/2015	30.86	22.05	-	-	-	24.70	8.81	11:40	
	04/02/2015	30.86	22.03	-	-	-	24.60	8.83	11:25	
	04/08/2015	30.86	22.07	-	-	-	24.68	8.79	8:50	
	04/13/2015	30.86	22.08	-	-	-	-	8.78	10:41	
	04/23/2015	30.86	22.08	-	-	-	24.65	8.78	11:55	
	04/29/2015	30.86	22.09	-	-	-	24.60	8.77	14:22	
	05/04/2015	30.86	22.09	-	-	-	-	8.77	11:39	
	05/11/2015	30.86	22.10	-	-	-	24.70	8.76	9:50	
	05/21/2015	30.86	22.05	-	-	-	24.65	8.81	12:22	
	05/28/2015	30.86	22.11	-	-	-	24.60	8.75	11:45	
	06/02/2015	30.86	22.06	-	-	-	-	8.80	13:04	
	06/09/2015	30.86	22.05	-	-	-	-	8.81	10:30	
	06/16/2015	30.86	22.05	-	-	-	-	8.81	11:24	
	06/26/2015	30.86	21.98	-	-	-	24.50	8.88	10:40	
	07/01/2015	30.86	22.02	-	-	-	-	8.84	12:15	
	07/08/2015	30.86	22.01	-	-	-	-	8.85	11:18	
	07/13/2015	30.86	21.95	-	-	-	-	8.91	9:26	
	07/20/2015	30.86	21.75	-	-	-	-	9.11	9:16	
	07/28/2015	30.86	21.08	-	-	-	24.75	9.78	11:46	
	07/28/2015	30.86	21.08	-	-	-	24.75	9.78	11:46	
	08/04/2015	30.86	21.05	-	-	-	24.30	9.81	9:39	
	08/11/2015	30.86	21.15	-	-	-	24.69	9.71	10:18	
	08/18/2015	30.86	21.24	-	-	-	-	9.62	10:16	
	08/24/2015	30.86	21.32	-	-	-	-	9.54	10:26	
	09/02/2015	30.86	21.32	-	-	-	24.66	9.54	11:10	
	09/09/2015	30.86	21.50	-	-	-	24.71	9.36	10:15	
	09/17/2015	30.86	21.61	-	-	-	24.74	9.25	10:17	
	09/23/2015	30.86	21.63	-	-	-	-	9.23	10:40	
	09/28/2015	30.86	21.68	-	-	-	24.69	9.18	9:22	
	10/05/2015	30.86	21.75	-	-	-	24.70	9.11	9:23	
	11/10/2015	30.86	21.95	-	-	-	-	8.91	13:13	
	12/01/2015	30.86	22.00	-	-	-	24.66	8.86	10:43	
	01/27/2016	30.86	21.98	-	-	-	-	8.88	10:33	
	02/15/2016	30.86	21.83	-	-	-	-	9.03	10:14	
	03/14/2016	30.86	21.72	-	-	-	25.62	9.14	11:04	
MW-10S / RW-10S	08/08/2014	31.24	22.40	-	-	-	26.51	8.84	-	
	08/11/2014	31.24	22.41	-	-	-	-	8.83	-	
	08/15/2014	31.24	22.02	-	-	-	-	9.22	-	
	08/18/2014	31.24	22.03	-	-	-	-	9.21	-	
	08/25/2014	31.24	22.06	-	-	-	-	9.18	-	
	09/02/2014	31.24	22.11	-	-	-	-	9.13	-	
	09/15/2014	31.24	22.15	-	-	-	-	9.09	-	
	09/22/2014	31.24	22.18	-	-	-	-	9.06	-	
	09/24/2014	31.24	22.19	-	-	-	-	9.05	-	
	10/01/2014	31.24	22.22	-	-	-	26.09	9.02	-	
	10/10/2014	31.24	22.18	TRACE	TRACE	-	-	9.06	-	
	10/13/2014	31.24	22.21	-	-	-	-	9.03	-	
	10/20/2014	31.24	22.35	-	-	-	26.10	8.89	-	
	10/27/2014	31.24	22.32	-	-	-	-	8.92	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-10S / RW-10S (cont.)	11/07/2014	31.24	22.30	-	-	-	-	8.94	-	
	11/12/2014	31.24	22.32	-	-	-	-	8.92	-	
	11/21/2014	31.24	22.38	-	-	-	-	8.86	-	
	11/26/2014	31.24	22.35	-	-	-	-	8.89	-	
	12/05/2014	31.24	22.40	22.38	0.02	TRACE	-	8.84	-	
	12/11/2014	31.24	22.33	TRACE	TRACE	-	-	8.91	-	
	12/16/2014	31.24	22.36	TRACE	TRACE	-	-	8.88	-	
	12/23/2014	31.24	22.37	-	-	-	-	8.87	-	
	12/30/2014	31.24	22.42	TRACE	TRACE	-	-	8.82	-	
	01/09/2015	31.24	22.44	22.43	0.01	TRACE	-	8.80	-	
	01/16/2015	31.24	22.41	22.40	0.01	TRACE	-	8.83	-	
	01/19/2015	31.24	22.43	22.42	0.01	TRACE	-	8.81	-	
	01/26/2015	31.24	22.23	22.22	0.01	TRACE	-	9.01	-	
	02/03/2015	31.24	22.50	-	-	-	26.11	8.74	-	
	02/09/2015	31.24	22.43	22.42	0.01	-	-	8.81	-	LNAPL not manually bailed
	02/18/2015	31.24	22.44	22.43	0.01	-	-	8.80	-	LNAPL not manually bailed
	02/24/2015	31.24	22.50	22.49	0.01	-	26.11	8.74	15:44	LNAPL not manually bailed
	03/04/2015	31.24	22.50	22.48	0.02	-	-	8.74	14:28	LNAPL not manually bailed
	03/11/2015	31.24	22.51	22.48	0.03	-	-	8.73	12:54	LNAPL not manually bailed
	03/18/2015	31.24	22.56	22.52	0.04	-	-	8.68	11:23	LNAPL not manually bailed
	03/26/2015	31.24	22.53	22.50	0.03	-	26.10	8.71	11:27	LNAPL not manually bailed
	04/02/2015	31.24	22.55	22.51	0.04	-	26.05	8.69	11:52	LNAPL not manually bailed
	04/08/2015	31.24	22.53	22.52	0.01	-	26.10	8.71	9:05	LNAPL not manually bailed
	04/13/2015	31.24	22.56	22.53	0.03	-	-	8.68	10:59	LNAPL not manually bailed
	04/23/2015	31.24	22.53	22.51	0.02	-	26.05	8.71	12:22	LNAPL not manually bailed
	04/29/2015	31.24	23.53	23.50	0.03	-	26.00	7.71	14:43	LNAPL not manually bailed
	05/04/2015	31.24	22.57	22.54	0.03	-	-	8.67	11:59	LNAPL not manually bailed
	05/11/2015	31.24	22.86	22.84	0.02	-	26.10	8.38	10:00	LNAPL not manually bailed
	05/21/2015	31.24	22.59	22.56	0.03	-	-	8.65	12:46	LNAPL not manually bailed
	05/28/2015	31.24	22.60	22.56	0.04	-	26.00	8.64	12:01	LNAPL not manually bailed
	06/02/2015	31.24	22.60	22.56	0.04	-	-	8.64	13:20	LNAPL not manually bailed
	06/09/2015	31.24	22.54	22.53	0.01	-	-	8.70	10:40	LNAPL not manually bailed
	06/19/2015	31.24	22.54	22.53	0.01	-	-	8.70	11:34	LNAPL not manually bailed
	06/26/2015	31.24	22.61	22.54	0.07	-	26.00	8.63	11:26	LNAPL not manually bailed
	07/01/2015	31.24	22.58	22.52	0.06	-	-	8.66	12:26	LNAPL not manually bailed
	07/08/2015	31.24	22.54	22.49	0.05	TRACE	-	8.70	11:57	LNAPL not manually bailed
	07/13/2015	31.24	21.96	-	-	-	-	9.28	9:44	
	07/20/2015	31.24	21.48	-	-	-	-	9.76	9:13	
	07/28/2015	31.24	21.36	-	-	-	26.11	9.88	10:39	
	08/05/2015	31.24	21.51	21.42	0.09	-	-	9.73	9:24	
	08/11/2015	31.24	21.49	TRACE	TRACE	TRACE	26.15	9.75	10:22	
	08/18/2015	31.24	21.76	21.59	0.17	0.02	-	9.48	10:40	
	08/24/2015	31.24	21.80	21.68	0.12	0.01	-	9.44	10:50	
	09/02/2015	31.24	21.95	21.81	0.14	0.01	26.10	9.29	10:00	
	09/09/2015	31.24	22.05	21.91	0.14	0.02	26.11	9.19	11:08	
	09/17/2015	31.24	22.10	22.00	0.10	TRACE	-	9.14	10:35	
	09/23/2015	31.24	22.06	22.02	0.04	TRACE	-	9.18	11:10	
	09/28/2015	31.24	22.14	22.07	0.07	TRACE	26.10	9.10	10:00	
	10/05/2015	31.24	22.12	-	-	-	26.10	9.12	9:26	
	11/10/2015	31.24	24.00	TRACE	TRACE	-	-	7.24	13:25	LNAPL not manually bailed
	12/01/2015	33.02	24.10	-	-	-	27.85	8.92	10:53	
	01/27/2016	33.02	24.18	TRACE	TRACE	-	-	8.84	10:52	LNAPL not manually bailed



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-10S / RW-10S (cont.)	02/15/2016	33.02	24.37	24.36	0.01	-	-	8.65	10:35	LNAPL not manually bailed
	03/14/2016	33.02	24.07	-	-	-	27.87	8.95	12:50	
MW-11	07/25/2014	30.85	26.90	-	-	-	33.40	3.95	-	
	08/08/2014	30.85	26.76	-	-	-	34.00	4.09	-	
	08/11/2014	30.85	26.57	-	-	-	-	4.28	-	
	08/15/2014	30.85	27.15	-	-	-	-	3.70	-	
	08/16/2014	30.85	26.81	-	-	-	34.00	4.04	-	
	08/18/2014	30.85	26.77	-	-	-	-	4.08	-	
	08/25/2014	30.85	26.43	-	-	-	-	4.42	-	
	09/02/2014	30.85	26.83	-	-	-	-	4.02	-	
	09/15/2014	30.85	26.75	-	-	-	-	4.10	-	
	09/22/2014	30.85	26.64	-	-	-	-	4.21	-	
	09/24/2014	30.85	27.08	-	-	-	-	3.77	-	
	10/01/2014	30.85	26.87	-	-	-	34.02	3.98	-	
	10/13/2014	30.85	26.86	-	-	-	-	3.99	-	
	10/20/2014	30.85	26.96	-	-	-	33.99	3.89	-	
	02/24/2015	30.85	27.03	-	-	-	-	3.82	13:39	
	02/26/2015	30.85	27.07	-	-	-	34.00	3.78	10:18	
	03/04/2015	30.85	26.95	-	-	-	-	3.90	14:09	
	03/11/2015	30.85	26.58	-	-	-	-	4.27	12:39	
	03/18/2015	30.85	26.74	-	-	-	-	4.11	10:59	
	03/26/2015	30.85	26.56	-	-	-	33.90	4.29	11:22	
	04/02/2015	30.85	26.69	-	-	-	33.90	4.16	11:12	
	04/08/2015	30.85	27.00	-	-	-	33.82	3.85	9:25	
	04/13/2015	30.85	26.88	-	-	-	-	3.97	10:32	
	04/23/2015	30.85	26.40	-	-	-	33.85	4.45	11:40	
	04/29/2015	30.85	26.56	-	-	-	33.80	4.29	14:09	
	05/04/2015	30.85	26.39	-	-	-	-	4.46	11:33	
	05/11/2015	30.85	26.35	-	-	-	33.80	4.50	15:05	
	05/21/2015	30.85	26.88	-	-	-	33.90	3.97	12:12	
	05/28/2015	30.85	26.83	-	-	-	33.80	4.02	11:38	
	06/02/2015	30.85	26.50	-	-	-	-	4.35	12:58	
	06/09/2015	30.85	26.23	-	-	-	-	4.62	10:24	
	06/16/2015	30.85	26.28	-	-	-	-	4.57	11:18	
	06/26/2015	30.85	26.22	-	-	-	33.80	4.63	10:32	
	07/01/2015	30.85	25.73	-	-	-	-	5.12	12:09	
	08/04/2015	30.85	25.94	-	-	-	33.86	4.91	12:13	
	08/05/2015	30.85	26.31	-	-	-	33.84	4.54	8:46	
	09/28/2015	30.85	25.92	25.90	0.02	-	33.92	4.93	9:58	
	10/05/2015	30.85	25.72	-	-	-	33.92	5.13	9:29	
	11/10/2015	30.85	26.35	-	-	-	-	4.50	13:23	
	12/01/2015	30.85	26.48	-	-	-	33.92	4.37	13:38	
	01/27/2016	30.85	26.68	-	-	-	-	4.17	10:31	
	02/15/2016	30.85	27.03	-	-	-	-	3.82	10:03	
	03/14/2016	30.85	26.63	-	-	-	34.06	4.22	8:30	
TW-13	12/18/2013	36.99	30.09	-	-	-	-	6.90	-	
	01/08/2014	36.99	30.45	-	-	-	-	6.54	-	
	03/07/2014	36.99	29.11	-	-	-	-	7.88	-	
	03/13/2014	36.99	29.91	-	-	-	-	7.08	-	
	03/20/2014	36.99	29.09	-	-	-	-	7.90	-	



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-13 (cont.)	03/27/2014	36.99	29.98	-	-	-	-	7.01	-	
	04/03/2014	36.99	29.05	-	-	-	-	7.94	-	
	04/08/2014	36.99	29.98	-	-	-	-	7.01	-	
	04/17/2014	36.99	29.62	-	-	-	-	7.37	-	
	04/22/2014	36.99	28.93	-	-	-	-	8.06	-	
	04/29/2014	36.99	28.90	-	-	-	-	8.09	-	
	05/05/2014	36.99	29.95	-	-	-	-	7.04	-	
	05/12/2014	36.99	28.91	-	-	-	-	8.08	-	
	05/19/2014	36.99	28.87	-	-	-	-	8.12	-	
	06/02/2014	36.99	28.86	-	-	-	-	8.13	-	
	06/09/2014	36.99	28.73	-	-	-	-	8.26	-	
	06/16/2014	36.99	28.88	-	-	-	-	8.11	-	
	06/23/2014	36.99	28.65	-	-	-	-	8.34	-	
	07/02/2014	36.99	28.69	-	-	-	-	8.30	-	
	07/07/2014	36.99	28.91	-	-	-	35.02	8.08	-	
	07/14/2014	36.99	28.58	-	-	-	-	8.41	-	
	07/29/2014	Overdrilled and replaced with MW-14								
MW-14	07/31/2014	31.22	28.04	-	-	-	38.15	3.18	-	
	08/08/2014	31.22	28.21	-	-	-	38.14	3.01	-	
	08/11/2014	31.22	27.81	-	-	-	-	3.41	-	
	08/15/2014	31.22	27.43	-	-	-	-	3.79	-	
	08/18/2014	31.22	27.17	-	-	-	-	4.05	-	
	08/25/2014	31.22	26.83	-	-	-	-	4.39	-	
	09/02/2014	31.22	27.25	-	-	-	-	3.97	-	
	09/15/2014	31.22	27.15	-	-	-	-	4.07	-	
	09/22/2014	31.22	27.04	-	-	-	-	4.18	-	
	10/01/2014	31.22	27.23	-	-	-	37.28	3.99	-	
	10/13/2014	31.22	27.25	TRACE	TRACE	-	-	3.97	-	
	10/20/2014	31.22	27.32	-	-	-	37.30	3.90	-	
	02/24/2015	31.22	27.42	-	-	-	37.31	3.80	13:40	
	02/25/2015	31.22	27.46	-	-	-	37.31	3.76	10:47	
	03/04/2015	31.22	27.39	-	-	-	-	3.83	14:06	
	03/11/2015	31.22	26.94	-	-	-	-	4.28	12:36	
	03/18/2015	31.22	27.13	-	-	-	-	4.09	10:56	
	03/26/2015	31.22	26.92	-	-	-	37.30	4.30	11:19	
	04/02/2015	31.22	27.04	-	-	-	37.25	4.18	11:08	
	04/08/2015	31.22	27.30	-	-	-	37.21	3.92	9:26	
	04/13/2015	31.22	27.30	-	-	-	-	3.92	10:55	
	04/23/2015	31.22	26.72	-	-	-	37.25	4.50	11:37	
	04/29/2015	31.22	26.94	-	-	-	37.25	4.28	14:06	
	05/04/2015	31.22	26.77	-	-	-	-	4.45	11:30	
	05/11/2015	31.22	26.71	-	-	-	37.37	4.51	14:52	
	05/12/2015	31.22	27.08	-	-	-	-	4.14	12:15	
	05/21/2015	31.22	26.93	-	-	-	37.33	4.29	12:10	
	05/28/2015	31.22	27.25	-	-	-	37.25	3.97	11:36	
	06/02/2015	31.22	26.92	-	-	-	-	4.30	12:55	
	06/09/2015	31.22	26.67	-	-	-	-	4.55	10:21	
	06/16/2015	31.22	26.73	-	-	-	-	4.49	11:15	
	06/26/2015	31.22	26.65	-	-	-	37.30	4.57	10:30	
	07/01/2015	31.22	26.12	-	-	-	-	5.10	12:06	
	08/04/2015	31.22	26.26	-	-	-	37.28	4.96	12:09	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-14 (cont.)	08/05/2015	31.22	26.75	SHEEN	-	-	37.27	4.47	8:50	
	12/01/2015	31.22	26.88	-	-	-	37.30	4.34	13:35	
	03/14/2016	31.22	26.93	-	-	-	37.30	4.29	8:55	
MW-15S	08/08/2014	31.03	26.11	-	-	-	26.20	4.92	-	
	08/11/2014	31.03	26.11	-	-	-	-	4.92	-	
	08/15/2014	31.03	24.00	-	-	-	-	7.03	-	
	08/18/2014	31.03	24.67	-	-	-	-	6.36	-	
	08/25/2014	31.03	24.82	-	-	-	-	6.21	-	
	09/02/2014	31.03	24.82	-	-	-	-	6.21	-	
	09/15/2014	31.03	24.96	-	-	-	-	6.07	-	
	09/22/2014	31.03	25.06	-	-	-	-	5.97	-	
	10/01/2014	31.03	25.20	-	-	-	25.88	5.83	-	
	10/13/2014	31.03	26.37	-	-	-	-	4.66	-	
	10/20/2014	31.03	25.45	-	-	-	25.90	5.58	-	
	05/11/2015	31.03	25.33	-	-	-	26.00	5.70	9:10	
	05/12/2015	31.03	25.35	-	-	-	-	5.68	12:10	
	08/04/2015	31.03	22.16	-	-	-	25.90	8.87	9:47	
	12/01/2015	31.03	25.46	-	-	-	25.88	5.57	11:03	
	03/14/2016	31.03	25.58	-	-	-	26.00	5.45	8:55	
MW-16S	08/15/2014	31.03	24.13	-	-	-	24.61	-	-	
	08/16/2014	31.03	24.12	-	-	-	24.48	-	-	
	08/18/2014	31.03	24.13	-	-	-	-	-	-	
	08/25/2014	31.03	24.24	-	-	-	-	6.79	-	
	09/02/2014	31.03	DRY	-	-	-	24.65	-	-	
	09/15/2014	31.03	DRY	-	-	-	24.64	-	-	
	09/22/2014	31.03	DRY	-	-	-	-	-	-	
	10/01/2014	31.03	DRY	-	-	-	24.64	-	-	
	10/10/2014	31.03	DRY	-	-	-	-	-	-	
	10/20/2014	31.03	DRY	-	-	-	24.64	-	-	
	02/24/2015	31.03	DRY	-	-	-	24.70	-	15:36	
	05/11/2015	31.03	DRY	-	-	-	24.70	-	10:15	
	08/04/2015	31.03	22.63	-	-	-	24.62	8.40	9:54	
	12/01/2015	31.03	DRY	-	-	-	24.64	-	11:07	
	03/14/2016	31.03	DRY	-	-	-	24.70	-	8:45	
MW-16	08/15/2014	30.97	26.78	-	-	-	35.74	4.19	-	
	08/18/2014	30.97	26.73	-	-	-	-	4.24	-	
	08/25/2014	30.97	26.55	-	-	-	-	4.42	-	
	09/02/2014	30.97	26.91	-	-	-	-	4.06	-	
	09/15/2014	30.97	26.76	-	-	-	-	4.21	-	
	09/22/2014	30.97	26.80	-	-	-	-	4.17	-	
	10/01/2014	30.97	26.95	-	-	-	35.53	4.02	-	
	10/10/2014	30.97	26.85	-	-	-	-	4.12	-	
	10/20/2014	30.97	27.19	-	-	-	35.61	3.78	-	
	02/24/2015	30.97	27.25	-	-	-	35.61	3.72	13:34	
	02/25/2015	30.97	27.23	-	-	-	35.62	3.74	11:14	
	05/11/2015	30.97	26.43	-	-	-	35.60	4.54	14:50	
	05/12/2015	30.97	26.90	-	-	-	-	4.07	9:52	
	08/04/2015	30.97	24.75	-	-	-	35.55	6.22	12:06	
	08/05/2015	30.97	25.04	-	-	-	35.53	5.93	9:51	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-16 (cont.)	12/01/2015	30.97	26.55	-	-	-	27.90	4.42	13:30	
	03/14/2016	30.97	26.67	-	-	-	35.55	4.30	9:00	
MW-25S	08/08/2014	31.07	23.64	-	-	-	25.80	7.43	-	
	08/11/2014	31.07	22.35	-	-	-	-	8.72	-	
	08/15/2014	31.07	21.94	-	-	-	-	9.13	-	
	08/18/2014	31.07	21.95	-	-	-	-	9.12	-	
	08/25/2014	31.07	21.98	-	-	-	-	9.09	-	
	09/02/2014	31.07	21.99	-	-	-	-	9.08	-	
	09/15/2014	31.07	22.04	-	-	-	-	9.03	-	
	09/22/2014	31.07	22.50	-	-	-	-	8.57	-	
	09/24/2014	31.07	22.12	TRACE	TRACE	-	-	8.95	-	
	10/01/2014	31.07	22.07	-	-	-	25.47	9.00	-	
	10/10/2014	31.07	22.09	TRACE	TRACE	-	-	8.98	-	
	10/13/2014	31.07	22.13	22.11	0.02	TRACE	-	8.96	-	
	10/20/2014	31.07	22.19	22.18	0.01	TRACE	-	8.89	-	
	10/27/2014	31.07	22.10	22.09	0.01	TRACE	-	8.98	-	
	10/27/2014	31.07	22.10	22.09	0.01	TRACE	-	8.98	-	
	11/07/2014	31.07	22.08	22.07	0.01	TRACE	-	9.00	-	
	11/12/2014	31.07	22.28	22.10	0.18	0.06	-	8.95	-	
	11/21/2014	31.07	22.43	22.18	0.25	0.09	-	8.86	-	
	11/26/2014	31.07	22.37	22.17	0.20	0.06	-	8.87	-	
	12/05/2014	31.07	22.57	22.20	0.37	-	25.50	8.50	-	HIT event
	12/11/2014	31.07	22.22	22.21	0.01	TRACE	-	8.85	-	
	12/16/2014	31.07	22.38	22.11	0.27	0.03	-	8.69	-	
	12/23/2014	31.07	22.43	22.13	0.30	0.05	-	8.64	-	
	12/30/2014	31.07	22.50	22.20	0.30	0.04	-	8.83	-	
	01/09/2015	31.07	22.49	22.19	0.30	-	-	8.84	-	HIT event
	01/16/2015	31.07	22.60	22.48	0.12	0.01	-	8.57	-	
	01/19/2015	31.07	22.34	22.25	0.09	0.01	-	8.81	-	
	01/26/2015	31.07	22.30	22.16	0.14	0.02	-	8.89	-	
	02/03/2015	31.07	22.25	-	-	-	25.50	8.82	-	
	02/09/2015	31.07	22.31	22.14	0.17	-	-	8.76	-	LNAPL not manually bailed
	02/18/2015	31.07	22.37	22.18	0.19	-	-	8.70	-	LNAPL not manually bailed
	02/24/2015	31.07	22.59	22.28	0.31	-	-	8.48	14:03	LNAPL not manually bailed
	03/04/2015	31.07	22.48	22.30	0.18	-	-	8.59	14:31	LNAPL not manually bailed
	03/11/2015	31.07	22.50	22.30	0.20	-	-	8.57	13:04	LNAPL not manually bailed
	03/18/2015	31.07	22.46	22.23	0.23	-	-	8.61	11:26	LNAPL not manually bailed
	03/26/2015	31.07	22.35	22.17	0.18	-	25.50	8.72	11:59	LNAPL not manually bailed
	04/02/2015	31.07	22.40	22.18	0.22	-	25.45	8.67	12:06	LNAPL not manually bailed
	04/08/2015	31.07	22.40	22.08	0.32	-	25.47	8.67	9:15	LNAPL not manually bailed
	04/13/2015	31.07	22.50	22.22	0.28	-	-	8.57	11:03	LNAPL not manually bailed
	04/23/2015	31.07	22.39	22.16	0.23	-	25.50	8.68	12:25	LNAPL not manually bailed
	04/29/2015	31.07	22.35	22.12	0.23	-	25.50	8.72	14:48	LNAPL not manually bailed
	05/04/2015	31.07	22.47	22.19	0.28	-	-	8.60	12:04	LNAPL not manually bailed
	05/11/2015	31.07	22.45	22.20	0.25	-	-	8.62	11:00	LNAPL not manually bailed
	05/21/2015	31.07	22.40	22.23	0.17	-	-	8.67	12:53	LNAPL not manually bailed
	05/28/2015	31.07	22.60	22.27	0.33	-	25.50	8.47	12:06	LNAPL not manually bailed
	06/02/2015	31.07	22.53	22.25	0.28	-	-	8.54	13:24	LNAPL not manually bailed
	06/09/2015	31.07	22.38	22.16	0.22	-	-	8.69	10:46	LNAPL not manually bailed
	06/16/2015	31.07	22.37	22.13	0.24	-	-	8.70	11:40	LNAPL not manually bailed
	06/26/2015	31.07	22.35	22.12	0.23	-	25.40	8.72	11:28	LNAPL not manually bailed

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-25S (cont.)	07/01/2015	31.07	22.23	22.04	0.19	-	-	8.84	12:18	LNAPL not manually bailed
	07/08/2015	31.07	22.08	21.88	0.20	0.04	-	8.99	12:04	HIT event
	07/13/2015	31.07	21.89	21.74	0.15	-	-	9.18	9:48	
	07/20/2015	31.07	21.37	21.33	0.04	TRACE	-	9.70	9:43	
	07/28/2015	31.07	21.20	-	-	-	25.49	9.87	12:25	
	08/04/2015	31.07	21.28	21.24	TRACE	TRACE	-	9.79	12:22	
	08/11/2015	31.07	21.37	21.36	0.01	0.01	25.49	9.70	11:22	
	08/18/2015	31.07	21.51	21.46	0.05	TRACE	-	9.56	10:50	
	08/24/2015	31.07	21.60	21.54	0.06	TRACE	-	9.47	10:53	
	09/02/2015	31.07	21.76	21.69	0.07	0.01	25.47	9.31	10:31	
	09/09/2015	31.07	21.81	21.77	0.04	0.01	25.49	9.26	10:50	
	09/17/2015	31.07	21.92	21.89	0.03	0.01	25.52	9.15	10:37	
	09/23/2015	31.07	21.92	21.89	0.03	TRACE	-	9.15	11:14	
	09/28/2015	31.07	21.96	21.92	0.04	TRACE	25.48	9.11	9:49	
	10/05/2015	31.07	22.01	21.98	0.03	TRACE	25.51	9.06	11:32	
	11/10/2015	31.07	22.09	22.06	0.03	TRACE	-	8.98	13:27	
	12/01/2015	31.07	22.19	22.16	0.03	-	25.43	8.88	12:10	LNAPL not manually bailed
	01/27/2016	31.07	22.10	22.08	0.02	-	-	8.97	10:56	LNAPL not manually bailed
	02/15/2016	31.07	22.10	22.07	0.03	TRACE	-	8.97	10:39	LNAPL not manually bailed
	03/14/2016	31.07	22.02	-	-	-	25.50	9.05	9:20	strong product odor
MW-25 / RW-25	08/08/2014	31.13	27.97	27.60	0.37	0.08	36.69	3.16	-	Transducers in well for pump test
	08/11/2014	31.13	27.61	27.37	0.24	NA	-	3.52	-	
	08/15/2014	31.13	28.11	28.05	0.06	NA	-	3.02	-	
	08/16/2014	31.13	27.81	27.75	0.06	NA	-	3.32	-	
	08/18/2014	31.13	27.94	27.71	0.23	NA	-	3.19	-	
	08/25/2014	31.13	26.89	26.74	0.15	0.05	-	4.37	-	
	09/02/2014	31.13	27.77	27.03	0.74	0.50	-	4.00	-	
	09/15/2014	31.13	27.69	26.87	0.82	NR	-	4.15	-	
	09/19/2014	31.13	28.10	26.95	1.15	0.93	-	4.03	-	
	09/22/2014	31.13	27.53	26.91	0.62	0.38	-	4.14	-	
	09/24/2014	31.13	27.73	27.23	0.50	NR	-	3.84	-	HIT event
	10/01/2014	31.13	27.47	27.02	0.45	0.19	35.90	4.05	-	
	10/10/2014	31.13	27.65	26.91	0.74	0.50	-	4.12	-	
	10/13/2014	31.13	27.60	27.03	0.57	NR	-	4.03	-	
	10/20/2014	31.13	27.49	27.19	0.30	0.13	-	3.90	-	HIT event
	10/27/2014	31.13	27.87	27.25	0.62	NR	-	3.80	-	
	11/07/2014	31.13	27.53	27.08	0.45	0.19	-	3.99	-	
	11/12/2014	31.13	27.50	27.07	0.43	0.19	-	4.00	-	
	11/21/2014	31.13	28.53	27.81	0.72	0.16	-	3.23	-	HIT event
	11/26/2014	31.13	27.70	27.23	0.47	0.19	-	3.84	-	
	12/05/2014	31.13	27.63	27.15	0.48	-	35.87	3.50	-	
	12/11/2014	31.13	27.31	26.98	0.33	0.06	-	3.82	-	
	12/16/2014	31.13	27.27	27.04	0.23	0.03	-	3.86	-	HIT event
	12/23/2014	31.13	27.20	26.95	0.25	0.04	-	3.93	-	
	12/30/2014	31.13	28.02	27.33	0.69	0.28	-	3.11	-	
	01/09/2015	31.13	27.80	27.38	0.42	-	-	3.33	-	
	01/16/2015	31.13	27.24	27.16	0.08	0.00	-	3.89	-	HIT event
	01/19/2015	31.13	27.28	26.97	0.31	0.06	-	3.85	-	
	01/26/2015	31.13	27.27	26.98	0.29	0.05	-	3.86	-	
	02/03/2015	31.13	28.10	27.52	0.58	-	35.86	3.03	-	
	02/09/2015	31.13	27.43	27.06	0.37	-	-	3.70	-	LNAPL not manually bailed

