



*Prepared for*

**Georgia Power Company**  
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Atlanta, Georgia 30308

**2020 SEMIANNUAL GROUNDWATER  
MONITORING & CORRECTIVE  
ACTION REPORT**

**GEORGIA POWER COMPANY  
PLANT HAMMOND ASH POND 3 (AP-3)**

*Prepared by*

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**CERTIFICATION STATEMENT**

This 2020 Semiannual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant Hammond – Ash Pond 3 (AP-3) has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D], specifically 40 CFR § 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants.



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February 26, 2021  
Date

## EXECUTIVE SUMMARY

This summary of the 2020 Semiannual Groundwater Monitoring and Corrective Action Report provides the status of groundwater monitoring and corrective action program for the reporting period of August through December 2020 at the Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 3 (AP-3) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Part A, Section 6<sup>1</sup> of the U.S. Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Plant Hammond is a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. AP-3 is located on the northeastern corner of the Plant



Figure 1. Plant Hammond and Location of AP-3

Hammond property as shown on Figure 1. Ash sluicing and placement operations at AP-3 commenced in June 1977. In the early 1980's, AP-3 was converted into a dry ash disposal area and in the early 1990's the pond stopped receiving CCR materials. Final capping of the pond with a low-permeability cover system was completed in the second quarter of 2018. A Closure Plan for AP-3 was submitted to the Georgia Environmental Protection Division (GA EPD) as part of the closure permit application package, which described the closure activities and requirements in accordance with § 257.102.

Groundwater at the Site is monitored using a monitoring system comprised of seven upgradient and five downgradient wells installed between November 2014 and August 2020 that meet federal and state monitoring requirements. Groundwater monitoring-related activities have been performed at AP-3 since August 2016. Based on groundwater conditions at the Site, an assessment monitoring program and assessment of corrective measures were established in August 2019 and July 2020, respectively. During the 2020

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<sup>1</sup> 80 FR 21468, Apr. 17, 2015, as amended at 81 FR 51807, Aug. 5, 2016; 83 FR 36452, July 30, 2018; 85 FR 53561, Aug. 28, 2020

semiannual reporting period, the Site remained in assessment monitoring as corrective measures are being evaluated.

During the 2020 semiannual reporting period, Geosyntec conducted groundwater sampling events in August and in September 2020. Groundwater samples were submitted to Pace Analytical Services, LLC., for analysis. Per the CCR rule, groundwater results for September 2020 data were evaluated in accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III<sup>2</sup> and Appendix IV<sup>3</sup> parameters in wells provided in the table below.

Based on review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program from August through December 2020, the Site will continue in assessment monitoring. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be posted to the website and provided to GA EPD semiannually.

| <b>Appendix III Parameter</b>            | <b>September 2020</b>                     |
|--|---|
| Boron                                    | HGWC-120, HGWC-121A, HGWC-124, HGWC-125   |
| Calcium                                  | HGWC-120, HGWC-121A, HGWC-125             |
| Sulfate                                  | HGWC-120, HGWC-121A, HGWC-125             |
| Total dissolved solids (TDS)             | HGWC-125                                  |
| <b>Appendix IV Parameter<sup>4</sup></b> | <b>September 2020</b>                     |
| Molybdenum                               | <i>State only:</i> HGWC-120, MW-32, MW-39 |

<sup>2</sup> Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

<sup>3</sup> Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228

<sup>4</sup> A state statistically significant level SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, or the calculated background interwell prediction limit. A federal SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, the USEPA RSL, if no MCL is available, or the calculated background interwell prediction limit.



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## LIST OF ACRONYMS

|                 |   |
|-----------------|---|
| AP              | ash pond  |
| ACM             | assessment of corrective measures                       |
| CCR             | coal combustion residuals                               |
| CFR             | Code of Federal Regulations                             |
| CFS             | Civil Field Services                                    |
| cm/sec          | centimeters per second                                  |
| DO              | dissolved oxygen  |
| ft              | feet  |
| ft/day          | feet per day  |
| ft/ft           | feet per foot   |
| GA EPD          | Georgia Environmental Protection Division               |
| Georgia Power   | Georgia Power Company                                   |
| GWPS            | Groundwater Protection Standard                         |
| HAR             | Hydrogeologic Assessment Report                         |
| HDPE            | high density polyethylene                               |
| $K_h$           | horizontal hydraulic conductivity                       |
| mg/L            | milligram per liter                                     |
| NELAP           | National Environmental Laboratory Accreditation Program |
| NTU             | Nephelometric turbidity units                           |
| Pace Analytical | Pace Analytical Services, LLC.                          |
| PE              | professional engineer                                   |
| PL              | prediction limit  |
| QA/QC           | Quality Assurance/Quality Control                       |
| SCS             | Southern Company Services                               |
| SSI             | statistically significant increase                      |
| SSL             | statistically significant level                         |
| s.u.            | standard unit   |
| TDS             | total dissolved solids                                  |
| USEPA           | United States Environmental Protection Agency           |

## 1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D] and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants (Geosyntec) has prepared this *2020 Semiannual Groundwater Monitoring & Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 3 (AP-3) for the reporting period of August 2020 through December 2020.

Groundwater monitoring and reporting for the CCR unit is performed in accordance with the monitoring requirements of § 257.90 through 257.95 of the Federal CCR rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6). To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the USEPA CCR Rule. For ease of reference, the USEPA CCR rules are cited within this report.

AP-3 ceased receiving waste prior to the effective date of the CCR rule promulgated in April 2015. A notification of intent to initiate closure of the inactive CCR surface impoundment was certified on December 7, 2015 and posted to GPC's website. Groundwater monitoring and reporting for AP-3 are being completed in accordance with the alternate schedule in § 257.100(e)(5) of the revised CCR rule (August 5, 2016).

Due to statistically significant level (SSL) of molybdenum identified in the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2020a), Georgia Power initiated an assessment of corrective measures (ACM) program for AP-3 in July 2020. Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-3 in accordance with the assessment monitoring program established for the unit in 2019, including annual and semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the Federal CCR rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

### 1.1 Site Description and Background

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome and is bordered by Georgia Highway 20 (GA-20) on the north, the Coosa River on the south, Cabin Creek and industrial land on the east, and sparsely populated, forested,

rural and industrial land on the west (**Figure 1**). The physical address of the plant is 5963 Alabama Highway, Rome, Georgia, 30165.

Plant Hammond is a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were retired on July 2019 and no longer produce electricity.

AP-3 is a 25-acre former ash pond that was constructed in 1973 and 1974. Ash sluicing and placement operations at AP-3 commenced in June 1977. In the early 1980's, AP-3 was converted into a dry ash disposal area and in the early 1990's the pond stopped receiving CCR materials.

Closure of AP-3 commenced in 2016. As part of closure, AP-3 was dewatered sufficiently to remove the free liquids. The CCR material remaining in AP-3 was graded and a final cover system installed. The final cover system consists of a 60-mil high density polyethylene (HDPE) liner, geocomposite drainage media, a minimum 18-inch thick protective soil cover, and a 6-inch thick vegetative layer. The final cover system was designed to limit infiltration of precipitation with low permeability materials and is graded to promote positive drainage and shed stormwater away from AP-3 via riprap drainage ditches toward three outfall locations around AP-3. Final capping of the unit was completed in the second quarter of 2018.

## **1.2 Regional Geology & Hydrogeologic Setting**

The following section summarizes the geologic and hydrogeologic conditions at AP-3 as described in the *Hydrogeologic Assessment Report Revision 01 – Ash Pond 3* (HAR Rev 01) submitted to GA EPD under separate cover in support of the AP-3 closure permit application (Geosyntec, 2020a).

### **1.2.1 Regional and Site Geology**

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia, which is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. Geologic mapping performed at the Site by Petrologic Solutions, Inc. under the direction of Golder (Golder, 2018) indicates that AP-3 is underlain by the middle units of the Cambrian age Conasauga Formation, consisting of mostly shaley limestone. Based on review of site-specific subsurface investigations, the bedrock at AP-3 was identified as limestone or shaley limestone. AP-3 is underlain primarily by five

lithologic units; (i) fill material, (ii) terrace alluvium, (iii) residuum, (iv) highly weathered/fractured limestone bedrock, and (v) unweathered limestone bedrock.

Based on subsurface investigations the fill is composed of lean clay or gravelly lean clay with sand, sometimes identified by the presence of wood or roots. The terrace alluvium consists of unconsolidated sediments with high sand and gravel content associated with deposition from the Coosa River and Cabin Creek. Residual or native soils have been derived from the in-place weathering of the shaley limestone bedrock. The residuum is generally described as fat clay with typically only trace amounts of sand, and rarely gravel. Just below the residuum clay layer is a gradational zone of varying proportions of clayey residuum and sand, gravel, and cobble-sized angular pieces of partially weathered limestone, grading into a zone of fractured limestone, before grading into unweathered, fresh limestone. The upper highly weathered zone appears more as residuum with various sized rock fragments. The lower zone becomes less clayey with depth and is estimated to be approximately 5 feet thick. Most of the limestone is described as medium to dark gray with a slabby or flaggy habit when broken in pieces by the sonic drilling. The limestone is very finely laminated with lighter and darker gray layers, and also contains interbeds of calcareous shale.

### **1.2.2 Hydrogeologic Setting**

The uppermost aquifer at AP-3 is a regional groundwater aquifer that occurs within the residuum and the weathered and fractured bedrock. The uppermost aquifer is considered to be unconfined; however, localized, semi-confined conditions may be encountered due to the low-permeability clayey nature of the residual soils, or as a result of perched groundwater or poorly interconnected fracture networks in the bedrock. Based on observations of soil types and horizontal conductivity values, the movement of groundwater in the soil, and to some degree the highly weathered bedrock zone, can be characterized as low-to moderate permeability, porous media flow. Groundwater flow in the more competent underlying bedrock is characterized as fracture flow. Flow direction within the area of AP-3 is generally from west to east.