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-25 / RW-25 (cont.)	02/18/2015	31.13	27.63	27.24	0.39	-	-	3.50	-	LNAPL not manually bailed
	02/24/2015	31.13	27.68	27.18	0.50	-	-	3.45	14:00	LNAPL not manually bailed
	03/04/2015	31.13	27.85	27.19	0.66	-	-	3.28	14:35	LNAPL not manually bailed
	03/11/2015	31.13	27.27	26.76	0.51	-	-	3.86	13:08	LNAPL not manually bailed
	03/18/2015	31.13	27.63	26.93	0.70	-	-	3.50	11:30	LNAPL not manually bailed
	03/26/2015	31.13	27.31	26.70	0.61	-	35.90	3.82	12:03	LNAPL not manually bailed
	04/02/2015	31.13	27.60	26.85	0.75	-	35.80	3.53	12:09	LNAPL not manually bailed
	04/08/2015	31.13	28.00	27.15	0.85	-	35.90	3.13	9:10	LNAPL not manually bailed
	04/13/2015	31.13	27.98	27.05	0.93	-	-	3.15	11:06	LNAPL not manually bailed
	04/23/2015	31.13	27.21	26.47	0.74	-	35.90	3.92	12:28	LNAPL not manually bailed
	04/29/2015	31.13	27.50	26.67	0.83	-	35.90	3.63	14:52	LNAPL not manually bailed
	05/04/2015	31.13	27.37	26.57	0.80	-	-	3.76	12:08	LNAPL not manually bailed
	05/11/2015	31.13	27.50	27.43	0.07	-	-	3.63	15:10	LNAPL not manually bailed
	05/13/2015	31.13	28.31	27.19	1.12	1.50	-	2.82	12:53	
	05/21/2015	31.13	26.85	26.82	0.03	-	-	4.28	12:50	LNAPL not manually bailed
	05/28/2015	31.13	27.55	27.09	0.46	-	35.80	3.58	12:10	LNAPL not manually bailed
	06/02/2015	31.13	27.10	26.74	0.36	-	-	4.03	13:28	LNAPL not manually bailed
	06/09/2015	31.13	26.91	26.46	0.45	-	-	4.22	10:50	LNAPL not manually bailed
	06/16/2015	31.13	26.86	26.56	0.30	-	-	4.27	11:43	LNAPL not manually bailed
	06/26/2015	31.13	26.91	26.48	0.43	-	35.80	4.22	11:31	LNAPL not manually bailed
	07/01/2015	31.13	26.43	25.98	0.45	-	-	4.70	12:22	LNAPL not manually bailed
	07/08/2015	31.13	26.63	26.13	0.50	0.25	-	4.50	12:00	
	07/13/2015	31.13	26.13	25.89	0.24	-	-	5.00	9:50	HIT event
	07/20/2015	31.13	26.23	TRACE	TRACE	TRACE	-	4.90	9:48	
	07/28/2015	31.13	26.37	26.23	0.14	TRACE	36.00	4.76	12:10	
	08/04/2015	31.13	26.27	26.20	0.07	0.02	-	4.86	12:25	
	08/11/2015	31.13	26.05	25.90	0.15	0.03	35.88	5.08	11:19	
	08/18/2015	31.13	26.52	26.42	0.10	0.01	-	4.61	10:53	
	08/24/2015	31.13	26.55	26.33	0.22	0.02	-	4.58	10:56	
	09/02/2015	31.13	26.80	26.62	0.18	0.02	35.92	4.33	10:28	
	09/09/2015	31.13	26.51	26.45	0.06	0.02	35.93	4.62	10:42	
	09/17/2015	31.13	26.73	26.53	0.20	0.04	35.95	4.40	10:48	
	09/23/2015	31.13	26.82	26.63	0.19	0.02	-	4.31	11:18	
	09/28/2015	31.13	26.34	26.31	0.03	0.01	35.89	4.79	9:51	
	10/05/2015	31.13	26.21	26.06	0.15	0.05	35.87	4.92	11:18	
	11/10/2015	31.13	26.05	26.02	0.03	-	-	5.08	13:31	LNAPL not manually bailed
	12/01/2015	30.52	26.19	26.06	0.13	-	-	4.33	13:54	LNAPL not manually bailed
	01/27/2016	30.52	26.68	26.38	0.30	-	-	3.84	11:00	pump in well
	02/15/2016	30.52	26.88	26.59	0.29	-	-	3.64	10:39	pump in well
	03/14/2016	30.52	26.42	26.27	0.15	-	-	4.10	10:30	pump in well
	03/30/2016	30.52	32.73	-	-	-	-	-2.21	-	O&M event
TW-10	12/18/2013	37.28	30.31	-	-	-	-	6.97	-	
	01/08/2014	37.28	30.56	-	-	-	-	6.72	-	
	03/07/2014	37.28	29.70	-	-	-	-	7.58	-	
	03/13/2014	37.28	30.08	-	-	-	-	7.20	-	
	03/20/2014	37.28	29.22	-	-	-	-	8.06	-	
	03/27/2014	37.28	30.13	-	-	-	-	7.15	-	
	04/03/2014	37.28	29.08	-	-	-	-	8.20	-	
	04/08/2014	37.28	29.14	-	-	-	-	8.14	-	
	04/17/2014	37.28	29.66	-	-	-	-	7.62	-	
	04/22/2014	37.28	29.12	-	-	-	-	8.16	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-10 (cont.)	04/29/2014	37.28	28.96	-	-	-	-	8.32	-	
	05/05/2014	37.28	29.22	-	-	-	-	8.06	-	
	05/12/2014	37.28	29.06	-	-	-	-	8.22	-	
	05/19/2014	37.28	29.02	-	-	-	-	8.26	-	
	06/02/2014	37.28	28.99	-	-	-	-	8.29	-	
	06/09/2014	37.28	28.89	-	-	-	-	8.39	-	
	06/16/2014	37.28	29.02	-	-	-	-	8.26	-	
	06/23/2014	37.28	28.86	-	-	-	-	8.42	-	
	07/02/2014	37.28	28.87	-	-	-	-	8.41	-	
	07/07/2014	37.28	29.12	-	-	-	36.47	8.16	-	
	07/14/2014	37.28	28.68	-	-	-	-	8.60	-	
	07/21/2014	Overdrilled and replaced with MW-27								
MW-27	07/24/2014	31.43	27.59	-	-	-	-	3.84	-	
	07/31/2014	31.43	27.58	-	-	-	34.47	3.85	-	
	08/08/2014	31.43	27.69	-	-	-	34.46	3.74	-	
	08/11/2014	31.43	27.33	-	-	-	-	4.10	-	
	08/15/2014	31.43	27.90	-	-	-	-	3.53	-	
	08/16/2014	31.43	27.65	-	-	-	34.48	3.78	-	
	08/18/2014	31.43	27.62	-	-	-	-	3.81	-	
	08/25/2014	31.43	27.09	-	-	-	-	4.34	-	
	09/02/2014	31.43	27.52	-	-	-	-	3.91	-	
	09/15/2014	31.43	27.38	-	-	-	-	4.05	-	
	09/22/2014	31.43	27.24	-	-	-	-	4.19	-	
	10/01/2014	31.43	27.44	-	-	-	34.27	3.99	-	
	10/10/2014	31.43	27.24	-	-	-	-	4.19	-	
	10/20/2014	31.43	27.59	-	-	-	34.13	3.84	-	
	10/27/2014	31.43	27.66	-	-	-	-	3.77	-	
	11/07/2014	31.43	27.43	-	-	-	-	4.00	-	
	11/12/2014	31.43	27.43	-	-	-	-	4.00	-	
	11/21/2014	31.43	28.23	-	-	-	-	3.20	-	
	11/26/2014	31.43	27.64	-	-	-	-	3.79	-	
	12/05/2014	31.43	27.50	-	-	-	-	3.93	-	
	12/11/2014	31.43	27.38	-	-	-	-	4.05	-	
	12/16/2014	31.43	27.34	-	-	-	-	4.09	-	
	12/23/2014	31.43	27.22	-	-	-	-	4.21	-	
	12/30/2014	31.43	27.80	-	-	-	-	3.63	-	
	01/09/2015	31.43	27.59	-	-	-	-	3.84	-	
	01/16/2015	31.43	27.46	-	-	-	-	3.97	-	
	01/19/2015	31.43	27.38	-	-	-	-	4.05	-	
	01/26/2015	31.43	27.40	-	-	-	-	4.03	-	
	02/03/2015	31.43	28.01	-	-	-	34.05	3.42	-	
	02/09/2015	31.43	27.43	-	-	-	-	4.00	-	
	02/18/2015	31.43	27.52	-	-	-	-	3.91	-	
	02/24/2015	31.43	26.61	-	-	-	-	4.82	13:15	
	02/25/2015	31.43	27.45	-	-	-	34.06	3.98	13:38	
	03/04/2015	31.43	27.63	-	-	-	-	3.80	13:59	
	03/11/2015	31.43	27.11	-	-	-	-	4.32	12:26	
	03/18/2015	31.43	27.36	-	-	-	-	4.07	10:49	
	03/26/2015	31.43	27.20	-	-	-	34.00	4.23	10:50	
	04/02/2015	31.43	27.28	-	-	-	34.05	4.15	11:15	
	04/08/2015	31.43	27.55	-	-	-	34.04	3.88	9:30	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-27 (cont.)	04/13/2015	31.43	27.53	-	-	-	-	3.90	10:14	
	04/23/2015	31.43	26.92	-	-	-	34.05	4.51	11:33	
	04/29/2015	31.43	27.18	-	-	-	34.05	4.25	13:52	
	05/04/2015	31.43	26.96	-	-	-	-	4.47	11:26	
	05/11/2015	31.43	26.86	-	-	-	34.04	4.57	15:15	
	05/13/2015	31.43	27.55	-	-	-	-	3.88	9:52	
	05/21/2015	31.43	27.12	-	-	-	34.12	4.31	12:02	
	05/28/2015	31.43	27.51	-	-	-	34.00	3.92	11:25	
	06/02/2015	31.43	27.11	-	-	-	-	4.32	12:45	
	06/09/2015	31.43	26.92	-	-	-	-	4.51	10:11	
	06/16/2015	31.43	26.86	-	-	-	-	4.57	11:05	
	06/26/2015	31.43	26.87	-	-	-	34.00	4.56	10:15	
	07/01/2015	31.43	26.38	-	-	-	-	5.05	11:57	
	07/08/2015	31.43	26.64	-	-	-	-	4.79	10:45	
	07/13/2015	31.43	26.19	-	-	-	-	5.24	9:10	
	07/20/2015	31.43	26.51	-	-	-	-	4.92	8:52	
	07/28/2015	31.43	26.55	-	-	-	34.13	4.88	9:56	
	08/04/2015	31.43	26.58	-	-	-	34.05	4.85	12:05	
	08/05/2015	31.43	27.06	TRACE	TRACE	TRACE	34.07	4.37	8:16	
	08/11/2015	31.43	26.16	TRACE	TRACE	TRACE	34.03	5.27	9:38	
	08/18/2015	31.43	26.77	-	-	-	-	4.66	10:03	
	08/24/2015	31.43	26.75	-	-	-	-	4.68	10:06	
	09/02/2015	31.43	27.09	TRACE	TRACE	TRACE	34.08	4.34	9:08	
	09/09/2015	31.43	26.82	TRACE	TRACE	TRACE	34.05	4.61	9:57	
	09/17/2015	31.43	27.16	-	-	-	34.08	4.27	10:07	
	09/23/2015	31.43	27.03	-	-	-	-	4.40	10:24	
	09/28/2015	31.43	26.52	-	-	-	34.09	4.91	9:42	
	10/05/2015	31.43	26.39	-	-	-	34.05	5.04	9:00	
	11/10/2015	31.43	26.97	-	-	-	-	4.46	12:51	
	12/01/2015	31.43	26.98	-	-	-	33.35	4.45	13:39	
	01/27/2016	31.43	27.28	SHEEN	-	-	-	4.15	10:14	
	02/15/2016	31.43	27.64	-	-	-	-	3.79	9:55	
	03/14/2016	31.43	27.32	-	-	-	34.03	4.11	9:00	
MW-30S	08/08/2014	30.67	23.31	-	-	-	25.28	7.36	-	
	08/11/2014	30.67	23.33	-	-	-	-	7.34	-	
	08/15/2014	30.67	24.84	-	-	-	-	5.83	-	
	08/18/2014	30.67	24.84	-	-	-	-	5.83	-	
	08/25/2014	30.67	24.79	-	-	-	-	5.88	-	
	09/02/2014	30.67	24.83	-	-	-	-	5.84	-	
	09/15/2014	30.67	24.85	-	-	-	-	5.82	-	
	09/22/2014	30.67	24.88	-	-	-	-	5.79	-	
	10/01/2014	30.67	24.88	-	-	-	25.28	5.79	-	
	10/10/2014	30.67	24.87	-	-	-	-	5.80	-	
	10/20/2014	30.67	24.77	-	-	-	25.29	5.90	-	
	10/27/2014	30.67	24.78	-	-	-	-	5.89	-	
	11/07/2014	30.67	24.85	-	-	-	-	5.82	-	
	11/12/2014	30.67	24.87	-	-	-	-	5.80	-	
	11/21/2014	30.67	24.94	-	-	-	-	5.73	-	
	11/26/2014	30.67	24.93	-	-	-	-	5.74	-	
	12/05/2014	30.67	24.92	-	-	-	-	5.75	-	
	12/11/2014	30.67	24.72	-	-	-	-	5.95	-	



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-30S (cont.)	12/16/2014	30.67	24.74	-	-	-	-	5.93	-	
	12/23/2014	30.67	24.70	-	-	-	-	5.97	-	
	12/30/2014	30.67	24.68	-	-	-	-	5.99	-	
	01/09/2015	30.67	24.66	-	-	-	-	6.01	-	
	01/16/2015	30.67	24.62	-	-	-	-	6.05	-	
	01/19/2015	30.67	24.60	-	-	-	-	6.07	-	
	01/26/2015	30.67	24.48	-	-	-	-	6.19	-	
	02/03/2015	30.67	24.56	-	-	-	25.34	6.11	-	
	02/09/2015	30.67	24.57	-	-	-	-	6.10	-	
	02/18/2015	30.67	24.63	-	-	-	-	6.04	-	
	02/24/2015	30.67	24.24	-	-	-	25.31	6.43	15:32	
	02/25/2015	30.67	24.10	-	-	-	25.31	6.57	13:10	
	03/04/2015	30.67	24.20	-	-	-	-	6.47	14:04	
	03/11/2015	30.67	24.20	-	-	-	-	6.47	12:32	
	03/18/2015	30.67	24.22	-	-	-	-	6.45	10:55	
	03/26/2015	30.67	24.32	-	-	-	25.30	6.35	10:42	
	04/02/2015	30.67	24.27	-	-	-	25.30	6.40	11:02	
	04/08/2015	30.67	24.30	-	-	-	25.29	6.37	9:31	
	04/13/2015	30.67	24.31	-	-	-	-	6.36	10:28	
	04/23/2015	30.67	DRY	-	-	-	25.28	-	11:23	
	04/29/2015	30.67	24.27	-	-	-	25.25	6.40	13:38	
	05/04/2015	30.67	24.32	-	-	-	-	6.35	11:23	
	05/11/2015	30.67	24.41	-	-	-	25.20	6.26	10:50	
	05/13/2015	30.67	24.41	-	-	-	-	6.26	9:50	
	05/21/2015	30.67	24.68	-	-	-	25.15	5.99	12:04	
	05/28/2015	30.67	24.67	-	-	-	25.28	6.00	11:21	
	06/02/2015	30.67	24.55	-	-	-	-	6.12	12:51	
	06/09/2015	30.67	24.30	-	-	-	-	6.37	10:17	
	06/16/2015	30.67	24.33	-	-	-	-	6.34	11:08	
	06/22/2015	Destroyed during overdrilling activities; replaced with RW-30S								
TW-11	12/18/2013	37.39	26.40	-	-	-	-	10.99	-	
	01/08/2014	37.39	27.73	-	-	-	-	9.66	-	
	03/07/2014	37.39	29.17	-	-	-	-	8.22	-	
	03/13/2014	37.39	27.56	-	-	-	-	9.83	-	
	03/20/2014	37.39	27.15	-	-	-	-	10.24	-	
	03/27/2014	37.39	27.40	-	-	-	-	9.99	-	
	04/03/2014	37.39	26.28	26.26	0.02	0.10	-	11.12	-	
	04/08/2014	37.39	26.52	-	-	-	-	10.87	-	
	04/17/2014	37.39	26.85	-	-	-	-	10.54	-	
	04/22/2014	37.39	27.09	-	-	-	-	10.30	-	
	04/29/2014	37.39	27.39	-	-	-	-	10.00	-	
	05/05/2014	37.39	26.26	26.24	0.02	-	-	11.15	-	
	05/12/2014	37.39	26.97	-	-	-	-	10.42	-	
	05/19/2014	37.39	25.91	25.90	0.01	-	-	11.49	-	
	06/02/2014	37.39	26.32	26.31	0.01	-	-	11.08	-	
	06/09/2014	37.39	25.23	-	-	-	-	12.16	-	
	06/16/2014	37.39	25.35	25.36	0.01	-	-	12.05	-	
	06/23/2014	37.39	26.55	-	-	-	-	10.84	-	
	07/02/2014	37.39	26.91	TRACE	TRACE	-	-	10.48	-	
	07/07/2014	37.39	27.08	-	-	-	37.10	10.31	-	
	07/14/2014	37.39	26.95	TRACE	TRACE	-	-	10.44	-	



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-11 (cont.)	07/24/2014	37.39	26.88	-	-	-	-	10.51	-	
	07/31/2014	37.39	27.10	-	-	-	37.02	10.29	-	
	08/05/2014	Overdrilled and replaced with MW-31								
MW-31 / RW-31	08/08/2014	31.23	27.31	-	-	-	36.35	3.92	-	
	08/11/2014	31.23	26.88	-	-	-	-	4.35	-	
	08/15/2014	31.23	27.00	-	-	-	-	4.23	-	
	08/16/2014	31.23	26.92	-	-	-	35.00	4.31	-	
	08/18/2014	31.23	27.11	-	-	-	-	4.12	-	
	08/25/2014	31.23	26.90	-	-	-	-	4.33	-	
	09/02/2014	31.23	27.31	-	-	-	-	3.92	-	
	09/15/2014	31.23	27.18	-	-	-	-	4.05	-	
	09/22/2014	31.23	27.05	-	-	-	-	4.18	-	
	10/01/2014	31.23	27.21	-	-	-	35.50	4.02	-	
	10/10/2014	31.23	27.02	-	-	-	-	4.21	-	
	10/20/2014	31.23	27.40	-	-	-	35.50	3.83	-	
	10/27/2014	31.23	27.43	-	-	-	-	3.80	-	
	11/07/2014	31.23	24.23	-	-	-	-	7.00	-	
	11/12/2014	31.23	27.18	-	-	-	-	4.05	-	
	11/21/2014	31.23	28.03	-	-	-	-	3.20	-	
	11/26/2014	31.23	27.39	-	-	-	-	3.84	-	
	12/05/2014	31.23	27.33	-	-	-	-	3.90	-	
	12/11/2014	31.23	27.14	-	-	-	-	4.09	-	
	12/16/2014	31.23	27.15	-	-	-	-	4.08	-	
	12/23/2014	31.23	27.02	-	-	-	-	4.21	-	
	12/30/2014	31.23	27.61	-	-	-	-	3.62	-	
	01/09/2015	31.23	27.42	-	-	-	-	3.81	-	
	01/16/2015	31.23	27.26	-	-	-	-	3.97	-	
	01/19/2015	31.23	27.20	-	-	-	-	4.03	-	
	01/26/2015	31.23	27.18	-	-	-	-	4.05	-	
	02/03/2015	31.23	27.81	-	-	-	35.49	3.42	-	
	02/09/2015	31.23	27.18	-	-	-	-	4.05	-	
	02/18/2015	31.23	27.34	-	-	-	-	3.89	-	
	02/24/2015	31.23	27.27	-	-	-	-	3.96	13:09	
	02/25/2015	31.23	27.50	-	-	-	35.52	3.73	10:28	
	03/04/2015	31.23	27.45	-	-	-	-	3.78	14:02	
	03/11/2015	31.23	26.78	-	-	-	-	4.45	12:29	
	03/18/2015	31.23	27.13	-	-	-	-	4.10	10:52	
	03/26/2015	31.23	26.99	-	-	-	35.50	4.24	10:46	
	04/02/2015	31.23	27.04	-	-	-	35.45	4.19	11:04	
	04/08/2015	31.23	27.27	-	-	-	35.42	3.96	9:32	
	04/13/2015	31.23	27.35	-	-	-	-	3.88	10:25	
	04/23/2015	31.23	26.67	-	-	-	35.45	4.56	11:27	
	04/29/2015	31.23	26.97	-	-	-	35.40	4.26	13:34	
	05/04/2015	31.23	26.75	-	-	-	-	4.48	11:20	
	05/11/2015	31.23	26.65	-	-	-	35.40	4.58	14:55	
	05/13/2015	31.23	27.35	-	-	-	-	3.88	9:47	
	05/21/2015	31.23	26.87	-	-	-	35.50	4.36	12:06	
	05/28/2015	31.23	27.31	-	-	-	35.40	3.92	11:23	
	06/02/2015	31.23	26.87	-	-	-	-	4.36	12:48	
	06/09/2015	31.23	26.71	-	-	-	-	4.52	10:14	
	06/16/2015	31.23	26.68	-	-	-	-	4.55	11:11	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-31 / RW-31 (cont.)	06/26/2015	31.23	26.58	-	-	-	35.20	4.65	9:20	
	07/01/2015	31.23	26.02	-	-	-	-	5.21	12:00	
	07/08/2015	31.23	26.26	-	-	-	-	4.97	10:48	
	07/13/2015	31.23	25.88	-	-	-	-	5.35	9:13	
	07/20/2015	31.23	26.22	-	-	-	-	5.01	8:58	
	07/28/2015	31.23	26.31	-	-	-	35.56	4.92	10:22	
	08/04/2015	31.23	29.82	-	-	-	35.42	1.41	12:09	
	08/05/2015	31.23	26.78	-	-	-	35.47	4.45	8:22	
	08/11/2015	31.23	25.93	-	-	-	35.43	5.30	9:48	
	08/18/2015	31.23	26.56	-	-	-	-	4.67	9:56	
	08/24/2015	31.23	26.55	-	-	-	-	4.68	10:00	
	09/02/2015	31.23	26.87	-	-	-	35.42	4.36	9:20	
	09/09/2015	31.23	26.61	-	-	-	35.47	4.62	10:03	
	09/17/2015	31.23	26.96	-	-	-	35.50	4.27	10:01	
	09/23/2015	31.23	26.82	-	-	-	-	4.41	10:18	
	09/28/2015	31.23	26.29	-	-	-	35.44	4.94	9:35	
	10/05/2015	31.23	26.11	-	-	-	35.42	5.12	9:02	
	11/10/2015	31.23	26.61	-	-	-	-	4.62	12:47	
	12/01/2015	31.23	26.27	-	-	-	-	4.96	13:47	
	01/27/2016	31.23	26.24	-	-	-	-	4.99	10:06	
	02/15/2016	31.23	27.21	-	-	-	-	4.02	9:49	
	03/14/2016	31.23	26.76	-	-	-	-	4.47	9:33	
	03/30/2016	31.23	32.98	-	-	-	-	-1.75	-	O&M event
MW-33	08/08/2014	30.93	27.91	-	-	-	35.41	3.02	-	
	08/11/2014	30.93	27.41	-	-	-	-	3.52	-	
	08/15/2014	30.93	26.98	-	-	-	34.45	3.95	-	
	08/18/2014	30.93	26.76	-	-	-	-	4.17	-	
	08/25/2014	30.93	26.47	-	-	-	-	4.46	-	
	09/02/2014	30.93	26.87	-	-	-	-	4.06	-	
	09/15/2014	30.93	26.73	-	-	-	-	4.20	-	
	09/22/2014	30.93	26.59	-	-	-	-	4.34	-	
	10/01/2014	30.93	26.79	-	-	-	34.47	4.14	-	
	10/10/2014	30.93	26.60	-	-	-	-	4.33	-	
	10/20/2014	30.93	26.96	-	-	-	34.47	3.97	-	
	02/24/2015	30.93	26.99	-	-	-	-	3.94	13:05	
	02/25/2015	30.93	27.03	-	-	-	34.45	3.90	10:08	
	05/11/2015	30.93	26.22	-	-	-	34.40	4.71	14:54	
	05/13/2015	30.93	26.90	-	-	-	34.40	4.03	9:45	
	08/04/2015	30.93	25.91	-	-	-	34.39	5.02	12:14	
	08/05/2015	30.93	26.43	-	-	-	34.42	4.50	8:26	
	12/01/2015	30.93	26.37	-	-	-	34.40	4.56	13:35	
	03/14/2016	30.93	26.59	-	-	-	34.46	4.34	10:21	
MW-51S	08/08/2014	30.81	21.15	-	-	-	25.27	9.66	-	
	08/11/2014	30.81	21.27	-	-	-	-	9.54	-	
	08/15/2014	30.81	21.17	-	-	-	25.30	9.64	-	
	08/18/2014	30.81	21.23	-	-	-	-	9.58	-	
	08/25/2014	30.81	21.34	-	-	-	-	9.47	-	
	09/02/2014	30.81	21.38	-	-	-	-	9.43	-	
	09/15/2014	30.81	21.46	-	-	-	-	9.35	-	
	09/22/2014	30.81	21.48	-	-	-	-	9.33	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-51S (cont.)	09/24/2014	30.81	21.49	-	-	-	-	9.32	-	
	10/01/2014	30.81	21.32	TRACE	TRACE	-	25.30	9.49	-	
	10/10/2014	30.81	21.53	-	-	-	-	9.28	-	
	10/13/2014	30.81	21.52	-	-	-	-	9.29	-	
	10/20/2014	30.81	21.58	-	-	-	25.33	9.23	-	
	10/27/2014	30.81	21.64	-	-	-	-	9.17	-	
	11/07/2014	30.81	21.53	-	-	-	-	9.28	-	
	11/12/2014	30.81	21.66	-	-	-	-	9.15	-	
	11/21/2014	30.81	21.73	-	-	-	-	9.08	-	
	12/05/2014	30.81	21.64	-	-	-	-	9.17	-	
	12/11/2014	30.81	21.72	-	-	-	-	9.09	-	
	12/16/2014	30.81	21.78	-	-	-	-	9.03	-	
	12/23/2014	30.81	21.83	-	-	-	-	8.98	-	
	12/30/2014	30.81	21.87	-	-	-	-	8.94	-	
	01/09/2015	30.81	21.89	-	-	-	-	8.92	-	
	01/16/2015	30.81	21.80	-	-	-	-	9.01	-	
	01/19/2015	30.81	21.87	-	-	-	-	8.94	-	
	01/26/2015	30.81	21.82	-	-	-	-	8.99	-	
	02/03/2015	30.81	22.00	-	-	-	25.21	8.81	-	
	02/09/2015	30.81	21.92	-	-	-	-	8.89	-	
	02/18/2015	30.81	21.92	-	-	-	-	8.89	-	
	02/24/2015	30.81	21.96	-	-	-	25.33	8.85	16:00	
	03/11/2015	30.81	21.67	-	-	-	-	9.14	12:48	
	03/18/2015	30.81	21.71	-	-	-	-	9.10	11:08	
	03/26/2015	30.81	21.76	-	-	-	25.30	9.05	11:45	
	04/02/2015	30.81	21.80	-	-	-	25.30	9.01	11:27	
	04/08/2015	30.81	21.75	-	-	-	25.19	9.06	8:55	
	04/13/2015	30.81	21.87	-	-	-	-	8.94	10:44	
	04/23/2015	30.81	21.89	-	-	-	25.25	8.92	11:59	
	04/29/2015	30.81	21.88	-	-	-	25.25	8.93	14:26	
	05/04/2015	30.81	21.89	-	-	-	-	8.92	11:43	
	05/11/2015	30.81	21.93	-	-	-	24.50	8.88	10:45	
	05/13/2015	30.81	21.95	-	-	-	-	8.86	10:00	
	05/21/2015	30.81	21.68	-	-	-	25.35	9.13	12:12	
	05/28/2015	30.81	21.93	-	-	-	25.30	8.88	11:47	
	06/09/2015	30.81	21.85	-	-	-	-	8.96	10:34	
	06/16/2015	30.81	21.79	-	-	-	-	9.02	11:27	
	06/26/2015	30.81	21.62	-	-	-	-	9.19	10:35	
	07/08/2015	30.81	21.33	-	-	-	-	9.48	11:40	
	07/13/2015	30.81	21.62	-	-	-	-	9.19	9:41	
	07/20/2015	30.81	21.57	-	-	-	-	9.24	9:19	
	07/28/2015	30.81	21.37	-	-	-	25.35	9.44	11:29	
	08/04/2015	30.81	21.21	-	-	-	25.30	9.60	12:02	
	08/05/2015	30.81	21.25	-	-	-	25.30	9.56	9:12	
	08/11/2015	30.81	21.28	-	-	-	25.31	9.53	10:14	
	08/18/2015	30.81	21.22	-	-	-	-	9.59	10:19	
	08/24/2015	30.81	21.27	-	-	-	-	9.54	10:30	
	09/02/2015	30.81	21.35	-	-	-	25.30	9.46	9:54	
	09/09/2015	30.81	21.42	-	-	-	25.32	9.39	10:32	
	09/17/2015	30.81	21.52	-	-	-	25.43	9.29	10:32	
	09/23/2015	30.81	21.48	-	-	-	-	9.33	10:53	
	09/28/2015	30.81	21.56	-	-	-	25.30	9.25	9:44	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-51S (cont.)	10/05/2015	30.81	21.55	-	-	-	25.61	9.26	9:21	
	11/10/2015	30.81	21.67	-	-	-	-	9.14	13:14	
	12/01/2015	30.81	21.80	-	-	-	25.30	9.01	10:48	
	01/27/2016	30.81	21.95	-	-	-	-	8.86	10:36	
	02/15/2016	30.81	21.31	-	-	-	-	9.50	10:18	
	03/14/2016	30.81	21.23	-	-	-	25.30	9.58	12:45	
MW-51 / RW-51	07/25/2014	30.97	27.25	-	-	-	35.95	3.72	-	
	08/08/2014	30.97	27.00	TRACE	TRACE	-	36.48	3.97	-	
	08/11/2014	30.97	26.70	-	-	-	-	4.27	-	
	08/15/2014	30.97	27.30	-	-	-	-	3.67	-	
	08/16/2014	30.97	26.99	TRACE	TRACE	-	34.65	3.98	-	
	08/18/2014	30.97	26.94	TRACE	TRACE	-	-	4.03	-	
	08/25/2014	30.97	26.59	TRACE	TRACE	-	-	4.38	-	
	09/02/2014	30.97	26.93	TRACE	TRACE	-	-	4.04	-	
	09/15/2014	30.97	26.88	26.85	0.03	TRACE	-	4.12	-	
	09/22/2014	30.97	26.83	26.80	0.03	TRACE	-	4.17	-	
	09/24/2014	30.97	27.19	27.15	0.04	-	-	3.81	-	
	10/01/2014	30.97	26.93	TRACE	TRACE	-	36.15	4.04	-	
	10/10/2014	30.97	26.84	26.81	0.03	-	-	4.16	-	
	10/13/2014	30.97	27.01	26.94	0.07	-	-	4.02	-	
	10/20/2014	30.97	27.05	27.03	0.02	TRACE	-	3.94	-	
	10/27/2014	30.97	27.16	27.12	0.04	TRACE	-	3.84	-	
	11/07/2014	30.97	27.11	27.07	0.04	TRACE	-	3.89	-	
	11/12/2014	30.97	26.92	26.90	0.02	TRACE	-	4.07	-	
	11/21/2014	30.97	27.57	27.50	0.07	TRACE	-	3.46	-	
	11/26/2014	30.97	27.20	27.17	0.03	TRACE	-	3.80	-	
	12/05/2014	30.97	26.98	26.96	0.02	TRACE	-	3.99	-	
	12/11/2014	30.97	26.88	26.87	0.01	TRACE	-	4.09	-	
	12/16/2014	30.97	26.83	26.80	0.03	TRACE	-	4.14	-	
	12/23/2014	30.97	26.83	TRACE	TRACE	TRACE	-	4.14	-	
	12/30/2014	30.97	27.28	27.22	0.06	TRACE	-	3.69	-	
	01/09/2015	30.97	27.20	27.15	0.05	TRACE	-	3.77	-	
	01/16/2015	30.97	26.95	26.91	0.04	TRACE	-	4.02	-	
	01/19/2015	30.97	26.88	26.83	0.05	TRACE	-	4.09	-	
	01/26/2015	30.97	26.98	26.92	0.06	TRACE	-	3.99	-	
	02/03/2015	30.97	27.52	27.45	0.07	-	36.15	3.45	-	LNAPL not manually bailed
	02/09/2015	30.97	26.93	26.91	0.02	-	-	4.04	-	LNAPL not manually bailed
	02/18/2015	30.97	27.07	27.02	0.05	-	-	3.90	-	LNAPL not manually bailed
	02/24/2015	30.97	27.07	27.06	0.01	TRACE	-	3.90	13:46	LNAPL not manually bailed
	03/04/2015	30.97	27.24	27.17	0.07	-	-	3.73	14:25	LNAPL not manually bailed
	03/11/2015	30.97	26.68	26.65	0.03	-	-	4.29	12:51	LNAPL not manually bailed
	03/18/2015	30.97	26.94	26.84	0.10	-	-	4.03	11:11	LNAPL not manually bailed
	03/26/2015	30.97	26.74	26.60	0.14	-	36.10	4.23	11:50	LNAPL not manually bailed
	04/02/2015	30.97	27.78	27.75	0.03	-	36.05	3.19	11:46	LNAPL not manually bailed
	04/08/2015	30.97	27.15	27.02	0.13	-	36.11	3.82	9:00	LNAPL not manually bailed
	04/13/2015	30.97	27.09	26.98	0.11	-	-	3.88	10:47	LNAPL not manually bailed
	04/23/2015	30.97	26.42	26.35	0.07	-	36.05	4.55	12:17	LNAPL not manually bailed
	04/29/2015	30.97	26.71	26.60	0.11	-	36.00	4.26	14:39	LNAPL not manually bailed
	05/04/2015	30.97	26.54	26.48	0.06	-	-	4.43	11:46	LNAPL not manually bailed
	05/11/2015	30.97	26.44	26.40	0.04	-	-	4.53	15:00	LNAPL not manually bailed
	05/13/2015	30.97	27.31	27.10	0.21	0.03	-	3.66	12:35	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-51 / RW-51 (cont.)	05/21/2015	30.97	26.74	26.71	0.03	-	-	4.23	12:10	LNAPL not manually bailed
	05/28/2015	30.97	27.10	26.95	0.15	-	36.05	3.87	11:58	LNAPL not manually bailed
	06/02/2015	30.97	26.85	26.82	0.03	-	-	4.12	13:07	LNAPL not manually bailed
	06/09/2015	30.97	26.75	26.72	0.03	-	-	4.22	10:37	LNAPL not manually bailed
	06/16/2015	30.97	26.57	26.54	0.03	-	-	4.40	11:30	LNAPL not manually bailed
	06/26/2015	30.97	26.44	26.31	0.13	-	36.00	4.53	11:23	LNAPL not manually bailed
	07/01/2015	30.97	25.86	25.85	0.01	-	-	5.11	12:30	LNAPL not manually bailed
	07/08/2015	30.97	26.28	26.05	0.23	0.05	-	4.69	11:54	
	07/13/2015	30.97	26.03	25.90	0.13	-	-	4.94	9:46	HIT event
	07/20/2015	30.97	25.97	25.92	0.05	TRACE	-	5.00	9:52	
	07/28/2015	30.97	26.16	26.10	0.06	TRACE	36.18	4.81	11:55	
	08/04/2015	30.97	26.11	26.02	0.09	0.01	-	4.86	12:28	
	08/11/2015	30.97	25.78	25.70	0.08	0.01	36.14	5.19	11:07	
	08/18/2015	30.97	27.29	27.23	0.06	TRACE	-	3.68	10:43	
	08/24/2015	30.97	26.18	26.16	0.02	TRACE	-	4.79	10:46	
	09/02/2015	30.97	26.42	26.40	0.02	0.01	36.10	4.55	10:50	
	09/09/2015	30.97	26.35	26.27	0.08	0.02	36.12	4.62	10:35	
	09/17/2015	30.97	26.61	-	-	-	36.14	4.36	10:54	
	09/23/2015	30.97	26.49	26.47	0.02	TRACE	-	4.48	11:06	
	09/28/2015	30.97	26.00	TRACE	TRACE	-	36.10	4.97	10:01	LNAPL not manually bailed
	10/05/2015	30.97	26.67	-	-	-	36.15	4.30	12:15	
	11/10/2015	30.97	26.52	26.48	0.04	-	-	4.45	13:42	LNAPL not manually bailed
	12/01/2015	30.97	26.57	26.55	0.02	-	-	4.40	13:53	LNAPL not manually bailed
	01/27/2016	30.97	26.86	26.73	0.13	-	-	4.11	10:48	pump in well
	02/15/2016	30.97	27.22	27.14	0.08	-	-	3.75	10:23	pump in well
	03/14/2016	30.97	26.72	26.63	0.09	-	-	4.25	10:25	pump in well
	03/30/2016	30.97	33.60	-	-	-	-	-2.63	-	O&M event
MW-52	08/15/2014	30.17	28.11	-	-	-	35.78	2.06	-	
	08/18/2014	30.17	26.07	-	-	-	-	4.10	-	
	08/25/2014	30.17	25.76	-	-	-	-	4.41	-	
	09/02/2014	30.17	26.15	-	-	-	-	4.02	-	
	09/15/2014	30.17	25.99	-	-	-	-	4.18	-	
	09/22/2014	30.17	26.00	-	-	-	-	4.17	-	
	10/01/2014	30.17	26.03	-	-	-	35.65	4.14	-	
	10/10/2014	30.17	26.07	-	-	-	-	4.10	-	
	10/20/2014	30.17	26.24	-	-	-	35.64	3.93	-	
	05/11/2015	30.17	25.81	-	-	-	35.65	4.36	14:45	
	05/12/2015	30.17	26.10	-	-	-	-	4.07	9:50	
	08/04/2015	30.17	25.21	-	-	-	35.55	4.96	12:01	
	08/05/2015	30.17	25.68	-	-	-	35.49	4.49	9:47	
	12/01/2015	30.17	NG	-	-	-	-	-	-	Well flooded
	03/14/2016	30.17	26.61	-	-	-	35.30	3.56	9:10	
MW-70	08/15/2014	30.86	26.63	-	-	-	34.95	4.23	-	
	08/18/2014	30.86	26.61	-	-	-	-	4.25	-	
	08/25/2014	30.86	26.25	-	-	-	-	4.61	-	
	09/02/2014	30.86	26.68	-	-	-	-	4.18	-	
	09/15/2014	30.86	26.63	-	-	-	-	4.23	-	
	09/22/2014	30.86	26.47	-	-	-	-	4.39	-	
	10/01/2014	30.86	26.66	-	-	-	34.88	4.20	-	
	10/10/2014	30.86	26.57	-	-	-	-	4.29	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-70 (cont.)	10/20/2014	30.86	26.79	-	-	-	34.90	4.07	-	
	02/24/2015	30.86	26.62	-	-	-	-	4.24	13:00	
	05/11/2015	30.86	26.02	-	-	-	35.15	4.84	14:55	
	05/12/2015	30.86	26.21	-	-	-	-	4.65	14:05	
	08/04/2015	30.86	25.73	-	-	-	35.16	5.13	12:28	
	08/05/2015	30.86	26.10	-	-	-	35.05	4.76	9:55	
	12/01/2015	30.86	26.23	-	-	-	35.05	4.63	13:32	
	03/14/2016	30.86	26.45	-	-	-	35.11	4.41	9:45	
TW-08S	12/18/2013	36.75	DRY	-	-	-	-	-	-	
	01/08/2014	36.75	DRY	-	-	-	-	-	-	
	03/07/2014	36.75	24.14	-	-	-	-	12.61	-	
	03/13/2014	36.75	24.06	-	-	-	-	12.69	-	
	03/20/2014	36.75	24.37	-	-	-	-	12.38	-	
	03/27/2014	36.75	24.54	-	-	-	-	12.21	-	
	04/03/2014	36.75	24.26	-	-	-	-	12.49	-	
	04/08/2014	36.75	23.85	-	-	-	-	12.90	-	
	04/17/2014	36.75	24.13	-	-	-	-	12.62	-	
	04/22/2014	36.75	23.92	-	-	-	-	12.83	-	
	04/29/2014	36.75	23.91	-	-	-	-	12.84	-	
	05/05/2014	36.75	22.89	-	-	-	-	13.86	-	
	05/12/2014	36.75	23.02	-	-	-	-	13.73	-	
	05/19/2014	36.75	22.90	-	-	-	-	13.85	-	
	06/02/2014	36.75	23.24	-	-	-	-	13.51	-	
	06/09/2014	36.75	23.21	-	-	-	-	13.54	-	
	06/16/2014	36.75	22.40	-	-	-	-	14.35	-	
	06/23/2014	36.75	22.41	-	-	-	-	14.34	-	
	07/02/2014	36.75	22.40	-	-	-	-	14.35	-	
	07/07/2014	36.75	22.65	-	-	-	25.85	14.10	-	
	07/14/2014	36.75	23.23	-	-	-	-	13.52	-	
	07/24/2014	36.75	23.09	-	-	-	-	13.66	-	
	07/31/2014	36.75	23.26	-	-	-	25.82	13.49	-	
	08/07/2014	Overdrilled and replaced with MW-72S								
MW-72S / RW-72S	08/08/2014	30.63	23.33	-	-	-	25.30	7.30	-	
	08/11/2014	30.63	22.85	-	-	-	-	7.78	-	
	08/15/2014	30.63	21.35	-	-	-	23.90	9.28	-	
	08/18/2014	30.63	21.34	-	-	-	-	9.29	-	
	08/25/2014	30.63	21.41	-	-	-	-	9.22	-	
	09/02/2014	30.63	21.45	-	-	-	-	9.18	-	
	09/15/2014	30.63	21.54	-	-	-	-	9.09	-	
	09/22/2014	30.63	21.56	-	-	-	-	9.07	-	
	10/01/2014	30.63	21.63	-	-	-	23.90	9.00	-	
	10/10/2014	30.63	21.69	-	-	-	-	8.94	-	
	10/20/2014	30.63	21.73	-	-	-	23.88	8.90	-	
	10/27/2014	30.63	21.80	-	-	-	-	8.83	-	
	11/07/2014	30.63	21.83	-	-	-	-	8.80	-	
	11/12/2014	30.63	21.88	-	-	-	-	8.75	-	
	11/21/2014	30.63	22.04	-	-	-	-	8.59	-	
	11/26/2014	30.63	22.10	-	-	-	-	8.53	-	
	12/05/2014	30.63	22.23	-	-	-	-	8.40	-	
	12/11/2014	30.63	22.11	-	-	-	-	8.52	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-72S / RW-72S (cont.)	12/16/2014	30.63	22.00	-	-	-	-	8.63	-	
	12/23/2014	30.63	21.99	-	-	-	-	8.64	-	
	12/30/2014	30.63	21.98	-	-	-	-	8.65	-	
	01/09/2015	30.63	21.94	-	-	-	-	8.69	-	
	01/16/2015	30.63	21.93	-	-	-	-	8.70	-	
	01/19/2015	30.63	21.88	-	-	-	-	8.75	-	
	01/26/2015	30.63	21.78	-	-	-	-	8.85	-	
	02/03/2015	30.63	21.79	-	-	-	23.93	8.84	-	
	02/09/2015	30.63	21.77	-	-	-	-	8.86	-	
	02/18/2015	30.63	21.85	-	-	-	-	8.78	-	
	02/24/2015	30.63	21.90	-	-	-	23.89	8.73	15:53	
	02/25/2015	30.63	21.87	-	-	-	23.75	8.76	14:10	
	03/04/2015	30.63	21.79	-	-	-	-	8.84	13:45	
	03/11/2015	30.63	21.75	-	-	-	-	8.88	12:12	
	03/18/2015	30.63	21.70	-	-	-	-	8.93	10:35	
	03/26/2015	30.63	21.73	-	-	-	23.90	8.90	11:10	
	04/02/2015	30.63	21.78	-	-	-	23.90	8.85	10:55	
	04/08/2015	30.63	21.82	-	-	-	23.87	8.81	9:35	
	04/13/2015	30.63	21.86	-	-	-	-	8.77	10:08	
	04/23/2015	30.63	21.86	-	-	-	23.87	8.77	11:12	
	04/29/2015	30.63	21.85	-	-	-	23.85	8.78	13:56	
	05/04/2015	30.63	21.84	-	-	-	-	8.79	11:06	
	05/11/2015	30.63	21.91	-	-	-	23.90	8.72	10:48	
	05/13/2015	30.63	21.90	-	-	-	-	8.73	9:57	
	05/21/2015	30.63	21.88	-	-	-	23.90	8.75	11:47	
	05/28/2015	30.63	22.04	-	-	-	23.90	8.59	11:27	
	06/02/2015	30.63	22.03	-	-	-	-	8.60	12:30	
	06/09/2015	30.63	21.67	-	-	-	-	8.96	9:56	
	06/16/2015	30.63	21.68	-	-	-	-	8.95	10:50	
	06/26/2015	30.63	21.55	-	-	-	23.80	9.08	10:17	
	07/01/2015	30.63	21.38	-	-	-	-	9.25	11:45	
	08/04/2015	30.63	21.55	-	-	-	23.90	9.08	12:38	
	08/05/2015	30.63	21.51	-	-	-	23.90	9.12	9:25	
	12/01/2015	30.63	24.65	-	-	-	26.17	5.98	11:26	
	03/14/2016	30.63	23.71	-	-	-	26.02	6.92	12:25	
MW-72 / RW-72	08/08/2014	31.06	26.97	-	-	-	34.55	4.09	-	
	08/11/2014	31.06	26.85	-	-	-	-	4.21	-	
	08/15/2014	31.06	27.43	-	-	-	-	3.63	-	
	08/16/2014	31.06	27.05	-	-	-	34.43	4.01	-	
	08/18/2014	31.06	27.00	-	-	-	-	4.06	-	
	08/25/2014	31.06	26.66	-	-	-	-	4.40	-	
	09/02/2014	31.06	27.11	-	-	-	-	3.95	-	
	09/15/2014	31.06	27.02	-	-	-	-	4.04	-	
	09/22/2014	31.06	26.88	-	-	-	-	4.18	-	
	10/01/2014	31.06	27.10	-	-	-	34.48	3.96	-	
	10/10/2014	31.06	26.94	-	-	-	-	4.12	-	
	10/20/2014	31.06	27.19	-	-	-	34.43	3.87	-	
	10/27/2014	31.06	27.34	-	-	-	-	3.72	-	
	11/07/2014	31.06	27.04	-	-	-	-	4.02	-	
	11/12/2014	31.06	27.12	-	-	-	-	3.94	-	
	11/21/2014	31.06	27.82	-	-	-	-	3.24	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-72 / RW-72 (cont.)	11/26/2014	31.06	27.36	-	-	-	-	3.70	-	
	12/05/2014	31.06	27.01	-	-	-	-	4.05	-	
	12/11/2014	31.06	27.03	-	-	-	-	4.03	-	
	12/16/2014	31.06	26.91	-	-	-	-	4.15	-	
	12/23/2014	31.06	26.89	-	-	-	-	4.17	-	
	12/30/2014	31.06	27.36	-	-	-	-	3.70	-	
	01/09/2015	31.06	27.27	-	-	-	-	3.79	-	
	01/16/2015	31.06	27.03	-	-	-	-	4.03	-	
	01/19/2015	31.06	26.98	-	-	-	-	4.08	-	
	01/26/2015	31.06	26.96	-	-	-	-	4.10	-	
	02/03/2015	31.06	27.65	-	-	-	34.19	3.41	-	
	02/09/2015	31.06	27.14	-	-	-	-	3.92	-	
	02/18/2015	31.06	27.11	-	-	-	-	3.95	-	
	02/24/2015	31.06	27.27	-	-	-	-	3.79	13:35	
	02/25/2015	31.06	27.33	-	-	-	34.28	3.73	9:50	
	03/04/2015	31.06	27.17	-	-	-	-	3.89	13:48	
	03/11/2015	31.06	26.98	-	-	-	-	4.08	12:15	
	03/18/2015	31.06	26.94	-	-	-	-	4.12	10:38	
	03/26/2015	31.06	26.78	-	-	-	34.10	4.28	11:13	
	04/02/2015	31.06	26.86	-	-	-	34.15	4.20	10:57	
	04/08/2015	31.06	27.20	-	-	-	33.98	3.86	9:40	
	04/13/2015	31.06	27.11	-	-	-	-	3.95	10:11	
	04/23/2015	31.06	26.61	-	-	-	34.13	4.45	11:15	
	04/29/2015	31.06	26.76	-	-	-	33.95	4.30	14:00	
	05/04/2015	31.06	26.60	-	-	-	-	4.46	11:09	
	05/11/2015	31.06	26.55	-	-	-	33.90	4.51	14:58	
	05/13/2015	31.06	27.12	-	-	-	-	3.94	9:55	
	05/21/2015	31.06	26.81	-	-	-	34.04	4.25	11:49	
	05/28/2015	31.06	27.05	-	-	-	34.00	4.01	11:28	
	06/02/2015	31.06	26.68	-	-	-	-	4.38	12:33	
	06/09/2015	31.06	26.46	-	-	-	-	4.60	10:00	
	06/16/2015	31.06	26.48	-	-	-	-	4.58	10:53	
	06/26/2015	31.06	26.42	-	-	-	34.00	4.64	10:19	
	07/01/2015	31.06	25.91	-	-	-	-	5.15	11:48	
	08/04/2015	31.06	26.19	-	-	-	34.14	4.87	12:35	
	08/05/2015	31.06	26.61	-	-	-	34.26	4.45	9:22	
	12/01/2015	31.06	26.68	-	-	-	-	4.38	13:44	
	03/14/2016	31.06	26.87	-	-	-	-	4.19	9:05	pump in well
	03/30/2016	31.06	31.47	-	-	-	-	-0.41	-	O&M event
MW-100S	08/15/2014	31.06	21.32	-	-	-	24.22	9.74	-	
	08/18/2014	31.06	21.28	-	-	-	-	9.78	-	
	08/25/2014	31.06	21.31	-	-	-	-	9.75	-	
	09/02/2014	31.06	21.39	-	-	-	-	9.67	-	
	09/15/2014	31.06	21.39	-	-	-	-	9.67	-	
	09/22/2014	31.06	21.52	-	-	-	-	9.54	-	
	10/01/2014	31.06	21.62	-	-	-	24.16	9.44	-	
	10/10/2014	31.06	21.61	-	-	-	-	9.45	-	
	10/20/2014	31.06	21.67	-	-	-	24.17	9.39	-	
	02/24/2015	31.06	21.75	-	-	-	24.18	9.31	15:18	
	05/11/2015	31.06	21.55	-	-	-	24.20	9.51	9:55	
	08/04/2015	31.06	20.66	-	-	-	24.15	10.40	12:44	