### **1.3 Groundwater Monitoring Well Network**

In accordance with § 257.91, a groundwater monitoring system was installed at AP-3 that (1) consists of a sufficient number of wells, (2) is installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) represents the groundwater quality both upgradient of the units (i.e., background conditions) and

passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

The current groundwater monitoring well network consists of seven upgradient compliance monitoring wells (HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122) and five downgradient compliance monitoring wells (HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126). Prior to November 2019, the certified compliance monitoring well network for AP-3 consisted of only four compliance monitoring wells (HGWA-122, HGWC-120, HGWC-121A, and HGWC-124). Wells HGWC-125 and HGWC-126 were added to the network in May 2020 at the request of GA EPD. Wells HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, and HGWA-45D were incorporated into the AP-3 compliance well network in September 2020 to supplement HGWA-122 and further characterize background groundwater conditions upgradient of AP-3. Of this subset, wells HGWA-1, HGWA-2, and HGWA-3 were installed before January 2016. Wells HGWA-43D, HGWA-44D, and HGWA-45D were installed in August 2020 and screened in bedrock to characterize groundwater conditions within deeper portions of the aquifer (481.76 to 544.08 ft NAVD88) than that provided by HGWA-1, HGWA-2, HGWA-3, and HGWA-122 (543.23 to 573.12 ft NAVD88). Data from these three deeper wells will be used to better characterize background conditions for AP-3.

In addition, three delineation wells (MW-32, MW-41, and MW-46D) and three piezometers (MW-21, MW-23, and MW-39) are used to characterize groundwater conditions upgradient and downgradient of AP-3. The locations of the compliance monitoring wells, delineation wells, and piezometers associated with AP-3 are shown on **Figure 2**; well construction details are listed in **Table 1**.

## 2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes monitoring-related activities performed for AP-3 between August and December 2020. Groundwater monitoring was performed in accordance with § 257.93.

### 2.1 Monitoring Well Installation and Maintenance

Three compliance monitoring wells (HGWA-43D, HGWA-44D, and HGWA-45D) and one delineation well (MW-46D) were installed in August 2020 to provide additional data to characterize groundwater quality and flow conditions at deeper depths. A well installation report that includes detailed boring logs and well construction diagrams for these wells is provided in **Appendix A**. The installation report was submitted to GA EPD under separate cover in November 2020.

The monitoring well and piezometer networks are inspected during each groundwater monitoring event using GA EPD-based inspection criteria. Any issues identified with the wells (e.g., clogged weep holes within the outer protective casing, faded well identification signage, rusted locks and/or latches, etc.) are addressed before the following groundwater monitoring event. The well inspection forms for the August and September 2020 monitoring events are provided in **Appendix B**.

The AP-3 well network was resurveyed by GEL Solutions May 11-14, 2020; a subsequent survey of the wells installed at the Site after May 2020 was conducted on September 1-2, 2020. A memorandum was prepared to update and modify well construction details based on the updated survey data and included updated boring and well construction logs for the entire AP-3 well network. The *September 2020 Well Installation Addendum* was submitted to GA EPD on September 29, 2020 (Geosyntec, 2020b) and included the survey data certified by a Georgia-licensed surveyor.

### 2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-3 in August 2019. Statistical analyses of the groundwater data from the August 2019, October 2019, and March 2020 assessment monitoring events identified SSLs of lithium and molybdenum in compliance well HGWC-120. A reduced Li groundwater concentration reported in March 2020 for HGWC-120 reduced the lower confidence interval to below the state GWPS, and therefore an SSL for Li was no longer identified in HGWC-120. Details regarding the statistical analyses are provided in the *2020 Annual Groundwater*



and *Corrective Action Monitoring Report* (Geosyntec, 2020c). Pursuant to § 257.96, an ACM was initiated for AP-3 in July 2020. An *Assessment of Corrective Measures Report* (ACM Report) was subsequently prepared for AP-3 (Geosyntec, 2020d) and submitted to GA EPD in December 2020 and posted to the Georgia Power CCR compliance website. In accordance with § 257.96(b), groundwater continues to be monitored at AP-3 under the assessment monitoring program as the ACM phase is implemented.

For the reporting period, the initial annual Appendix IV sampling event was conducted in August 2020; the first semiannual assessment monitoring event was conducted in September 2020. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-3 during the reporting period is summarized in **Table 2**. Details of these events and analytical results are discussed in Section 3, while the statistical results are discussed in Section 4.

### **2.3 Additional Groundwater and Surface Water Sampling**

A supplemental groundwater sampling event was conducted in November 2020 to sample well MW-46D in support of the continued efforts to characterize groundwater quality and flow conditions downgradient of AP-3. Efforts to characterize groundwater quality and evaluate the corrective measures outlined in the ACM Report are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C**.

Due to the presence of surface water features in the downgradient direction of MW-41, installation of wells to horizontally characterize the area is infeasible. For this reason, Georgia Power proactively collected surface water samples in July 2020 and December 2020 from three locations along Cabin Creek, two of which are applicable to evaluating the AP-3 groundwater/surface water conditions (i.e., H-SCC NBR and H-SCC E41), as shown on **Figure 2**. Surface water samples are collected in accordance with *Region 4 U.S. Environmental Protection Agency Science and Ecosystem Support Division Operating Procedures for Surface Water Sampling* SESDPROC-201-R4 (December 16, 2016). The laboratory report associated with the December 2020 sampling event is provided in **Appendix D**; a copy of the analytical laboratory report from the July 2020 surface water sampling event was provided with the ACM Report (Geosyntec, 2020d). Georgia Power will continue collecting the surface water samples semiannually.

During this reporting period, additional samples were collected at HGWC-125, HGWC-126, HGWA-43D, HGWA-44D, and HGWA-45D in November and December 2020. For each event, the samples were analyzed for the complete list of Appendix III and

Appendix IV constituents. The laboratory reports associated with the two additional sampling events are provided in **Appendix D**.

### 3.0 SAMPLING METHODOLOGY & ANALYSES

The following section presents a summary of the field sampling procedures that were implemented and the groundwater sampling results that were obtained in connection with the assessment monitoring program conducted at AP-3 during the reporting period.

#### 3.1 Groundwater Level Measurement

Prior to each sampling event, a synoptic round of depth-to-groundwater level measurements were recorded from the AP-3 wells and piezometers and used to calculate the groundwater elevations. The calculated groundwater elevations for the August 2020 and September 2020 monitoring events are presented in **Table 3**. The most recent survey data for each well/piezometer was used to calculate the groundwater elevations for the August and September 2020 events.

The groundwater elevation data presented in **Table 3** were used to prepare potentiometric surface contour maps for the August and September 2020 assessment monitoring events, which are presented on **Figures 3** and **4**, respectively. Groundwater in the AP-3 area flows under the influence of topography from slightly higher ground surface elevations on the western side of the Site towards lower elevations to the east of AP-3. The flow direction is consistent with previous observations for AP-3.

#### 3.2 Groundwater Gradient and Flow Velocity

The representative groundwater hydraulic gradient within the uppermost aquifer beneath AP-3 was calculated using the August and September 2020 groundwater elevation data. The hydraulic gradient is commonly calculated along the groundwater flow path perpendicular to contours of equal hydraulic head using elevations of two equipotential lines. However, at the request of GA EPD, the hydraulic gradients in this report have been calculated between upgradient and downgradient wells selected to provide the most accurate alignment possible relative to the interpreted groundwater flow path. Hydraulic gradients were calculated between wells MW-21 and HGWC-125. The hydraulic gradient and groundwater flow velocity calculations are presented on **Table 4**. The general trajectories of the flow paths are shown on each potentiometric map. The average hydraulic gradient for this reporting period across AP-3 is 0.0091 feet per foot (ft/ft).

The approximate horizontal flow velocity associated with AP-3 groundwater was calculated using the following derivative of Darcy's Law.

$$V = \text{linear velocity} = \frac{K_h * i}{n_e}$$

where:

$$V = \text{Groundwater flow velocity} \left( \frac{\text{feet}}{\text{day}} \right)$$

$$K_h = \text{Average hydraulic conductivity} \left( \frac{\text{feet}}{\text{day}} \right)$$

$$i = \text{Horizontal hydraulic gradient} \left( \frac{\text{feet}}{\text{feet}} \right)$$

$$n_e = \text{Effective porosity}$$

Aquifer testing was conducted by LETCO in 1977, SCS in 2014, and Geosyntec in 2017 to evaluate horizontal hydraulic conductivity of the water bearing units in the vicinity of AP-3. Slug testing was performed to estimate the horizontal hydraulic conductivity ( $K_h$ ) for units above the top of bedrock, while single packer testing was used to estimate the  $K_h$  for the bedrock intervals. Additional details are presented in the HAR Rev 01 (Geosyntec, 2020a).

The groundwater flow velocity calculation was performed using the geometric mean value for  $K_h$  of the highly weathered/fractured rock of  $9.8 \times 10^{-4}$  centimeters per second (cm/sec) or 2.76 feet per day (ft/day). An estimated effective porosity of 0.15 is used to represent average lithologic conditions at AP-3, derived based on review of literature, observed site lithology, and professional judgement. With these variables determined, and accounting for the average hydraulic gradient discussed above, the average horizontal groundwater flow velocity underneath AP-3 for this reporting period was calculated to be 0.17 ft/day.

### 3.3 Groundwater Sampling Procedures

Groundwater samples were collected from the compliance monitoring network using low-flow sampling procedures in accordance with § 257.93(a). For the August 2020 monitoring event nine wells were sampled using bladder pump and tubing installed in each well. Monitoring wells MW-32 and MW-41 and piezometer MW-39 were sampled using a peristaltic pump equipped with new disposable polyethylene tubing. During the September 2020 event, 13 of the 16 wells were purged and sampled using the installed bladder pump with tubing. Wells MW-32 and MW-41 and piezometer MW-39 were sampled using a peristaltic pump equipped with new disposable polyethylene tubing. The

newly installed wells HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D were purged using a non-dedicated bladder pump with disposable polyethylene tubing. All non-disposable equipment was decontaminated before use and between well locations.

A SmarTroll or Aqua TROLL (In-Situ field instrument) was used to monitor and record field water quality parameters listed below during well purging to verify stabilization prior to sampling. Turbidity was measured using a LaMotte 2020we portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

- pH  $\pm$  0.1 Standard Units (s.u.).
- Conductivity  $\pm$  5%.
- $\pm$ 0.2 milligrams per liter (mg/L) or  $\pm$ 10%, whichever is greater for dissolved oxygen (DO) > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L, record only.
- Turbidity measured less than 10 nephelometric turbidity units (NTU).

Following purging, and once stabilization was achieved, samples were collected into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC. (Pace Analytical) in Norcross, Georgia, following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the monitoring events are provided in **Appendix D**.