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-100S (cont.)	08/05/2015	31.06	20.70	-	-	-	24.15	10.36	10:03	
	12/01/2015	31.06	21.57	-	-	-	24.16	9.49	11:38	
	03/14/2016	31.06	21.41	-	-	-	24.20	9.65	9:40	
MW-100	08/15/2014	30.78	26.80	-	-	-	36.90	3.98	-	
	08/18/2014	30.78	26.66	-	-	-	-	4.12	-	
	08/25/2014	30.78	26.26	-	-	-	-	4.52	-	
	09/02/2014	30.78	26.70	-	-	-	-	4.08	-	
	09/15/2014	30.78	26.65	-	-	-	-	4.13	-	
	09/22/2014	30.78	26.48	-	-	-	-	4.30	-	
	10/01/2014	30.78	26.69	-	-	-	36.68	4.09	-	
	10/10/2014	30.78	26.60	-	-	-	-	4.18	-	
	10/20/2014	30.78	26.86	-	-	-	36.58	3.92	-	
	02/24/2015	30.78	26.88	-	-	-	36.61	3.90	13:08	
	02/25/2015	30.78	26.87	-	-	-	36.62	3.91	11:32	
	05/11/2015	30.78	26.17	-	-	-	36.60	4.61	14:57	
	08/04/2015	30.78	25.80	-	-	-	36.80	4.98	12:31	
	08/05/2015	30.78	26.22	-	-	-	36.61	4.56	9:59	
	12/01/2015	30.78	26.25	-	-	-	36.35	4.53	13:24	
	03/14/2016	30.78	26.54	-	-	-	36.46	4.24	9:54	
MW-102	08/15/2014	29.72	29.91	-	-	-	36.64	-0.19	-	
	08/18/2014	29.72	29.81	-	-	-	-	-0.09	-	
	08/25/2014	29.72	28.40	-	-	-	-	1.32	-	
	09/02/2014	29.72	27.23	-	-	-	-	2.49	-	
	09/15/2014	29.72	24.97	-	-	-	-	4.75	-	
	09/22/2014	29.72	24.83	-	-	-	-	4.89	-	
	10/01/2014	29.72	24.73	-	-	-	36.45	4.99	-	
	10/10/2014	29.72	24.66	-	-	-	-	5.06	-	
	10/20/2014	29.72	24.78	-	-	-	36.44	4.94	-	
	05/11/2015	29.72	24.44	-	-	-	36.40	5.28	15:01	
	08/04/2015	29.72	23.39	-	-	-	36.43	6.33	12:35	
	08/05/2015	29.72	23.50	-	-	-	36.42	6.22	10:14	
	12/01/2015	29.72	22.61	-	-	-	31.80	7.11	13:52	
	03/14/2016	29.72	24.11	-	-	-	36.41	5.61	10:04	
MW-103	07/24/2014	11.07	7.87	-	-	-	-	3.20	-	
	08/08/2014	11.07	4.61	-	-	-	15.06	6.46	-	
	08/11/2014	11.07	4.63	-	-	-	-	6.44	-	
	08/15/2014	11.07	4.26	-	-	-	14.95	6.81	-	
	08/18/2014	11.07	4.48	-	-	-	-	6.59	-	
	08/25/2014	11.07	4.45	-	-	-	-	6.62	-	
	09/02/2014	11.07	4.50	-	-	-	-	6.57	-	
	09/15/2014	11.07	4.63	-	-	-	-	6.44	-	
	09/22/2014	11.07	4.76	-	-	-	-	6.31	-	
	10/01/2014	11.07	4.85	-	-	-	14.88	6.22	-	
	10/10/2014	11.07	4.93	-	-	-	-	6.14	-	
	10/20/2014	11.07	4.70	-	-	-	14.88	6.37	-	
	02/24/2015	11.07	5.02	-	-	-	-	6.05	15:27	
	02/26/2015	11.07	5.21	-	-	-	14.90	5.86	11:53	
	05/11/2015	11.07	4.67	-	-	-	14.88	6.40	10:20	
	08/04/2015	11.07	3.69	-	-	-	14.88	7.38	10:19	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-103 (cont.)	08/05/2015	11.07	3.71	-	-	-	14.87	7.36	10:20	
	12/01/2015	11.07	9.70	-	-	-	-	1.37	11:30	
	03/14/2016	11.07	4.15	-	-	-	14.89	6.92	10:08	
MW-104	07/24/2014	12.00	5.24	-	-	-	-	6.76	-	
	08/08/2014	12.00	4.28	-	-	-	12.05	7.72	-	
	08/11/2014	12.00	4.40	-	-	-	-	7.60	-	
	08/15/2014	12.00	3.95	-	-	-	12.20	8.05	-	
	08/18/2014	12.00	4.22	-	-	-	-	7.78	-	
	08/25/2014	12.00	4.29	-	-	-	-	7.71	-	
	09/02/2014	12.00	4.38	-	-	-	-	7.62	-	
	09/15/2014	12.00	4.52	-	-	-	-	7.48	-	
	09/22/2014	12.00	4.73	-	-	-	-	7.27	-	
	10/01/2014	12.00	4.73	-	-	-	11.98	7.27	-	
	10/10/2014	12.00	4.77	-	-	-	-	7.23	-	
	10/20/2014	12.00	3.98	-	-	-	12.07	8.02	-	
	02/24/2015	12.00	5.43	-	-	-	-	6.57	15:38	
	02/26/2015	12.00	5.70	-	-	-	12.00	6.30	12:07	
	05/11/2015	12.00	4.51	-	-	-	12.10	7.49	10:25	
	08/04/2015	12.00	3.82	-	-	-	12.00	8.18	10:08	
	08/05/2015	12.00	3.85	-	-	-	12.50	8.15	10:23	
	12/01/2015	12.00	4.29	-	-	-	12.05	7.71	11:42	
	03/14/2016	12.00	3.80	-	-	-	11.99	8.20	10:14	
MW-105	07/24/2014	10.94	2.34	-	-	-	-	8.60	-	
	08/08/2014	10.94	2.15	-	-	-	10.06	8.79	-	
	08/11/2014	10.94	2.39	-	-	-	-	8.55	-	
	08/15/2014	10.94	1.67	-	-	-	9.95	9.27	-	
	08/18/2014	10.94	2.06	-	-	-	-	8.88	-	
	08/25/2014	10.94	2.25	-	-	-	-	8.69	-	
	09/02/2014	10.94	2.24	-	-	-	-	8.70	-	
	09/15/2014	10.94	2.32	-	-	-	-	8.62	-	
	09/22/2014	10.94	2.71	-	-	-	-	8.23	-	
	10/01/2014	10.94	2.57	-	-	-	9.88	8.37	-	
	10/10/2014	10.94	2.70	-	-	-	-	8.24	-	
	10/20/2014	10.94	1.70	-	-	-	9.93	9.24	-	
	05/11/2015	10.94	2.40	-	-	-	9.70	8.54	10:35	
	08/04/2015	10.94	1.65	-	-	-	9.62	9.29	10:15	
	08/05/2015	10.94	1.67	-	-	-	9.60	9.27	10:26	
	12/01/2015	10.94	NG	-	-	-	-	-	-	Well flooded
	03/14/2016	10.94	0.30	-	-	-	9.24	10.64	10:17	
MW-106	08/08/2014	11.12	8.30	-	-	-	10.27	2.82	-	
	08/11/2014	11.12	8.27	-	-	-	-	2.85	-	
	08/15/2014	11.12	7.63	-	-	-	9.88	3.49	-	
	08/18/2014	11.12	7.58	-	-	-	-	3.54	-	
	08/25/2014	11.12	7.52	-	-	-	-	3.60	-	
	09/02/2014	11.12	7.79	-	-	-	-	3.33	-	
	09/15/2014	11.12	7.90	-	-	-	-	3.22	-	
	09/22/2014	11.12	7.87	-	-	-	-	3.25	-	
	10/01/2014	11.12	7.93	-	-	-	9.88	3.19	-	
	10/10/2014	11.12	7.71	-	-	-	-	3.41	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-106 (cont.)	10/13/2014	11.12	7.92	-	-	-	-	3.20	-	
	10/20/2014	11.12	7.86	-	-	-	9.88	3.26	-	
	10/27/2014	11.12	7.77	-	-	-	-	3.35	-	
	11/07/2014	11.12	7.83	-	-	-	-	3.29	-	
	11/12/2014	11.12	7.88	-	-	-	-	3.24	-	
	11/21/2014	11.12	8.23	-	-	-	-	2.89	-	
	11/26/2014	11.12	8.03	-	-	-	-	3.09	-	
	12/05/2014	11.12	7.21	-	-	-	-	3.91	-	
	12/11/2014	11.12	6.95	-	-	-	-	4.17	-	
	12/16/2014	11.12	7.18	-	-	-	-	3.94	-	
	12/23/2014	11.12	7.31	-	-	-	-	3.81	-	
	12/30/2014	11.12	6.97	-	-	-	-	4.15	-	
	01/09/2015	11.12	7.34	-	-	-	-	3.78	-	
	01/16/2015	11.12	6.88	-	-	-	-	4.24	-	
	01/19/2015	11.12	6.77	-	-	-	-	4.35	-	
	01/26/2015	11.12	5.79	-	-	-	-	5.33	-	
	02/03/2015	11.12	7.24	-	-	-	9.90	3.88	-	
	02/09/2015	11.12	7.42	-	-	-	-	3.70	-	
	02/18/2015	11.12	7.63	-	-	-	-	3.49	-	
	02/24/2015	11.12	7.76	-	-	-	9.84	3.36	13:18	
	02/25/2015	11.12	7.80	-	-	-	9.79	3.32	10:20	
	03/04/2015	11.12	7.57	-	-	-	-	3.55	13:52	
	03/11/2015	11.12	5.17	-	-	-	-	5.95	12:19	
	03/18/2015	11.12	6.39	-	-	-	-	4.73	10:42	
	03/26/2015	11.12	7.02	-	-	-	9.90	4.10	11:02	
	04/02/2015	11.12	7.15	-	-	-	9.85	3.97	10:47	
	04/08/2015	11.12	7.55	-	-	-	9.87	3.57	9:46	
	04/13/2015	11.12	7.63	-	-	-	-	3.49	10:18	
	04/23/2015	11.12	6.70	-	-	-	9.85	4.42	11:00	
	04/29/2015	11.12	7.15	-	-	-	9.85	3.97	13:34	
	05/04/2015	11.12	7.23	-	-	-	-	3.89	11:17	
	05/11/2015	11.12	7.43	-	-	-	9.85	3.69	14:51	
	05/12/2015	11.12	7.50	-	-	-	-	3.62	10:35	
	05/21/2015	11.12	7.62	-	-	-	9.85	3.50	11:55	
	05/28/2015	11.12	7.81	-	-	-	9.80	3.31	11:11	
	06/02/2015	11.12	6.66	-	-	-	-	4.46	12:38	
	06/09/2015	11.12	6.37	-	-	-	-	4.75	10:04	
	06/16/2015	11.12	7.21	-	-	-	-	3.91	11:01	
	06/26/2015	11.12	6.27	-	-	-	9.90	4.85	9:13	
	07/01/2015	11.12	4.77	-	-	-	-	6.35	11:54	
	08/04/2015	11.12	7.42	-	-	-	9.86	3.70	12:19	
	12/01/2015	11.12	7.65	-	-	-	9.85	3.47	13:45	
	03/14/2016	11.12	7.33	-	-	-	9.84	3.79	9:10	
MW-107	08/08/2014	15.74	10.62	-	-	-	11.57	5.12	-	
	08/11/2014	15.74	9.02	-	-	-	-	6.72	-	
	08/15/2014	15.74	8.94	-	-	-	-	6.80	-	
	08/16/2014	15.74	8.93	-	-	-	11.57	6.81	-	
	08/18/2014	15.74	8.89	-	-	-	-	6.85	-	
	08/25/2014	15.74	8.38	-	-	-	-	7.36	-	
	09/02/2014	15.74	8.43	-	-	-	-	7.31	-	
	09/15/2014	15.74	9.39	-	-	-	-	6.35	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-107 (cont.)	09/22/2014	15.74	9.92	-	-	-	-	5.82	-	
	10/01/2014	15.74	10.32	-	-	-	11.03	5.42	-	
	10/10/2014	15.74	10.53	-	-	-	-	5.21	-	
	10/13/2014	15.74	10.67	-	-	-	-	5.07	-	
	10/20/2014	15.74	8.43	-	-	-	11.04	7.31	-	
	10/27/2014	15.74	7.97	-	-	-	-	7.77	-	
	11/07/2014	15.74	8.32	-	-	-	-	7.42	-	
	11/12/2014	15.74	8.63	-	-	-	-	7.11	-	
	11/21/2014	15.74	9.38	-	-	-	-	6.36	-	
	11/26/2014	15.74	8.93	-	-	-	-	6.81	-	
	12/05/2014	15.74	7.47	-	-	-	-	8.27	-	
	12/11/2014	15.74	7.43	-	-	-	-	8.31	-	
	12/16/2014	15.74	8.28	-	-	-	-	7.46	-	
	12/23/2014	15.74	8.35	-	-	-	-	7.39	-	
	12/30/2014	15.74	8.20	-	-	-	-	7.54	-	
	01/09/2015	15.74	8.03	-	-	-	-	7.71	-	
	01/16/2015	15.74	7.68	-	-	-	-	8.06	-	
	01/19/2015	15.74	6.76	-	-	-	-	8.98	-	
	01/26/2015	15.74	5.84	-	-	-	-	9.90	-	
	02/03/2015	15.74	8.63	-	-	-	11.04	7.11	-	
	02/09/2015	15.74	8.73	-	-	-	-	7.01	-	
	02/18/2015	15.74	9.21	-	-	-	-	6.53	-	
	02/24/2015	15.74	9.78	-	-	-	11.00	5.96	13:23	
	02/25/2015	15.74	9.64	-	-	-	11.00	6.10	11:40	
	03/04/2015	15.74	9.48	-	-	-	-	6.26	13:55	
	03/11/2015	15.74	4.08	-	-	-	-	11.66	12:22	
	03/18/2015	15.74	7.44	-	-	-	-	8.30	10:45	
	03/26/2015	15.74	8.98	-	-	-	11.00	6.76	11:05	
	04/02/2015	15.74	8.63	-	-	-	11.00	7.11	10:49	
	04/08/2015	15.74	9.00	-	-	-	11.00	6.74	9:45	
	04/13/2015	15.74	9.06	-	-	-	-	6.68	10:21	
	04/23/2015	15.74	7.18	-	-	-	11.00	8.56	11:04	
	04/29/2015	15.74	9.14	-	-	-	11.00	6.60	13:39	
	05/04/2015	15.74	9.03	-	-	-	-	6.71	11:14	
	05/11/2015	15.74	9.19	-	-	-	11.00	6.55	14:49	
	05/12/2015	15.74	9.25	-	-	-	-	6.49	10:37	
	05/21/2015	15.74	9.21	-	-	-	11.00	6.53	11:57	
	05/28/2015	15.74	9.27	-	-	-	11.00	6.47	11:13	
	06/02/2015	15.74	3.95	-	-	-	-	11.79	12:41	
	06/09/2015	15.74	6.78	-	-	-	-	8.96	10:07	
	06/16/2015	15.74	9.05	-	-	-	-	6.69	10:58	
	06/26/2015	15.74	6.86	-	-	-	11.00	8.88	9:15	
	07/01/2015	15.74	4.03	-	-	-	-	11.71	11:51	
	08/04/2015	15.74	9.40	-	-	-	11.00	6.34	12:21	
	12/01/2015	15.74	8.80	-	-	-	11.01	6.94	13:47	
	03/14/2016	15.74	8.09	-	-	-	11.03	7.65	9:15	
MW-108	08/08/2014	15.61	DRY	-	-	-	9.49	-	-	
	08/11/2014	15.61	DRY	-	-	-	9.52	-	-	
	08/15/2014	15.61	9.01	-	-	-	9.22	6.60	-	
	08/18/2014	15.61	9.07	-	-	-	-	6.54	-	
	08/25/2014	15.61	DRY	-	-	-	9.23	-	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-108 (cont.)	09/02/2014	15.61	DRY	-	-	-	9.23	-	-	
	09/15/2014	15.61	DRY	-	-	-	9.22	-	-	
	09/22/2014	15.61	DRY	-	-	-	-	-	-	
	10/01/2014	15.61	DRY	-	-	-	10.48	-	-	
	10/10/2014	15.61	DRY	-	-	-	-	-	-	
	10/20/2014	15.61	DRY	-	-	-	10.48	-	-	
	05/11/2015	15.61	DRY	-	-	-	9.20	-	14:47	
	05/12/2015	15.61	DRY	-	-	-	-	-	10:40	
	08/04/2015	15.61	DRY	-	-	-	9.21	-	12:27	
	12/01/2015	15.61	DRY	-	-	-	9.21	-	13:49	
	03/14/2016	15.61	DRY	-	-	-	9.22	-	9:18	
MW-109S	08/25/2014	19.27	10.06	-	-	-	-	9.21	-	
	09/15/2014	19.27	10.19	-	-	-	-	9.08	-	
	09/22/2014	19.27	10.24	-	-	-	-	9.03	-	
	10/01/2014	19.27	10.33	-	-	-	13.20	8.94	-	
	10/10/2014	19.27	10.47	-	-	-	-	8.80	-	
	10/13/2014	19.27	10.58	-	-	-	-	8.69	-	
	10/20/2014	19.27	10.67	-	-	-	13.20	8.60	-	
	10/27/2014	19.27	10.83	-	-	-	-	8.44	-	
	11/07/2014	19.27	10.76	-	-	-	-	8.51	-	
	11/12/2014	19.27	10.85	-	-	-	-	8.42	-	
	11/21/2014	19.27	11.04	-	-	-	-	8.23	-	
	11/26/2014	19.27	11.02	-	-	-	-	8.25	-	
	02/24/2015	19.27	11.43	-	-	-	13.06	7.84	13:55	
	02/26/2015	19.27	11.36	-	-	-	13.06	7.91	10:40	
	05/11/2015	19.27	11.31	-	-	-	13.20	7.96	15:06	
	05/12/2015	19.27	11.28	-	-	-	13.20	7.99	10:00	
	05/21/2015	19.27	11.40	-	-	-	13.06	7.87	12:34	
MW-109	08/25/2014	19.16	14.59	-	-	-	-	4.57	-	
	09/15/2014	19.16	14.98	-	-	-	-	4.18	-	
	09/22/2014	19.16	14.88	-	-	-	-	4.28	-	
	10/01/2014	19.16	15.07	-	-	-	22.79	4.09	-	
	10/10/2014	19.16	14.96	-	-	-	-	4.20	-	
	10/13/2014	19.16	15.09	-	-	-	-	4.07	-	
	10/20/2014	19.16	15.22	-	-	-	22.72	3.94	-	
	10/27/2014	19.16	15.27	-	-	-	-	3.89	-	
	11/07/2014	19.16	15.07	-	-	-	-	4.09	-	
	11/12/2014	19.16	15.13	-	-	-	-	4.03	-	
	11/21/2014	19.16	15.81	-	-	-	-	3.35	-	
	11/26/2014	19.16	15.33	-	-	-	-	3.83	-	
	02/24/2015	19.16	15.25	-	-	-	22.80	3.91	13:58	
	02/26/2015	19.16	15.25	-	-	-	22.80	3.91	10:44	
	05/11/2015	19.16	14.61	-	-	-	22.84	4.55	15:04	
	05/12/2015	19.16	14.77	-	-	-	22.84	4.39	9:57	
	05/21/2015	19.16	15.23	-	-	-	22.80	3.93	12:36	
MW-110S	08/25/2014	19.13	10.05	-	-	-	12.70	9.08	-	
	09/15/2014	19.13	10.23	-	-	-	-	8.90	-	
	09/22/2014	19.13	10.28	-	-	-	-	8.85	-	
	10/01/2014	19.13	10.33	-	-	-	12.65	8.80	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-110S (cont.)	10/10/2014	19.13	10.41	-	-	-	-	8.72	-	
	10/20/2014	19.13	10.45	-	-	-	12.66	8.68	-	
	10/27/2014	19.13	10.48	-	-	-	-	8.65	-	
	11/07/2014	19.13	10.50	-	-	-	-	8.63	-	
	11/12/2014	19.13	10.53	-	-	-	-	8.60	-	
	11/21/2014	19.13	10.60	-	-	-	-	8.53	-	
	11/26/2014	19.13	10.60	-	-	-	-	8.53	-	
	02/24/2015	19.13	11.53	-	-	-	12.67	7.60	13:49	
	02/26/2015	19.13	11.59	-	-	-	12.67	7.54	10:33	
	05/11/2015	19.13	12.24	-	-	-	12.65	6.89	14:56	
	05/12/2015	19.13	12.24	-	-	-	12.65	6.89	9:47	
	05/21/2015	19.13	11.55	-	-	-	12.67	7.58	12:38	
MW-110	08/25/2014	19.51	14.70	-	-	-	24.40	4.81	-	
	09/15/2014	19.51	15.11	-	-	-	-	4.40	-	
	09/22/2014	19.51	14.98	-	-	-	-	4.53	-	
	10/01/2014	19.51	15.18	-	-	-	23.33	4.33	-	
	10/10/2014	19.51	15.07	-	-	-	-	4.44	-	
	10/20/2014	19.51	14.35	-	-	-	23.34	5.16	-	
	10/27/2014	19.51	14.39	-	-	-	-	5.12	-	
	11/07/2014	19.51	15.18	-	-	-	-	4.33	-	
	11/12/2014	19.51	15.25	-	-	-	-	4.26	-	
	11/21/2014	19.51	15.97	-	-	-	-	3.54	-	
	11/26/2014	19.51	15.45	-	-	-	-	4.06	-	
	02/24/2015	19.51	15.38	-	-	-	23.36	4.13	13:52	
	02/26/2015	19.51	15.38	-	-	-	23.36	4.13	10:36	
	05/11/2015	19.51	14.74	-	-	-	23.42	4.77	14:54	
	05/12/2015	19.51	14.91	-	-	-	23.42	4.60	9:44	
	05/21/2015	19.51	15.40	-	-	-	23.36	4.11	12:40	
MW-111	10/10/2014	19.17	14.97	-	-	-	-	4.20	-	
	10/20/2014	19.17	14.25	-	-	-	21.97	4.92	-	
	02/24/2015	19.17	15.30	-	-	-	21.96	3.87	13:43	
	02/26/2015	19.17	15.28	-	-	-	21.96	3.89	10:25	
	05/11/2015	19.17	14.66	-	-	-	21.87	4.51	14:51	
	05/12/2015	19.17	14.78	-	-	-	21.87	4.39	9:41	
MW-112S	08/15/2014	19.22	10.31	-	-	-	12.40	8.91	-	
	08/18/2014	19.22	10.22	-	-	-	12.45	9.00	-	
	08/25/2014	19.22	10.29	-	-	-	-	8.93	-	
	09/15/2014	19.22	10.43	-	-	-	-	8.79	-	
	09/22/2014	19.22	10.56	-	-	-	-	8.66	-	
	10/01/2014	19.22	10.58	-	-	-	12.46	8.64	-	
	10/10/2014	19.22	10.64	-	-	-	-	8.58	-	
	10/20/2014	19.22	10.75	-	-	-	12.47	8.47	-	
	02/24/2015	19.22	11.30	-	-	-	12.48	7.92	13:37	
	02/26/2015	19.22	11.34	-	-	-	12.48	7.88	10:19	
	05/11/2015	19.22	11.21	-	-	-	12.44	8.01	15:01	
	05/12/2015	19.22	11.21	-	-	-	12.44	8.01	9:54	
MW-112	08/15/2014	19.08	15.11	-	-	-	22.55	3.97	-	
	08/18/2014	19.08	14.43	-	-	-	22.31	4.65	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-112 (cont.)	08/25/2014	19.08	14.53	-	-	-	-	4.55	-	
	09/02/2014	19.08	NR <sup>3</sup>	-	-	-	-	-	-	
	09/15/2014	19.08	14.85	-	-	-	-	4.23	-	
	09/22/2014	19.08	14.77	-	-	-	-	4.31	-	
	10/01/2014	19.08	14.92	-	-	-	22.83	4.16	-	
	10/10/2014	19.08	14.87	-	-	-	-	4.21	-	
	10/20/2014	19.08	15.15	-	-	-	22.83	3.93	-	
	02/24/2015	19.08	15.19	-	-	-	22.75	3.89	13:40	
	02/26/2015	19.08	15.15	-	-	-	22.75	3.93	10:22	
	05/11/2015	19.08	14.52	-	-	-	22.83	4.56	14:59	
	05/12/2015	19.08	14.64	-	-	-	22.83	4.44	9:51	
MW-113	08/25/2014	19.11	14.49	-	-	-	-	4.62	-	
	09/15/2014	19.11	14.96	-	-	-	-	4.15	-	
	09/22/2014	19.11	14.83	-	-	-	-	4.28	-	
	10/01/2014	19.11	15.04	-	-	-	22.95	4.07	-	
	10/10/2014	19.11	14.84	-	-	-	-	4.27	-	
	10/20/2014	19.11	15.20	-	-	-	22.95	3.91	-	
	02/24/2015	19.11	15.24	-	-	-	22.95	3.87	13:46	
	02/26/2015	19.11	15.27	-	-	-	22.95	3.84	10:29	
	05/11/2015	19.11	14.58	-	-	-	22.77	4.53	14:48	
	05/12/2015	19.11	14.81	-	-	-	22.77	4.30	9:38	
MW-114	08/25/2014	19.26	14.62	-	-	-	22.78	4.64	-	
	09/15/2014	19.26	14.89	-	-	-	-	4.37	-	
	09/22/2014	19.26	14.87	-	-	-	-	4.39	-	
	10/01/2014	19.26	14.96	-	-	-	22.77	4.30	-	
	10/10/2014	19.26	15.01	-	-	-	-	4.25	-	
	10/20/2014	19.26	15.29	-	-	-	22.77	3.97	-	
	02/24/2015	19.26	15.25	-	-	-	22.77	4.01	13:34	
	02/26/2015	19.26	15.10	-	-	-	22.77	4.16	10:15	
	05/11/2015	19.26	14.52	-	-	-	22.75	4.74	14:45	
	05/12/2015	19.26	14.51	-	-	-	22.75	4.75	9:35	
MW-121	07/08/2015	31.48	26.52	-	-	-	-	4.96	11:21	
	07/13/2015	31.48	26.14	-	-	-	36.93	5.34	9:28	
	07/20/2015	31.48	26.37	-	-	-	-	5.11	9:25	
	07/28/2015	31.48	26.53	-	-	-	37.06	4.95	11:38	
	08/04/2015	30.88	25.91	-	-	-	36.33	4.97	12:22	
	08/11/2015	30.88	25.58	-	-	-	36.31	5.30	9:59	
	08/18/2015	30.88	26.12	-	-	-	-	4.76	10:23	
	08/24/2015	30.88	26.02	-	-	-	-	4.86	10:23	
	09/02/2015	30.88	26.38	-	-	-	36.31	4.50	9:45	
	09/09/2015	30.88	26.11	-	-	-	36.29	4.77	10:23	
	09/17/2015	30.88	26.51	-	-	-	36.41	4.37	10:27	
	09/23/2015	30.88	26.32	-	-	-	-	4.56	10:43	
	09/28/2015	30.88	26.18	-	-	-	36.25	4.70	9:24	
	10/05/2015	30.88	26.02	-	-	-	36.25	4.86	9:18	
	11/10/2015	30.88	26.62	-	-	-	-	4.26	13:06	
	12/01/2015	30.88	26.48	-	-	-	36.20	4.40	13:56	
	01/27/2016	30.88	26.58	-	-	-	-	4.30	9:44	
	02/15/2016	30.88	27.11	-	-	-	-	3.77	9:30	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
MW-121 (cont.)	03/14/2016	30.88	26.57	-	-	-	36.28	4.31	8:45	
MW-122	07/08/2015	31.12	25.58	-	-	-	-	5.54	11:32	
	07/13/2015	31.12	25.36	-	-	-	34.72	5.76	9:29	
	07/20/2015	31.12	25.20	-	-	-	-	5.92	9:31	
	07/28/2015	31.12	25.38	-	-	-	34.85	5.74	11:13	
	08/04/2015	31.12	25.54	-	-	-	34.61	5.58	12:24	
	08/11/2015	31.12	25.46	-	-	-	34.79	5.66	9:58	
	08/18/2015	31.12	25.98	-	-	-	-	5.14	10:30	
	08/24/2015	31.12	25.83	-	-	-	-	5.29	10:37	
	09/02/2015	31.12	26.21	-	-	-	34.76	4.91	9:41	
	09/09/2015	31.12	26.03	-	-	-	34.78	5.09	10:21	
	09/17/2015	31.12	26.45	-	-	-	34.83	4.67	10:25	
	09/23/2015	31.12	26.18	-	-	-	-	4.94	10:46	
	09/28/2015	31.12	25.98	-	-	-	34.72	5.14	9:48	
	10/05/2015	31.12	25.50	TRACE	TRACE	-	34.72	5.62	9:13	
	11/10/2015	31.12	26.32	-	-	-	-	4.80	13:07	
	12/01/2015	31.12	26.57	-	-	-	34.72	4.55	13:53	
	01/27/2016	31.12	26.63	-	-	-	-	4.49	9:47	
	02/15/2016	31.12	27.05	-	-	-	-	4.07	9:33	
	03/14/2016	31.12	26.47	-	-	-	34.77	4.65	8:50	
MW-123S / RW-123S	07/08/2015	31.09	DRY	-	-	-	24.92	-	11:35	
	07/13/2015	31.09	23.96	-	-	-	24.90	7.13	9:17	
	07/20/2015	31.09	22.37	-	-	-	-	8.72	9:22	
	07/28/2015	31.09	22.15	-	-	-	24.98	8.94	11:05	
	08/04/2015	31.09	22.04	-	-	-	24.91	9.05	13:08	
	08/05/2015	31.09	22.07	-	-	-	24.93	9.02	9:16	
	08/11/2015	31.09	22.04	-	-	-	24.91	9.05	10:10	
	08/18/2015	31.09	22.05	-	-	-	-	9.04	9:50	
	08/24/2015	31.09	22.08	-	-	-	-	9.01	9:53	
	09/02/2015	31.09	22.26	22.25	0.01	TRACE	24.92	8.83	9:28	
	09/09/2015	31.09	22.33	-	-	-	24.92	8.76	10:28	
	09/17/2015	31.09	22.56	-	-	-	24.97	8.53	10:19	
	09/23/2015	31.09	22.57	-	-	-	-	8.52	10:11	
	09/28/2015	31.09	22.59	-	-	-	24.91	8.50	9:30	
	10/05/2015	31.09	22.61	TRACE	TRACE	-	24.92	8.48	9:09	
	11/10/2015	31.09	25.31	-	-	-	-	5.78	12:43	
	12/01/2015	33.54	25.53	-	-	-	27.40	8.01	10:55	
	01/27/2016	33.54	25.76	-	-	-	-	7.78	9:57	
	02/15/2016	33.54	24.93	-	-	-	-	8.61	9:43	
	03/14/2016	33.54	24.35	-	-	-	27.39	9.19	12:00	
RW-1	10/10/2014	31.19	26.93	-	-	-	-	4.26	-	
	10/13/2014	31.19	27.09	-	-	-	-	4.10	-	
	10/20/2014	31.19	27.27	-	-	-	40.65	3.92	-	
	10/27/2014	31.19	27.35	-	-	-	-	3.84	-	
	11/07/2014	31.19	27.10	-	-	-	-	4.09	-	
	11/12/2014	31.19	27.15	-	-	-	-	4.04	-	
	11/21/2014	31.19	27.83	-	-	-	-	3.36	-	
	11/26/2014	31.19	27.42	-	-	-	-	3.77	-	
	12/05/2014	31.19	27.25	-	-	-	-	3.94	-	



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
RW-1 (cont.)	12/11/2014	31.19	27.09	-	-	-	-	4.10	-	
	12/16/2014	31.19	26.98	-	-	-	-	4.21	-	
	12/23/2014	31.19	26.98	-	-	-	-	4.21	-	
	12/30/2014	31.19	27.38	-	-	-	-	3.81	-	
	01/09/2015	31.19	27.37	-	-	-	-	3.82	-	
	01/16/2015	31.19	27.08	-	-	-	-	4.11	-	
	01/19/2015	31.19	27.07	-	-	-	-	4.12	-	
	01/26/2015	31.19	27.03	-	-	-	-	4.16	-	
	02/03/2015	31.19	27.80	-	-	-	40.75	3.39	-	
	02/09/2015	31.19	27.18	-	-	-	-	4.01	-	
	02/18/2015	31.19	27.22	-	-	-	-	3.97	-	
	02/24/2015	31.19	27.42	-	-	-	40.35	3.77	13:49	
	03/04/2015	31.19	27.27	-	-	-	-	3.92	14:12	
	03/11/2015	31.19	26.90	-	-	-	-	4.29	12:42	
	03/18/2015	31.19	27.04	-	-	-	-	4.15	11:02	
	03/26/2015	31.19	26.87	-	-	-	40.70	4.32	11:35	
	04/02/2015	31.19	27.02	-	-	-	40.60	4.17	11:23	
	04/08/2015	31.19	27.30	-	-	-	40.55	3.89	8:45	
	04/13/2015	31.19	27.18	-	-	-	-	4.01	10:38	
	04/23/2015	31.19	26.67	-	-	-	40.65	4.52	11:52	
	04/29/2015	31.19	26.87	-	-	-	40.70	4.32	14:19	
	05/04/2015	31.19	26.72	-	-	-	-	4.47	11:36	
	05/11/2015	31.19	26.70	-	-	-	40.78	4.49	15:03	
	05/12/2015	31.19	26.92	-	-	-	40.63	4.27	14:15	
	05/21/2015	31.19	26.90	-	-	-	40.70	4.29	12:20	
	05/28/2015	31.19	27.11	-	-	-	40.60	4.08	11:43	
	06/02/2015	31.19	26.79	-	-	-	-	4.40	13:01	
	06/09/2015	31.19	26.57	-	-	-	-	4.62	10:27	
	06/16/2015	31.19	26.60	-	-	-	-	4.59	11:21	
	06/26/2015	31.19	26.52	-	-	-	40.50	4.67	10:37	
	07/01/2015	31.19	26.07	-	-	-	-	5.12	12:12	
	08/04/2015	31.19	26.30	-	-	-	40.66	4.89	12:16	
	08/05/2015	31.19	26.67	-	-	-	40.65	4.52	9:08	
	12/01/2015	31.19	26.77	-	-	-	40.67	4.42	13:41	
	03/14/2016	31.19	26.95	-	-	-	40.65	4.24	8:40	
RW-05S	07/08/2015	31.38	22.72	-	-	-	-	8.66	11:25	
	07/13/2015	31.38	22.57	-	-	-	26.03	8.81	9:34	
	07/20/2015	31.38	21.82	-	-	-	-	9.56	9:28	
	07/28/2015	31.38	21.77	-	-	-	26.07	9.61	11:21	
	08/05/2015	31.38	21.87	-	-	-	26.03	9.51	9:27	
	08/11/2015	31.38	21.95	-	-	-	26.06	9.43	10:05	
	08/18/2015	31.38	22.17	-	-	-	-	9.21	10:27	
	08/24/2015	31.38	22.42	-	-	-	-	8.96	10:20	
	09/02/2015	31.38	22.47	-	-	-	26.05	8.91	9:49	
	09/09/2015	31.38	22.60	-	-	-	26.07	8.78	10:25	
	09/17/2015	31.38	22.69	-	-	-	26.07	8.69	10:30	
	09/23/2015	31.38	22.69	-	-	-	-	8.69	10:37	
	09/28/2015	31.38	22.78	-	-	-	26.07	8.60	9:26	
	10/05/2015	31.38	22.71	-	-	-	26.20	8.67	9:15	
	11/10/2015	31.38	25.07	-	-	-	-	6.31	13:05	
	12/01/2015	33.47	25.36	-	-	-	28.15	8.11	11:51	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
RW-05S (cont.)	01/27/2016	33.47	26.23	-	-	-	-	7.24	10:40	
	02/15/2016	33.47	25.44	-	-	-	-	8.03	10:27	
	03/14/2016	33.47	25.21	-	-	-	28.20	8.26	11:40	
RW-25S	07/08/2015	30.97	DRY	-	-	-	24.64	-	11:43	
	07/13/2015	30.97	DRY	-	-	-	24.65	-	9:39	
	07/20/2015	30.97	DRY	-	-	-	-	-	9:40	
	07/28/2015	30.97	DRY	-	-	-	24.71	-	10:47	
	08/04/2015	30.97	DRY	-	-	-	24.64	-	13:06	
	08/11/2015	30.97	DRY	-	-	-	-	-	11:25	
	08/18/2015	30.97	24.62	-	-	-	-	6.35	10:36	
	08/24/2015	30.97	24.56	-	-	-	-	6.41	10:33	
	09/02/2015	30.97	NR	24.51	-	0.01	24.69	NA	10:23	
	09/09/2015	30.97	NR	24.50	-	0.01	24.69	NA	11:00	
	09/17/2015	30.97	NR	24.54	-	-	24.65	NA	10:50	LNAPL not manually bailed
	09/23/2015	30.97	24.62	24.50	0.12	0.01	24.62	6.35	10:56	
	09/28/2015	30.97	NR	24.57	TRACE	TRACE	24.65	NA	9:55	
	10/05/2015	30.97	NR	24.54	-	TRACE	24.59	NA	11:27	
	11/10/2015	30.97	NR	26.28	-	-	26.38	NA	13:36	LNAPL not manually bailed
	12/01/2015	32.70	26.34	26.27	0.07	-	26.36	6.36	11:55	LNAPL not manually bailed
	01/27/2016	32.70	26.30	26.22	0.08	-	-	6.40	11:04	LNAPL not manually bailed
	02/15/2016	32.70	25.59	25.42	0.17	-	-	7.11	10:44	LNAPL not manually bailed
	03/14/2016	32.70	24.45	24.44	0.01	-	-	8.25	13:00	LNAPL not manually bailed
RW-28S	07/08/2015	31.35	26.40	-	-	-	-	4.95	10:42	
	07/13/2015	31.35	25.20	-	-	-	26.66	6.15	9:11	
	07/20/2015	31.35	24.14	-	-	-	-	7.21	8:55	
	07/28/2015	31.35	23.92	-	-	-	26.73	7.43	10:04	
	08/04/2015	31.35	23.97	-	-	-	26.67	7.38	13:21	
	08/05/2015	31.35	24.98	-	-	-	26.66	6.37	8:18	
	08/11/2015	31.35	24.03	-	-	-	26.65	7.32	9:42	
	08/18/2015	31.35	24.13	-	-	-	-	7.22	10:00	
	08/24/2015	31.35	24.18	-	-	-	-	7.17	10:03	
	09/02/2015	31.35	24.31	-	-	-	26.68	7.04	9:10	
	09/09/2015	31.35	24.41	-	-	-	26.65	6.94	9:58	
	09/17/2015	31.35	24.55	-	-	-	26.69	6.80	9:51	
	09/23/2015	31.35	24.58	-	-	-	-	6.77	10:21	
	09/28/2015	31.35	24.65	-	-	-	26.60	6.70	9:40	
	10/05/2015	31.35	24.60	-	-	-	26.68	6.75	8:58	
	11/10/2015	31.35	26.71	-	-	-	-	4.64	12:48	
	12/01/2015	32.98	26.91	-	-	-	28.28	6.07	12:34	
	01/27/2016	32.98	27.09	-	-	-	-	5.89	10:10	
	02/15/2016	32.98	25.86	-	-	-	-	7.12	9:51	
	03/14/2016	32.98	25.74	-	-	-	28.30	7.24	12:15	
RW-30S	06/26/2015	31.32	Dry	-	-	-	28.40	-	9:28	
	07/01/2015	31.32	24.02	-	-	-	-	7.30	12:03	
	07/08/2015	31.32	25.39	-	-	-	-	5.93	10:51	
	07/13/2015	31.32	26.60	-	-	-	28.40	4.72	9:12	
	07/20/2015	31.32	26.07	-	-	-	-	5.25	9:01	
	07/28/2015	31.32	26.04	-	-	-	28.48	5.28	10:13	
	08/04/2015	31.32	26.07	-	-	-	28.40	5.25	13:25	

Table 2

**GROUNDWATER GAUGING DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
RW-30S (cont.)	08/05/2015	31.32	26.05	-	-	-	28.42	5.27	8:20	
	08/11/2015	31.32	26.42	-	-	-	28.44	4.90	9:44	
	08/18/2015	31.32	26.31	-	-	-	-	5.01	9:53	
	08/24/2015	31.32	26.28	-	-	-	-	5.04	9:56	
	09/02/2015	31.32	26.37	26.36	0.01	TRACE	28.45	4.95	9:14	
	09/09/2015	31.32	26.38	-	-	-	28.43	4.94	10:08	
	09/17/2015	31.32	26.52	-	-	-	28.46	4.80	10:05	
	09/23/2015	31.32	26.47	-	-	-	-	4.85	10:15	
	09/28/2015	31.32	26.42	-	-	-	28.41	4.90	9:37	
	10/05/2015	31.32	26.20	-	-	-	28.41	5.12	9:05	
	11/10/2015	31.32	28.73	-	-	-	-	2.59	12:46	
	12/01/2015	33.63	28.99	-	-	-	30.54	4.64	12:36	
	01/27/2016	33.63	29.08	-	-	-	-	4.55	10:01	
	02/15/2016	33.63	29.44	-	-	-	-	4.19	9:47	
	03/14/2016	33.63	28.78	-	-	-	30.60	4.85	12:10	
RW-116S	07/08/2015	31.80	22.48	-	-	-	-	9.32	11:28	
	07/13/2015	31.80	22.03	-	-	-	26.20	9.77	9:24	
	07/20/2015	31.80	21.77	-	-	-	-	10.03	9:10	
	07/28/2015	31.44	21.46	-	-	-	25.90	9.98	10:31	
	08/04/2015	31.44	21.55	-	-	-	25.82	9.89	13:11	
	08/05/2015	31.44	21.57	-	-	-	25.82	9.87	9:05	
	08/11/2015	31.44	21.72	-	-	-	24.88	9.72	10:31	
	08/18/2015	31.44	21.79	-	-	-	-	9.65	10:13	
	08/24/2015	31.44	21.90	-	-	-	-	9.54	10:16	
	09/02/2015	31.44	22.06	-	-	-	25.86	9.38	10:05	
	09/09/2015	31.44	22.18	-	-	-	25.89	9.26	10:12	
	09/17/2015	31.44	22.31	-	-	-	25.89	9.13	10:14	
	09/23/2015	31.44	22.35	-	-	-	-	9.09	10:34	
	09/28/2015	31.44	22.42	-	-	-	25.84	9.02	9:20	
	10/05/2015	31.44	22.47	-	-	-	25.84	8.97	9:31	
	11/10/2015	31.44	25.05	-	-	-	-	6.39	13:03	
	12/01/2015	33.78	25.73	-	-	-	28.20	8.05	11:20	
	01/27/2016	33.78	26.53	-	-	-	-	7.25	10:29	
	02/15/2016	33.78	26.53	-	-	-	-	7.25	10:10	
	03/14/2016	33.78	26.26	-	-	-	28.18	7.52	11:35	
RW-117S	07/08/2015	31.81	22.53	-	-	-	-	9.28	11:08	
	07/13/2015	31.81	22.27	-	-	-	24.25	9.54	9:22	
	07/20/2015	31.81	21.97	-	-	-	-	9.84	9:07	
	07/28/2015	31.81	21.86	-	-	-	24.34	9.95	9:30	
	08/04/2015	31.81	21.94	-	-	-	24.23	9.87	13:15	
	08/05/2015	31.81	21.96	-	-	-	24.27	9.85	9:20	
	08/11/2015	31.81	22.06	-	-	-	24.30	9.75	10:28	
	08/18/2015	31.81	22.16	-	-	-	-	9.65	10:10	
	08/24/2015	31.81	22.25	-	-	-	-	9.56	10:13	
	09/02/2015	31.81	22.40	-	-	-	24.30	9.41	10:10	
	09/09/2015	31.81	22.51	TRACE	TRACE	TRACE	24.31	9.30	10:10	
	09/17/2015	31.81	22.61	-	-	-	24.31	9.20	10:12	
	09/23/2015	31.81	22.61	-	-	-	-	9.20	10:31	
	09/28/2015	31.81	22.66	-	-	-	24.29	9.15	9:18	
	10/05/2015	31.81	22.76	-	-	-	24.30	9.05	9:34	

Table 2

**GROUNDWATER GAUGING DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
RW-117S (cont.)	11/10/2015	31.81	25.29	-	-	-	-	6.52	12:59	
	12/01/2015	33.73	25.72	-	-	-	26.13	8.01	11:16	
	01/27/2016	33.73	26.06	-	-	-	-	7.67	10:25	
	02/15/2016	33.73	26.05	-	-	-	-	7.68	10:07	
	03/14/2016	33.73	26.06	-	-	-	26.09	7.67	11:05	
RW-118S	07/08/2015	31.09	21.79	-	-	-	-	9.30	11:03	
	07/13/2015	31.09	21.64	-	-	-	24.90	9.45	9:20	
	07/20/2015	31.09	21.27	-	-	-	-	9.82	9:04	
	07/28/2015	31.09	21.22	-	-	-	25.00	9.87	9:39	
	08/04/2015	31.09	21.28	-	-	-	24.93	9.81	13:18	
	08/11/2015	31.09	21.44	-	-	-	24.96	9.65	10:33	
	08/18/2015	31.09	21.52	-	-	-	-	9.57	10:07	
	08/24/2015	31.09	21.62	-	-	-	-	9.47	10:10	
	09/02/2015	31.09	21.76	-	-	-	24.97	9.33	10:13	
	09/09/2015	31.09	21.56	-	-	-	24.95	9.53	10:07	
	09/17/2015	31.09	21.96	-	-	-	25.01	9.13	10:10	
	09/23/2015	31.09	21.97	-	-	-	-	9.12	10:28	
	09/28/2015	31.09	22.03	-	-	-	24.95	9.06	9:16	
	10/05/2015	31.09	22.68	-	-	-	25.00	8.41	12:20	
	11/10/2015	31.09	22.35	-	-	-	-	8.74	12:55	
	12/01/2015	31.24	22.84	-	-	-	25.08	8.40	13:09	
	01/27/2016	31.24	24.02	-	-	-	-	7.22	10:19	
	02/15/2016	31.24	22.23	-	-	-	-	9.01	9:50	
	03/14/2016	31.24	22.26	-	-	-	25.15	8.98	9:05	
RW-119S	07/08/2015	30.38	21.80	-	-	-	-	8.58	11:46	
	07/13/2015	30.38	21.83	-	-	-	26.15	8.55	9:32	
	07/20/2015	30.38	21.53	-	-	-	-	8.85	9:34	
	07/28/2015	30.38	21.51	-	-	-	26.25	8.87	9:48	
	08/04/2015	30.38	21.50	-	-	-	26.15	8.88	10:37	
	08/11/2015	30.38	21.53	-	-	-	26.15	8.85	9:53	
	08/18/2015	30.38	21.73	-	-	-	-	8.65	10:33	
	08/24/2015	30.38	21.82	-	-	-	-	8.56	10:40	
	09/02/2015	30.38	22.01	-	-	-	26.17	8.37	9:38	
	09/09/2015	30.38	22.09	-	-	-	26.20	8.29	10:17	
	09/17/2015	30.38	22.34	-	-	-	26.21	8.04	10:22	
	09/23/2015	30.38	22.35	-	-	-	-	8.03	10:49	
	09/28/2015	30.38	22.32	-	-	-	26.20	8.06	9:33	
	10/05/2015	30.38	22.45	-	-	-	26.20	7.93	12:04	
	11/10/2015	30.38	25.50	-	-	-	-	4.88	13:09	
	12/01/2015	33.33	25.65	-	-	-	29.02	7.68	13:03	
	01/27/2016	33.33	25.63	-	-	-	-	7.70	9:50	
	02/15/2016	33.33	26.89	-	-	-	-	6.44	9:36	
	03/14/2016	33.33	25.85	-	-	-	29.20	7.48	9:28	
SP-1	02/24/2015	30.87	27.08	-	-	-	-	3.79	13:59	
SP-2	10/01/2014	NR	27.23	-	-	-	35.45	-	-	
	10/10/2014	NR	27.10	-	-	-	-	-	-	
TW-02	12/18/2013	20.60	15.52	-	-	-	-	5.08	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-02 (cont.)	01/08/2014	20.60	15.08	-	-	-	-	5.52	-	
	03/07/2014	20.60	14.81	-	-	-	-	5.79	-	
	03/13/2014	20.60	14.22	-	-	-	-	6.38	-	
	03/20/2014	20.60	13.39	-	-	-	-	7.21	-	
	03/27/2014	20.60	14.31	-	-	-	-	6.29	-	
	04/03/2014	20.60	13.25	-	-	-	-	7.35	-	
	04/08/2014	20.60	13.74	-	-	-	-	6.86	-	
	04/17/2014	20.60	13.70	-	-	-	-	6.90	-	
	04/22/2014	20.60	13.62	-	-	-	-	6.98	-	
	04/29/2014	20.60	13.96	-	-	-	-	6.64	-	
	05/05/2014	20.60	13.55	-	-	-	-	7.05	-	
	05/12/2014	20.60	14.25	-	-	-	-	6.35	-	
	05/19/2014	20.60	13.63	-	-	-	-	6.97	-	
	05/27/2014	20.60	14.31	-	-	-	-	6.29	-	
	06/02/2014	20.60	14.34	-	-	-	-	6.26	-	
	06/09/2014	20.60	14.71	-	-	-	-	5.89	-	
	06/16/2014	20.60	14.30	-	-	-	-	6.30	-	
	06/23/2014	20.60	14.48	-	-	-	-	6.12	-	
	07/02/2014	20.60	14.77	-	-	-	-	5.83	-	
	07/07/2014	20.60	15.08	-	-	-	21.28	5.52	-	
	07/14/2014	20.60	15.02	-	-	-	-	5.58	-	
	07/31/2014	20.60	15.40	-	-	-	21.22	5.20	-	
	08/08/2014	20.60	15.40	-	-	-	-	5.20	-	
	08/11/2014	20.60	15.28	-	-	-	-	5.32	-	
	08/15/2014	20.60	14.84	-	-	-	21.15	5.76	-	
	08/18/2014	20.60	15.06	-	-	-	-	5.54	-	
	08/25/2014	NR	14.71	-	-	-	-	-	-	
	09/02/2014	NR	15.18	-	-	-	-	-	-	
	09/15/2014	NR	14.90	-	-	-	-	-	-	
	09/22/2014	NR	15.00	-	-	-	-	-	-	
	10/01/2014	NR	15.22	-	-	-	21.12	-	-	
	10/13/2014	NR	14.92	-	-	-	-	-	-	
	10/20/2014	NR	15.10	-	-	-	20.99	-	-	
	02/24/2015	16.11	14.34	-	-	-	-	1.77	15:01	
	05/11/2015	16.11	14.38	-	-	-	20.80	1.73	15:18	
	08/04/2015	16.11	15.08	-	-	-	20.87	1.03	12:15	
	12/01/2015	16.11	15.08	-	-	-	20.88	1.03	13:28	
	03/14/2016	16.11	14.32	-	-	-	20.97	1.79	9:40	
TW-03	12/18/2013	14.87	9.08	-	-	-	-	5.79	-	
	01/08/2014	14.87	9.42	-	-	-	-	5.45	-	
	03/07/2014	14.87	7.66	-	-	-	-	7.21	-	
	03/13/2014	14.87	8.09	-	-	-	-	6.78	-	
	03/20/2014	14.87	7.50	-	-	-	-	7.37	-	
	03/27/2014	14.87	8.47	-	-	-	-	6.40	-	
	04/03/2014	14.87	6.99	-	-	-	-	7.88	-	
	04/08/2014	14.87	7.64	-	-	-	-	7.23	-	
	04/17/2014	14.87	7.33	-	-	-	-	7.54	-	
	04/22/2014	14.87	7.64	-	-	-	-	7.23	-	
	04/29/2014	14.87	7.36	-	-	-	-	7.51	-	
	05/05/2014	14.87	7.58	-	-	-	-	7.29	-	
	05/12/2014	14.87	7.93	-	-	-	-	6.94	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-03 (cont.)	05/19/2014	14.87	8.42	-	-	-	-	6.45	-	
	05/27/2014	14.87	7.69	-	-	-	-	7.18	-	
	06/02/2014	14.87	8.00	-	-	-	-	6.87	-	
	06/09/2014	14.87	7.77	-	-	-	-	7.10	-	
	06/16/2014	14.87	7.60	-	-	-	-	7.27	-	
	06/23/2014	14.87	7.68	-	-	-	-	7.19	-	
	07/02/2014	14.87	7.97	-	-	-	-	6.90	-	
	07/07/2014	14.87	8.31	-	-	-	13.45	6.56	-	
	07/14/2014	14.87	7.55	-	-	-	-	7.32	-	
	07/25/2014	14.87	8.45	-	-	-	13.30	6.42	-	
	07/31/2014	14.87	8.14	-	-	-	13.35	6.73	-	
	08/08/2014	14.87	8.39	-	-	-	-	6.48	-	
	08/11/2014	14.87	8.12	-	-	-	-	6.75	-	
	08/15/2014	14.87	8.10	-	-	-	13.40	6.77	-	
	08/18/2014	14.87	8.25	-	-	-	-	6.62	-	
	08/25/2014	10.40	7.85	-	-	-	-	2.55	-	
	09/02/2014	10.40	8.52	-	-	-	-	1.88	-	
	09/15/2014	10.40	8.33	-	-	-	-	2.07	-	
	09/22/2014	10.40	8.26	-	-	-	-	2.14	-	
	10/01/2014	10.40	8.35	-	-	-	13.15	2.05	-	
	10/13/2014	10.40	8.18	-	-	-	-	2.22	-	
	10/20/2014	10.40	8.50	-	-	-	13.14	1.90	-	
	02/24/2015	10.40	8.57	-	-	-	-	1.83	14:49	
	05/11/2015	10.40	7.74	-	-	-	13.10	2.66	15:23	
	08/04/2015	10.40	7.82	-	-	-	13.14	2.58	12:13	
	12/01/2015	10.40	7.64	-	-	-	13.12	2.76	13:26	
	03/14/2016	10.40	7.95	-	-	-	13.10	2.45	9:45	
TW-04	12/18/2013	13.26	6.25	-	-	-	-	7.01	-	
	01/08/2014	13.26	6.71	-	-	-	-	6.55	-	
	03/07/2014	13.26	6.06	-	-	-	-	7.20	-	
	03/13/2014	13.26	6.26	-	-	-	-	7.00	-	
	03/20/2014	13.26	6.17	-	-	-	-	7.09	-	
	03/27/2014	13.26	6.55	-	-	-	-	6.71	-	
	04/03/2014	13.26	4.64	-	-	-	-	8.62	-	
	04/08/2014	13.26	5.38	-	-	-	-	7.88	-	
	04/17/2014	13.26	5.60	-	-	-	-	7.66	-	
	04/22/2014	13.26	5.56	-	-	-	-	7.70	-	
	04/29/2014	13.26	5.91	-	-	-	-	7.35	-	
	05/05/2014	13.26	5.06	-	-	-	-	8.20	-	
	05/12/2014	13.26	5.82	-	-	-	-	7.44	-	
	05/19/2014	13.26	4.61	-	-	-	-	8.65	-	
	05/27/2014	13.26	5.66	-	-	-	-	7.60	-	
	06/02/2014	13.26	5.83	-	-	-	-	7.43	-	
	06/09/2014	13.26	5.87	-	-	-	-	7.39	-	
	06/16/2014	13.26	5.21	-	-	-	-	8.05	-	
	06/23/2014	13.26	5.68	-	-	-	-	7.58	-	
	07/02/2014	13.26	5.96	-	-	-	-	7.30	-	
	07/07/2014	13.26	6.18	-	-	-	13.77	7.08	-	
	07/14/2014	13.26	5.80	-	-	-	-	7.46	-	
	07/25/2014	13.26	6.20	-	-	-	13.70	7.06	-	
	07/31/2014	13.26	6.08	-	-	-	13.76	7.18	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-04 (cont.)	08/08/2014	13.26	6.21	-	-	-	-	7.05	-	
	08/11/2014	13.26	6.19	-	-	-	-	7.07	-	
	08/15/2014	13.26	5.99	-	-	-	13.75	7.27	-	
	08/18/2014	13.26	5.92	-	-	-	-	7.34	-	
	08/25/2014	9.49	5.87	-	-	-	-	3.62	-	
	09/02/2014	9.49	6.25	-	-	-	-	3.24	-	
	09/15/2014	9.49	6.17	-	-	-	-	3.32	-	
	09/22/2014	9.49	6.20	-	-	-	-	3.29	-	
	10/01/2014	9.49	6.23	-	-	-	13.55	3.26	-	
	10/10/2014	9.49	6.18	-	-	-	-	3.31	-	
	10/13/2014	9.49	6.19	-	-	-	-	3.30	-	
	10/20/2014	9.49	6.28	-	-	-	13.40	3.21	-	
	10/27/2014	9.49	6.04	-	-	-	-	3.45	-	
	11/07/2014	9.49	6.27	-	-	-	-	3.22	-	
	11/12/2014	9.49	6.19	-	-	-	-	3.30	-	
	11/21/2014	9.49	6.78	-	-	-	-	2.71	-	
	11/26/2014	9.49	6.33	-	-	-	-	3.16	-	
	12/05/2014	9.49	5.75	-	-	-	-	3.74	-	
	12/11/2014	9.49	5.60	-	-	-	-	3.89	-	
	12/16/2014	9.49	5.83	-	-	-	-	3.66	-	
	12/23/2014	9.49	5.82	-	-	-	-	3.67	-	
	12/30/2014	9.49	5.73	-	-	-	-	3.76	-	
	01/09/2015	9.49	6.06	-	-	-	-	3.43	-	
	01/16/2015	9.49	5.64	-	-	-	-	3.85	-	
	01/19/2015	9.49	5.37	-	-	-	-	4.12	-	
	01/26/2015	9.49	4.78	-	-	-	-	4.71	-	
	02/03/2015	9.49	6.06	-	-	-	13.21	3.43	-	
	02/09/2015	9.49	6.08	-	-	-	-	3.41	-	
	02/18/2015	9.49	6.19	-	-	-	-	3.30	-	
	02/24/2015	9.49	6.21	-	-	-	-	3.28	15:00	
	03/04/2015	9.49	6.11	-	-	-	-	3.38	11:45	
	03/11/2015	9.49	3.93	-	-	-	-	5.56	12:00	
	03/18/2015	9.49	5.40	-	-	-	-	4.09	10:23	
	03/26/2015	9.49	5.75	-	-	-	13.20	3.74	12:21	
	04/02/2015	9.49	5.85	-	-	-	13.25	3.64	10:28	
	04/08/2015	9.49	6.20	-	-	-	13.25	3.29	10:00	
	04/13/2015	9.49	6.28	-	-	-	-	3.21	9:55	
	04/23/2015	9.49	5.44	-	-	-	13.25	4.05	10:43	
	04/29/2015	9.49	5.85	-	-	-	13.25	3.64	13:15	
	05/04/2015	9.49	5.75	-	-	-	-	3.74	10:50	
	05/11/2015	9.49	5.83	-	-	-	13.20	3.66	15:33	
	05/21/2015	9.49	5.89	-	-	-	13.27	3.60	13:05	
	05/28/2015	9.49	6.28	-	-	-	13.25	3.21	10:55	
	06/02/2015	9.49	5.01	-	-	-	-	4.48	12:15	
	06/09/2015	9.49	5.17	-	-	-	-	4.32	9:45	
	06/16/2015	9.49	5.67	-	-	-	-	3.82	10:35	
	06/26/2015	9.49	4.98	-	-	-	13.20	4.51	8:45	
	07/01/2015	9.49	3.57	-	-	-	-	5.92	11:35	
	07/08/2015	9.49	4.57	-	-	-	-	4.92	10:20	
	07/13/2015	9.49	4.28	-	-	-	-	5.21	8:53	
	07/20/2015	9.49	5.32	-	-	-	-	4.17	8:40	
	08/04/2015	9.49	5.62	-	-	-	13.70	3.87	12:02	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-04 (cont.)	08/18/2015	9.49	5.88	-	-	-	-	3.61	9:20	
	08/24/2015	9.49	5.76	-	-	-	-	3.73	9:40	
	09/02/2015	9.49	5.92	-	-	-	13.20	3.57	11:36	
	09/09/2015	9.49	6.06	-	-	-	13.18	3.43	14:09	
	09/17/2015	9.49	6.11	-	-	-	13.21	3.38	11:48	
	09/23/2015	9.49	6.08	-	-	-	-	3.41	10:00	
	09/28/2015	9.49	5.61	-	-	-	13.08	3.88	10:36	
	10/05/2015	9.49	5.22	-	-	-	13.13	4.27	10:20	
	11/10/2015	9.49	5.92	-	-	-	-	3.57	12:29	
	12/01/2015	9.49	5.78	-	-	-	13.10	3.71	13:20	
	02/15/2016	9.49	6.07	-	-	-	-	3.42	9:05	
	03/14/2016	9.49	5.93	-	-	-	13.11	3.56	9:55	
TW-05	12/18/2013	13.73	6.45	-	-	-	-	7.28	-	
	01/08/2014	13.73	6.98	-	-	-	-	6.75	-	
	03/07/2014	13.73	6.34	-	-	-	-	7.39	-	
	03/13/2014	13.73	6.49	-	-	-	-	7.24	-	
	03/20/2014	13.73	6.04	-	-	-	-	7.69	-	
	03/27/2014	13.73	6.68	-	-	-	-	7.05	-	
	04/03/2014	13.73	4.29	-	-	-	-	9.44	-	
	04/08/2014	13.73	5.36	-	-	-	-	8.37	-	
	04/17/2014	13.73	5.33	-	-	-	-	8.40	-	
	04/22/2014	13.73	5.65	-	-	-	-	8.08	-	
	04/29/2014	13.73	6.06	-	-	-	-	7.67	-	
	05/05/2014	13.73	4.91	-	-	-	-	8.82	-	
	05/12/2014	13.73	6.01	-	-	-	-	7.72	-	
	05/19/2014	13.73	4.65	-	-	-	-	9.08	-	
	05/27/2014	13.73	5.91	-	-	-	-	7.82	-	
	06/02/2014	13.73	6.07	-	-	-	-	7.66	-	
	06/09/2014	13.73	6.11	-	-	-	-	7.62	-	
	06/16/2014	13.73	5.28	-	-	-	-	8.45	-	
	06/23/2014	13.73	5.95	-	-	-	-	7.78	-	
	07/02/2014	13.73	6.28	-	-	-	-	7.45	-	
	07/07/2014	13.73	6.49	-	-	-	12.06	7.24	-	
	07/14/2014	13.73	6.06	-	-	-	-	7.67	-	
	07/25/2014	13.73	5.43	-	-	-	12.08	8.30	-	
	07/31/2014	13.73	6.50	-	-	-	12.10	7.23	-	
	08/08/2014	13.73	6.56	-	-	-	-	7.17	-	
	08/11/2014	13.73	6.51	-	-	-	-	7.22	-	
	08/15/2014	13.73	5.91	-	-	-	11.95	7.82	-	
	08/18/2014	13.73	6.14	-	-	-	-	7.59	-	
	08/25/2014	9.64	6.13	-	-	-	-	3.51	-	
	09/02/2014	9.64	6.59	-	-	-	-	3.05	-	
	09/15/2014	9.64	6.57	-	-	-	-	3.07	-	
	09/22/2014	9.64	6.58	-	-	-	-	3.06	-	
	10/01/2014	9.64	6.63	-	-	-	11.74	3.01	-	
	10/10/2014	9.64	6.52	-	-	-	-	3.12	-	
	10/13/2014	9.64	6.58	-	-	-	-	3.06	-	
	10/20/2014	9.64	6.60	-	-	-	12.63	3.04	-	
	10/27/2014	9.64	6.23	-	-	-	-	3.41	-	
	11/07/2014	9.64	6.58	-	-	-	-	3.06	-	
	11/12/2014	9.64	6.56	-	-	-	-	3.08	-	



Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-05 (cont.)	11/21/2014	9.64	7.07	-	-	-	-	2.57	-	
	11/26/2014	9.64	6.67	-	-	-	-	2.97	-	
	12/05/2014	9.64	5.57	-	-	-	-	4.07	-	
	12/11/2014	9.64	5.38	-	-	-	-	4.26	-	
	12/16/2014	9.64	5.86	-	-	-	-	3.78	-	
	12/23/2014	9.64	6.08	-	-	-	-	3.56	-	
	12/30/2014	9.64	5.50	-	-	-	-	4.14	-	
	01/09/2015	9.64	6.27	-	-	-	-	3.37	-	
	01/16/2015	9.64	5.48	-	-	-	-	4.16	-	
	01/19/2015	9.64	5.08	-	-	-	-	4.56	-	
	01/26/2015	9.64	4.30	-	-	-	-	5.34	-	
	02/03/2015	9.64	6.20	-	-	-	11.88	3.44	-	
	02/09/2015	9.64	6.38	-	-	-	-	3.26	-	
	02/18/2015	9.64	6.64	-	-	-	-	3.00	-	
	02/24/2015	9.64	6.61	-	-	-	-	3.03	14:57	
	03/04/2015	9.64	6.27	-	-	-	-	3.37	12:15	
	03/11/2015	9.64	3.15	-	-	-	-	6.49	12:03	
	03/18/2015	9.64	4.61	-	-	-	-	5.03	10:26	
	03/26/2015	9.64	5.94	-	-	-	12.10	3.70	12:25	
	04/02/2015	9.64	6.00	-	-	-	12.10	3.64	10:30	
	04/08/2015	9.64	6.41	-	-	-	12.14	3.23	10:05	
	04/13/2015	9.64	6.53	-	-	-	-	3.11	9:58	
	04/23/2015	9.64	5.48	-	-	-	12.20	4.16	10:45	
	04/29/2015	9.64	5.99	-	-	-	12.20	3.65	13:17	
	05/04/2015	9.64	5.94	-	-	-	-	3.70	10:53	
	05/11/2015	9.64	6.12	-	-	-	12.30	3.52	15:39	
	05/21/2015	9.64	6.15	-	-	-	12.48	3.49	13:07	
	05/28/2015	9.64	6.56	-	-	-	12.50	3.08	10:57	
	06/02/2015	9.64	4.05	-	-	-	-	5.59	12:18	
	06/09/2015	9.64	4.63	-	-	-	-	5.01	9:48	
	06/16/2015	9.64	5.99	-	-	-	-	3.65	10:38	
	06/26/2015	9.64	4.52	-	-	-	12.80	5.12	8:47	
	07/01/2015	9.64	1.82	-	-	-	-	7.82	11:38	
	07/08/2015	9.64	4.22	-	-	-	-	5.42	10:23	
	07/13/2015	9.64	4.24	-	-	-	-	5.40	8:55	
	07/20/2015	9.64	5.64	-	-	-	-	4.00	8:43	
	07/28/2015	9.64	6.01	-	-	-	12.42	3.63	13:15	
	08/04/2015	9.64	6.07	-	-	-	12.32	3.57	12:05	
	08/11/2015	9.64	5.56	-	-	-	12.54	4.08	12:30	
	08/18/2015	9.64	6.28	-	-	-	-	3.36	9:23	
	08/24/2015	9.64	6.23	-	-	-	-	3.41	9:43	
	09/02/2015	9.64	6.32	-	-	-	12.53	3.32	11:33	
	09/09/2015	9.64	6.73	-	-	-	12.55	2.91	14:06	
	09/17/2015	9.64	6.54	-	-	-	12.53	3.10	11:45	
	09/23/2015	9.64	6.41	-	-	-	-	3.23	10:03	
	09/28/2015	9.64	6.01	-	-	-	12.51	3.63	10:38	
	10/05/2015	9.64	5.43	-	-	-	12.54	4.21	10:17	
	11/10/2015	9.64	6.31	-	-	-	-	3.33	12:31	
	12/01/2015	9.64	5.99	-	-	-	12.38	3.65	13:10	
	02/15/2016	9.64	6.34	-	-	-	-	3.30	9:09	
	03/14/2016	9.64	6.22	-	-	-	12.43	3.42	10:00	

Table 2

**GROUNDWATER GAUGING DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-06	12/18/2013	13.97	6.21	-	-	-	-	7.76	-	
	01/08/2014	13.97	6.98	-	-	-	-	6.99	-	
	03/07/2014	13.97	6.40	-	-	-	-	7.57	-	
	03/13/2014	13.97	6.62	-	-	-	-	7.35	-	
	03/20/2014	13.97	6.26	-	-	-	-	7.71	-	
	03/27/2014	13.97	6.88	-	-	-	-	7.09	-	
	04/03/2014	13.97	4.81	-	-	-	-	9.16	-	
	04/08/2014	13.97	5.82	-	-	-	-	8.15	-	
	04/17/2014	13.97	5.41	-	-	-	-	8.56	-	
	04/22/2014	13.97	5.90	-	-	-	-	8.07	-	
	04/29/2014	13.97	6.30	-	-	-	-	7.67	-	
	05/05/2014	13.97	4.98	-	-	-	-	8.99	-	
	05/12/2014	13.97	6.18	-	-	-	-	7.79	-	
	05/19/2014	13.97	4.63	-	-	-	-	9.34	-	
	05/27/2014	13.97	6.79	-	-	-	-	7.18	-	
	06/02/2014	13.97	6.24	-	-	-	-	7.73	-	
	06/09/2014	13.97	6.31	-	-	-	-	7.66	-	
	06/16/2014	13.97	5.33	-	-	-	-	8.64	-	
	06/23/2014	13.97	6.12	-	-	-	-	7.85	-	
	07/02/2014	13.97	6.52	-	-	-	-	7.45	-	
	07/07/2014	13.97	6.70	-	-	-	12.60	7.27	-	
	07/14/2014	13.97	6.24	-	-	-	-	7.73	-	
	07/25/2014	13.97	6.65	-	-	-	12.60	7.32	-	
	08/08/2014	13.97	6.81	-	-	-	-	7.16	-	
	08/11/2014	13.97	6.71	-	-	-	-	7.26	-	
	08/15/2014	13.97	6.01	-	-	-	12.70	7.96	-	
	08/18/2014	13.97	6.33	-	-	-	-	7.64	-	
	08/25/2014	9.86	6.37	-	-	-	-	3.49	-	
	09/02/2014	9.86	6.80	-	-	-	-	3.06	-	
	09/15/2014	9.86	6.79	-	-	-	-	3.07	-	
	09/22/2014	9.86	6.77	-	-	-	-	3.09	-	
	10/01/2014	9.86	6.88	-	-	-	12.60	2.98	-	
	10/10/2014	9.86	6.77	-	-	-	-	3.09	-	
	10/13/2014	9.86	6.85	-	-	-	-	3.01	-	
	10/20/2014	9.86	6.76	-	-	-	12.63	3.10	-	
	10/27/2014	9.86	6.39	-	-	-	-	3.47	-	
	11/07/2014	9.86	6.83	-	-	-	-	3.03	-	
	11/12/2014	9.86	6.85	-	-	-	-	3.01	-	
	11/21/2014	9.86	7.28	-	-	-	-	2.58	-	
	11/26/2014	9.86	7.02	-	-	-	-	2.84	-	
	12/05/2014	9.86	5.85	-	-	-	-	4.01	-	
	12/11/2014	9.86	5.75	-	-	-	-	4.11	-	
	12/16/2014	9.86	6.18	-	-	-	-	3.68	-	
	12/23/2014	9.86	6.36	-	-	-	-	3.50	-	
	12/30/2014	9.86	5.85	-	-	-	-	4.01	-	
	01/09/2015	9.86	6.52	-	-	-	-	3.34	-	
	01/16/2015	9.86	5.77	-	-	-	-	4.09	-	
	01/19/2015	9.86	5.46	-	-	-	-	4.40	-	
	01/26/2015	9.86	4.69	-	-	-	-	5.17	-	
	02/03/2015	9.86	6.39	-	-	-	12.58	3.47	-	
	02/09/2015	9.86	6.62	-	-	-	-	3.24	-	
	02/18/2015	9.86	6.89	-	-	-	-	2.97	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-06 (cont.)	02/24/2015	9.86	6.90	-	-	-	-	2.96	14:54	
	03/04/2015	9.86	6.43	-	-	-	-	3.43	13:00	
	03/11/2015	9.86	4.47	-	-	-	-	5.39	12:06	
	03/18/2015	9.86	5.33	-	-	-	-	4.53	10:29	
	03/26/2015	9.86	6.13	-	-	-	12.60	3.73	12:27	
	04/02/2015	9.86	6.20	-	-	-	12.65	3.66	10:32	
	04/08/2015	9.86	6.66	-	-	-	12.62	3.20	10:15	
	04/13/2015	9.86	6.76	-	-	-	-	3.10	10:01	
	04/23/2015	9.86	5.62	-	-	-	12.60	4.24	10:47	
	04/29/2015	9.86	6.22	-	-	-	12.65	3.64	13:19	
	05/04/2015	9.86	6.14	-	-	-	-	3.72	10:56	
	05/11/2015	9.86	6.38	-	-	-	12.70	3.48	15:40	
	05/21/2015	9.86	6.24	-	-	-	12.65	3.62	13:09	
	05/28/2015	9.86	6.79	-	-	-	12.60	3.07	10:59	
	06/02/2015	9.86	4.41	-	-	-	-	5.45	12:21	
	06/09/2015	9.86	5.28	-	-	-	-	4.58	9:51	
	06/16/2015	9.86	6.24	-	-	-	-	3.62	10:41	
	06/26/2015	9.86	5.08	-	-	-	12.70	4.78	8:49	
	07/01/2015	9.86	3.55	-	-	-	-	6.31	11:41	
	07/08/2015	9.86	4.88	-	-	-	-	4.98	10:26	
	07/13/2015	9.86	4.78	-	-	-	-	5.08	8:55	
	07/20/2015	9.86	5.93	-	-	-	-	3.93	8:46	
	07/28/2015	9.86	6.31	-	-	-	12.61	3.55	12:55	
	08/04/2015	9.86	6.34	-	-	-	12.64	3.52	12:07	
	08/11/2015	9.86	6.15	-	-	-	12.64	3.71	12:35	
	08/18/2015	9.86	6.58	-	-	-	-	3.28	9:26	
	08/24/2015	9.86	6.51	-	-	-	-	3.35	9:46	
	09/02/2015	9.86	6.65	-	-	-	12.06	3.21	11:30	
	09/09/2015	9.86	6.02	-	-	-	12.66	3.84	14:03	
	09/17/2015	9.86	6.85	-	-	-	12.69	3.01	11:40	
	09/23/2015	9.86	6.69	-	-	-	-	3.17	10:06	
	09/28/2015	9.86	6.27	-	-	-	12.61	3.59	10:41	
	10/05/2015	9.86	5.70	-	-	-	12.63	4.16	10:13	
	11/10/2015	9.86	6.65	-	-	-	-	3.21	12:32	
	12/01/2015	9.86	6.55	-	-	-	12.62	3.31	13:22	
	02/15/2016	9.86	6.60	-	-	-	-	3.26	9:15	
	03/14/2016	9.86	6.57	-	-	-	12.63	3.29	10:05	
TW-07	12/18/2013	14.00	7.56	-	-	-	-	6.44	-	
	01/08/2014	14.00	7.91	-	-	-	-	6.09	-	
	03/07/2014	14.00	6.91	-	-	-	-	7.09	-	
	03/13/2014	14.00	7.40	-	-	-	-	6.60	-	
	03/20/2014	14.00	6.78	-	-	-	-	7.22	-	
	03/27/2014	14.00	7.56	-	-	-	-	6.44	-	
	04/03/2014	14.00	5.67	-	-	-	-	8.33	-	
	04/08/2014	14.00	6.77	-	-	-	-	7.23	-	
	04/17/2014	14.00	5.51	-	-	-	-	8.49	-	
	04/22/2014	14.00	6.75	-	-	-	-	7.25	-	
	04/29/2014	14.00	6.60	-	-	-	-	7.40	-	
	05/05/2014	14.00	5.41	-	-	-	-	8.59	-	
	05/12/2014	14.00	6.89	-	-	-	-	7.11	-	
	05/19/2014	14.00	6.16	-	-	-	-	7.84	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-07 (cont.)	05/27/2014	14.00	6.70	-	-	-	-	7.30	-	
	06/02/2014	14.00	6.94	-	-	-	-	7.06	-	
	06/09/2014	14.00	7.81	-	-	-	-	6.19	-	
	06/16/2014	14.00	6.47	-	-	-	-	7.53	-	
	06/23/2014	14.00	6.69	-	-	-	-	7.31	-	
	07/02/2014	14.00	7.00	-	-	-	-	7.00	-	
	07/07/2014	14.00	7.27	-	-	-	13.42	6.73	-	
	07/14/2014	14.00	6.70	-	-	-	-	7.30	-	
	07/25/2014	14.00	7.33	-	-	-	13.30	6.67	-	
	07/31/2014	14.00	7.22	-	-	-	13.30	6.78	-	
	08/08/2014	14.00	7.39	-	-	-	-	6.61	-	
	08/11/2014	14.00	7.17	-	-	-	13.20	6.83	-	
	08/15/2014	14.00	7.05	-	-	-	-	6.95	-	
	08/18/2014	14.00	7.14	-	-	-	-	6.86	-	
	08/25/2014	9.88	6.87	-	-	-	-	3.01	-	
	09/02/2014	9.88	7.43	-	-	-	-	2.45	-	
	09/15/2014	9.88	7.33	-	-	-	-	2.55	-	
	09/22/2014	9.88	7.28	-	-	-	-	2.60	-	
	10/01/2014	9.88	7.38	-	-	-	12.98	2.50	-	
	10/13/2014	9.88	7.30	-	-	-	-	2.58	-	
	10/20/2014	9.88	7.49	-	-	-	12.97	2.39	-	
	02/24/2015	9.88	7.45	-	-	-	-	2.43	14:52	
	05/11/2015	9.88	6.92	-	-	-	12.70	2.96	15:27	
	08/04/2015	9.88	6.88	-	-	-	12.74	3.00	12:10	
	12/01/2015	9.88	5.97	-	-	-	12.99	3.91	13:24	
	03/14/2016	9.88	7.13	-	-	-	13.05	2.75	9:50	
TW-12S	12/18/2013	38.01	DRY	-	-	-	-	-	-	
	01/08/2014	38.01	DRY	-	-	-	-	-	-	
	03/07/2014	38.01	DRY	-	-	-	-	-	-	
	03/13/2014	38.01	DRY	-	-	-	-	-	-	
	03/20/2014	38.01	DRY	-	-	-	-	-	-	
	03/27/2014	38.01	DRY	-	-	-	-	-	-	
	04/03/2014	38.01	DRY	-	-	-	-	-	-	
	04/08/2014	38.01	DRY	-	-	-	-	-	-	
	04/17/2014	38.01	DRY	-	-	-	-	-	-	
	04/22/2014	38.01	DRY	-	-	-	-	-	-	
	04/29/2014	38.01	DRY	-	-	-	-	-	-	
	05/05/2014	38.01	DRY	-	-	-	-	-	-	
	05/12/2014	38.01	DRY	-	-	-	-	-	-	
	05/19/2014	38.01	DRY	-	-	-	-	-	-	
	06/02/2014	38.01	DRY	-	-	-	-	-	-	
	06/09/2014	38.01	DRY	-	-	-	-	-	-	
	06/16/2014	38.01	26.37	-	-	-	-	11.64	-	
	06/23/2014	38.01	26.37	-	-	-	-	11.64	-	
	07/02/2014	38.01	26.40	-	-	-	-	11.61	-	
	07/07/2014	38.01	26.40	-	-	-	26.60	11.61	-	
	07/14/2014	38.01	26.48	-	-	-	-	11.53	-	
	07/24/2014	38.01	26.48	-	-	-	-	11.53	-	
	07/31/2014	38.01	26.48	-	-	-	26.56	11.53	-	
	08/08/2014	38.01	26.49	-	-	-	26.60	11.52	-	
	08/11/2014	38.01	26.47	-	-	-	-	11.54	-	

Table 2

## GROUNDWATER GAUGING DATA SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-12S (cont.)	08/15/2014	38.01	26.47	-	-	-	26.58	11.54	-	
	08/18/2014	38.01	26.47	-	-	-	-	11.54	-	
	08/25/2014	NR	26.47	-	-	-	-	-	-	
	09/02/2014	NR	24.84	-	-	-	24.97	-	-	
	09/15/2014	NR	24.82	-	-	-	-	-	-	
	09/22/2014	NR	24.83	-	-	-	-	-	-	
	10/01/2014	NR	24.81	-	-	-	24.91	-	-	
	10/10/2014	NR	24.82	-	-	-	-	-	-	
	10/20/2014	NR	24.82	-	-	-	24.92	-	-	
	02/24/2015	31.33	24.81	-	-	-	-	6.52	15:47	
	05/11/2015	31.33	24.82	-	-	-	24.90	6.51	10:40	
	08/04/2015	31.33	24.78	-	-	-	25.00	6.55	10:25	
	12/01/2015	31.33	24.82	-	-	-	24.92	6.51	11:32	
	03/14/2016	31.33	24.76	-	-	-	25.00	6.57	9:34	
TW-14	01/17/2014	15.55	2.48	-	-	-	-	13.07	-	
	03/07/2014	15.55	2.29	-	-	-	-	13.26	-	
	03/13/2014	15.55	2.55	-	-	-	-	13.00	-	
	03/20/2014	15.55	2.25	-	-	-	-	13.30	-	
	03/27/2014	15.55	2.42	-	-	-	-	13.13	-	
	04/03/2014	15.55	2.31	-	-	-	-	13.24	-	
	04/08/2014	15.55	2.27	-	-	-	-	13.28	-	
	04/17/2014	15.55	2.26	-	-	-	-	13.29	-	
	04/22/2014	15.55	2.48	-	-	-	-	13.07	-	
	04/29/2014	15.55	2.66	-	-	-	-	12.89	-	
	05/05/2014	15.55	2.56	-	-	-	-	12.99	-	
	05/12/2014	15.55	2.58	-	-	-	-	12.97	-	
	05/19/2014	15.55	2.38	-	-	-	-	13.17	-	
	06/02/2014	15.55	2.52	-	-	-	-	13.03	-	
	06/09/2014	15.55	2.50	-	-	-	-	13.05	-	
	06/16/2014	15.55	2.31	-	-	-	-	13.24	-	
	06/23/2014	15.55	2.44	-	-	-	-	13.11	-	
	07/02/2014	15.55	4.63	-	-	-	-	10.92	-	
	07/07/2014	15.55	4.65	-	-	-	7.27	10.90	-	
	07/14/2014	15.55	4.40	-	-	-	-	11.15	-	
	07/24/2014	15.55	4.46	-	-	-	-	11.09	-	
	07/31/2014	15.55	4.63	-	-	-	7.39	10.92	-	
	08/08/2014	15.55	4.43	-	-	-	7.39	11.12	-	
	08/11/2014	15.55	4.57	-	-	-	-	10.98	-	
	08/15/2014	15.55	4.36	-	-	-	7.39	11.19	-	
	08/18/2014	15.55	4.49	-	-	-	-	11.06	-	
	08/25/2014	11.61	3.01	-	-	-	-	8.60	-	
	09/02/2014	11.61	3.03	-	-	-	-	8.58	-	
	09/15/2014	11.61	3.19	-	-	-	-	8.42	-	
	09/22/2014	11.61	3.38	-	-	-	-	8.23	-	
	10/01/2014	11.61	3.50	-	-	-	5.90	8.11	-	
	10/10/2014	11.61	3.67	-	-	-	-	7.94	-	
	10/20/2014	11.61	3.02	-	-	-	5.90	8.59	-	
	02/24/2015	11.61	2.67	-	-	-	-	8.94	15:29	
	02/26/2015	11.61	2.68	-	-	-	5.90	8.93	12:00	
	05/11/2015	11.61	3.28	-	-	-	6.90	8.33	10:30	
	08/04/2015	11.61	3.37	-	-	-	5.98	8.24	10:31	

Table 2

**GROUNDWATER GAUGING DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	Volume of LNAPL Recovered (gal)	Depth to Bottom - Measured Depth (ft)	Adjusted Groundwater Elevation (ft)	Time	Comments
TW-14 (cont.)	08/11/2015	11.61	3.65	-	-	-	6.00	7.96	12:00	
	08/18/2015	11.61	3.83	-	-	-	-	7.78	9:15	
	12/01/2015	11.61	2.76	-	-	-	-	8.85	9:15	
	03/14/2016	11.61	2.80	-	-	-	6.02	8.81	10:11	

## Notes:

The depth  
to water

Specific gravity was tested from MW-05 and MW-25, and the average specific gravity was used.

- = Not available

ft = Feet

gal = gallons

DRY = No / Insufficient water

LNAPL = Light Non-Aqueous Phase Liquid

NA = Not applicable

NG = Not gauged

NR = Not recorded

TRACE = LNAPL thickness is less than 0.01 feet

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-01S	10/10/2014	10.2	6.3	-	-	0.53	6.68	17.69	-95.0	880	-
	10/20/2014	1.0	6.3	10.1	10.3	-	-	-	-	-	-
	10/22/2014	-	-	-	-	0.80	6.63	17.81	-91.6	369	-
	2/24/2015	8.4	3.0	12.2	26.6	0.10	6.53	16.31	-172.6	724	-
	5/11/2015	64.8	1.6	10.8	27.8	-	-	-	-	-	-
	8/4/2015	11.4	8.9	7.2	9.2	-	-	-	-	-	-
	3/14/2016	78.8	3.5	10.8	2.2	0.13	6.65	16.46	-104.0	860	-
MW-05 / RW-05	10/13/2014	15.9	13.0	-	-	-	-	-	-	-	-
	10/15/2014	137.0	9.6	-	-	-	-	-	-	-	-
	2/24/2015	11.4	1.0	15.9	25.3	-	-	-	-	-	-
	5/11/2015	90.2	5.8	11.1	19.6	-	-	-	-	-	-
	8/4/2015	71.9	18.2	1.9	2.1	-	-	-	-	-	-
	12/1/2015	12.8	2.6	15.1	26.6	-	-	-	-	-	-
	3/14/2016	98.8	19.8	0.7	0.4	-	-	-	-	-	-
MW-08S	10/13/2014	21.0	14.5	-	-	0.89	6.68	18.18	-123.6	1488	-
	10/13/2014	-	-	-	-	0.81	6.70	18.26	-108.0	1386	-
	10/14/2014	-	-	-	-	0.16	6.77	18.18	-129.0	1424	-
	10/15/2014	8.7	20.4	-	-	0.83	6.68	18.29	-105.8	1325	-
	10/15/2014	-	-	-	-	0.28	6.66	18.23	-113.1	1408	-
	10/20/2014	15.9	10.9	6.2	1.9	-	-	-	-	-	-
	10/22/2014	-	-	-	-	1.24	6.59	18.27	-98.8	1276	-
	2/24/2015	49.3	0.4	13.8	15.4	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.09	6.69	16.81	-137.5	1236	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-10S / RW-10S	10/13/2014	23.1	17.0	-	-	0.75	6.59	18.17	-117.6	1202	-
	10/13/2014	-	-	-	-	0.60	6.60	18.20	-113.0	1185	-
	10/15/2014	8.3	20.4	-	-	0.41	6.54	18.23	-118.5	1185	-
	10/15/2014	-	-	-	-	0.60	6.56	18.30	-104.5	1189	-
	10/16/2014	18.5	20.9	-	-	-	-	-	-	-	-
	10/20/2014	25.2	15.2	3.7	0.2	-	-	-	-	-	-
	10/22/2014	-	-	-	-	1.30	6.48	18.44	-72.7	1002	-
	2/24/2015	54.5	1.0	14.7	3.4	-	-	-	-	-	-
	5/11/2015	22.6	6.5	9.2	7.6	-	-	-	-	-	-
	8/4/2015	53.6	4.2	10.6	7.6	0.02	6.73	16.52	-90.0	1440	-
	3/14/2016	134.2	19.4	1.2	0.4	0.14	6.59	15.38	-121.4	1350	-
MW-11	10/13/2014	5.4	19.0	-	-	2.30	6.27	18.16	56.2	324	-
	10/13/2014	-	-	-	-	3.23	6.14	18.29	48.6	349	-
	10/15/2014	23.6	15.3	-	-	-	-	-	-	-	-
	10/20/2014	22.0	11.6	6.3	1.9	-	-	-	-	-	-
	10/22/2014	-	-	-	-	0.38	5.73	18.38	160.2	323	-
	2/24/2015	3.2	19.3	3.7	0.1	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.12	5.60	17.83	62.6	370	-
	5/11/2015	0.6	20.6	0.2	0.1	0.07	5.66	17.27	91.2	390	-
MW-14	8/4/2015	4.3	2.5	15.0	26.8	0.09	6.66	18.45	-39.8	1	-
	10/13/2014	15.9	17.2	-	-	2.79	6.00	18.13	68.0	368	-
	10/20/2014	82.4	14.4	3.7	1.3	-	-	-	-	-	-
	10/22/2014	-	-	-	-	0.26	5.79	18.43	216.2	310	-





Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-14 (cont.)	2/24/2015	188.0	14.4	0.9	0.4	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.84	6.25	17.90	-98.6	460	-
	5/11/2015	166.8	18.4	2.4	0.2	0.07	6.22	17.30	-69.6	420	-
	8/4/2015	11.9	17.8	3.2	0.3	0.07	6.72	17.10	-69.4	1	-
	3/14/2016	143.4	13.6	5.9	0.8	0.10	6.35	16.95	-84.7	490	-
MW-15S	10/13/2014	34.0	12.4	-	-	0.84	6.32	18.03	-17.1	647	-
	10/20/2014	18.2	2.2	11.6	0.0	-	-	-	-	-	-
	10/22/2014	-	-	-	-	0.88	6.48	17.61	-37.4	989	-
MW-16S	10/10/2014	9.0	7.2	-	-	-	-	-	-	-	-
	2/24/2015	0.0	5.5	12.4	0.1	1.54	6.11	14.50	60.2	2	-
MW-16	10/10/2014	11.1	6.9	-	-	0.46	5.88	17.50	162.4	707	-
	10/22/2014	-	-	-	-	0.87	5.79	17.75	211.0	681	30,200
	2/24/2015	0.0	20.9	0.3	0.1	2.62	5.92	17.57	101.8	1010	-
	5/11/2015	-	-	-	-	0.49	5.83	17.05	112.4	830	-
MW-25S	10/13/2014	-	-	-	-	0.96	6.46	18.51	-84.0	914	-
	10/13/2014	13.0	20.3	-	-	-	-	-	-	-	-
	10/15/2014	192.0	19.3	-	-	-	-	-	-	-	-
	10/16/2014	34.4	20.9	-	-	-	-	-	-	-	-
	10/20/2014	30.2	16.6	3.4	0.3	-	-	-	-	-	-
	2/24/2015	127.0	3.6	12.7	2.3	-	-	-	-	-	-
	5/11/2015	51.8	6.5	8.3	6.4	-	-	-	-	-	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-25S	8/4/2015	70.5	4.4	9.5	4.6	-	-	-	-	-	-
MW-25 / RW-25 (cont.)	10/13/2014	139.0	19.2	-	-	-	-	-	-	-	-
	10/14/2014	79.0	17.5	-	-	-	-	-	-	-	-
	10/15/2014	8.4	20.9	-	-	-	-	-	-	-	-
	10/16/2014	28.2	14.3	-	-	-	-	-	-	-	-
	2/24/2015	121.0	15.4	5.5	1.3	-	-	-	-	-	-
	5/11/2015	263.0	11.6	6.7	0.6	-	-	-	-	-	-
	8/4/2015	118.4	15.8	3.7	0.4	-	-	-	-	-	-
	12/1/2015	79.5	14.7	5.4	1.1	-	-	-	-	-	-
	3/14/2016	6.2	10.9	8.9	3.2	-	-	-	-	-	-
	10/10/2014	41.5	17.7	-	-	0.28	6.55	17.74	-79.8	1075	-
	10/15/2014	7.3	20.9	-	-	0.02	6.51	17.97	-36.3	1057	-
	10/15/2014	21.9	16.1	-	-	1.67	6.37	18.18	44.5	831	-
	10/16/2014	21.9	16.1	-	-	-	-	-	-	-	-
MW-27	10/20/2014	25.3	14.3	6.5	8.6	-	-	-	-	-	-
	10/23/2014	-	-	-	-	0.54	6.46	17.97	743.0	153	1,540
	2/24/2015	21.1	2.3	12.2	13.6	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.06	6.61	15.83	-85.6	1228	-
	5/11/2015	127.3	8.1	7.9	0.0	0.08	6.54	14.84	-110.0	1300	-
	8/4/2015	28.5	1.3	13.2	16.6	0.03	6.68	15.93	-49.3	1260	-
	12/1/2015	67.4	2.2	16.9	31.9	0.06	6.57	17.28	-51.5	1190	-
	3/14/2016	70.8	1.0	15.5	0.6	0.08	6.54	14.77	-142.5	1390	-



Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-31 / RW-31	10/10/2014	120.5	6.2	-	-	0.39	6.97	18.62	-119.7	899	-
	10/15/2014	62.5	15.0	-	-	0.59	6.83	19.04	-119.9	848	-
	10/15/2014	0.0	20.9	-	-	0.90	6.61	19.57	-47.6	541	-
	10/20/2014	11.8	17.4	1.1	0.3	-	-	-	-	-	-
	10/23/2014	-	-	-	-	0.41	6.98	18.69	-15.9	791	728
	2/24/2015	179.0	2.1	0.2	0.3	0.02	7.08	14.47	-164.3	927	-
	5/11/2015	36.9	5.8	4.1	0.1	0.00	7.06	12.74	-129.3	1010	-
	8/4/2015	41.3	3.9	5.4	1.7	0.02	7.18	15.92	-13.7	1010	-
MW-33	10/10/2014	1.4	9.7	-	-	0.68	5.81	17.97	157.4	654	-
	10/15/2014	0.5	19.0	-	-	0.09	5.84	18.30	64.9	633	-
	10/15/2014	0.0	20.9	-	-	0.42	5.86	18.30	92.6	658	-
	10/20/2014	1.0	12.0	5.4	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	2.37	6.05	18.24	186.7	698	1,120
	2/24/2015	0.0	20.6	0.1	0.1	2.35	5.51	15.51	88.7	648	-
	5/11/2015	21.4	19.0	1.0	0.0	0.47	5.69	14.03	88.0	720	-
	8/4/2015	1.4	3.3	8.6	0.0	0.05	6.29	15.84	48.5	780	-
MW-51S	10/13/2014	23.0	5.7	-	-	0.64	6.72	18.32	-120.0	1457	-
	10/13/2014	1.0	-	-	-	0.75	6.65	18.35	-78.8	1000	-
	10/14/2014	-	-	-	-	0.33	6.64	18.46	-71.8	1047	-
	10/15/2014	1.2	20.0	-	-	1.62	6.60	18.43	1.5	566	-
	10/15/2014	-	-	-	-	0.74	6.62	18.45	-84.6	1122	-
	10/20/2014	22.3	10.6	6.3	1.5	-	-	-	-	-	-
	10/22/2014	-	-	-	-	0.81	6.67	18.47	-93.7	1153	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-51S (cont.)	2/24/2015	9.9	0.9	13.5	27.2	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.08	6.70	16.75	-110.9	1968	-
	5/11/2015	40.8	1.2	12.1	28.3	0.02	6.74	16.21	-113.3	1830	-
	8/4/2015	15.2	0.7	13.2	27.5	0.04	6.82	16.33	-96.0	1440	-
	3/14/2016	62.4	4.8	10.6	0.6	0.27	6.63	16.10	-129.3	2250	-
MW-51 / RW-51	10/13/2014	135.0	18.0	-	-	-	-	-	-	-	-
	10/15/2014	100.8	14.0	-	-	0.33	6.60	18.57	-86.9	1014	-
	10/20/2014	31.5	11.6	4.9	3.2	-	-	-	-	-	-
	2/24/2015	35.1	4.7	11.4	6.0	-	-	-	-	-	-
	5/11/2015	100.3	1.2	12.6	5.1	-	-	-	-	-	-
	8/4/2015	104.3	19.6	1.0	1.6	-	-	-	-	-	-
	12/1/2015	18.5	17.8	2.4	1.2	-	-	-	-	-	-
	3/14/2016	30.0	19.0	1.7	0.2	-	-	-	-	-	-
MW-52	10/10/2014	5.4	16.3	-	-	1.15	5.87	17.51	45.9	465	-
MW-70	10/10/2014	0.3	16.2	-	-	2.12	5.76	17.30	98.7	843	-
	2/24/2015	0.0	17.8	1.3	0.2	1.02	5.53	16.71	-36.2	9	-
	5/11/2015	-	-	-	-	0.40	5.49	16.51	120.7	790	-
	8/4/2015	-	-	-	-	0.46	5.72	16.24	77.5	820	-
MW-72S / RW-72S	10/10/2014	21.7	5.8	-	-	0.55	6.42	18.41	-98.2	1331	-
	10/15/2014	14.5	14.0	-	-	0.04	6.40	18.56	-85.4	1340	-
	10/15/2014	-	-	-	-	1.70	6.47	18.70	-53.0	1246	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-72S / RW-72S (cont.)	10/16/2014	95.0	7.8	-	-	-	-	-	-	-	-
	10/20/2014	38.8	9.3	7.4	4.2	-	-	-	-	-	-
	10/22/2014	-	-	-	-	1.92	6.39	17.99	-21.2	904	-
	2/24/2015	30.6	5.4	11.5	1.6	0.09	6.54	16.13	-101.9	1325	-
	5/11/2015	65.0	6.5	9.4	3.3	0.02	6.49	14.58	-110.6	1340	-
	8/4/2015	8.0	8.2	6.9	0.4	0.11	6.71	16.20	-56.9	1710	-
	3/14/2016	21.4	15.6	4.1	0.1	2.16	6.59	15.02	-101.1	1960	-
MW-72 / RW-72	10/10/2014	12.2	6.6	-	-	0.48	5.47	17.86	32.6	743	-
	10/15/2014	14.8	16.8	-	-	0.14	5.41	18.04	110.3	733	-
	10/15/2014	-	-	-	-	2.99	5.75	18.09	108.9	739	-
	10/16/2014	6.9	5.2	-	-	-	-	-	-	-	-
	10/20/2014	10.5	2.0	16.8	13.0	-	-	-	-	-	-
	10/22/2014	-	-	-	-	1.77	5.86	17.73	146.2	533	29,800
	2/24/2015	13.3	14.2	6.9	0.1	0.58	5.48	17.43	82.8	877	-
MW-100S	5/11/2015	64.5	20.6	0.2	0.0	0.03	5.82	15.99	-21.9	1080	-
	8/4/2015	6.9	12.7	5.0	3.2	0.02	6.68	16.31	-57.3	1880	-
MW-100	3/14/2016	42.8	19.8	1.0	0.1	0.04	6.62	16.93	-121.3	1970	-
	10/10/2014	6.5	6.8	-	-	0.40	5.62	18.36	11.8	915	-
MW-100	2/24/2015	0.0	17.2	3.5	0.2	4.78	5.79	16.07	25.5	2	-
	10/10/2014	0.3	20.4	-	-	2.23	5.38	17.60	148.8	531	-
	2/24/2015	0.0	20.4	0.6	0.2	1.02	5.53	16.80	27.5	309	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-102	10/10/2014	0.6	17.7	-	-	2.44	6.10	17.15	68.2	295	-
MW-103	10/10/2014	8.5	19.4	-	-	1.72	6.41	19.90	71.6	610	-
	10/23/2014	-	-	-	-	7.32	6.15	19.14	149.3	598	-
	2/24/2015	0.0	19.5	2.4	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	5.27	6.17	5.08	85.9	720	-
	5/11/2015	-	-	-	-	0.13	5.95	12.40	82.3	680	-
MW-104	10/10/2014	5.8	18.9	-	-	1.98	6.90	19.47	6.1	452	-
	10/21/2014	-	-	-	-	2.17	6.93	18.83	102.6	526	3,250
	2/24/2015	0.0	15.1	1.1	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	3.75	7.07	9.30	50.4	496	-
	5/11/2015	-	-	-	-	1.24	6.89	12.25	54.8	740	-
MW-105	10/10/2014	11.5	19.0	-	-	3.96	6.90	19.03	56.8	427	-
	10/21/2014	-	-	-	-	4.47	6.89	19.20	155.1	393	2,520
	5/11/2015	-	-	-	-	0.42	5.38	11.11	98.1	27900	-
MW-106	10/10/2014	9.2	17.1	-	-	1.20	4.66	18.99	122.5	2231	-
	10/14/2014	4.3	18.3	-	-	-	-	-	-	-	-
	10/20/2014	0.2	15.5	3.8	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	1.29	5.20	18.35	97.7	1529	-
	2/24/2015	0.0	7.1	5.4	0.1	1.03	4.63	9.81	62.0	2156	-
	5/11/2015	0.7	0.2	7.6	0.2	0.03	5.00	11.73	100.8	2010	-
	8/4/2015	1.0	12.6	4.5	0.0	0.09	5.66	17.62	31.8	2080	-
	3/14/2016	0.5	19.2	0.7	0.0	0.06	4.76	10.70	113.8	1740	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-107	10/10/2014	10.5	11.8	-	-	0.62	3.51	18.90	348.4	2063	-
	10/15/2014	7.3	13.7	-	-	1.51	3.63	19.54	393.0	1047	-
	10/15/2014	-	-	-	-	2.52	3.76	19.36	428.9	1117	-
	10/20/2014	0.3	7.3	9.4	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	3.40	2.90	19.05	480.1	1462	-
	2/24/2015	0.0	19.3	1.5	0.1	7.33	3.01	11.73	338.5	15	-
	5/11/2015	0.8	9.1	6.7	0.0	0.40	3.36	12.51	425.7	2010	-
	8/4/2015	0.5	7.9	8.2	0.0	0.31	3.69	18.19	347.8	2360	-
MW-108	10/10/2014	9.5	11.6	-	-	-	-	-	-	-	-
MW-109S	10/10/2014	50.0	11.3	-	-	1.43	6.35	18.20	-83.5	827	-
	10/20/2014	13.8	3.9	13.2	0.0	-	-	-	-	-	-
	10/21/2014	-	-	-	-	0.35	6.03	18.29	59.2	769	-
	2/24/2015	12.9	1.3	14.9	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	1.35	6.19	13.93	36.7	607	-
	5/11/2015	4.0	13.8	4.8	0.0	0.33	5.96	12.89	124.7	460	-
MW-109	10/10/2014	11.8	19.1	-	-	1.65	6.03	17.98	35.0	247	-
	10/20/2014	0.2	20.8	0.6	0.0	-	-	-	-	-	-
	10/21/2014	-	-	-	-	0.86	5.81	18.04	133.5	261	-
	2/24/2015	6.2	18.5	3.2	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.71	5.74	15.75	137.9	248	-
MW-110S	10/10/2014	9.9	14.4	-	-	0.50	6.32	18.38	-87.8	651	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-110S (cont.)	2/24/2015	12.7	4.3	12.8	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	1.65	6.39	13.79	-19.5	849	-
MW-110	10/10/2014	13.1	16.4	-	-	1.30	5.39	17.98	117.8	215	-
	2/24/2015	5.8	19.4	1.0	0.4	-	-	-	-	-	-
	2/25/2015	-	-	-	-	1.70	5.48	15.49	168.1	245	-
MW-111	10/10/2014	7.3	16.9	-	-	1.70	5.82	17.98	75.9	247	-
	2/24/2015	0.0	18.7	1.7	0.2	-	-	-	-	-	-
	2/25/2015	-	-	-	-	1.21	6.05	15.24	122.6	368	-
MW-112S	10/10/2014	25.0	14.7	-	-	1.95	5.46	18.26	148.5	369	-
	10/20/2014	0.0	12.0	7.9	0.0	-	-	-	-	-	-
	10/21/2014	-	-	-	-	2.50	5.38	18.27	172.9	333	-
	2/24/2015	16.8	6.6	9.7	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	3.92	5.41	13.06	207.5	347	-
	5/11/2015	2.1	16.3	3.3	0.0	3.37	5.21	13.22	197.2	360	-
MW-112	10/10/2014	14.8	16.3	-	-	2.14	5.56	17.93	157.3	162	-
	2/24/2015	12.3	19.2	1.3	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	4.34	5.54	15.13	203.8	171	-
MW-113	10/10/2014	6.3	19.2	-	-	6.17	6.35	17.97	83.2	352	-
	2/24/2015	0.0	19.9	1.6	0.2	-	-	-	-	-	-
	2/25/2015	-	-	-	-	5.96	6.73	14.72	73.5	428	-



Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW-114	10/10/2014	9.0	6.3	-	-	1.50	5.83	17.65	78.0	310	-
	10/20/2014	0.1	16.0	2.1	0.1	-	-	-	-	-	-
	10/21/2014	-	-	-	-	1.23	6.04	17.81	154.1	262	-
	2/24/2015	0.0	20.6	0.3	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	8.72	6.10	12.05	113.7	326	-
	5/11/2015	0.0	19.4	1.0	0.0	3.99	5.99	15.33	199.7	300	-
MW-121	8/4/2015	-	-	-	-	0.02	7.00	17.04	-13.1	890	-
	12/1/2015	14.8	14.8	3.6	15.2	0.04	6.72	17.44	-91.7	880	-
	3/14/2016	7.0	13.0	4.5	17.6	0.02	6.84	17.13	-159.0	850	-
MW-122	8/4/2015	-	-	-	-	0.06	7.04	16.73	-6.3	1020	-
	12/1/2015	2.2	11.2	4.8	4.8	0.27	6.81	17.06	-86.8	1130	-
	3/14/2016	5.7	16.2	2.7	1.1	0.11	7.04	16.50	-127.1	1000	-
MW-123S / RW-123S	8/4/2015	-	-	-	-	2.66	12.52	16.99	-53.2	15080	-
	12/1/2015	0.2	17.8	2.0	10.5	0.13	6.63	17.68	-46.3	810	-
	3/14/2016	73.7	16.8	2.9	3.1	0.86	6.50	15.31	-69.7	770	-
RW-1	10/13/2014	130.0	19.0	-	-	1.34	6.92	18.45	136.4	495	-
	10/13/2014	79.0	18.9	-	-	3.41	6.41	18.31	158.0	473	-
	10/14/2014	55.0	18.9	-	-	0.53	6.49	18.46	129.6	475	-
	10/15/2014	80.7	19.3	-	-	1.99	6.29	18.43	60.4	292	-
	10/15/2014	-	-	-	-	1.06	6.31	18.49	96.9	314	-
	10/20/2014	29.2	16.4	3.2	2.4	-	-	-	-	-	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
RW-1 (cont.)	10/22/2014	-	-	-	-	2.14	6.50	18.07	85.5	311	-
	2/24/2015	178.0	3.2	4.2	0.2	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.03	6.76	17.88	-86.4	900	-
	12/1/2015	6.9	3.1	8.5	9.5	0.07	6.68	17.28	-57.6	760	-
	3/14/2016	0.1	15.3	3.8	0.0	0.16	6.50	17.06	-89.0	730	-
RW-05S	8/4/2015	-	-	-	-	0.00	8.88	15.65	-469.6	1960	-
	12/1/2015	193.7	19.2	1.3	3.5	0.04	6.59	17.01	-89.7	1560	-
	3/14/2016	44.2	20.3	0.6	0.3	1.78	6.63	14.38	-98.0	1260	-
RW-25S	8/4/2015	3.9	2.1	14.7	59.9	-	-	-	-	-	-
	12/1/2015	111.1	13.1	6.5	9.7	-	-	-	-	-	-
	3/14/2016	55.5	18.8	1.4	0.5	-	-	-	-	-	-
RW-28S	8/4/2015	48.5	13.8	1.4	0.3	0.17	6.22	16.59	-12.0	1610	-
	12/1/2015	31.8	17.6	1.6	0.1	0.24	6.50	17.31	-48.20	1590	-
	3/14/2016	68.8	17.6	2.1	0.2	2.25	6.75	12.79	-86.50	1330	-
RW-30S	10/10/2014	6.8	7.6	-	-	0.31	6.64	18.50	-59.9	1155	-
	10/15/2014	15.5	17.2	-	-	-	6.69	19.02	-114.8	1084	-
	10/15/2014	74.4	10.5	-	-	0.69	6.61	19.43	-60.0	1030	-
	10/20/2014	2.8	11.5	4.0	0.0	-	-	-	-	-	-
	2/24/2015	16.5	12.8	0.3	0.2	0.40	6.74	14.15	-51.7	742	-
	5/11/2015	49.6	13.4	2.9	0.0	0.81	6.7	13.04	7.0	680	-
	8/4/2015	18.3	16.0	0.5	1.1	1.96	7.12	16.90	-93.7	780	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
RW-30S (cont.)	12/1/2015	32.1	15.7	2.6	0.1	0.27	6.75	17.86	-68.4	1040	-
	3/14/2016	16.4	18.4	2.1	0.3			DRY			
RW-116S	8/4/2015	3.8	13.8	3.9	0.6	0.07	6.68	16.35	-77.4	1710	-
	12/1/2015	50.7	18.8	0.6	1.2	0.06	6.62	16.97	-78.7	1350	-
	3/14/2016	25.1	20.2	0.8	0.2	0.65	6.59	14.49	-92.3	1150	-
RW-117S	8/4/2015	3.2	20.5	0.0	0.0	0.27	6.92	16.29	-76.5	1740	-
	12/1/2015	422.3	17.3	3.1	2.1	0.06	6.64	17.06	-100.6	1420	-
	3/14/2016	84.0	19.6	1.2	0.2			DRY			
RW-118S	8/4/2015	19.6	6.4	7.3	0.1	0.14	6.78	16.32	-59.8	1350	-
RW-119S	8/4/2015	2.4	12.8	3.4	2.1	0.03	6.69	16.60	-15.9	1020	-
TW-02	10/13/2014	0.3	17.4	-	-	1.01	6.43	18.32	-	523	-
	10/23/2014	-	-	-	-	0.65	6.70	17.24	-63.8	1189	-
	2/24/2015	0.0	19.9	0.3	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	1.56	6.24	8.82	96.2	991	-
	5/11/2015	-	-	-	-	1.62	6.60	21.64	-49.5	1230	-
	8/5/2015	-	-	-	-	0.27	6.82	18.28	-68.9	792	31.9
TW-03	10/13/2014	0.3	19.5	-	-	1.86	5.73	19.23	-	503	-
	10/23/2014	-	-	-	-	0.71	6.12	18.54	38.1	489	-
	2/24/2015	0.0	3.1	10.4	0.3	-	-	-	-	-	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
TW-03 (cont.)	2/25/2015	-	-	-	-	0.75	6.21	8.92	64.8	609	-
	5/11/2015	0.0	8.5	10.2	0.0	2.03	5.77	20.61	110.5	480	-
	8/4/2015	0.0	7.8	14.3	0.0	0.26	5.40	21.76	80.4	602	70.6
	3/14/2016	0.0	9.2	8.0	0.1	-	-	-	-	-	-
TW-04	10/13/2014	2.0	19.2	-	-	1.67	5.73	19.08	-	1344	-
	10/23/2014	-	-	-	-	0.70	5.76	18.95	35.0	1232	-
	2/24/2015	1.2	15.7	4.4	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	2.36	5.86	6.96	65.1	1862	-
	5/11/2015	-	-	-	-	1.92	6.19	19.77	-22.7	1390	-
	8/4/2015	-	-	-	-	0.16	6.23	19.04	-35.7	1203	210
TW-05	10/13/2014	129.3	17.0	-	-	1.26	5.23	18.64	61.2	1204	-
	10/15/2014	8.7	20.5	-	-	-	-	-	-	-	-
	10/20/2014	16.0	20.6	0.1	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	0.85	5.73	19.04	49.2	1121	-
	2/24/2015	16.0	11.1	8.6	0.7	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.85	6.19	7.42	37.1	992	-
	5/11/2015	22.1	4.6	12.9	0.0	0.15	5.60	18.61	54.0	800	-
	8/4/2015	8.2	7.2	13.3	0.0	0.38	5.86	19.61	21.5	901	87.0
	3/14/2016	0.3	12.3	6.5	0.0	-	-	-	-	-	-
TW-06	10/13/2014	39.8	14.4	-	-	1.31	6.42	18.99	-	983	-
	10/15/2014	78.9	11.0	-	-	1.33	6.54	21.65	-65.0	873	-
	10/15/2014	-	-	-	-	0.31	6.28	19.79	-46.8	986	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
TW-06 (cont.)	10/20/2014	0.8	5.4	12.0	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	0.84	6.51	18.95	-68.8	823	-
	2/24/2015	0.7	5.0	8.9	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	0.84	6.75	7.20	-32.9	882	-
	5/11/2015	-	-	-	-	1.33	6.49	18.61	-69.1	710	-
	8/4/2015	-	-	-	-	0.22	6.17	19.07	-36.8	975	30.5
	12/1/2015	4.7	1.1	14.5	0.0	-	-	-	-	-	-
	3/14/2016	0.0	11.6	4.1	0.1	-	-	-	-	-	-
TW-07	10/13/2014	33.5	16.4	-	-	1.40	4.96	19.08	-	580	-
	10/15/2014	15.6	15.4	-	-	0.40	4.94	20.81	97.9	569	-
	10/20/2014	0.0	14.6	5.0	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	0.41	4.99	19.04	139.5	415	-
	2/24/2015	0.0	14.4	7.2	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	1.53	5.07	7.15	244.8	640	-
	5/11/2015	0.0	9.0	11.0	0.0	2.02	4.70	20.64	202.2	660	-
	8/4/2015	0.0	7.2	16.9	0.0	0.20	4.39	22.88	150.0	629	65.8
	3/14/2016	0.0	18.8	2.3	0.1	-	-	-	-	-	-
TW-12S	10/10/2014	0.8	18.5	-	-	-	-	-	-	-	-
	2/24/2015	0.0	15.0	2.8	0.3	-	-	-	-	-	-
TW-14	10/10/2014	2.3	19.5	-	-	-	-	-	-	-	-
	10/20/2014	0.0	20.0	0.7	0.0	-	-	-	-	-	-
	10/23/2014	-	-	-	-	1.99	7.48	19.13	-47.2	562	-

Table 3

# **HISTORICAL GROUNDWATER FIELD PARAMETERS DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Head Space Photo Ionization Detector (ppm)	Head Space Oxygen (%)	Head Space Carbon Dioxide (%)	Head Space Methane (%)	Dissolved Oxygen (mg/L)	Well pH	Well Temperature (deg C)	ORP (mV)	Specific Conductance (µS/cm)	Turbidity (NTU)
TW-14 (cont.)	2/24/2015	0.0	20.3	0.3	0.3	-	-	-	-	-	-
	2/25/2015	-	-	-	-	3.80	7.18	3.96	-6.1	465	-
	5/11/2015	-	-	-	-	1.16	7.14	22.53	-114.6	760	-
	8/6/2015	-	-	-	-	0.73	6.88	24.20	-107.8	828	-

## Notes:

- = Not available  
 % = Percent  
 µS/cm = Microsiemens per centimeter  
 deg C = Degrees Celsius  
 mg/L = Milligrams per liter  
 mV = Millivolts  
 ORP = Oxidation-Reduction Potential  
 ppm = Parts per million  
 NTU = Nephelometric Turbidity Unit

Table 4

## Groundwater Monitoring Plan

Potomac River Generating Station  
1400 North Royal Street  
Alexandria, Virginia



Well ID	Aquifer Zone	Field Parameters							Laboratory Parameters							Sample Method	Comments	
		pH	Specific Conductance	Temperature	Oxidation Reduction Potential	Dissolved Oxygen	Headspace CO <sub>2</sub> concentration	Headspace VOC concentration	Headspace O <sub>2</sub>	TPH-DRO C10-C28 (SW-846 8015B)	Alkalinity (SM 2320B)	Nitrate NO <sub>3</sub> <sup>-1</sup> (EPA 353.2)	Manganese (Mn2+)	Ferrous Iron Fe <sup>2+</sup> (SM 3500-Fe B modified-1997)	Sulfate SO <sub>4</sub> <sup>2-</sup> (EPA 300.0)			Methane (RSKSOP-175 modified)
MW-01S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	LNAPL**; Biostimulation sampling to begin 1Q16
MW-05 / RW-05	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q							P&S	LNAPL**
MW-08S	Shallow								Q								P&S	*Sample once for BTEX and naphthalene; if concentrations below remediation goals discontinue sampling, if above continue to sample annually
MW-10S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	LNAPL** ; Biostimulation sampling to begin 1Q16
MW-11	Deep																P&S	
MW-14	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	Biostimulation sampling to begin 1Q16
MW-15S	Shallow																P&S	
MW-16S	Shallow																NS	Gauge only
MW-16	Deep																NS	Gauge only
MW-25S	Shallow								Q								P&S	LNAPL**
MW-25 / RW-25	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q							P&S	LNAPL**
MW-27	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	
MW-31 / RW-31	Deep								Q								P&S	
MW-33	Deep																P&S	
MW-51S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	Biostimulation sampling to begin 1Q16
MW-51 / RW-51	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q							P&S	LNAPL**
MW-52	Deep																NS	Gauge only
MW-70	Deep																NS	Gauge only
MW-72S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	Biostimulation sampling to begin 1Q16
MW-72 / RW-72	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	Biostimulation sampling to begin 1Q16
MW-100S	Shallow																P&S	
MW-100	Deep																P&S	
MW-102	Deep																NS	Gauge only
MW-103	Shallow																NS	Gauge only
MW-104	Shallow																NS	Gauge only
MW-105	Shallow																NS	Gauge only
MW-106	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S	Biostimulation sampling to begin 1Q16

# Groundwater Monitoring Plan

Potomac River Generating Station  
1400 North Royal Street  
Alexandria, Virginia

Well ID	Aquifer Zone	Field Parameters							Laboratory Parameters							Sample Method	Comments
		pH	Specific Conductance	Temperature	Oxidation Reduction Potential	Dissolved Oxygen	Headspace CO <sub>2</sub> concentration	Headspace VOC concentration	Headspace O <sub>2</sub>	TPH-DRO C10-C28 (SW-846 8015B)	Alkalinity (SM 2320B)	Nitrate NO <sub>3</sub> <sup>-</sup> (EPA 353.2)	Manganese (Mn2+)	Ferrous Iron Fe <sup>2+</sup> (SM 3500-Fe B modified-1997)	Sulfate SO <sub>4</sub> <sup>2-</sup> (EPA 300.0)		
MW-107	Shallow															P&S	Typically Dry
MW-108	Shallow									Q						P&S	
MW-109S	Shallow															P&S	
MW-109	Deep															P&S	basement wells
MW-110S	Shallow															P&S	
MW-110	Deep															P&S	
MW-111	Deep															P&S	
MW-112S	Shallow															P&S	
MW-112	Deep															P&S	
MW-113	Deep															P&S	
MW-114	Deep															P&S	
MW-121	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S
MW-122	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P&S
MW-123S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	
TW-02	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q						NS	Gauge only
TW-03	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	LF
TW-04	Deep									Q						LF	Biostimulation sampling to begin 1Q16
TW-05	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	LF
TW-06	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	LF
TW-07	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q						LF	Begin collection of field parameters 1Q16
TW-12S	Shallow									Q						P&S	Dry
TW-14	Shallow									Q						LF	
RW-1	Deep	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	
RW-05S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	
RW-25S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	LNAPL**
RW-28S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	
RW-30S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	Begin collection of field parameters 1Q16
RW-116S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	
RW-117S	Shallow	Q	Q	Q	Q	Q	Q	Q	Q	Q						P&S	
RW-118S	Shallow									Q						P&S	



Table 4

**Groundwater Monitoring Plan**  
 Potomac River Generating Station  
 1400 North Royal Street  
 Alexandria, Virginia



Well ID	Aquifer Zone	Field Parameters							Laboratory Parameters							Sample Method	Comments	
		pH	Specific Conductance	Temperature	Oxidation Reduction Potential	Dissolved Oxygen	Headspace CO <sub>2</sub> concentration	Headspace VOC concentration	Headspace O <sub>2</sub>	TPH-DRO C10-C28 (SW-846 8015B)	Alkalinity (SM 2320B)	Nitrate NO <sub>3</sub> <sup>-1</sup> (EPA 353.2)	Manganese (Mn2+)	Ferrous Iron Fe <sub>2</sub> <sup>+</sup> (SM 3500-Fe B modified-1997)	Sulfate SO <sub>4</sub> <sup>2-</sup> (EPA 300.0)			Methane (RSKSOP-175 modified)
RW-119S	Shallow								Q								P&S	
Total		25	25	25	25	25	25	25	34	13	13	13	13	13	13	13		

Notes:

\*\* - Wells with LNAPL will only be sampled when no measurable LNAPL is observed.

Q - Quarterly sampling frequency

A - Annual sampling frequency

P&S - Purge and Sample

LF - Low Flow Sampling

NS - No Sampling Planned

VOC - Volatile Organic Compound

TPH-DRO - Total Petroleum Hydrocarbons - Diesel Range Organics

Annual sampling to be completed during the 4th quarter of each year, beginning during 2016.

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-01S	8/15/2014	-	-	-	-	-	-	-	-	-	2,670
	10/22/2014	-	-	-	-	-	-	-	-	-	23,000
MW-08S	8/15/2014	-	-	-	-	-	-	-	-	-	7,540
	10/22/2014	-	-	-	-	-	-	-	-	-	52,000
	2/26/2015	-	-	-	-	-	-	-	-	-	22,000
	5/12/2015	-	-	-	-	-	-	-	-	-	27,000
	8/4/2015	-	-	-	-	-	-	-	-	-	14,000
	12/2/2015	61	<0.5	5	48	-	-	-	-	30	15,000
MW-10S / RW-10S	3/16/2016	-	-	-	-	-	-	-	-	-	20,000
	8/15/2014	-	-	-	-	-	-	-	-	-	36,000
	8/15/2014	-	-	-	-	-	-	-	-	-	100,000
MW-11	3/14/2016	-	-	-	-	-	-	-	-	-	29,000
	8/16/2014	-	-	-	-	-	-	-	-	-	423
	10/22/2014	-	-	-	-	-	-	-	-	-	840
	2/26/2015	-	-	-	-	-	-	-	-	-	920
	5/12/2015	2	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	900
	8/5/2015	-	-	-	-	-	-	-	-	-	5,300
MW-14	12/2/2015	-	-	-	-	-	-	-	-	-	2,000
	8/15/2014	-	-	-	-	-	-	-	-	-	305
	10/22/2014	-	-	-	-	-	-	-	-	-	2,100
	2/25/2015	-	-	-	-	-	-	-	-	-	6,000

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-14 (cont.)	5/12/2015	-	-	-	-	-	-	-	-	-	5,500
	8/5/2015	-	-	-	-	-	-	-	-	-	7,300
	12/2/2015	-	-	-	-	-	-	-	-	-	1,600
	3/15/2016	-	-	-	-	-	-	-	-	-	28,000
MW-15S	8/15/2014	-	-	-	-	-	-	-	-	-	909
	10/22/2014	-	-	-	-	-	-	-	-	-	2,800
	2/26/2015	-	-	-	-	-	-	-	-	-	2,800
	5/12/2015	-	-	-	-	-	-	-	-	-	1,800
	8/4/2015	-	-	-	-	-	-	-	-	-	5,900
MW-16S	12/1/2015	-	-	-	-	-	-	-	-	-	4,200
	8/16/2014	-	-	-	-	-	-	-	-	-	1,720
MW-16	9/9/2015	-	-	-	-	-	-	-	-	-	100
	8/15/2014	-	-	-	-	-	-	-	-	-	<300
MW-16	10/22/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.02	<45
	2/25/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.030	<45
	5/12/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-25S	8/15/2014	-	-	-	-	-	-	-	-	-	49,000
	12/5/2014	-	-	-	-	-	-	-	-	-	840,000
	1/9/2015	-	-	-	-	-	-	-	-	-	2,200,000

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-25 / RW-25	8/13/2014	-	-	-	-	-	-	-	-	-	1,280
	12/5/2014	-	-	-	-	-	-	-	-	-	50,000
	1/9/2015	-	-	-	-	-	-	-	-	-	56,000
MW-27	8/16/2014	-	-	-	-	-	-	-	-	-	1,490
	10/23/2014	0.5	<0.5	2	2	<0.5	2	<0.5	<0.5	6	1,900
	2/25/2015	<0.5	<0.5	1	0.5	<0.5	<2	<0.5	<0.5	8.3	1,700
	5/13/2015	<0.5	<0.5	2	1	<0.5	2 J	<0.5	<0.5	30	19,000
	8/5/2015	-	-	-	-	-	-	-	-	-	2,100
	12/3/2015	<0.5	<0.5	<0.5	<0.5	-	-	-	-	1.00 J	1,700
	3/15/2016	-	-	-	-	-	-	-	-	-	33,000
MW-30S	8/15/2014	-	-	-	-	-	-	-	-	-	7,040
	10/23/2014	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5	<0.5	-	2,900
	2/25/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	3.9	3,500
	5/13/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	3,200
MW-31 / RW-31	8/16/2014	-	-	-	-	-	-	-	-	-	27,200
	10/23/2014	<0.5	<0.5	0.6	0.6	<0.5	<2	<0.5	<0.5	4	7,200
	2/25/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	2.7	1,800
	5/13/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	3 J	14,000
	8/5/2015	-	-	-	-	-	-	-	-	-	2,400
	12/3/2015	-	-	-	-	-	-	-	-	-	1,200
	3/15/2016	-	-	-	-	-	-	-	-	-	11,000

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-33	8/15/2014	-	-	-	-	-	-	-	-	-	440
	10/23/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.02	<45
	2/25/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.030	<45
	5/13/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.1	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
	12/3/2015	-	-	-	-	-	-	-	-	-	<45
MW-51S	8/15/2014	-	-	-	-	-	-	-	-	-	1,590
	10/22/2014	-	-	-	-	-	-	-	-	-	8,400
	2/26/2015	-	-	-	-	-	-	-	-	-	7,100
	5/13/2015	-	-	-	-	-	-	-	-	-	17,000
	8/5/2015	-	-	-	-	-	-	-	-	-	11,000
	12/2/2015	-	-	-	-	-	-	-	-	-	14,000
	3/15/2016	-	-	-	-	-	-	-	-	-	67,000
MW-51 / RW-51	8/11/2014	-	-	-	-	-	-	-	-	-	1,180
	8/13/2014	-	-	-	-	-	-	-	-	-	1,650
	8/16/2014	-	-	-	-	-	-	-	-	-	281,000
MW-52	8/15/2014	-	-	-	-	-	-	-	-	-	<600
	10/22/2014	-	-	-	-	-	-	-	-	-	120
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	110
MW-70	8/15/2014	-	-	-	-	-	-	-	-	-	<153

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-70 (cont.)	10/21/2014	-	-	-	-	-	-	-	-	-	<45
	2/26/2015	-	-	-	-	-	-	-	-	-	3,200
	5/12/2015	-	-	-	-	-	-	-	-	-	100
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-72S / RW-72S	8/15/2014	-	-	-	-	-	-	-	-	-	5,980
	10/22/2014	-	-	-	-	-	-	-	-	-	3,300
	2/25/2015	-	-	-	-	-	-	-	-	-	3,400
	5/13/2015	13	<0.5	24	<0.5	<0.5	<2	<0.5	<0.5	16.00	4,000
	8/5/2015	-	-	-	-	-	-	-	-	-	3,700
	12/3/2015	8	<0.5	15	<0.5	-	-	-	-	2.00 J	2,100
	3/14/2016	-	-	-	-	-	-	-	-	-	8,200
MW-72 / RW-72	8/11/2014	-	-	-	-	-	-	-	-	-	<300
	8/13/2014	-	-	-	-	-	-	-	-	-	1,100
	8/16/2014	-	-	-	-	-	-	-	-	-	1,340
	10/22/2014	41	<0.5	1	66	0.6	2	<0.5	<0.5	61	2,000
	2/25/2015	8	<0.5	<0.5	3	<0.5	<2	<0.5	<0.5	<0.030	590
	5/13/2015	13	<0.5	<0.5	6	<0.5	<2	<0.5	<0.5	13.00	630
	8/5/2015	-	-	-	-	-	-	-	-	-	3,900
	12/3/2015	20	<0.5	29	100	-	-	-	-	26	960
	3/15/2016	-	-	-	-	-	-	-	-	-	1,200
MW-100S	8/15/2014	-	-	-	-	-	-	-	-	-	<300
	10/21/2014	-	-	-	-	-	-	-	-	-	<45

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-100S (cont.)	2/26/2015	-	-	-	-	-	-	-	-	-	690
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-100	8/15/2014	-	-	-	-	-	-	-	-	-	<152
	10/21/2014	-	-	-	-	-	-	-	-	-	60
	2/25/2015	-	-	-	-	-	-	-	-	-	300
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-102	8/15/2014	-	-	-	-	-	-	-	-	-	<1,500
	10/21/2014	-	-	-	-	-	-	-	-	-	<45
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-103	8/15/2014	-	-	-	-	-	-	-	-	-	479
	10/21/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.02	54
	2/26/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.033	<45
	5/12/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-104	8/15/2014	-	-	-	-	-	-	-	-	-	1,630
	10/21/2014	<0.5	<0.5	0.7	2	<0.5	<2	<0.5	<0.5	1	150
	2/26/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.030	<45
	5/12/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	<45