### **3.4 Laboratory Analyses**

Laboratory analyses were performed by Pace Analytical, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace Analytical maintains a NELAP certification for the Appendix III and Appendix IV constituents analyzed for this project. Analytical methods used for groundwater sample analysis are listed in the analytical laboratory reports included in **Appendix D**.

The groundwater analytical results from the August and September 2020 sampling events, and additional sampling events for HGWA-43D, HGWA-44D, HGWA-45D, HGWC-125, and HGWC-126 are summarized in **Table 5**.

### 3.5 Quality Assurance & Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events in accordance with the site's *Groundwater Monitoring Plan* (Geosyntec, 2021), and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in laboratory-provided bottles and submitted under the same chain of custody as the primary samples for analysis of the same parameters by Pace Analytical.

In addition to collecting QA/QC samples, the data were validated based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and applicable federal guidance documents (USEPA, 2011; USEPA, 2017). Where necessary, the data were qualified with supporting documentation and justifications. The data are considered usable for meeting project objectives and the results are considered valid. The associated data validation report is provided in **Appendix D**, along with the laboratory reports.

## 4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established groundwater protection standards (GWPS) for the Appendix IV monitoring constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the reporting period through December 2020. The report generated from the statistical analyses are provided in **Appendix E**. Statistical data analysis was performed by Groundwater Stats Consulting (GSC).

### 4.1 Statistical Methods

Analytical data through the December 2020 supplemental monitoring event were statistically analyzed in accordance with the PE-certified Statistical Analysis Method Certification (October 2017, revised January 2020). The Sanitas groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009).

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV assessment monitoring constituents were evaluated to determine if concentrations statistically exceeded the established state and federal GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix E** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and presented in **Table 6**.

#### 4.1.1 Appendix III Statistical Methods

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for each of the Appendix III parameters. Interwell prediction limits (PLs) pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are significant statistical increases (SSIs). An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient compliance monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan

allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

#### **4.1.2 Appendix IV Statistical Methods**

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in any downgradient well for which a minimum of four independent sampling events has occurred. In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), four independent data are the minimum population size recommended to construct confidence intervals required to assess SSLs for Appendix IV constituents. Due to non-routine (or ACM investigation) sampling, some Appendix IV constituents at a well location have differing number of data.

The confidence intervals are compared to both the state and federal GWPS. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its GWPS. If a confidence interval exceeds a GWPS, an SSL is identified.

USEPA revised the federal CCR Rule on July 30, 2018, updating GWPS for cobalt, lead, lithium, and molybdenum. As described in § 257.95(h)(1-3), the GWPS is:

- (1) The maximum contaminant level (MCL) established under §141.62 and 141.66.
- (2) Where an MCL has not been established:
  - (i) Cobalt 0.006 mg/L;
  - (ii) Lead 0.015 mg/L;
  - (iii) Lithium 0.040 mg/L; and
  - (iv) Molybdenum 0.10 mg/L.
- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

USEPA's updated GWPS have not yet been incorporated under GA EPD's CCR Rule. The GA EPD CCR Rule GWPS is:



- (1) The federally established MCL.
- (2) Where an MCL has not been established, the background concentration.
- (3) Background levels for constituents where the background level is higher than the MCL.

Following the above federal and state rule requirements, GWPS have been established for statistical comparison of Appendix IV constituents and are presented in **Table 6**.

## 4.2 Statistical Analyses Results

Based on review of the full Appendix III statistical analysis discussion presented in **Appendix E**, groundwater conditions have not returned to background and assessment monitoring should continue. Based on the statistical analysis of Appendix IV constituents, the following constituents exceeded the state or federal GWPS for assessment monitoring events completed during the reporting period through December 2020:

AP-3 (Federal CCR Rule):

- No SSLs were reported above federal GWPS.

AP-3 (GA EPD CCR Rule):

- Molybdenum: HGWC-120, MW-32, MW-39

The identified SSL of molybdenum in well HGWC-120 in exceedance of the state GWPS is consistent with the statistical results of previous reporting periods. This is the first reporting period for which an SSL has been identified in wells MW-32 and MW-39. A groundwater exceedance notification acknowledging the SSLs of molybdenum was placed in the Operating Record on January 29, 2021, pursuant to § 257.95(g).

## 4.3 Delineation Data

Due to the presence of a surface water feature in the downgradient direction of MW-41, installation of an additional well to horizontally characterize this area is infeasible. Georgia Power proactively collected surface water samples in July and December 2020 from three locations along Cabin Creek, two of which are applicable to evaluating the AP-3 groundwater/surface water conditions (i.e., H-SCC NBR and H-SCC E41). The

surface water locations are shown on **Figure 2**. Sample location H-SCC NBR is located upstream of the Site, and therefore the data are considered representative of background conditions. Sample location H-SCC E41 is located immediately downgradient of MW-41. The surface water sample collected from both locations for both events indicate molybdenum is not detected. Based on molybdenum results for data collected to date, no molybdenum impacts to surface water have been detected, and horizontal delineation to below the state GWPS is complete. The surface water analytical results from the July and December 2020 sampling events are summarized in **Table 7**. The laboratory report associated with the December 2020 surface water sampling event is provided in **Appendix D**; a copy of the analytical laboratory report from the July 2020 surface water sampling event was provided with the ACM Report (Geosyntec, 2020d). Georgia Power will continue collecting the surface water samples semiannually.

In August 2020, Georgia Power installed a well (MW-46D) to vertically delineate the molybdenum SSL identified in compliance well HGWC-120. However, the current Appendix IV data set for MW-46D is limited to less than four independent sampling events which is the required number to construct confidence intervals to statistically evaluate the results with respect to GWPS. Georgia Power will continue to monitor this well until an adequately sized data set is available to complete statistical analyses. Regarding the SSLs in MW-32 and MW-39, vertical delineation of molybdenum may require the installation of additional wells adjacent to their locations and is under evaluation.

## **5.0 MONITORING PROGRAM STATUS**

### **5.1 Assessment Monitoring Status**

Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-3 in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts are continued to be evaluated. Pursuant to § 257.95(g)(1)(iv), the delineation wells will continue to be sampled as part of the ongoing semiannual assessment groundwater monitoring program.

### **5.2 Assessment of Corrective Measures**

The ACM efforts completed during the reporting period covered by this groundwater monitoring and corrective action report are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C**. The Semiannual Progress Report summarizes:

- (i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Geosyntec, 2020d);
- (ii) the analytical data obtained during supplemental ACM-specific field investigations;
- (iii) the status of evaluating applicable corrective measures; and
- (iv) the planned activities and anticipated schedule for the following semi-annual reporting period.

Georgia Power will include future Semiannual Progress Reports with each groundwater monitoring and corrective action report.

## 6.0 CONCLUSIONS & FUTURE ACTIONS

This 2020 *Semiannual Groundwater Monitoring & Corrective Action Report* for Plant Hammond AP-3 was prepared to fulfill the requirements of USEPA's CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. Statistical analysis of the assessment monitoring data through December 2020 for AP-3 confirmed the continued presence of an SSL of molybdenum above the state GWPS, but not the federal GWPS, in AP-3 compliance monitoring well HGWC-120. The analysis also identified new SSLs of molybdenum above the state GWPS, but not the federal GWPS, in wells MW-32 and MW-39.

Georgia Power proactively collected surface water samples in July and December 2020 from three locations along Cabin Creek, two of which are applicable to evaluating the AP-3 groundwater/surface water conditions (i.e., H-SCC NBR and H-SCC E41). The surface water sample collected from both locations for both events indicate molybdenum is not detected. Based on molybdenum results for data collected to date, no molybdenum impacts to surface water have been detected, and horizontal delineation to below the state GWPS is complete.

In August 2020, Georgia Power installed a well (MW-46D) to vertically delineate the molybdenum SSL identified in compliance well HGWC-120. However, the current Appendix IV data set for MW-46D is limited to less than four independent sampling events which is the required number to construct confidence intervals to statistically evaluate the results with respect to GWPS. Georgia Power will continue to monitor this well until an adequately sized data set is available to complete statistical analyses. Vertical delineation of the SSLs in MW-32 and MW-39 may require the installation of additional wells adjacent to their locations and is under evaluation.

Georgia Power will continue to monitor groundwater in the vicinity of AP-3 under the current assessment monitoring program and adaptively manage the Site as new data become available. Georgia Power will continue efforts to assess corrective measures as presented in the Semiannual Progress Report provided in **Appendix C**. The second semiannual assessment monitoring event tentatively planned for March 2021.

## 7.0 REFERENCES

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# TABLES

**Table 1**  
Monitoring Well Network Summary  
Plant Hammond AP-3, Floyd County, Georgia

| Well ID                           | Hydraulic Location | Installation Date | Northing <sup>(1)</sup> | Easting <sup>(1)</sup> | Top of Casing Elevation <sup>(2)</sup> (ft) | Top of Screen Elevation <sup>(2)</sup> (ft) | Bottom of Screen Elevation <sup>(2)</sup> (ft) | Well Depth (ft BTOC) <sup>(3)</sup> | Screen Interval Length |
|-----------------------------------|--------------------|-------------------|-------------------------|------------------------|---|---|--|-------------------------------------|------------------------|
| <b>Compliance Monitoring Well</b> |                    |                   |                         |                        |   |   |  |                                     |                        |
| HGWA-1                            | Upgradient         | 12/3/2014         | 1550423.32              | 1940770.00             | 595.21                                      | 573.12                                      | 563.12   | 32.49                               | 10                     |
| HGWA-2                            | Upgradient         | 12/2/2015         | 1549796.87              | 1939845.15             | 587.92                                      | 570.29                                      | 560.29   | 27.95                               | 10                     |
| HGWA-3                            | Upgradient         | 12/2/2015         | 1549794.41              | 1939833.39             | 587.74                                      | 553.23                                      | 543.23   | 44.51                               | 10                     |
| HGWA-43D                          | Upgradient         | 8/26/2020         | 1550422.85              | 1940753.80             | 595.08                                      | 544.08                                      | 534.08   | 61.25                               | 10                     |
| HGWA-44D                          | Upgradient         | 8/25/2020         | 1550409.13              | 1940756.18             | 594.79                                      | 491.76                                      | 481.76   | 113.28                              | 10                     |
| HGWA-45D                          | Upgradient         | 8/19/2020         | 1551157.68              | 1941907.54             | 586.95                                      | 535.23                                      | 525.23   | 62.87                               | 10                     |
| HGWA-122                          | Upgradient         | 11/20/2014        | 1551251.42              | 1941887.11             | 587.90                                      | 570.54                                      | 560.54   | 27.76                               | 10                     |
| HGWC-120                          | Downgradient       | 6/27/2016         | 1551067.24              | 1942926.62             | 605.82                                      | 548.83                                      | 538.83   | 67.00                               | 10                     |
| HGWC-121A                         | Downgradient       | 7/17/2017         | 1550607.97              | 1943030.44             | 584.69                                      | 556.71                                      | 546.71   | 37.98                               | 10                     |
| HGWC-124                          | Downgradient       | 11/13/2014        | 1551624.93              | 1942781.05             | 582.52                                      | 557.80                                      | 547.80   | 35.12                               | 10                     |
| HGWC-125                          | Downgradient       | 5/4/2020          | 1550821.41              | 1942962.87             | 608.89                                      | 556.03                                      | 546.03   | 63.19                               | 10                     |
| HGWC-126 <sup>(4)</sup>           | Downgradient       | 11/25/2019        | 1550422.03              | 1942689.40             | 611.24                                      | 552.72                                      | 542.72   | 68.52                               | 10                     |
| <b>Delineation Well</b>           |                    |                   |                         |                        |   |   |  |                                     |                        |
| MW-32                             | Downgradient       | 11/22/2019        | 1551092.83              | 1943021.47             | 585.46                                      | 559.30                                      | 549.30   | 36.16                               | 10                     |
| MW-41                             | Downgradient       | 5/18/2020         | 1551158.16              | 1943196.47             | 577.25                                      | 563.20                                      | 553.20   | 24.38                               | 10                     |
| MW-46D                            | Downgradient       | 8/18/2020         | 1551056.48              | 1942929.10             | 605.72                                      | 513.92                                      | 503.92   | 102.05                              | 10                     |
| <b>Piezometer</b>                 |                    |                   |                         |                        |   |   |  |                                     |                        |
| MW-21                             | Downgradient       | 12/3/2014         | 1550270.15              | 1941809.76             | 586.27                                      | 570.40                                      | 560.40   | 26.28                               | 10                     |
| MW-23                             | Downgradient       | 11/24/2014        | 1551641.44              | 1942496.83             | 584.91                                      | 563.03                                      | 553.03   | 32.28                               | 10                     |
| MW-39                             | Downgradient       | 3/16/2020         | 1551111.45              | 1943089.26             | 580.42                                      | 564.93                                      | 554.93   | 25.82                               | 10                     |

Notes:

ft = feet.

ft BTOC = feet below top of casing.

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.

(3) Total well depth accounts for sump if sump depth data was provided on well construction logs.

(4) Well HGWC-126 was originally installed as piezometer MW-31 but reclassified as a compliance monitoring well in May 2020.

**Table 2**  
Groundwater Sampling Event Summary  
Plant Hammond AP-3, Floyd County, Georgia

| Well ID                           | Hydraulic Location | August 24-28, 2020    | September 14-28, 2020 | November 11-12, 2020              | December 15-16, 2020              | Status of Monitoring Well |
|-----------------------------------|--------------------|-----------------------|-----------------------|-----------------------------------|-----------------------------------|---------------------------|
| <b>Purpose of Sampling Event:</b> |                    | <b>App. IV Annual</b> | <b>Assessment</b>     | <b>Supplemental<sup>(1)</sup></b> | <b>Supplemental<sup>(1)</sup></b> |                           |
| <i>Compliance Monitoring Well</i> |                    |                       |                       |                                   |                                   |                           |
| HGWA-1                            | Upgradient         | X                     | X                     | --                                | --                                | Assessment                |
| HGWA-2                            | Upgradient         | X                     | X                     | --                                | --                                | Assessment                |
| HGWA-3                            | Upgradient         | X                     | X                     | --                                | --                                | Assessment                |
| HGWA-43D                          | Upgradient         | --                    | X                     | X                                 | X                                 | Assessment                |
| HGWA-44D                          | Upgradient         | --                    | X                     | X                                 | X                                 | Assessment                |
| HGWA-45D                          | Upgradient         | --                    | X                     | X                                 | X                                 | Assessment                |
| HGWA-122                          | Upgradient         | X                     | X                     | --                                | --                                | Assessment                |
| HGWC-120                          | Downgradient       | X                     | X                     | --                                | --                                | Assessment                |
| HGWC-121A                         | Downgradient       | X                     | X                     | --                                | --                                | Assessment                |
| HGWC-124                          | Downgradient       | X                     | X                     | --                                | --                                | Assessment                |
| HGWC-125                          | Downgradient       | X                     | X                     | X                                 | X                                 | Assessment                |
| HGWC-126                          | Downgradient       | X                     | X                     | X                                 | X                                 | Assessment                |
| <i>Delineation Well</i>           |                    |                       |                       |                                   |                                   |                           |
| MW-32                             | Downgradient       | X                     | X                     | --                                | --                                | Assessment                |
| MW-41                             | Downgradient       | X                     | X                     | --                                | --                                | Assessment                |
| MW-46D                            | Downgradient       | --                    | X                     | X                                 | --                                | Assessment                |
| <i>Piezometer</i>                 |                    |                       |                       |                                   |                                   |                           |
| MW-39                             | Downgradient       | X                     | X                     | --                                | --                                | Assessment                |

Note:

"--" = Not sampled.

(1) Supplemental sampling in support of ongoing characterization of site groundwater quality.



**Table 3**  
 Summary of Groundwater Elevations  
 Plant Hammond AP-3, Floyd County, Georgia

| Well ID                                  | Top of Casing Elevation (ft) <sup>(1,2)</sup> | August 24, 2020          |                            | September 14, 2020       |                            |
|--|---|--------------------------|----------------------------|--------------------------|----------------------------|
|  |   | Depth to Water (ft BTOC) | Groundwater Elevation (ft) | Depth to Water (ft BTOC) | Groundwater Elevation (ft) |
| <b><i>Compliance Monitoring Well</i></b> |   |                          |                            |                          |                            |
| HGWA-1                                   | 595.21  | 19.30                    | 575.91                     | 20.97                    | 574.24                     |
| HGWA-2                                   | 587.92  | 10.12                    | 577.80                     | 11.14                    | 576.78                     |
| HGWA-3                                   | 587.74  | 10.00                    | 577.74                     | 10.96                    | 576.78                     |
| HGWA-43D                                 | 595.08  | --                       | --                         | 20.75                    | 574.33                     |
| HGWA-44D                                 | 594.79  | --                       | --                         | 19.59                    | 575.20                     |
| HGWA-45D                                 | 586.95  | --                       | --                         | 14.08                    | 572.87                     |
| HGWA-122                                 | 587.90  | 14.20                    | 573.70                     | 15.13                    | 572.77                     |
| HGWC-120                                 | 605.82  | 40.67                    | 565.15                     | 41.20                    | 564.62                     |
| HGWC-121A                                | 584.69  | 18.52                    | 566.17                     | 18.56                    | 566.13                     |
| HGWC-124                                 | 582.52  | 15.81                    | 566.71                     | 18.16                    | 564.36                     |
| HGWC-125                                 | 608.89  | 43.89                    | 565.00                     | 44.50                    | 564.39                     |
| HGWC-126                                 | 611.24  | 41.61                    | 569.63                     | 41.86                    | 569.38                     |
| <b><i>Delineation Well</i></b>           |   |                          |                            |                          |                            |
| MW-32                                    | 585.46  | 20.30                    | 565.16                     | 20.80                    | 564.66                     |
| MW-41                                    | 577.25  | 12.25                    | 565.00                     | 12.79                    | 564.46                     |
| MW-46D                                   | 605.72  | --                       | --                         | 41.05                    | 564.67                     |
| <b><i>Piezometer</i></b>                 |   |                          |                            |                          |                            |
| MW-21                                    | 586.27  | 9.26                     | 577.01                     | 10.70                    | 575.57                     |
| MW-23                                    | 584.91  | 14.34                    | 570.57                     | 15.20                    | 569.71                     |
| MW-39                                    | 580.42  | 15.30                    | 565.12                     | 15.84                    | 564.58                     |

Notes:

-- = well was not installed at the time of depth to water measurement.

ft = feet

ft BTOC = feet below top of casing

(1) Elevations referenced to the North American Vertical Datum of 1988 (ft NAVD88).

(2) Survey data certified on May 19, 2020 and September 10, 2020 for wells HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D.

**Table 4**  
 Horizontal Groundwater Gradient and Flow Velocity Calculations  
 Plant Hammond AP-3, Floyd County, Georgia

| Flow Path Direction                    | Aug 24, 2020 |            |                 |                             | September 14, 2020 |            |                 |                             | Average $\Delta h/\Delta l$ (ft/ft) |
|--|--------------|------------|-----------------|-----------------------------|--------------------|------------|-----------------|-----------------------------|-------------------------------------|
|  | $h_1$ (ft)   | $h_2$ (ft) | $\Delta l$ (ft) | $\Delta h/\Delta l$ (ft/ft) | $h_1$ (ft)         | $h_2$ (ft) | $\Delta l$ (ft) | $\Delta h/\Delta l$ (ft/ft) |                                     |
| Westerly Flow Path (MW-21 to HGWC-125) | 577.01       | 565.00     | 1,278           | 0.0094                      | 575.57             | 564.39     | 1,278           | 0.0088                      | 0.0091                              |

| Flow Path Direction <sup>(1)</sup>     | $K_h$ (ft/d) | n    | $\Delta h/\Delta l$ (ft/ft) | V (ft/d) <sup>(2)</sup> |
|--|--------------|------|-----------------------------|-------------------------|
| Westerly Flow Path (MW-21 to HGWC-125) | 2.76         | 0.15 | 0.0091                      | 0.17                    |

Notes:

ft = feet

ft/d = feet per day

ft/ft = feet per foot

$h_1, h_2$  = point of interpreted groundwater elevation

$K_h$  = horizontal hydraulic conductivity

$\Delta h/\Delta l$  = hydraulic gradient

$\Delta h$  = change in groundwater elevation between identified wells

$\Delta l$  = distance between identified wells

n = effective porosity

V = groundwater flow velocity

(1) Flow path direction relative to the orientation of AP-3 and illustrated on Figures 3 and 4 of associated report.