Table 5

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PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-104 (cont.)	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-105	8/15/2014	-	-	-	-	-	-	-	-	-	<1,500
	10/21/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.06	<45
	5/12/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
MW-106	8/15/2014	-	-	-	-	-	-	-	-	-	89,200
	10/22/2014	<0.5	<0.5	1	<0.5	<0.5	<2	<0.5	<0.5	23	2,000
	2/25/2015	<0.5	<0.5	2	<0.5	<0.5	<2	<0.5	<0.5	4.1	9,500
	5/12/2015	<0.5	<0.5	5	<0.5	<0.5	<2	<0.5	<0.5	2 J	7,800
	8/5/2015	-	-	-	-	-	-	-	-	-	2,300
	12/3/2015	<0.5	<0.5	1	<0.5	-	-	-	-	<1	3,300
	3/15/2016	-	-	-	-	-	-	-	-	-	2,900
MW-107	8/16/2014	-	-	-	-	-	-	-	-	-	8,540
	10/22/2014	<0.5	<0.5	2	2	<0.5	<2	<0.5	<0.5	0.9	840
	2/25/2015	1	<0.5	0.7	0.7	<0.5	<2	<0.5	<0.5	-	480
	5/12/2015	<0.5	<0.5	2	3	<0.5	<2	<0.5	<0.5	5.00	150
	8/5/2015	-	-	-	-	-	-	-	-	-	280
	12/3/2015	-	-	-	-	-	-	-	-	-	730
MW-109S	8/21/2014	-	-	-	-	-	-	-	-	-	7,500
	10/20/2014	-	-	-	-	-	-	-	-	-	12,000
	2/26/2015	-	-	-	-	-	-	-	-	-	1,800



Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-109S (cont.)	5/12/2015	<0.5	<0.5	<0.5	<0.5	<0.5	4 J	<0.5	<0.5	<1	180
MW-109	8/21/2014	-	-	-	-	-	-	-	-	-	<600
	10/20/2014	-	-	-	-	-	-	-	-	-	200
	2/26/2015	-	-	-	-	-	-	-	-	-	100
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
MW-110S	8/25/2014	-	-	-	-	-	-	-	-	-	6,630
	10/20/2014	-	-	-	-	-	-	-	-	-	8,500
	2/26/2015	-	-	-	-	-	-	-	-	-	6,700
	5/12/2015	-	-	-	-	-	-	-	-	-	2,300
MW-110	8/25/2014	-	-	-	-	-	-	-	-	-	<153
	10/20/2014	-	-	-	-	-	-	-	-	-	<45
	2/26/2015	-	-	-	-	-	-	-	-	-	<45
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
MW-111	8/21/2014	-	-	-	-	-	-	-	-	-	<600
	10/20/2014	-	-	-	-	-	-	-	-	-	<45
	2/26/2015	-	-	-	-	-	-	-	-	-	260
	5/12/2015	-	-	-	-	-	-	-	-	-	150
MW-112S	8/15/2014	-	-	-	-	-	-	-	-	-	<1,500
	10/20/2014	-	-	-	-	-	-	-	-	-	380
	2/26/2015	-	-	-	-	-	-	-	-	-	<45

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-112S (cont.)	5/12/2015	-	-	-	-	-	-	-	-	-	<45
MW-112	8/15/2014	-	-	-	-	-	-	-	-	-	<1,500
	10/20/2014	-	-	-	-	-	-	-	-	-	<45
	2/26/2015	-	-	-	-	-	-	-	-	-	<45
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
MW-113	8/21/2014	-	-	-	-	-	-	-	-	-	<600
	10/20/2014	-	-	-	-	-	-	-	-	-	61
	2/26/2015	-	-	-	-	-	-	-	-	-	90
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
MW-114	8/25/2014	-	-	-	-	-	-	-	-	-	<600
	10/20/2014	-	-	-	-	-	-	-	-	-	<45
	2/26/2015	-	-	-	-	-	-	-	-	-	<45
	5/12/2015	-	-	-	-	-	-	-	-	-	<45
MW-121	8/4/2015	-	-	-	-	-	-	-	-	-	9,400
	12/2/2015	2.00	<0.5	8.00	<0.5	-	-	-	-	41.00	4,500
	3/15/2016	-	-	-	-	-	-	-	-	-	5,500
MW-122	8/4/2015	-	-	-	-	-	-	-	-	-	2,000
	12/2/2015	1.00	<0.5	8.00	<0.5	-	-	-	-	<1	1,600
	3/15/2016	-	-	-	-	-	-	-	-	-	1,800

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
MW-123S / RW-123S	8/5/2015	-	-	-	-	-	-	-	-	-	2,400
	12/1/2015	-	-	-	-	-	-	-	-	-	2,500
	3/14/2016	-	-	-	-	-	-	-	-	-	13,000
RW-1	10/22/2014	-	-	-	-	-	-	-	-	-	30,000
	2/26/2015	-	-	-	-	-	-	-	-	-	6,200
	5/12/2015	-	-	-	-	-	-	-	-	-	8,400
	8/5/2015	-	-	-	-	-	-	-	-	-	2,500
	12/2/2015	-	-	-	-	-	-	-	-	-	4,300
	3/15/2016	-	-	-	-	-	-	-	-	-	4,300
RW-05S	8/5/2015	-	-	-	-	-	-	-	-	-	6,900
	12/2/2015	-	-	-	-	-	-	-	-	-	17,000
	3/15/2016	-	-	-	-	-	-	-	-	-	15,000
RW-28S	8/5/2015	-	-	-	-	-	-	-	-	-	2,300
	12/1/2015	-	-	-	-	-	-	-	-	-	2,500
	3/14/2016	-	-	-	-	-	-	-	-	-	790
RW-30S	8/5/2015	-	-	-	-	-	-	-	-	-	890
	12/1/2015	-	-	-	-	-	-	-	-	-	1,300
	3/14/2016	-	-	-	-	-	-	-	-	-	61,000
RW-116S	8/5/2015	-	-	-	-	-	-	-	-	-	7,000
	12/2/2015	-	-	-	-	-	-	-	-	-	11,000

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
RW-116S (cont.)	3/14/2016	-	-	-	-	-	-	-	-	-	7,600
	8/5/2015	-	-	-	-	-	-	-	-	-	6,600
	12/1/2015	-	-	-	-	-	-	-	-	-	13,000
RW-118S	8/5/2015	-	-	-	-	-	-	-	-	-	8,200
	12/2/2015	-	-	-	-	-	-	-	-	-	11,000
	3/14/2016	-	-	-	-	-	-	-	-	-	8,200
RW-119S	8/5/2015	-	-	-	-	-	-	-	-	-	2,700
	12/2/2015	-	-	-	-	-	-	-	-	-	2,000
	3/14/2016	-	-	-	-	-	-	-	-	-	4,400
TW-01	12/16/2013	14.3	ND	13.1	63.5	1.55	-	-	-	119	14,100
	7/7/2014	-	-	-	-	-	-	-	-	-	27,400
TW-02	12/16/2013	ND	ND	ND	ND	0.791	-	-	-	ND	584
	7/7/2014	-	-	-	-	-	-	-	-	-	<1,160
	8/15/2014	-	-	-	-	-	-	-	-	-	<600
	10/23/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	-	60
	3/4/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.20	<45
	5/13/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	<45
	8/5/2015	-	-	-	-	-	-	-	-	-	<45
	12/3/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.07	81 J
	3/16/2016	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.08	<45

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
TW-03	12/16/2013	ND	ND	ND	ND	ND	-	-	-	ND	351
	7/7/2014	-	-	-	-	-	-	-	-	-	<1,160
	8/15/2014	-	-	-	-	-	-	-	-	-	<1,500
	10/23/2014	0.7	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	-	49
	3/4/2015	1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.030	180
	5/13/2015	1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	200
	8/5/2015	-	-	-	-	-	-	-	-	-	150
	12/2/2015	0.7 J	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.04	56 J
	3/16/2016	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.1 J	150
TW-04	12/16/2013	2.2	ND	3.45	7.11	ND	-	-	-	27.7	2,000
	7/7/2014	-	-	-	-	-	-	-	-	-	1,270
	8/15/2014	-	-	-	-	-	-	-	-	-	1,610
	10/23/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.3	160
	3/4/2015	1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	1	940
	5/13/2015	1 J	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<1	700
	8/6/2015	-	-	-	-	-	-	-	-	-	1,000
	12/2/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.04	280
	3/14/2016	1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.2	980
TW-05	12/16/2013	7.68	ND	62.8	40.3	ND	-	-	-	240	136,000
	7/7/2014	-	-	-	-	-	-	-	-	-	66,300
	8/15/2014	-	-	-	-	-	-	-	-	-	271,000
	10/23/2014	4	<0.5	14	<0.5	<0.5	<2	<0.5	<0.5	21	29,000
	3/4/2015	2	<0.50	1	<0.5	<0.5	<2	<0.5	<0.5	3	2,200

Table 5

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PC #2013-3154  
Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
TW-05 (cont.)	5/13/2015	3	<0.50	<0.50	<0.5	<0.5	<2	<0.5	<0.5	1 J	1,100
	8/6/2015	-	-	-	-	-	-	-	-	-	790
	12/1/2015	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.04	330
	3/14/2016	1	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	0.3	960
TW-06	12/16/2013	1.09	ND	20.3	7.86	ND	-	-	-	174	47,000
	7/7/2014	-	-	-	-	-	-	-	-	-	113,000
	8/15/2014	-	-	-	-	-	-	-	-	-	147,000
	10/23/2014	0.8	<0.5	11	1	<0.5	<2	<0.5	<0.5	5	16,000
	3/4/2015	2	<0.5	6	<0.5	<0.5	<2	<0.5	<0.5	2.2	2,200
	5/13/2015	2	<0.5	4	<0.5	<0.5	<2	<0.5	<0.5	4	2,300
	8/6/2015	-	-	-	-	-	-	-	-	-	1,400
	12/2/2015	0.8 J	<0.5	1	<0.5	<0.5	<2	<0.5	<0.5	0.8	1,300
	3/15/2016	0.8 J	<0.5	3	<0.5	<0.5	<2	<0.5	<0.5	1	43,000
TW-07	12/16/2013	2.38	ND	0.969	ND	ND	-	-	-	34	3,290
	7/7/2014	-	-	-	-	-	-	-	-	-	41,500
	8/15/2014	-	-	-	-	-	-	-	-	-	19,600
	10/23/2014	2	<0.5	0.6	<0.5	<0.5	<2	<0.5	<0.5	6	4,700
	3/4/2015	9	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	2.2	670
	5/13/2015	10	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	3 J	320
	8/5/2015	-	-	-	-	-	-	-	-	-	220
	12/2/2015	3	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	1	110
	3/15/2016	3	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.08	160

Table 5

# **HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY**

PC #2013-3154  
 Potomac River Generating Station  
 1400 North Royal St  
 Alexandria, VA

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes, Total (µg/L)	Methyl tert-butyl ether (µg/L)	tert-Butyl alcohol (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	Naphthalene (µg/L)	TPH-DRO (µg/L)
TW-08S	7/7/2014	-	-	-	-	-	-	-	-	-	29,500
TW-09S	7/7/2014	-	-	-	-	-	-	-	-	-	2,330,000
TW-10	12/18/2013 7/7/2014	2.51 -	ND -	19.7 -	4.99 -	ND -	- -	- -	- -	131 -	3,040 23,400
TW-11	12/18/2013 7/7/2014	1.55 -	0.664 -	8.3 -	9.67 -	0.578 -	- -	- -	- -	263 -	170,000 117,000
TW-13	12/18/2013 7/7/2014	6.06 -	ND -	44.5 -	137 -	ND -	- -	- -	- -	239 -	3,580 17,500
TW-14	1/17/2014 7/7/2014 8/15/2014 10/21/2014 2/26/2015 5/12/2015 8/11/2015 12/1/2015 3/14/2016	ND - - <0.5 <0.5 1.00 - <0.5 <0.5	ND - - <0.5 <0.5 <0.5 - <0.5 <0.5	ND - - <0.5 <0.5 <0.5 - <0.5 <0.5	ND - - <0.5 <0.5 <0.5 - <0.5 <0.5	0.536 - - <0.5 <0.5 <0.5 - <0.5 <0.5	- - - <2 <2 7.00 - <2 <2	- - - <0.5 <0.5 <0.5 - <0.5 <0.5	- - - <0.5 <0.5 <0.5 - <0.5 <0.5	ND - - - - <0.030 <1 - - <0.04 <0.08	2,290 16,000 3,900 670 120 2,000 3,700 <45 54 J

HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY

PC #2013-3154  
Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Notes:

During the 1st Quarter 2016 sampling event, MW-109S, MW-109, MW-110S, MW-110, MW-111, MW-112S, MW-112, MW-113, and MW-114 were not sampled, as their locations in the basement of the plant were inaccessible due to unsafe conditions. MW-25S, RW-05, RW-25S, RW-25, and RW-51 were not sampled due to the presence of LNAPL. MW-108, RW-117S, and TW-12S were not sampled, as these wells were dry.

- = Not available
- <# = Less than the method detection limit
- µg/L = Micrograms per liter
- J = Detected between the Method Detection Limit and the Reporting Limit; therefore, result is an estimated value.
- ND = Non-detect
- TPH-DRO = Total Petroleum Hydrocarbons, Diesel Range Organics C10-C28





Table 6

**HISTORICAL GROUNDWATER BIOSTIMULATION ANALYTICAL DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Methane (µg/L)	Sulfate as SO <sub>4</sub> (mg/L)	Nitrate Nitrogen (mg/L)	Nitrite Nitrogen (mg/L)	Alkalinity, Carbonate (mg/L as CaCO <sub>3</sub> )	Ferrous Iron (mg/L)	Manganese (mg/L)
MW-01S	10/22/2014	4200	130	0.044 J	0.037 J	306	31.4	-
	3/16/2016	4,500	27.9	<0.040	0.017 J	367	9.3	14.5
MW-10S / RW-10S	10/22/2014	1,100	33.1	<0.040	0.037 J	461	62.8	-
	3/14/2016	1,800	193	<0.040	0.088	427	129	4.04
MW-11	10/22/2014	120	71.9	<0.040	<0.015	55	0.059	-
	2/26/2015	200	79.8	<0.040	<0.015	39	0.37	1.64
	5/12/2015	280	70.5	<0.040	<0.015	40.8	0.75	1.73
	8/6/2015	450	118	<0.040	0.049 J	356	21.9	5.67
MW-14	2/25/2015	230	51.4	0.7	<0.015	63	2.5	8.66
	5/12/2015	660	44.3	0.6	0.023 J	76.8	6.3	8.54
	8/6/2015	1,800	45.9	0.15	0.11	304	18	15.1
	3/15/2016	5,800	23.8	<0.040	0.050 J	171	22.2	6.81
MW-27	12/3/2015	2,500	112	<0.040	<0.015	424	33.4	10.9
	3/15/2016	6,100	214	<0.040	0.022 J	439	34	10.3
MW-31 / RW-31	10/23/2014	4,300	57.2	<0.040	<0.015	416	2.6	-
	2/25/2015	5,000	69.7	<0.040	<0.015	487	9.3	9.84
	5/13/2015	5,700	70.1	<0.040	<0.015	510	15.4	10.8
	8/5/2015	5,400	85.3	<0.040	<0.015	482	10	5.52
MW-33	10/23/2014	43	253	1.9	<0.015	119	0.068	-
	2/25/2015	9.8	235	2.5	<0.015	55.6	0.030 J	1.23
	5/13/2015	7.3	254	2	<0.015	81.7	0.075	0.975
	8/5/2015	17	253	1.8	<0.015	97.7	<0.010	0.605
MW-51S	10/22/2014	7,100	36.3	0.047 J	<0.015	564	28.7	-
	2/26/2015	8,900	6.2	<0.040	0.12	518	82.4	4.49
	5/13/2015	11,000	<1.5	<0.040	0.2	676	77.3	1.74
	8/6/2015	10,000	26.1	<0.040	0.046	480	48.3	1.03
	3/15/2016	13,000	535	<0.040	0.049 J	585	69	4.64
MW-70	2/26/2015	<3.0	361	0.71	<0.015	35.1	0.048 J	2.62
	5/12/2015	3.4 J	357	0.7	<0.015	40.7	<0.50	6.13
	8/6/2015	<3.0	365	0.73	<0.015	29.6	0.089	1.29



Table 6

**HISTORICAL GROUNDWATER BIOSTIMULATION ANALYTICAL DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Methane (µg/L)	Sulfate as SO <sub>4</sub> (mg/L)	Nitrate Nitrogen (mg/L)	Nitrite Nitrogen (mg/L)	Alkalinity, Carbonate (mg/L as CaCO <sub>3</sub> )	Ferrous Iron (mg/L)	Manganese (mg/L)
MW-72S / RW-72S	10/22/2014	4,400	80.3	0.093 J	0.019 J	328	9.1	-
	2/25/2015	3,600	64.5	<0.040	<0.015	615	16.7	8.49
	5/13/2015	4,100	130	<0.040	0.097	597	24.6	8.46
	8/5/2015	2,300	207	<0.040	0.067	697	30.7	11.7
	3/14/2016	310	508	<0.040	0.054	543	71.4	16.7
MW-72 / RW-72	10/22/2014	2,200	389	<0.040	<0.015	65.5	0.33	-
	2/25/2015	490	396	<0.040	<0.015	72.7	4.8	18.8
	5/13/2015	540	434	<0.040	0.057	101	10.8	17.5
	8/5/2015	1,400	393	<0.040	<0.015	548	14.3	13.5
MW-106	2/25/2015	260	1600	<0.040	0.021 J	<7.0	122	2.23
	5/12/2015	960	1160	<0.040	0.15	<0.70	50.1	1.49
	8/5/2015	2,100	1,010	<0.040	<0.015	35.1	32.7	1.38
	3/15/2016	1,600	1,250	<0.040	0.016 J	<0.70	25.1	1.67
MW-109S	10/20/2014	1,000	18.8	<0.040	0.037 J	368	8	-
	2/26/2015	140	55.4	<0.040	<0.015	196	3.1	2.64
	5/12/2015	11	62.7	<0.040	<0.015	126	0.5	2.34
MW-112S	10/20/2014	4.1 J	99	0.71	<0.015	25	0.13	-
	2/26/2015	<3.0	86.7	2.3	<0.015	13.3	0.029 J	0.649
	5/12/2015	<3.0	98.9	2.5	<0.015	13.8	<0.010	0.597
MW-114	10/20/2014	16	40.5	1.5	0.16	66.7	0.066	-
	2/26/2015	<3.0	42.7	1.7	<0.015	68	0.016 J	0.102
	5/12/2015	<3.0	42.4	1.7	<0.015	68.2	0.035 J	0.0465
MW-121	12/2/2015	12,000	38.7	<0.040	0.033 J	353	66.7	28
MW-122	12/2/2015	1,000	94.3	<0.040	<0.015	451	7.2	13.1
TW-03	3/4/2015	2,500	269	<0.040	0.083	49.7	29.7	5.24
	5/13/2015	2,200	298	<0.040	0.13	39	24.6	4.32
	8/6/2015	1,800	289	<0.040	0.07	<0.70	32.3	4.61
	3/16/2016	1,600	345	<0.040	0.029 J	24.7	21.9	4.99



Table 6

**HISTORICAL GROUNDWATER BIOSTIMULATION ANALYTICAL DATA SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Well ID	Sample Date	Methane (µg/L)	Sulfate as SO <sub>4</sub> (mg/L)	Nitrate Nitrogen (mg/L)	Nitrite Nitrogen (mg/L)	Alkalinity, Carbonate (mg/L as CaCO <sub>3</sub> )	Ferrous Iron (mg/L)	Manganese (mg/L)
TW-05	3/4/2015	2,800	367	<0.040	0.13	89.4	72.6	5.28
	5/13/2015	1,300	463	0.052 J	0.18	66.2	58.6	4.77
	8/6/2015	3,000	388	-	-	-	-	-
	8/13/2015	-	-	<0.040	0.091	16.1	84.5	3.55
	3/14/2016	460	410	0.12	0.042 J	114	41.5	3.05
TW-06	12/2/2015	7,000	279	<0.040	0.027 J	194	58.4	1.93
	3/15/2016	3,600	224	<0.040	0.039 J	128	53.9	1.46
TW-07	3/4/2015	1,300	258	<0.040	0.034 J	1.6 J	14.1	4.3
	5/13/2015	800	323	<0.040	0.046 J	1.1 J	9.5	5.62
	8/6/2015	2,700	304	<0.040	0.018 J	2.7	8.7	4.51

## Notes:

J = Detected between the Method Detection Limit and the Reporting Limit; therefore, the result is an estimated value.

<# = Less than the method detection limit of #

µg/L = Micrograms per liter

mg/L = Milligrams per liter



Table 7

## TOTAL PHASE EXTRACTION OPERATIONAL SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

DATE	Operation			Vapor Recovery							Groundwater Recovery		
	Period (days)	Operating Days	Operating Hours	Applied Vacuum	Vapor Flow Rate	PID Reading	Influent >C4-C10 Hydrocarbon Concentration	>C4-C10 Hydrocarbon Recovery Per Day	>C4-C10 Hydrocarbon Recovery Per Period	Cumulative >C4-C10 Hydrocarbon Recovery	Average Groundwater Flow Rate	Monthly Groundwater Recovery	Cumulative Groundwater Recovery
March 14, 2016	-	-	-	15.8	325	-	830	-	-	-	-	2,572	539
March 15, 2016	0.1	0.1	2	14.5	340	-		25.4	2.1	2	0.7		627
March 16, 2016	0.3	0.3	10	14.0	340	150		25.4	8.5	11	0.5		875
March 17, 2016	0.4	0.4	19	13.7	360	313		26.9	10.1	21	0.2		993
March 21, 2016	1.3	1.3	49	15.1	320	189		23.9	29.8	50	0.2		1,358
March 24, 2016	3	2.5	108	-	-	-		-	-	-	0.2		1,920
March 30, 2016	6	5.4	238	15.1	360	210		26.9	212	262	0.1		2,572
Q1 2016	11	10		14.7	341	216			262		0.2	2,572	

## Notes:

PID - photoionization detector  
in. Hg - inches of mercury  
scfm - standard cubic feet per minute  
ppm-v - parts per million by volume  
mg/m<sup>3</sup> - milligrams per cubic meter  
lbs - pounds  
gal - gallons  
gpm - gallons per minute

*Estimate of TPE vapor >C4-C10 hydrocarbon recovery using analytical results in units of mg/m<sup>3</sup>:*

Pounds = Vapor Flow Rate (scfm) x Influent >C4-C10 Hydrocarbons (mg/m<sup>3</sup>) x Period (days) x c

c = conversion factors, 1440 min/day, 0.02832 m<sup>3</sup>/ft<sup>3</sup>, 2.2046E-6 lb/mg

*Estimate of recovery using analytical results in units of mg/L:*

Pounds = Total Monthly Flow (gal) x Concentration (mg/L) x c

c = conversion factors, 3.7854 L/gal, 2.2046E-6 lb/mg

Table 8

# PUMP AND TREAT OPERATIONAL SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

DATE	Operation			Groundwater Recovery			Recovery Wells														
	Period (days)	Operating Days	Operating Hours	Average Groundwater Flow Rate	Monthly Groundwater Recovery	Cumulative Groundwater Recovery	RW-05			RW-25			RW-31			RW-51			RW-72		
				(gpm)	(gal)	(gal)	Cumulative Pump Cycles	Cycles per Minute	Cumulative Pump Cycles	Cycles per Minute	Cumulative Pump Cycles	Cycles per Minute	Cumulative Pump Cycles	Cycles per Minute	Cumulative Pump Cycles	Cycles per Minute	Cumulative Pump Cycles	Cycles per Minute			
March 14, 2016	-	-	-	-		536	692	-	6,213	-	3,309	-	5,987	-	4,157	-	-	-	-	-	
March 15, 2016	0.2	0.2	6	0.5		729	1,120	1.8	10,090	16	9,063	24	10,880	20	7,307	20	-	-	13	-	
March 16, 2016	0.4	0.4	15	4.6		3,220	1,299	0.3	14,530	8	11,994	5	15,925	9	8,755	9	-	-	3	-	
March 17, 2016	0.3	0.3	22	3.3	43,907	4,595	1,436	0.3	21,226	16	16,785	11	23,056	17	9,825	17	-	-	3	-	
March 21, 2016	1.3	1.3	54	1.1		6,677	1,505	0.0	31,176	5	18,124	1	29,238	3	16,073	3	-	-	3	-	
March 24, 2016	3	2.3	108	1.8		12,539	1,625	0.0	-	-	-	-	-	-	-	-	-	-	-	-	
March 30, 2016	6	5.2	232	4.2		43,907	11,823	1.4	212,345	17	151,623	12	205,395	16	39,882	16	-	-	2	-	
Q1 2016	11	10		3.2	43,907		11,823	0.9	212,345	15	151,623	11	205,395	15	39,882	15	205,395	15	39,882	3	

Notes:

gal - gallons

gpm - gallons per minute

Pump Cycles - Cycle counters at each pneumatic well pump are used as relative measurements to estimate proportion of total flow and evaluate changes in flow rates over time.



Table 9

**BIOSPARGE OPERATIONAL SUMMARY**

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

Operation		Biosparge Injection Points																
DATE	Period (days)	Operating Days	SP-01		SP-02		SP-03		SP-04		SP-05		SP-06		SP-07		SP-08	
			Flow	Pressure	Flow	Pressure	Flow	Pressure	Flow	Pressure	Flow	Pressure	Flow	Pressure	Flow	Pressure	Flow	Pressure
			(scfm)	(psi)	(scfm)	(psi)	(scfm)	(psi)	(scfm)	(psi)	(scfm)	(psi)	(scfm)	(psi)	(scfm)	(psi)	(scfm)	(psi)
March 14, 2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
March 15, 2016	0.0	0.0	0.8	4.0	0.7	6.8	0.6	9.6	0.8	9	0.8	11.2	0.6	11	0.8	10	0.7	8.5
March 16, 2016	0.4	0.4	0.8	4.4	0.8	4.4	0.7	4.8	0.7	9.2	0.7	7.2	0.7	5.6	0.7	5.6	0.7	5.6
March 17, 2016	0.9	0.9	0.7	3	0.75	3	0.7	3.1	0.7	7	0.7	5.4	0.7	4.2	0.75	4.5	0.75	3.6
March 21, 2016	1.3	1.3	1.0	5.2	1.0	4.4	1.0	5.4	1.0	8.4	1.2	7.2	1.1	6.0	1.0	5.8	1.0	5.6
March 24, 2016	3.0	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
March 30, 2016	6.0	5.6	0.8	2.0	0.8	2.1	0.8	2.3	0.8	5.2	0.8	3.8	0.8	3.4	0.8	3.6	0.8	3.6
Q1 2016	12	11	0.8		0.8		0.8		0.8		0.8		0.8		0.8		0.8	

Notes:

scfm - standard cubic feet per minute

psi - pounds per square inch

Table 10

## HYDROCARBON RECOVERY SUMMARY

Potomac River Generating Station  
1400 North Royal St  
Alexandria, VA

DATE	TPE			P&T			LNAPL		Cumulative Hydrocarbon Recovery				
	Monthly Groundwater Recovery	Dissolved-Phase TPH-DRO Concentration	Monthly TPH-DRO Recovery	Monthly Groundwater Recovery	Dissolved-Phase TPH-DRO Concentration	Monthly TPH-DRO Recovery	LNAPL Thickness in Drum <sup>1</sup>	Monthly Recovered LNAPL	Dissolved-Phase		Liquid-Phase	Vapor-Phase <sup>2</sup>	Total
	(gal)	(mg/L)	(lbs)	(gal)	(mg/L)	(lbs)	(ft)	(lbs)	TPE	P&T	(lbs)	(lbs)	(gal)
March 2016	2,572	250	5.4	43,907	56	20.5	0.39	56.8	5	21	57	262	49
<b>Q1 2016</b>			<b>5.4</b>			<b>20.5</b>		<b>56.8</b>					

## Notes:

TPE - total phase extraction  
P&T - pump & treat  
TPH-DRO - total petroleum hydrocarbons - diesel range organics  
LNAPL - light non-aqueous phase liquid  
gal - gallon  
mg/L - milligrams per liter  
lbs - pounds

<sup>1</sup> - LNAPL drum includes LNAPL bailed previously during well gauge and bail events

<sup>2</sup> - Vapor-Phase recovery values are calculated with the Total Phase Extraction Operational Summary Table

Estimate of dissolved-phase recovery using analytical results in units of mg/L:

Pounds = Total Monthly Flow (gal) x Concentration (mg/L) x c

c = conversion factors, 3.7854 L/gal, 2.2046E-6 lb/mg

Estimate of recovered LNAPL in drum using product thickness in units of ft:

Pounds = LNAPL Thickness (ft) x Drum Radius<sup>2</sup> (ft<sup>2</sup>) x π x LNAPL Density (lb/ft<sup>3</sup>)

drum diameter = 1.875 feet

Density of LNAPL (#2 fuel oil) is approximated as 52.7 lb/ft<sup>3</sup> (Report on Revisions to 5th Edition AP-42 Section 1.3 Fuel Oil Combustion, EPA)

Conversion of recovered hydrocarbons from pounds to gallons:

Gallons = Total Hydrocarbons (lbs) / Density of LNAPL (52.7 lb/ft<sup>3</sup>) x 7.48 gal/ft<sup>3</sup>)

## **ATTACHMENTS**



**ATTACHMENT A**

**Laboratory Analytical Reports and Chain of Custody Documentation**

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

GES, Inc.  
Suite A  
1350 Blair Dr  
Odenton MD 21113

Report Date: March 29, 2016

**Project: NRG PRGS**

Submittal Date: 03/17/2016

Group Number: 1641722

PO Number: NRG PRGS

Release Number: 0402896

State of Sample Origin: VA

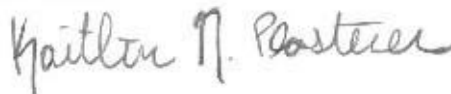
Client Sample DescriptionTW-03 Grab Groundwater  
MW-08S Grab Groundwater  
MW-01S Grab GroundwaterLancaster Labs (LL) #8290875  
8290876  
8290877

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To GES, Inc.-MD  
Electronic Copy To GES  
Electronic Copy To GES, Inc.-MDAttn: Anne Ashley Bell  
Attn: Greg Reichart  
Attn: Data Distribution

Respectfully Submitted,

Kaitlin N. Plasterer  
Specialist

(717) 556-7323

Sample Description: TW-03 Grab Groundwater  
NRG PRGS

LL Sample # WW 8290875  
LL Group # 1641722  
Account # 08390

Project Name: NRG PRGS

Collected: 03/16/2016 10:00 by JP

GES, Inc.

Submitted: 03/17/2016 15:45

Suite A

Reported: 03/29/2016 09:30

1350 Blair Dr

Odenton MD 21113

TW-3-

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	1,600	30	10
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	150	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	4.99	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	345	7.5	25
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.029 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	24.7	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	21.9	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160810002A	03/23/2016 14:41	Johanna C Kennedy	10
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 15:23	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1
07058	Manganese	SW-846 6010B	1	160781848004	03/23/2016 19:32	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160781848004	03/21/2016 11:52	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16079667601A	03/19/2016 16:08	Drew M Gerhart	25
00220	Nitrate Nitrogen	EPA 353.2	1	16081106102B	03/21/2016 10:06	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16077105109B	03/17/2016 23:21	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002104A	03/22/2016 22:09	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

Sample Description: MW-08S Grab Groundwater  
NRG PRGS

LL Sample # WW 8290876  
LL Group # 1641722  
Account # 08390

Project Name: NRG PRGS

Collected: 03/16/2016 13:50 by JP

GES, Inc.

Submitted: 03/17/2016 15:45

Suite A

Reported: 03/29/2016 09:30

1350 Blair Dr

Odenton MD 21113

MW08S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	20,000	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 15:46	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1

Sample Description: MW-01S Grab Groundwater  
NRG PRGS

LL Sample # WW 8290877  
LL Group # 1641722  
Account # 08390

Project Name: NRG PRGS

Collected: 03/16/2016 14:00 by JP

GES, Inc.

Submitted: 03/17/2016 15:45

Suite A

Reported: 03/29/2016 09:30

1350 Blair Dr

Odenton MD 21113

MW01S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	4,500	60	20
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	25,000	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	14.5	0.0060	5
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	27.9	3.0	10
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.017 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	367	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	9.3	0.50	50

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160810002A	03/23/2016 14:59	Johanna C Kennedy	20
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 16:10	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1
07058	Manganese	SW-846 6010B	1	160781848004	03/28/2016 18:50	Cindy M Gehman	5
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160781848004	03/21/2016 11:52	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16079667601A	03/19/2016 16:25	Drew M Gerhart	10
00220	Nitrate Nitrogen	EPA 353.2	1	16081106102B	03/21/2016 10:07	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16077105109B	03/17/2016 23:25	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002104A	03/22/2016 21:57	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	50

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/29/2016 09:30

Group Number: 1641722

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 160810002A	Sample number(s): 8290875,8290877	
Methane	N.D.	3.0
Batch number: 160790028A	Sample number(s): 8290875-8290877	
DRO C10-C28	N.D.	45
	mg/l	mg/l
Batch number: 160781848004	Sample number(s): 8290875,8290877	
Manganese	N.D.	0.0012
Batch number: 16077105109B	Sample number(s): 8290875,8290877	
Nitrite Nitrogen	N.D.	0.015
Batch number: 16079667601A	Sample number(s): 8290875,8290877	
Sulfate	N.D.	0.30
Batch number: 16081106102B	Sample number(s): 8290875,8290877	
Nitrate Nitrogen	N.D.	0.040
Batch number: 16080834401A	Sample number(s): 8290875,8290877	
Ferrous Iron	N.D.	0.010
	mg/l as CaCO3	mg/l as CaCO3
Batch number: 16082002104A	Sample number(s): 8290875,8290877	
Total Alkalinity to pH 4.5	N.D.	0.70

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160810002A	Sample number(s): 8290875,8290877								
Methane	61.3	69.01			113		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160790028A	Sample number(s): 8290875-8290877								
DRO C10-C28	2660	2132.49	2660	2112.18	80	79	69-115	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 160781848004	Sample number(s): 8290875,8290877								
Manganese	0.500	0.518			104		80-120		
	mg/l	mg/l	mg/l	mg/l					

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/29/2016 09:30

Group Number: 1641722

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16077105109B Nitrite Nitrogen	Sample number(s): 8290875,8290877 0.700 0.665				95		90-110		
Batch number: 16079667601A Sulfate	Sample number(s): 8290875,8290877 7.50 7.24				97		90-110		
Batch number: 16081106102B Nitrate Nitrogen	Sample number(s): 8290875,8290877 2.50 2.54				101		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8290875,8290877 0.400 0.403				101		93-105		
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8290875,8290877 188 176.49				94		90-110		

## MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 160810002A Methane	Sample number(s): 8290875,8290877 UNSPK: 8290875 1632.83 61.3 1393.44 61.3 1077.14					-390 (2)	-906 (2)	73-125	26	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 160781848004 Manganese	Sample number(s): 8290875,8290877 UNSPK: P290381 5.96 0.500 6.55 0.500 6.24					118 (2)	56 (2)	75-125	5	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16077105109B Nitrite Nitrogen	Sample number(s): 8290875,8290877 UNSPK: P291174 0.0604 0.200 0.231					85*		90-110		
Batch number: 16079667601A Sulfate	Sample number(s): 8290875,8290877 UNSPK: P294057 4.65 50 51.49					94		90-110		
Batch number: 16081106102B Nitrate Nitrogen	Sample number(s): 8290875,8290877 UNSPK: P290651 N.D. 1.00 1.12					112*		90-110		
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8290875,8290877 UNSPK: 8290877 9.26 20 28.83 20 28.33					98	95	93-105	2	6
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8290875,8290877 UNSPK: P293504 78.54 188 228.12					80*		90-110		

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/29/2016 09:30

Group Number: 1641722

Analysis Name	Unspiked Conc mg/l as CaCO3	MS Spike Added mg/l as CaCO3	MS Conc mg/l as CaCO3	MSD Spike Added mg/l as CaCO3	MSD Conc mg/l as CaCO3	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
---------------	--------------------------------------	---------------------------------------	--------------------------------	--	---------------------------------	------------	-------------	------------------	-----	------------

## Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 160781848004 Manganese	Sample number(s): 8290875, 8290877 5.96	BKG: P290381 5.91	1	20
Batch number: 16077105109B Nitrite Nitrogen	Sample number(s): 8290875, 8290877 0.0604	BKG: P291174 0.0608	1 (1)	20
Batch number: 16079667601A Sulfate	Sample number(s): 8290875, 8290877 4.65	BKG: P294057 4.61	1 (1)	15
Batch number: 16081106102B Nitrate Nitrogen	Sample number(s): 8290875, 8290877 N.D.	BKG: P290651 N.D.	0 (1)	2
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8290875, 8290877 9.26	BKG: 8290877 9.31	1 (1)	5
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8290875, 8290877 78.54	BKG: P293504 70.29	11*	5

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: DRO micro-ext 8015B  
Batch number: 160790028A

Orthoterphenyl	
8290875	104
8290876	56
8290877	64
Blank	102
LCS	100
LCSD	93

Limits: 42-160

Analysis Name: Methane  
Batch number: 160810002A

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/29/2016 09:30

Group Number: 1641722

---

	Propene
8290875	94
8290877	104
Blank	111
LCS	112
MS	92
MSD	91

---

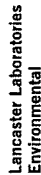
Limits: 44-123

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



Acct. #	Group #	Sample #
8390	1641722	8290875-77

[illegible]

Sample Administration  
Receipt Documentation Log

Doc Log ID: 139790

Group Number(s): 1641722Client: GES**Delivery and Receipt Information**

Delivery Method:	<u>ELLE Courier</u>	Arrival Timestamp:	<u>03/17/2016 15:45</u>
Number of Packages:	<u>3</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>VA</u>		

**Arrival Condition Summary**

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace $\geq$ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Katherine Metzger (2241) at 19:02 on 03/17/2016***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT131	0.8	DT	Wet	Y	Loose	N
2	DT131	0.7	DT	Wet	Y	Loose	N
3	DT131	1.2	DT	Wet	Y	Loose	N

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and  $<$  the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

GES, Inc.  
Suite A  
1350 Blair Dr  
Odenton MD 21113

Report Date: March 25, 2016

**Project: NRG PRGS**

Submittal Date: 03/16/2016

Group Number: 1641372

PO Number: NRG PRGS

Release Number: 0402896

State of Sample Origin: VA

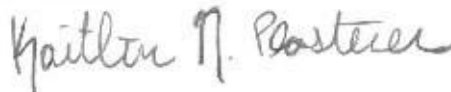
Client Sample DescriptionRW-01 Grab Groundwater  
MW-51S Grab Groundwater  
MW-121 Grab Groundwater  
MW-122 Grab Groundwater  
MW-14 Grab GroundwaterLancaster Labs (LL) #8289198  
8289199  
8289200  
8289201  
8289202

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To GES, Inc.-MD  
Electronic Copy To GES  
Electronic Copy To GES, Inc.-MDAttn: Anne Ashley Bell  
Attn: Greg Reichart  
Attn: Data Distribution

Respectfully Submitted,

Kaitlin N. Plasterer  
Specialist

(717) 556-7323

Sample Description: RW-01 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289198  
LL Group # 1641372  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 11:20 by MR

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/25/2016 14:36

1350 Blair Dr

Odenton MD 21113

P-G01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	4,300	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 09:52	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: MW-51S Grab Groundwater  
NRG PRGS

LL Sample # WW 8289199  
LL Group # 1641372  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 11:53 by MR

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/25/2016 14:36

1350 Blair Dr

Odenton MD 21113

P-G02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	13,000	150	50
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	67,000	45	5
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	4.64	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	535	60.0	200
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.049 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	585	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	69.0	2.0	200

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 20:13	Johanna C Kennedy	50
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/23/2016 09:40	Thomas C Wildermuth	5
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:31	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901B	03/17/2016 23:35	Drew M Gerhart	200
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 09:06	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:12	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002103A	03/22/2016 19:09	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	200

Sample Description: MW-121 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289200  
LL Group # 1641372  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 13:05 by MR

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/25/2016 14:36

1350 Blair Dr

Odenton MD 21113

P-G03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	13,000	150	50
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	5,500	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	7.83	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	56.8	3.0	10
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.046 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	338	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	33.5	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 20:31	Johanna C Kennedy	50
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 13:48	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:34	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901B	03/17/2016 23:49	Drew M Gerhart	10
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 09:07	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:13	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002103A	03/22/2016 19:02	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100



Sample Description: MW-122 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289201  
LL Group # 1641372  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 13:50 by MR

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/25/2016 14:36

1350 Blair Dr

Odenton MD 21113

P-G04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	2,700	60	20
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	1,800	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	7.35	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	47.2	1.5	5
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	0.043 J	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	440	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	11.4	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 21:08	Johanna C Kennedy	20
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 14:12	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:38	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901B	03/18/2016 00:02	Drew M Gerhart	5
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 09:08	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:14	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002104A	03/22/2016 23:52	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

Sample Description: MW-14 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289202  
LL Group # 1641372  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 14:32 by MR

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/25/2016 14:36

1350 Blair Dr

Odenton MD 21113

P-G05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	5,800	60	20
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	28,000	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	6.81	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	23.8	1.5	5
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.050 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	171	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	22.2	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 21:27	Johanna C Kennedy	20
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 14:36	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:41	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901B	03/18/2016 00:16	Drew M Gerhart	5
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 09:09	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:15	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002103A	03/22/2016 19:15	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/25/2016 14:36

Group Number: 1641372

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 160770019A Methane	Sample number(s): 8289199-8289202 N.D.	3.0
Batch number: 160780010A DRO C10-C28	Sample number(s): 8289198 N.D.	45
Batch number: 160790028A DRO C10-C28	Sample number(s): 8289199-8289202 N.D.	45
	mg/l	mg/l
Batch number: 160771848006 Manganese	Sample number(s): 8289199-8289202 N.D.	0.0012
Batch number: 16076105106B Nitrite Nitrogen	Sample number(s): 8289199-8289202 N.D.	0.015
Batch number: 16077667901B Sulfate	Sample number(s): 8289199-8289202 N.D.	0.30
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289199-8289202 N.D.	0.040
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289199-8289202 N.D.	0.010
	mg/l as CaCO3	mg/l as CaCO3
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289199-8289200, 8289202 N.D.	0.70
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289201 N.D.	0.70

### LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 160770019A Methane	Sample number(s): 8289199-8289202 61.3	61.8			101		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160780010A DRO C10-C28	Sample number(s): 8289198 2650	1870.07	2700	1932.62	71	72	69-115	3	20
Batch number: 160790028A	Sample number(s): 8289199-8289202								

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/25/2016 14:36

Group Number: 1641372

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
DRO C10-C28	2660	2132.49	2660	2112.18	80	79	69-115	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 160771848006 Manganese	Sample number(s): 8289199-8289202				98		80-120		
	0.500	0.488							
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16076105106B Nitrite Nitrogen	Sample number(s): 8289199-8289202				101		90-110		
	0.700	0.705							
Batch number: 16077667901B Sulfate	Sample number(s): 8289199-8289202				98	97	90-110	1	20
	7.50	7.37	7.50	7.29					
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289199-8289202				99		90-110		
	2.50	2.47							
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289199-8289202				101		93-105		
	0.400	0.403							
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289199-8289200, 8289202				93		90-110		
	188	175.47							
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289201				94		90-110		
	188	176.49							

## MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 160770019A Methane	Sample number(s): 8289199-8289202 UNSPK: P288228				64.22	101	105	73-125	4	30
	N.D.	61.3	61.65	61.3						
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 160771848006 Manganese	Sample number(s): 8289199-8289202 UNSPK: P287908				0.565	98	95	75-125	2	20
	0.0888	0.500	0.578	0.500						
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16076105106B Nitrite Nitrogen	Sample number(s): 8289199-8289202 UNSPK: P288997					106		90-110		
	N.D.	0.200	0.211							
Batch number: 16077667901B Sulfate	Sample number(s): 8289199-8289202 UNSPK: P289725					98		90-110		
	N.D.	50	49.08							
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289199-8289202 UNSPK: P288087					113*		90-110		
	0.372	1.00	1.50							

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/25/2016 14:36

Group Number: 1641372

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289199-8289202 9.26	20	28.83	UNSPK: P290877 20	28.33	98	95	93-105	2	6
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289199-8289200,8289202 8.15	188	176.12	UNSPK: P292318 188	179.61	89*	91	90-110	2	5
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289201 78.54	188	228.12	UNSPK: P293504		80*		90-110		

## Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 160771848006 Manganese	Sample number(s): 8289199-8289202 0.0888	BKG: P287908 0.205	79*	20
	mg/l	mg/l		
Batch number: 16076105106B Nitrite Nitrogen	Sample number(s): 8289199-8289202 N.D.	BKG: P288997 N.D.	0 (1)	20
Batch number: 16077667901B Sulfate	Sample number(s): 8289199-8289202 N.D.	BKG: P289725 N.D.	0 (1)	15
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289199-8289202 0.372	BKG: P288087 0.391	5* (1)	2
	mg/l	mg/l		
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289199-8289202 9.26	BKG: P290877 9.31	1 (1)	5
	mg/l as CaCO3	mg/l as CaCO3		
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289199-8289200,8289202 8.15	BKG: P292318 7.70	6* (1)	5
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289201 78.54	BKG: P293504 70.29	11*	5

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Methane  
Batch number: 160770019A

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/25/2016 14:36

Group Number: 1641372

Propene	
8289199	105
8289200	111
8289201	103
8289202	103
Blank	108
LCS	109
MS	96
MSD	100

Limits: 44-123

Analysis Name: DRO micro-ext 8015B  
Batch number: 160780010A

Orthoterphenyl	
8289198	76
Blank	100
LCS	91
LCSD	91

Limits: 42-160

Analysis Name: DRO micro-ext 8015B  
Batch number: 160790028A

Orthoterphenyl	
8289199	416*
8289200	118
8289201	90
8289202	124
Blank	102
LCS	100
LCSD	93

Limits: 42-160

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

[illegible]

Client: GES**Delivery and Receipt Information**

Delivery Method:	<u>ELLE Courier</u>	Arrival Timestamp:	<u>03/16/2016 18:00</u>
Number of Packages:	<u>2</u>	Number of Projects:	<u>2</u>
State/Province of Origin:	<u>VA</u>		

**Arrival Condition Summary**

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace $\geq$ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Patrick Engle (3472) at 18:55 on 03/16/2016***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT121	2.7	DT	Wet	Y	Bagged	N
2	DT121	4.1	DT	Wet	Y	Bagged	N

General Comments: Received Metals Batch QC for MW-122.
--



# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and  $<$  the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

GES, Inc.  
Suite A  
1350 Blair Dr  
Odenton MD 21113

Report Date: March 28, 2016

**Project: NRG PRGS**

Submittal Date: 03/16/2016

Group Number: 1641371

PO Number: NRG PRGS

Release Number: 0402897

State of Sample Origin: VA

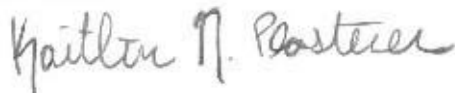
Client Sample DescriptionMW-27 Grab Groundwater  
RW-72 Grab Groundwater  
RW-31 Grab Groundwater  
MW-106 Grab Groundwater  
TW-06 Grab Groundwater  
TW-07 Grab GroundwaterLancaster Labs (LL) #8289192  
8289193  
8289194  
8289195  
8289196  
8289197

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To GES, Inc.-MD  
Electronic Copy To GES  
Electronic Copy To GES, Inc.-MDAttn: Anne Ashley Bell  
Attn: Greg Reichart  
Attn: Data Distribution

Respectfully Submitted,



Kaitlin N. Plasterer  
Specialist

(717) 556-7323

Sample Description: MW-27 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289192  
LL Group # 1641371  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 10:30 by RO

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/28/2016 11:51

1350 Blair Dr

Odenton MD 21113

PRG01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	6,100	60	20
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	33,000	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	10.3	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	214	15.0	50
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.022 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	439	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	34.0	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 19:17	Johanna C Kennedy	20
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 07:54	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:10	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901A	03/17/2016 20:09	Drew M Gerhart	50
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 08:58	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:36	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002104A	03/22/2016 23:58	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

Sample Description: RW-72 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289193  
LL Group # 1641371  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 11:55 by RO

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/28/2016 11:51

1350 Blair Dr

Odenton MD 21113

PRG02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	320	3.0	1
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	1,200	45	1
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.					
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	15.7	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	419	30.0	100
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	570	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	14.0	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 15:28	Johanna C Kennedy	1
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 08:18	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:20	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901A	03/17/2016 20:23	Drew M Gerhart	100
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 08:59	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:38	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002105A	03/23/2016 01:29	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

Sample Description: RW-31 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289194  
LL Group # 1641371  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 12:10 by RO

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/28/2016 11:51

1350 Blair Dr

Odenton MD 21113

PRG03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	11,000	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 08:41	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: MW-106 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289195  
LL Group # 1641371  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 13:15 by RO

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/28/2016 11:51

1350 Blair Dr

Odenton MD 21113

PRG04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	1,600	30	10
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	2,900	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	1.67	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	1,250	60.0	200
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.016 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	N.D.	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	25.1	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 19:36	Johanna C Kennedy	10
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 09:05	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:24	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901A	03/17/2016 20:36	Drew M Gerhart	200
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 09:01	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:09	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002103A	03/22/2016 20:05	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

Sample Description: TW-06 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289196  
LL Group # 1641371  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 13:50 by RO

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/28/2016 11:51

1350 Blair Dr

Odenton MD 21113

PRG05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	3,600	60	20
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	43,000	45	1
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.					
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	1.46	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	224	15.0	50
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.039 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	128	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	53.9	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160770019A	03/18/2016 19:54	Johanna C Kennedy	20
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 09:29	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 07:27	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16077667901A	03/17/2016 20:50	Drew M Gerhart	50
00220	Nitrate Nitrogen	EPA 353.2	1	16081106101A	03/21/2016 09:02	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16076105106B	03/16/2016 23:10	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16082002105A	03/23/2016 01:22	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100



Sample Description: TW-07 Grab Groundwater  
NRG PRGS

LL Sample # WW 8289197  
LL Group # 1641371  
Account # 08390

Project Name: NRG PRGS

Collected: 03/15/2016 17:45 by RO

GES, Inc.

Submitted: 03/16/2016 18:00

Suite A

Reported: 03/28/2016 11:51

1350 Blair Dr

Odenton MD 21113

PRG06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	160	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160790028A	03/22/2016 13:01	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160790028A	03/21/2016 13:30	Wanda F Oswald	1

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/28/2016 11:51

Group Number: 1641371

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 160770019A Methane	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	3.0
Batch number: 160780010A DRO C10-C28	Sample number(s): 8289192-8289196 N.D.	45
Batch number: 160790028A DRO C10-C28	Sample number(s): 8289197 N.D.	45
	mg/l	mg/l
Batch number: 160771848006 Manganese	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	0.0012
Batch number: 16076105106B Nitrite Nitrogen	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	0.015
Batch number: 16077667901A Sulfate	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	0.30
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	0.040
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	0.010
	mg/l as CaCO3	mg/l as CaCO3
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289195 N.D.	0.70
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289192 N.D.	0.70
Batch number: 16082002105A Total Alkalinity to pH 4.5	Sample number(s): 8289193, 8289196 N.D.	0.70

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160770019A Methane	Sample number(s): 8289192-8289193, 8289195-8289196 61.3	61.8			101		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160780010A	Sample number(s): 8289192-8289196								

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/28/2016 11:51

Group Number: 1641371

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
DRO C10-C28	2650	1870.07	2700	1932.62	71	72	69-115	3	20
Batch number: 160790028A	Sample number(s): 8289197								
DRO C10-C28	2660	2132.49	2660	2112.18	80	79	69-115	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 160771848006	Sample number(s): 8289192-8289193,8289195-8289196								
Manganese	0.500	0.488			98		80-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16076105106B	Sample number(s): 8289192-8289193,8289195-8289196								
Nitrite Nitrogen	0.700	0.705			101		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16077667901A	Sample number(s): 8289192-8289193,8289195-8289196								
Sulfate	7.50	7.37	7.50	7.29	98	97	90-110	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16081106101A	Sample number(s): 8289192-8289193,8289195-8289196								
Nitrate Nitrogen	2.50	2.47			99		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16080834401A	Sample number(s): 8289192-8289193,8289195-8289196								
Ferrous Iron	0.400	0.403			101		93-105		
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 16082002103A	Sample number(s): 8289195								
Total Alkalinity to pH 4.5	188	175.47			93		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16082002104A	Sample number(s): 8289192								
Total Alkalinity to pH 4.5	188	176.49			94		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16082002105A	Sample number(s): 8289193,8289196								
Total Alkalinity to pH 4.5	188	175.28			93		90-110		
	mg/l	mg/l	mg/l	mg/l					

## MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 160770019A	Sample number(s): 8289192-8289193,8289195-8289196					UNSPK: P288228				
Methane	N.D.	61.3	61.65	61.3	64.22	101	105	73-125	4	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 160771848006	Sample number(s): 8289192-8289193,8289195-8289196					UNSPK: P287908				
Manganese	0.0888	0.500	0.578	0.500	0.565	98	95	75-125	2	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16076105106B	Sample number(s): 8289192-8289193,8289195-8289196					UNSPK: P288997				
Nitrite Nitrogen	N.D.	0.200	0.211			106		90-110		
	mg/l	mg/l	mg/l	mg/l	mg/l					

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/28/2016 11:51

Group Number: 1641371

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16077667901A Sulfate	Sample number(s): 8289192-8289193, 8289195-8289196 27.48	50	76.01			UNSPK: P288833 97		90-110		
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289192-8289193, 8289195-8289196 0.372	1.00	1.50			UNSPK: P288087 113*		90-110		
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289192-8289193, 8289195-8289196 9.26	20	28.83	20	28.33	UNSPK: P290877 98	95	93-105	2	6
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289195 UNSPK: P292318 8.15	188	176.12	188	179.61	89*	91	90-110	2	5
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289192 UNSPK: P293504 78.54	188	228.12			80*		90-110		
Batch number: 16082002105A Total Alkalinity to pH 4.5	Sample number(s): 8289193, 8289196 UNSPK: P293498 131	188	296.78			88*		90-110		

## Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 160771848006 Manganese	Sample number(s): 8289192-8289193, 8289195-8289196 0.0888	BKG: P287908 0.205	79*	20
	mg/l	mg/l		
Batch number: 16076105106B Nitrite Nitrogen	Sample number(s): 8289192-8289193, 8289195-8289196 N.D.	BKG: P288997 N.D.	0 (1)	20
Batch number: 16077667901A Sulfate	Sample number(s): 8289192-8289193, 8289195-8289196 27.48	BKG: P288833 27.59	0	15
Batch number: 16081106101A Nitrate Nitrogen	Sample number(s): 8289192-8289193, 8289195-8289196 0.372	BKG: P288087 0.391	5* (1)	2
	mg/l	mg/l		
Batch number: 16080834401A Ferrous Iron	Sample number(s): 8289192-8289193, 8289195-8289196 9.26	BKG: P290877 9.31	1 (1)	5
	mg/l as CaCO3	mg/l as CaCO3		
Batch number: 16082002103A Total Alkalinity to pH 4.5	Sample number(s): 8289195 BKG: P292318 8.15	7.70	6* (1)	5
Batch number: 16082002104A Total Alkalinity to pH 4.5	Sample number(s): 8289192 BKG: P293504 78.54	70.29	11*	5
Batch number: 16082002105A	Sample number(s): 8289193, 8289196 BKG: P293498			

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/28/2016 11:51

Group Number: 1641371

Analysis Name	BKG Conc mg/l as CaCO <sub>3</sub>	DUP Conc mg/l as CaCO <sub>3</sub>	DUP RPD	DUP RPD Max
Total Alkalinity to pH 4.5	131	122.59	7*	5

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Methane  
Batch number: 160770019A

Propene	
8289192	105
8289193	86
8289195	97
8289196	108
Blank	108
LCS	109
MS	96
MSD	100
Limits:	44-123

Analysis Name: DRO micro-ext 8015B  
Batch number: 160780010A

Orthoterphenyl	
8289192	100
8289193	55
8289194	71
8289195	56
8289196	31*
Blank	100
LCS	91
LCSD	91
Limits:	42-160

Analysis Name: DRO micro-ext 8015B  
Batch number: 160790028A

Orthoterphenyl	
8289197	100
Blank	102
LCS	100
LCSD	93
Limits:	42-160

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Environmental Analysis Request/Chain of Custody

Accel #	Group #	Sample #
8390	164371	8289192-97

[illegible]

Client: GES**Delivery and Receipt Information**

Delivery Method:	<u>ELLE Courier</u>	Arrival Timestamp:	<u>03/16/2016 18:00</u>
Number of Packages:	<u>2</u>	Number of Projects:	<u>2</u>
State/Province of Origin:	<u>VA</u>		

**Arrival Condition Summary**

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	No
Samples Chilled:	Yes	VOA Vial Headspace $\geq$ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Patrick Engle (3472) at 18:55 on 03/16/2016***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT121	2.7	DT	Wet	Y	Bagged	N
2	DT121	4.1	DT	Wet	Y	Bagged	N

**Sample Date/Time Discrepancy Details**

<u>Sample ID on COC</u>	<u>Date/Time on Label</u>	<u>Comments</u>
TW-06	3/15/2016 10:10	Time = 1350 on COC
TW-07	3/15/2016 14:45	Time = 1745 on COC

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and  $<$  the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

GES, Inc.  
Suite A  
1350 Blair Dr  
Odenton MD 21113

Report Date: March 30, 2016

**Project: NRG PRGS**

Submittal Date: 03/15/2016

Group Number: 1640846

PO Number: NRG PRGS

Release Number: 0402982

State of Sample Origin: VA

Client Sample DescriptionLancaster Labs (LL) #

RW-118S Grab Groundwater	8286871
RW-119S Grab Groundwater	8286872
MW-123S Grab Groundwater	8286873
RW-116S Grab Groundwater	8286874
RW-30S Grab Groundwater	8286875
RW-28S Grab Groundwater	8286876
RW-72S Grab Groundwater	8286877
TW-14 Grab Groundwater	8286878
RW-05S Grab Groundwater	8286879
TW-04 Grab Groundwater	8286880
MW-10S Grab Groundwater	8286881
TW-05 Grab Groundwater	8286882

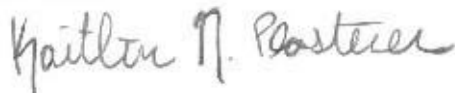
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To   GES, Inc.-MD  
Electronic Copy To   GES  
Electronic Copy To   GES, Inc.-MD

Attn: Anne Ashley Bell  
Attn: Greg Reichart  
Attn: Data Distribution

Respectfully Submitted,



Kaitlin N. Plasterer  
Specialist

(717) 556-7323

Sample Description: RW-118S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286871  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 11:50 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW118

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	8,200	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 02:25	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: RW-119S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286872  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 12:05 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW119

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	4,400	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 02:49	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: MW-123S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286873  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 12:20 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

MW123

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	13,000	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 03:12	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: RW-116S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286874  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 12:55 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW116

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	7,600	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 03:36	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: RW-30S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286875  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 13:05 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW30S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
	GC Petroleum Hydrocarbons	SW-846 8015B	ug/l	ug/l	
12858	DRO C10-C28	n.a.	61,000	45	1
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.					

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 03:59	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: RW-28S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286876  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 13:25 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW28S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	790	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 04:23	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1



Sample Description: RW-72S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286877  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 14:00 by RO

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW72S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	310	3.0	1
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	8,200	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	16.7	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	508	30.0	100
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.054	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	543	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	71.4	2.0	200

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160760030A	03/16/2016 18:35	Johanna C Kennedy	1
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 04:46	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 06:26	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16076667121A	03/16/2016 14:50	Drew M Gerhart	100
00220	Nitrate Nitrogen	EPA 353.2	1	16080106102B	03/20/2016 13:30	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16075105105A	03/15/2016 23:37	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16078004102A	03/18/2016 16:51	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	200

Sample Description: TW-14 Grab Groundwater  
NRG PRGS

LL Sample # WW 8286878  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 11:30 by JP

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

14-TW

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	54 J	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 05:10	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: RW-05S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286879  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 13:45 by JP

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

RW05S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
	GC Petroleum Hydrocarbons	SW-846 8015B	ug/l	ug/l	
12858	DRO C10-C28	n.a.	15,000	45	1
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.					

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 05:33	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: TW-04 Grab Groundwater  
NRG PRGS

LL Sample # WW 8286880  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 13:50 by JP

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

04-TW

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC Petroleum Hydrocarbons	SW-846 8015B		ug/l	ug/l	
12858 DRO C10-C28		n.a.	980	45	1

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 06:44	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1

Sample Description: MW-10S Grab Groundwater  
NRG PRGS

LL Sample # WW 8286881  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 14:15 by JP

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

MW10S

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	1,800	30	10
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	29,000	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	4.04	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	193	15.0	50
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.088	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	427	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	129	2.0	200

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160760030A	03/17/2016 14:34	Johanna C Kennedy	10
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 07:07	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 06:30	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16076667121A	03/16/2016 15:05	Drew M Gerhart	50
00220	Nitrate Nitrogen	EPA 353.2	1	16080106102B	03/20/2016 13:34	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16075105105A	03/15/2016 23:43	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16078004102A	03/18/2016 17:50	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	200

Sample Description: TW-05 Grab Groundwater  
NRG PRGS

LL Sample # WW 8286882  
LL Group # 1640846  
Account # 08390

Project Name: NRG PRGS

Collected: 03/14/2016 16:00 by JP

GES, Inc.

Submitted: 03/15/2016 16:55

Suite A

Reported: 03/30/2016 15:01

1350 Blair Dr

Odenton MD 21113

05-TW

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
<b>GC Miscellaneous</b>	<b>RSKSOP-175 modified</b>		<b>ug/l</b>	<b>ug/l</b>	
07105	Methane	74-82-8	460	3.0	1
<b>GC Petroleum Hydrocarbons</b>	<b>SW-846 8015B</b>		<b>ug/l</b>	<b>ug/l</b>	
12858	DRO C10-C28	n.a.	960	45	1
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	
07058	Manganese	7439-96-5	3.05	0.0012	1
<b>Wet Chemistry</b>	<b>EPA 300.0</b>		<b>mg/l</b>	<b>mg/l</b>	
00228	Sulfate	14808-79-8	410	30.0	100
	<b>EPA 353.2</b>		<b>mg/l</b>	<b>mg/l</b>	
00220	Nitrate Nitrogen	14797-55-8	0.12	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.042 J	0.015	1
	<b>SM 2320 B-1997</b>		<b>mg/l as CaCO3</b>	<b>mg/l as CaCO3</b>	
12150	Total Alkalinity to pH 4.5	n.a.	114	0.70	1
	<b>SM 3500-Fe B 1997</b>		<b>mg/l</b>	<b>mg/l</b>	
08344	Ferrous Iron	n.a.	41.5	1.0	100

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Methane	RSKSOP-175 modified	1	160760030A	03/16/2016 19:12	Johanna C Kennedy	1
12858	DRO micro-ext 8015B	SW-846 8015B	1	160780010A	03/22/2016 07:31	Thomas C Wildermuth	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	160780010A	03/19/2016 06:55	Maria Davenport	1
07058	Manganese	SW-846 6010B	1	160771848006	03/22/2016 06:40	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160771848006	03/20/2016 12:38	James L Mertz	1
00228	Sulfate	EPA 300.0	1	16076667121A	03/16/2016 15:20	Drew M Gerhart	100
00220	Nitrate Nitrogen	EPA 353.2	1	16080106102B	03/20/2016 13:35	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	16075105105A	03/15/2016 23:44	James S Mathiot	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	16078004102B	03/18/2016 18:10	Michele L Graham	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	16080834401A	03/20/2016 06:45	Daniel S Smith	100

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/30/2016 15:01

Group Number: 1640846

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 160760030A	Sample number(s): 8286877,8286881-8286882	
Methane	N.D.	3.0
Batch number: 160780010A	Sample number(s): 8286871-8286882	
DRO C10-C28	N.D.	45
	mg/l	mg/l
Batch number: 160771848006	Sample number(s): 8286877,8286881-8286882	
Manganese	N.D.	0.0012
Batch number: 16075105105A	Sample number(s): 8286877,8286881-8286882	
Nitrite Nitrogen	N.D.	0.015
Batch number: 16076667121A	Sample number(s): 8286877,8286881-8286882	
Sulfate	N.D.	0.30
Batch number: 16080106102B	Sample number(s): 8286877,8286881-8286882	
Nitrate Nitrogen	N.D.	0.040
Batch number: 16080834401A	Sample number(s): 8286877,8286881-8286882	
Ferrous Iron	N.D.	0.010
	mg/l as CaCO3	mg/l as CaCO3
Batch number: 16078004102A	Sample number(s): 8286877,8286881	
Total Alkalinity to pH 4.5	N.D.	0.70
Batch number: 16078004102B	Sample number(s): 8286882	
Total Alkalinity to pH 4.5	N.D.	0.70

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160760030A	Sample number(s): 8286877,8286881-8286882								
Methane	61.3	65.33			107		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160780010A	Sample number(s): 8286871-8286882								
DRO C10-C28	2650	1870.07	2700	1932.62	71	72	69-115	3	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 160771848006	Sample number(s): 8286877,8286881-8286882								
Manganese	0.500	0.488			98		80-120		

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/30/2016 15:01

Group Number: 1640846

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16075105105A Nitrite Nitrogen	0.700	0.709			101		90-110		
Batch number: 16076667121A Sulfate	7.50	7.40			99		90-110		
Batch number: 16080106102B Nitrate Nitrogen	2.50	2.66			106		90-110		
Batch number: 16080834401A Ferrous Iron	0.400	0.403			101		93-105		
Batch number: 16078004102A Total Alkalinity to pH 4.5	188	176.53			94		90-110		
Batch number: 16078004102B Total Alkalinity to pH 4.5	188	176.53			94		90-110		

## MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 160760030A Methane	4.04	61.3	62.1	61.3	61.38	95	94	73-125	1	30
Batch number: 160771848006 Manganese	0.0888	0.500	0.578	0.500	0.565	98	95	75-125	2	20
Batch number: 16075105105A Nitrite Nitrogen	0.0541	0.200	0.220			83*		90-110		
Batch number: 16076667121A Sulfate	29	50	77.34			97		90-110		
Batch number: 16080106102B Nitrate Nitrogen	N.D.	1.00	0.821			82*		90-110		
Batch number: 16080834401A Ferrous Iron	9.26	20	28.83	20	28.33	98	95	93-105	2	6

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/30/2016 15:01

Group Number: 1640846

Analysis Name	Unspiked Conc mg/l as CaCO <sub>3</sub>	MS Spike Added mg/l as CaCO <sub>3</sub>	MS Conc mg/l as CaCO <sub>3</sub>	MSD Spike Added mg/l as CaCO <sub>3</sub>	MSD Conc mg/l as CaCO <sub>3</sub>	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16078004102A Total Alkalinity to pH 4.5	4.05	188	179.03	UNSPK: P286193		93		90-110		
Batch number: 16078004102B Total Alkalinity to pH 4.5	4.05	188	179.03	Sample number(s): 8286882 UNSPK: P286193		93		90-110		

## Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 160771848006 Manganese	0.0888	0.205	79*	20
Batch number: 16075105105A Nitrite Nitrogen	0.0541	0.0511	6 (1)	20
Batch number: 16076667121A Sulfate	29	29.01	0	15
Batch number: 16080106102B Nitrate Nitrogen	N.D.	N.D.	0 (1)	2
Batch number: 16080834401A Ferrous Iron	9.26	9.31	1 (1)	5
Batch number: 16078004102A Total Alkalinity to pH 4.5	4.05	3.48	15* (1)	5
Batch number: 16078004102B Total Alkalinity to pH 4.5	113.58	113.71	0	5

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Methane  
Batch number: 160760030A

Propene	
8286877	84
8286881	100
8286882	89
Blank	108
LCS	106

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Quality Control Summary

Client Name: GES, Inc.  
Reported: 03/30/2016 15:01

Group Number: 1640846

Propene	
MS	97
MSD	96
Limits:	44-123

Analysis Name: DRO micro-ext 8015B  
Batch number: 160780010A

Orthoterphenyl	
8286871	81
8286872	86
8286873	121
8286874	81
8286875	185*
8286876	100
8286877	33*
8286878	100
8286879	40*
8286880	99
8286881	120
8286882	90
Blank	100
LCS	91
LCSD	91
Limits:	42-160

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

# Environmental Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 8390 Group # 1640846 Sample # 8206871-82

Client: Groundwater & Env. Services, Inc.		Site ID #: NRG PRGS		Project Name/ID: NRG PRGS		Project Manager: Ashley Bell		Sampler: Ryan O'Donoghue		Phone #: 800-220-3806 x 3704		Quote #: 212032A		State where sample(s) were collected: 1400 North Royal St., Alexandria, VA			
Sample Identification		Collection		Date		Time		Grab		Composite		Matrix		Analyses Requested			
												<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Other:		Preservation Codes H = HCl T = Thiocyanate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> P = H <sub>3</sub> PO <sub>4</sub> O = Other			
RV-1163 RW-1193 MW-1233 RW-1163 RW-303 RW-285 RW-723		3/14/16 11:50 12:05 12:20 12:35 13:25 14:00		X X X X X X X		X X X X X X X		X X X X X X X		X X X X X X X		X X X X X X X		X X X X X X X		X X X X X X X	
Turnaround Time Requested (TAT) (please check):		Standard		Rush		Date		Time		Received by:		Date		Time			
(Rush TAT is subject to laboratory approval and surcharges.)						3/14/16		1600		Jell Pummer		3-14-16		1600			
Date results are needed:						3/14/16		1600		Jell Pummer		3-14-16		1600			
Rush results requested by (please check):		E-Mail		Phone		3/14/16		1600		Jell Pummer		3-14-16		1600			
E-mail Address: mdlabs@gesonline.com & ges@equisonline.com						3/14/16		1600		Jell Pummer		3-14-16		1600			
Phone:						3/14/16		1600		Jell Pummer		3-14-16		1600			
Data Package Options (please check if required)		Type I (Validation/non-CLP)		Type III (Reduced non-CLP)		Type VI (Raw Data Only)		Type VII (Reduced non-CLP)		Type VIII (Reduced non-CLP)		Type IX (Reduced non-CLP)		Type X (Reduced non-CLP)			
		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
NYSDEC Category		A		or		B											
EDD Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, format: GES EQEDD																	
EQEDD Name: NRG PRGS Lab report # 25800.EQEDD.zip																	
UPS		FedEx		Other		Date		Time		Received by:		Date		Time			
						3/15/16		1655		Jell Pummer		3-15-16		1655			
Temperature upon receipt		2.4		°C													

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7045 0614

[illegible]

Sample Administration  
Receipt Documentation Log

Doc Log ID: 139514

Group Number(s): 1640846

Client: GES**Delivery and Receipt Information**

Delivery Method:	<u>ELLE Courier</u>	Arrival Timestamp:	<u>03/15/2016 16:55</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>VA</u>		

**Arrival Condition Summary**

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace $\geq$ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Patrick Engle (3472) at 17:08 on 03/15/2016***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT121	2.4	DT	Wet	Y	Bagged	N

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and  $<$  the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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