(2) Groundwater flow velocity equation:  $V = [K_h * (\Delta h/\Delta l)] / n$ .

**Table 5**  
Summary of Groundwater Analytical Data  
Plant Hammond AP-3, Floyd County, Georgia

| Well ID:                   | HGWA-1                      | HGWA-1     | HGWA-2    | HGWA-2     | HGWA-3     | HGWA-3    | HGWA-43D <sup>(4)</sup> | HGWA-43D <sup>(4)</sup> | HGWA-43D <sup>(4)</sup> | HGWA-44D <sup>(4)</sup> | HGWA-44D <sup>(4)</sup> | HGWA-44D <sup>(4)</sup> |           |
|----------------------------|-----------------------------|------------|-----------|------------|------------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------|
| Sample Date:               | 8/28/2020                   | 9/15/2020  | 8/25/2020 | 9/15/2020  | 8/25/2020  | 9/15/2020 | 9/16/2020               | 11/10/2020              | 12/15/2020              | 9/16/2020               | 11/10/2020              | 12/15/2020              |           |
| Parameter <sup>(1,2)</sup> |                             |            |           |            |            |           |                         |                         |                         |                         |                         |                         |           |
| APPENDIX III               | <b>Boron</b>                | --         | 0.017 J   | --         | 0.044 J    | --        | 0.0071 J                | 0.061 J                 | 0.057 J                 | 0.052 J                 | 0.23                    | 0.29                    | 0.31      |
|                            | <b>Calcium</b>              | --         | 103       | --         | 21.1       | --        | 73.1                    | 56.0                    | 63.3                    | 62.6                    | 30.0                    | 33.6                    | 28.7      |
|                            | <b>Chloride</b>             | --         | 13.4      | --         | 5.0        | --        | 6.0                     | 4.1                     | 4.4                     | 4.7                     | 4.1                     | 7.8                     | 9.4       |
|                            | <b>Fluoride</b>             | 0.080 J    | 0.082 J   | <0.050     | <0.050     | <0.050    | <0.050                  | 0.22                    | 0.19                    | 0.21                    | 0.22                    | 0.59                    | 0.67      |
|                            | <b>pH<sup>(3)</sup></b>     | 7.02       | 7.15      | 5.17       | 5.22       | 7.14      | 7.29                    | 7.52                    | 7.27                    | 7.39                    | 7.83                    | 7.84                    | 7.87      |
|                            | <b>Sulfate</b>              | --         | 47.3      | --         | 51.5       | --        | 44.7                    | 43.0                    | 39.0                    | 38.8                    | 43.0                    | 6.3                     | 6.7       |
|                            | <b>TDS</b>                  | --         | 265       | --         | 124        | --        | 258                     | 272                     | 307                     | 289                     | 270                     | 287                     | 295       |
| APPENDIX IV                | <b>Antimony</b>             | <0.00028   | <0.00028  | <0.00028   | <0.00028   | <0.00028  | <0.00028                | 0.00051 J               | 0.00043 J               | 0.00031 J               | 0.00049 J               | <0.00028                | 0.00047 J |
|                            | <b>Arsenic</b>              | <0.00078   | --        | <0.00078   | --         | <0.00078  | --                      | <0.00078                | 0.0021 J                | <0.00078                | <0.00078                | <0.00078                | <0.00078  |
|                            | <b>Barium</b>               | 0.036      | 0.035     | 0.11       | 0.12       | 0.11      | 0.12                    | 0.26                    | 0.25                    | 0.29                    | 0.24                    | 0.38                    | 0.39      |
|                            | <b>Beryllium</b>            | <0.000046  | <0.000046 | 0.00014 J  | 0.00013 J  | <0.000046 | <0.000046               | <0.000046               | <0.000046               | <0.000046               | <0.000046               | <0.000046               | <0.000046 |
|                            | <b>Cadmium</b>              | <0.00012   | --        | <0.00012   | --         | <0.00012  | --                      | <0.00012                | <0.00012                | <0.00012                | <0.00012                | <0.00012                | <0.00012  |
|                            | <b>Chromium</b>             | <0.00055   | <0.00055  | 0.00067 J  | <0.00055   | <0.00055  | <0.00055                | <0.00055                | <0.00055                | <0.00055                | 0.0012 J                | 0.00089 J               | 0.00072 J |
|                            | <b>Cobalt</b>               | <0.00038   | <0.00038  | 0.018      | 0.021      | <0.00038  | <0.00038                | <0.00038                | <0.00038                | <0.00038                | <0.00038                | <0.00038                | <0.00038  |
|                            | <b>Fluoride</b>             | 0.080 J    | 0.082 J   | <0.050     | <0.050     | <0.050    | <0.050                  | 0.22                    | 0.19                    | 0.21                    | 0.22                    | 0.59                    | 0.67      |
|                            | <b>Lead</b>                 | 0.000070 J | <0.000036 | 0.000085 J | 0.000080 J | <0.000036 | 0.000042 J              | 0.000050 J              | 0.000069 J              | 0.000082 J              | 0.00021 J               | 0.00020 J               | 0.00011 J |
|                            | <b>Lithium</b>              | 0.00087 J  | 0.00087 J | 0.0015 J   | 0.0015 J   | 0.0027 J  | 0.0026 J                | 0.0018 J                | 0.0013 J                | 0.0019 J                | 0.014 J                 | 0.025 J                 | 0.028 J   |
|                            | <b>Mercury</b>              | <0.000078  | --        | <0.000078  | --         | <0.000078 | --                      | <0.000078               | <0.000078               | <0.000078               | <0.000078               | <0.000078               | <0.000078 |
|                            | <b>Molybdenum</b>           | <0.00069   | <0.00069  | <0.00069   | <0.00069   | <0.00069  | <0.00069                | 0.0044 J                | 0.0072 J                | 0.0044 J                | 0.0019 J                | 0.0018 J                | 0.0019 J  |
|                            | <b>Comb. Radium 226/228</b> | 0.000 U    | 0.748 U   | 0.778 U    | 0.124 U    | 0.330 U   | 0.161 U                 | 0.531 U                 | 0.788 U                 | 1.04 U                  | 0.422 U                 | 0.293 U                 | 0.700 U   |
| <b>Selenium</b>            | <0.0016                     | --         | <0.0016   | --         | <0.0016    | --        | <0.0016                 | <0.0016                 | <0.0016                 | <0.0016                 | <0.0016                 | <0.0016                 |           |
| <b>Thallium</b>            | <0.00014                    | --         | <0.00014  | --         | <0.00014   | --        | <0.00014                | <0.00014                | <0.00014                | <0.00014                | <0.00014                | <0.00014                |           |

Notes:

-- = Parameter was not analyzed

J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL)

< = Indicates the parameter was not detected above the analytical MDL

TDS = Total dissolved solids

U = Indicates the parameter was not detected above the minimum detection concentration (MDC, specific to combined radium 226/228)

(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).

(2) Metals were analyzed by EPA Method 6010D/6020B, Mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320.

(3) The pH value presented was recorded at the time of sample collection in the field.

(4) Monitoring wells HGWA-43D, HGWA-44D, HGWA-45D, HGWC-125 and HGWC-126 were analyzed for the complete list of Appendix III and Appendix IV constituents to establish groundwater quality.

**Table 5**  
Summary of Groundwater Analytical Data  
Plant Hammond AP-3, Floyd County, Georgia

| Well ID:                   | HGWA-45D <sup>(4)</sup> | HGWA-45D <sup>(4)</sup> | HGWA-45D <sup>(4)</sup> | HGWA-122   | HGWA-122   | HGWC-120   | HGWC-120  | HGWC-121A | HGWC-121A | HGWC-124  | HGWC-124  | HGWC-125 <sup>(4)</sup> | HGWC-125 <sup>(4)</sup> |           |
|----------------------------|-------------------------|-------------------------|-------------------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-------------------------|-------------------------|-----------|
| Sample Date:               | 9/25/2020               | 11/11/2020              | 12/16/2020              | 8/24/2020  | 9/15/2020  | 8/26/2020  | 9/21/2020 | 8/26/2020 | 9/28/2020 | 8/27/2020 | 9/28/2020 | 8/25/2020               | 9/21/2020               |           |
| Parameter <sup>(1,2)</sup> |                         |                         |                         |            |            |            |           |           |           |           |           |                         |                         |           |
| APPENDIX III               | Boron                   | 0.16                    | 0.17                    | 0.16       | --         | 0.22       | --        | 0.93      | --        | 2.3       | --        | 0.43                    | 1.4                     | 1.4       |
|                            | Calcium                 | 56.8                    | 54.9                    | 56.4       | --         | 75.8       | --        | 152       | --        | 167       | --        | 107                     | 186                     | 155       |
|                            | Chloride                | 3.6                     | 3.3                     | 3.4        | --         | 3.6        | --        | 2.4       | --        | 23.2      | --        | 2.5                     | 10.6                    | 12.1      |
|                            | Fluoride                | 0.21                    | 0.19                    | 0.18       | 0.075 J    | 0.096 J    | 0.48      | 0.33      | 0.16      | 0.15      | <0.050    | <0.050                  | 0.16                    | 0.11      |
|                            | pH <sup>(3)</sup>       | 7.57                    | 7.40                    | 7.39       | 6.54       | 6.68       | 6.96      | 6.98      | 6.73      | 6.93      | 7.15      | 7.27                    | 6.36                    | 6.22      |
|                            | Sulfate                 | 6.8                     | 11.2                    | 11.3       | --         | 41.4       | --        | 225       | --        | 182       | --        | 86.2                    | 353                     | 352       |
|                            | TDS                     | 263                     | 276                     | 294        | --         | 267        | --        | 272       | --        | <10.0     | --        | 176                     | 772                     | 956       |
| APPENDIX IV                | Antimony                | <0.00028                | 0.00057 J               | <0.00028   | <0.00028   | 0.0010 J   | <0.00028  | <0.00028  | <0.00028  | <0.00028  | <0.00028  | <0.00028                | <0.00028                | <0.00028  |
|                            | Arsenic                 | <0.00078                | 0.0011 J                | <0.00078   | <0.00078   | --         | <0.00078  | --        | <0.00078  | --        | <0.00078  | --                      | <0.00078                | <0.00078  |
|                            | Barium                  | 0.49                    | 0.45                    | 0.52       | 0.041      | 0.039      | 0.041     | 0.046     | 0.057     | 0.056     | 0.062     | 0.071                   | 0.045                   | 0.042     |
|                            | Beryllium               | <0.000046               | <0.000046               | <0.000046  | <0.000046  | <0.000046  | <0.000046 | <0.000046 | <0.000046 | <0.000046 | <0.000046 | <0.000046               | <0.000046               | <0.000046 |
|                            | Cadmium                 | <0.00012                | <0.00012                | <0.00012   | <0.00012   | --         | <0.00012  | --        | <0.00012  | --        | <0.00012  | --                      | <0.00012                | <0.00012  |
|                            | Chromium                | <0.00055                | <0.00055                | <0.00055   | 0.00093 J  | 0.00067 J  | <0.00055  | 0.00065 J | <0.00055  | <0.00055  | <0.00055  | <0.00055                | <0.00055                | <0.00055  |
|                            | Cobalt                  | <0.00038                | <0.00038                | <0.00038   | <0.00038   | <0.00038   | 0.0023 J  | 0.0041 J  | <0.00038  | <0.00038  | <0.00038  | <0.00038                | 0.0087                  | 0.012     |
|                            | Fluoride                | 0.21                    | 0.19                    | 0.18       | 0.075 J    | 0.096 J    | 0.48      | 0.33      | 0.16      | 0.15      | <0.050    | <0.050                  | 0.16                    | 0.11      |
|                            | Lead                    | <0.000036               | 0.000040 J              | 0.000058 J | 0.000077 J | 0.000043 J | <0.000036 | <0.000036 | <0.000036 | <0.000036 | <0.000036 | 0.000075 J              | <0.000036               | <0.000036 |
|                            | Lithium                 | 0.0049 J                | 0.0032 J                | 0.0045 J   | <0.00081   | <0.00081   | 0.023 J   | 0.023 J   | 0.0071 J  | 0.0076 J  | 0.00091 J | 0.0011 J                | 0.0037 J                | 0.0038 J  |
|                            | Mercury                 | <0.000078               | <0.000078               | <0.000078  | <0.000078  | --         | <0.000078 | --        | <0.000078 | --        | <0.000078 | --                      | <0.000078               | <0.000078 |
|                            | Molybdenum              | 0.0014 J                | 0.0049 J                | 0.0024 J   | 0.0031 J   | 0.0045 J   | 0.050     | 0.043     | <0.00069  | <0.00069  | 0.00091 J | 0.00090 J               | 0.00099 J               | <0.00069  |
|                            | Comb. Radium 226/228    | 1.07 U                  | 0.490 U                 | 0.963 U    | 0.883 U    | 0.375 U    | 0.357 U   | 0.553 U   | 1.96      | 0.761 U   | 0.494 U   | 0.477 U                 | 1.65                    | 1.45      |
|                            | Selenium                | <0.0016                 | <0.0016                 | <0.0016    | <0.0016    | --         | <0.0016   | --        | <0.0016   | --        | <0.0016   | --                      | <0.0016                 | <0.0016   |
| Thallium                   | <0.00014                | <0.00014                | <0.00014                | <0.00014   | --         | <0.00014   | --        | <0.00014  | --        | <0.00014  | --        | <0.00014                | <0.00014                |           |

**Table 5**  
Summary of Groundwater Analytical Data  
Plant Hammond AP-3, Floyd County, Georgia

| Well ID:                   | HGWC-125 <sup>(4)</sup>     | HGWC-125 <sup>(4)</sup> | HGWC-126 <sup>(4)</sup> | HGWC-126 <sup>(4)</sup> | HGWC-126 <sup>(4)</sup> | HGWC-126 <sup>(4)</sup> | MW-32     | MW-32     | MW-39     | MW-39     | MW-41     | MW-41     | MW-46D    | MW-46D     |            |    |
|----------------------------|-----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|----|
| Sample Date:               | 11/12/2020                  | 12/16/2020              | 8/25/2020               | 9/18/2020               | 11/11/2020              | 12/16/2020              | 8/26/2020 | 9/28/2020 | 8/26/2020 | 9/28/2020 | 8/26/2020 | 9/28/2020 | 9/25/2020 | 11/11/2020 |            |    |
| Parameter <sup>(1,2)</sup> |                             |                         |                         |                         |                         |                         |           |           |           |           |           |           |           |            |            |    |
| APPENDIX III               | <b>Boron</b>                | 1.4                     | 1.5                     | 0.016 J                 | 0.041 J                 | 0.0090 J                | 0.011 J   | --        | 1.3       | --        | 1.3       | --        | 1.2       | 0.51       | 0.68       |    |
|                            | <b>Calcium</b>              | 165                     | 194                     | 130                     | 119                     | 133                     | 132       | --        | 173       | --        | 185       | --        | 173       | 78.3       | 69.3       |    |
|                            | <b>Chloride</b>             | 10.4                    | 5.3                     | 8.7                     | 8.4                     | 8.3                     | 8.9       | --        | 2.5       | --        | 2.4       | --        | 2.5       | 3.7        | 3.5        |    |
|                            | <b>Fluoride</b>             | 0.12                    | 0.20                    | 0.52                    | 0.43                    | 0.45                    | 0.49      | 0.33      | 0.33      | 0.32      | 0.33      | 0.24      | 0.25      | 0.68       | 1.0        |    |
|                            | <b>pH<sup>(3)</sup></b>     | 6.13                    | 6.61                    | 6.78                    | 6.97                    | 6.86                    | 6.93      | 6.75      | 6.90      | 6.74      | 7.00      | 6.74      | 7.00      | 7.56       | 7.52       |    |
|                            | <b>Sulfate</b>              | 300                     | 306                     | 62.8                    | 62.7                    | 62.3                    | 68.1      | --        | 245       | --        | 239       | --        | 154       | 149        | 167        |    |
|                            | <b>TDS</b>                  | 694                     | 816                     | 505                     | 452                     | 468                     | 536       | --        | 272       | --        | 272       | --        | 392       | 449        | 472        |    |
| APPENDIX IV                | <b>Antimony</b>             | <0.00028                | <0.00028                | <0.00028                | <0.00028                | 0.00040 J               | <0.00028  | 0.00035 J | <0.00028  | <0.00028  | <0.00028  | <0.00028  | <0.00028  | <0.00028   | --         |    |
|                            | <b>Arsenic</b>              | <0.00078                | <0.00078                | <0.00078                | <0.00078                | <0.00078                | <0.00078  | <0.00078  | --        | <0.00078  | --        | <0.00078  | --        | --         | --         |    |
|                            | <b>Barium</b>               | 0.042                   | 0.041                   | 0.23                    | 0.21                    | 0.23                    | 0.24      | 0.055     | 0.053     | 0.059     | 0.058     | 0.066     | 0.071     | 0.040      | --         |    |
|                            | <b>Beryllium</b>            | <0.000046               | <0.000046               | <0.000046               | <0.000046               | <0.000046               | <0.000046 | <0.000046 | <0.000046 | <0.000046 | <0.000046 | <0.000046 | <0.000046 | <0.000046  | <0.000046  | -- |
|                            | <b>Cadmium</b>              | <0.00012                | <0.00012                | <0.00012                | <0.00012                | <0.00012                | <0.00012  | <0.00012  | --        | <0.00012  | --        | <0.00012  | --        | --         | --         |    |
|                            | <b>Chromium</b>             | <0.00055                | <0.00055                | 0.00096 J               | <0.00055                | <0.00055                | <0.00055  | <0.00055  | 0.00058 J | <0.00055  | <0.00055  | <0.00055  | <0.00055  | <0.00055   | 0.00075 J  | -- |
|                            | <b>Cobalt</b>               | 0.012                   | 0.0055                  | <0.00038                | <0.00038                | <0.00038                | <0.00038  | 0.0048 J  | 0.0047 J  | 0.0026 J  | 0.0026 J  | 0.00068 J | 0.00066 J | 0.00041 J  | --         |    |
|                            | <b>Fluoride</b>             | 0.12                    | 0.20                    | 0.52                    | 0.43                    | 0.45                    | 0.49      | 0.33      | 0.33      | 0.32      | 0.33      | 0.24      | 0.25      | 0.68       | 1.0        |    |
|                            | <b>Lead</b>                 | 0.000047 J              | <0.000036               | 0.000045 J              | <0.000036               | 0.000042 J              | <0.000036 | <0.000036 | <0.000036 | <0.000036 | <0.000036 | <0.000036 | <0.000036 | <0.000036  | 0.000048 J | -- |
|                            | <b>Lithium</b>              | 0.0038 J                | 0.0055 J                | 0.0037 J                | 0.0035 J                | 0.0032 J                | 0.0029 J  | 0.031     | 0.032     | 0.031     | 0.034     | 0.027 J   | 0.028 J   | 0.015 J    | --         |    |
|                            | <b>Mercury</b>              | <0.000078               | <0.000078               | <0.000078               | <0.000078               | <0.000078               | <0.000078 | <0.000078 | --        | <0.000078 | --        | <0.000078 | --        | --         | --         |    |
|                            | <b>Molybdenum</b>           | 0.0017 J                | 0.014                   | <0.00069                | <0.00069                | <0.00069                | <0.00069  | 0.065     | 0.062     | 0.064     | 0.062     | 0.039     | 0.036     | 0.027      | 0.015      |    |
|                            | <b>Comb. Radium 226/228</b> | 0.633 U                 | 0.818 U                 | 1.82                    | 0.841 U                 | 0.837 U                 | 1.26 U    | 0.281 U   | 1.01 U    | 1.38      | 1.02 U    | 1.53      | 0.409 U   | 0.594 U    | --         |    |
| <b>Selenium</b>            | <0.0016                     | <0.0016                 | <0.0016                 | <0.0016                 | <0.0016                 | <0.0016                 | <0.0016   | --        | <0.0016   | --        | <0.0016   | --        | --        | --         |            |    |
| <b>Thallium</b>            | <0.00014                    | <0.00014                | <0.00014                | <0.00014                | <0.00014                | <0.00014                | <0.00014  | --        | <0.00014  | --        | <0.00014  | --        | --        | --         |            |    |

**Table 6**  
**Summary of Background Concentrations and Groundwater Protection Standards**  
**Plant Hammond AP-3, Floyd County, Georgia**

| Analyte                 | Units | Background <sup>(1)</sup> | Federal GWPS <sup>(2)</sup> | State GWPS <sup>(3)</sup> |
|-------------------------|-------|---------------------------|-----------------------------|---------------------------|
| Antimony                | mg/L  | 0.003                     | 0.006                       | 0.006                     |
| Arsenic                 | mg/L  | 0.005                     | 0.01                        | 0.01                      |
| Barium                  | mg/L  | 0.49                      | 2                           | 2                         |
| Beryllium               | mg/L  | 0.003                     | 0.004                       | 0.004                     |
| Cadmium                 | mg/L  | 0.0025                    | 0.005                       | 0.005                     |
| Chromium                | mg/L  | 0.01                      | 0.1                         | 0.1                       |
| Cobalt                  | mg/L  | 0.038                     | 0.038                       | 0.038                     |
| Fluoride                | mg/L  | 0.59                      | 4                           | 4                         |
| Lead                    | mg/L  | 0.005                     | 0.015                       | 0.005                     |
| Lithium                 | mg/L  | 0.03                      | 0.04                        | 0.03                      |
| Mercury                 | mg/L  | 0.0005                    | 0.002                       | 0.002                     |
| Molybdenum              | mg/L  | 0.01                      | 0.1                         | 0.01                      |
| Selenium                | mg/L  | 0.01                      | 0.05                        | 0.05                      |
| Thallium                | mg/L  | 0.001                     | 0.002                       | 0.002                     |
| Combined Radium-226/228 | pCi/L | 4.36                      | 5                           | 5                         |

Notes:

"mg/L" = milligrams per liter

"pCi/L" = picocuries per liter

1. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (EPD) Rule 391-3-4-.10(6)(a).
2. Under 40 CFR §257.95(h)(1-3) the GWPS is: (i) the maximum contaminant level (MCL) established under 141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS is used; or (iii) background concentrations for constituents where the background level is higher than the MCL or rule-specified GWPS.
3. Under the existing Georgia EPD rules, the GWPS is: (i) the MCL, (ii) where the MCL is not established, the background concentration, or (iii) background concentrations for constituents where the background level is higher than the MCL.

**Table 7**  
 Summary of Surface Water Analytical Data  
 Plant Hammond AP-3, Floyd County, Georgia

| Sample ID:                 |                        | H-SCC NBR | H-SCC NBR  | H-SCC E41 | H-SCC E41  |
|----------------------------|------------------------|-----------|------------|-----------|------------|
| Sample Date:               |                        | 7/17/2020 | 12/14/2020 | 7/17/2020 | 12/14/2020 |
| Parameter <sup>(1,2)</sup> |                        |           |            |           |            |
| APP. III                   | Boron                  | --        | 0.041      | --        | <0.040     |
|                            | Calcium                | --        | 8.3        | --        | 9.0        |
|                            | Chloride               | --        | 1.3        | --        | 1.4        |
|                            | Fluoride               | --        | <0.10      | --        | <0.10      |
|                            | Sulfate                | --        | 9.1        | --        | 10.2       |
|                            | TDS                    | --        | 76.0       | --        | 83.0       |
| APP. IV                    | Fluoride               | --        | <0.10      | --        | <0.10      |
|                            | Molybdenum             | <0.010    | <0.010     | <0.010    | <0.010     |
| GEOCHEM                    | Bicarbonate Alkalinity | --        | 22.9       | --        | 21.8       |
|                            | Magnesium              | --        | 2.0        | --        | 2.1        |
|                            | Potassium              | --        | 1.5        | --        | 1.7        |
|                            | Sodium                 | --        | 1.2        | --        | 1.3        |

Notes:

-- = Parameter was not analyzed

< = Indicates the parameter was not detected above the analytical reporting limit (RL)

TDS = Total dissolved solids

(1) Appendix (App.) III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L).

(2) Metals were analyzed by EPA Method 6010D/6020B, anions were analyzed by EPA Method 300.0, and TDS was analyzed by SM2540C.

(3) Refer to included Figure 2 for locations.

# FIGURES





Note:  
1. Aerial photograph source: Google Earth Pro, August 2019.



**SITE LOCATION MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power  
Prepared By: Geosyntec  
consultants

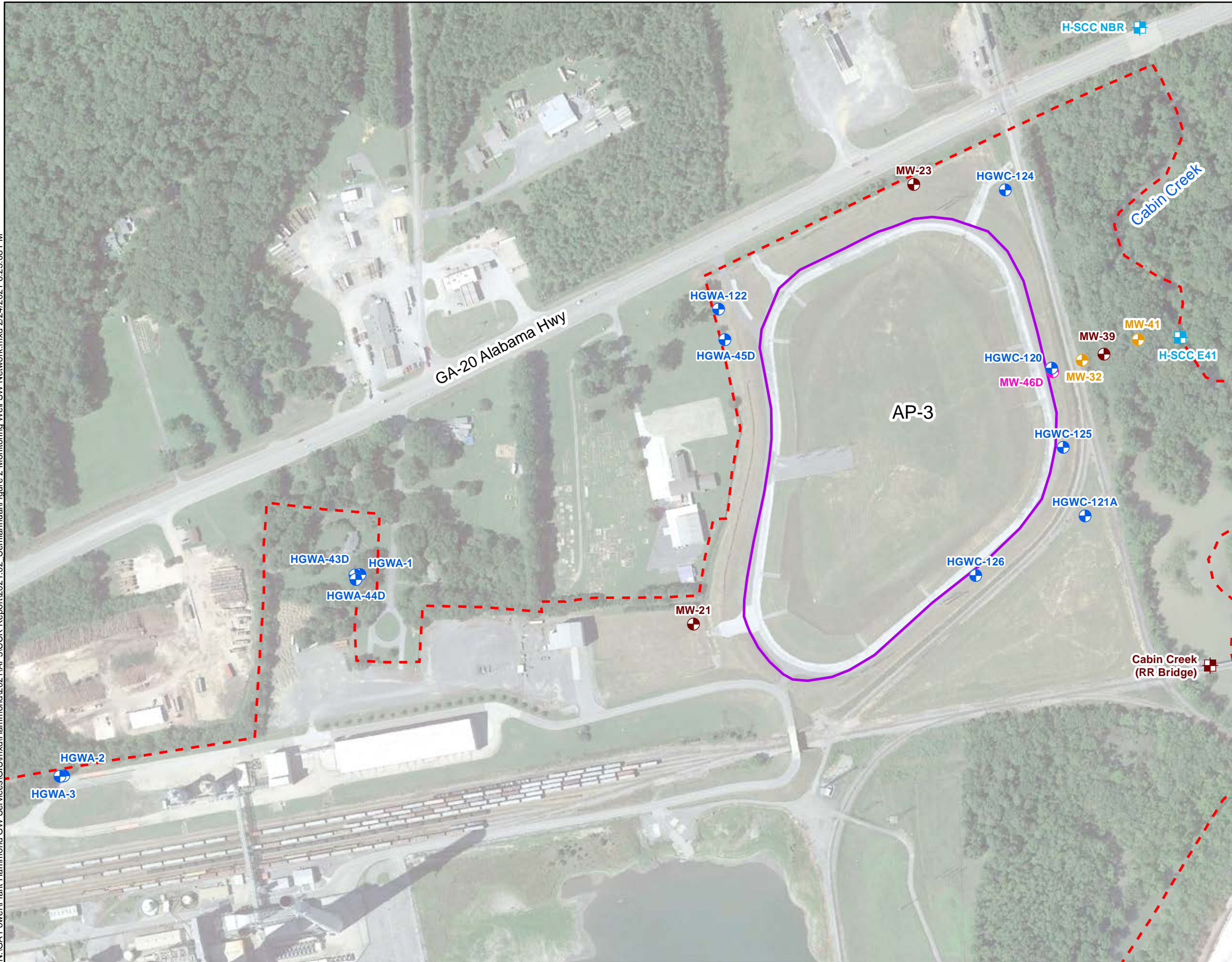
KENNESAW, GA    FEBRUARY 2021

**FIGURE  
1**









N:\GA Power\Plant Hammond\GIS\mxd\Hammond\2020\CCR Reports\AP-3\Figure 1\_SiteMap.mxd 9/30/2020 11:08:37 AM



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP3\CCR Report\2021.02\_Semiannual\Figure 2\_Monitoring Well SW Network.mxd 2/24/2021 6:23:08 PM



**LEGEND**

-  Compliance Monitoring Well
-  Horizontal Delineation Well
-  Vertical Delineation Well
-  Piezometer
-  Surface Water Sample Point
-  Surface Water Level Gauge Point
-  Approximate AP-3 Boundary
-  Plant Hammond Property Boundary

Notes:  
1. Aerial photograph source: Google Earth Pro, August 2019.



**MONITORING WELL NETWORK AND SAMPLING LOCATION MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For:  Georgia Power

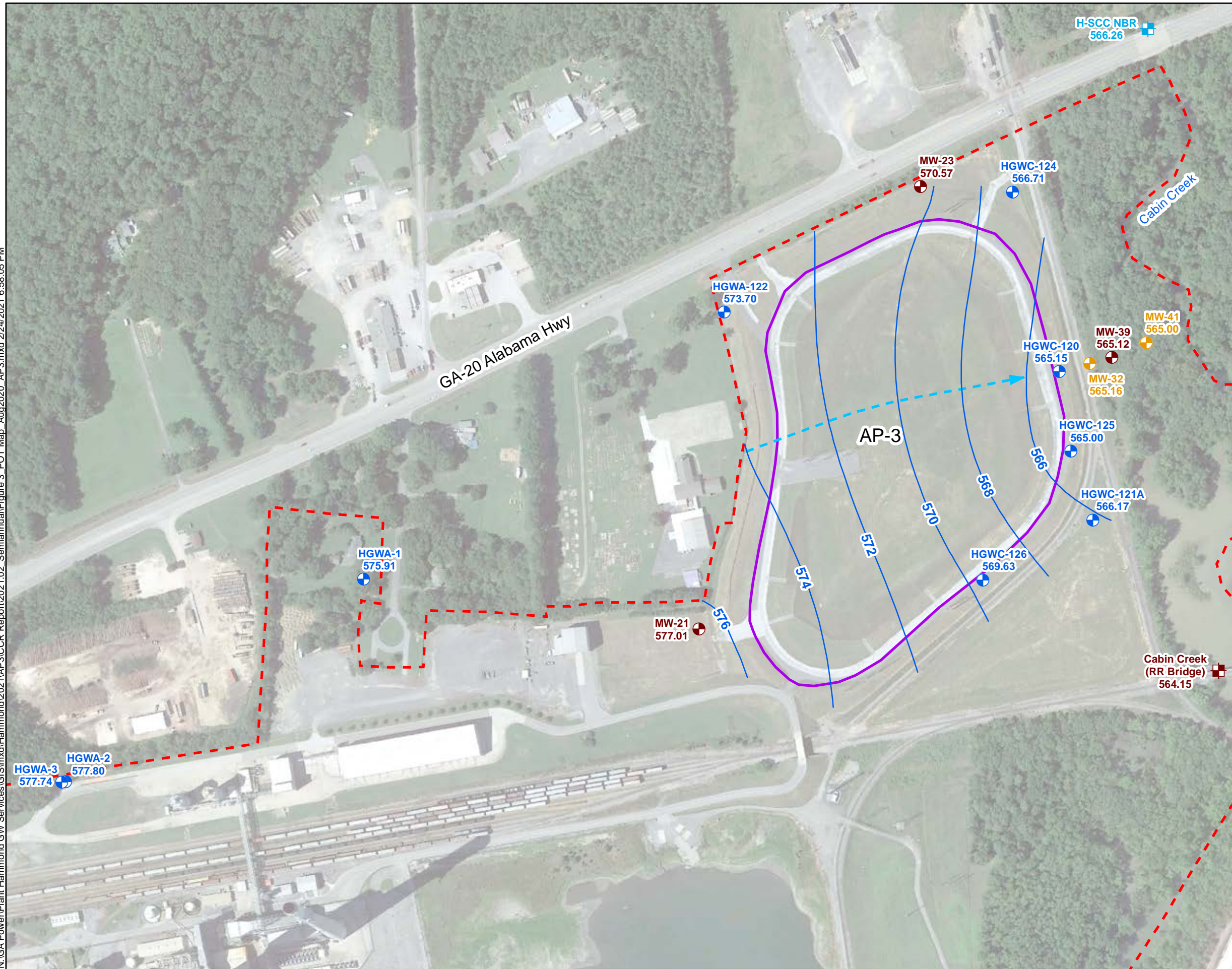
Prepared By:  Geosyntec  
consultants

KENNESAW, GA    FEBRUARY 2021

**FIGURE**  
**2**



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP3\CCR Report\2021.02\_Semiannual\Figure 3\_POT Map\_Aug2020\_AP3.mxd 2/24/2021 6:58:05 PM



- LEGEND**
- Compliance Monitoring Well
  - Horizontal Delineation Well
  - Piezometer
  - + Surface Water Sample Point
  - + Surface Water Level Gauge Point
  - Groundwater Elevation Iso-Contour
  - Approximate Groundwater Flow Direction
  - ▭ Approximate AP-3 Boundary
  - - - Plant Hammond Property Boundary

- Notes:**
1. Water level elevation recorded on August 24, 2020. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
  2. The map shows only the wells/piezometers installed at the time of the gauging event.
  3. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE  
CONTOUR MAP - AUGUST 2020**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

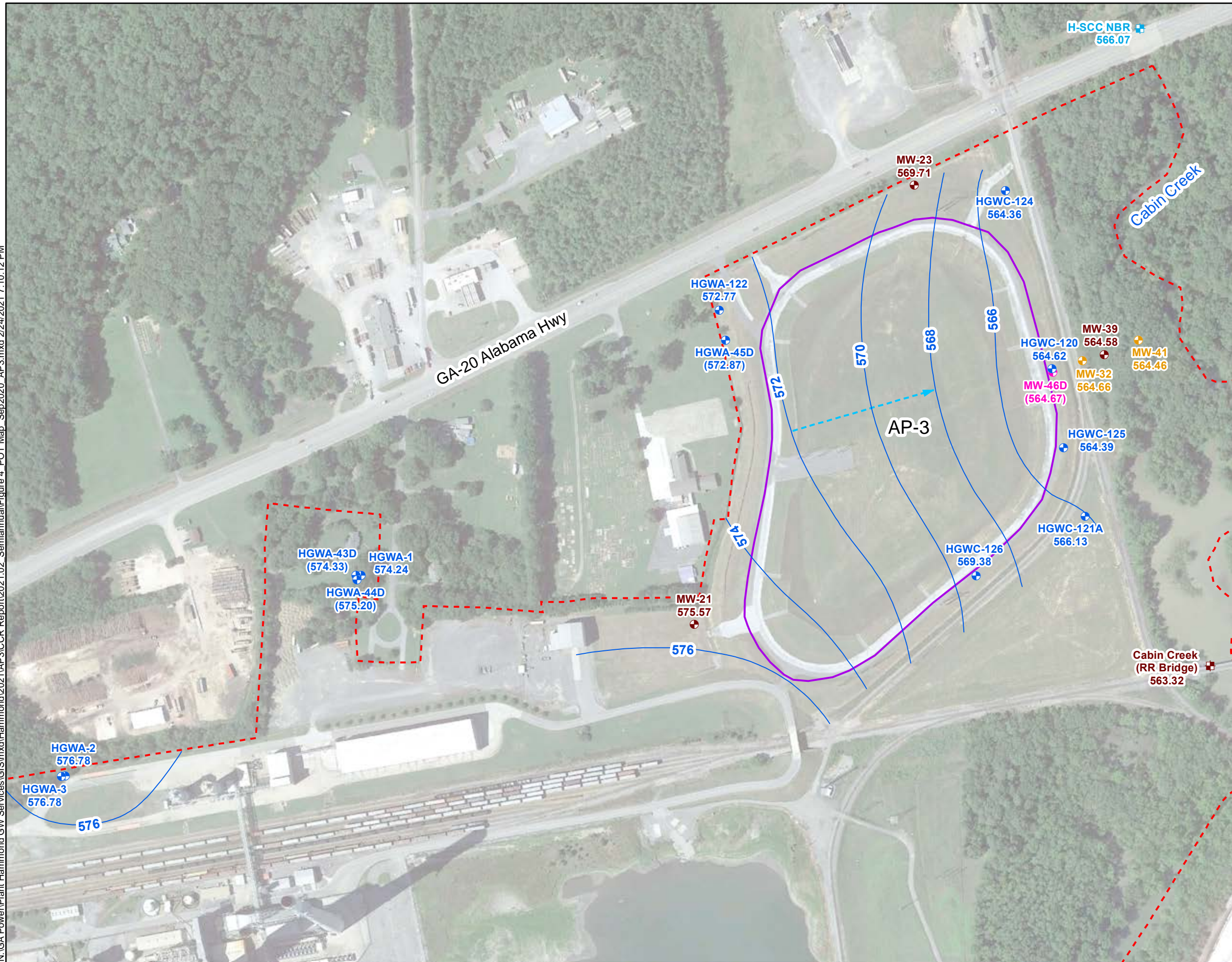
Prepared By: Geosyntec  
consultants

KENNESAW, GA    FEBRUARY 2021

**FIGURE  
3**



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP3\CCR Report\2021.02\_Semiannual\Figure 4\_POT Map\_Sep2020\_AP3.mxd 2/24/2021 7:10:12 PM



- LEGEND**
- ⊕ Compliance Monitoring Well
  - ⊕ Horizontal Delineation Well
  - ⊕ Vertical Delineation Well
  - ⊕ Piezometer
  - ⊕ Surface Water Sample Point
  - ⊕ Surface Water Level Gauge Point
  - Groundwater Elevation Iso-Contour
  - ➔ Approximate Groundwater Flow Direction
  - ▭ Approximate AP-3 Boundary
  - ⋯ Plant Hammond Property Boundary

- Notes:
1. Water level elevation recorded on September 14, 2020. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
  2. Water elevation in parentheses were not used in development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
  3. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE  
CONTOUR MAP – SEPTEMBER 2020**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec  
consultants

**FIGURE  
4**

KENNESAW, GA      FEBRUARY 2021



## APPENDIX A

Well Design, Installation, and Development  
Report – Addendum No.3, Plant Hammond  
Ash Pond 3 (AP-3)

*Prepared for*

**Georgia Power Company**

241 Ralph McGill Blvd NE

Atlanta, Georgia 30308

# **WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT - ADDENDUM**

**No. 3**

**PLANT HAMMOND ASH POND 3  
(AP-3)**

*Prepared by*

**Geosyntec**   
consultants

engineers | scientists | innovators

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Kennesaw, Georgia 30144

Project Number GW6581B

November 2020



**WELL DESIGN, INSTALLATION, AND DEVELOPMENT  
REPORT – ADDENDUM No. 3**

Plant Hammond

Ash Pond 3

November 5, 2020

A handwritten signature in black ink that reads "Whitney Law".

---

Whitney Law, P.E.

*Project Manager*

*Geosyntec Consultants*

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## LIST OF ACRONYMS

|               |   |
|---------------|---|
| AP            | Ash Pond                                      |
| ASTM          | American Society for Testing and Materials    |
| CCR           | coal combustion residual                      |
| CFR           | Code of Federal Regulations                   |
| CFS           | Civil Field Services                          |
| DO            | dissolved oxygen                              |
| GA EPD        | Georgia Environmental Protection Division     |
| Georgia Power | Georgia Power Company                         |
| NAD           | North America Datum                           |
| NAVD          | North American Vertical Datum                 |
| NSF           | National Sanitation Foundation                |
| ORP           | oxygen reduction potential                    |
| PVC           | polyvinyl chloride                            |
| SCS           | Southern Company Services                     |
| TOC           | top of casing                                 |
| US EPA        | United States Environmental Protection Agency |

## 1. INTRODUCTION

This report provides details regarding the design, installation, and development of four groundwater monitoring wells to supplement the current groundwater monitoring system at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 3 (AP-3). The report was prepared as an addendum to previously submitted well design, installation, development and decommissioning reports issued for the Site (ERM, 2017; Geosyntec 2019 and Geosyntec 2020), and meets the requirements promulgated in the United States Environmental Protection Agency (US EPA) coal combustion residual (CCR) rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D], specifically 40 CFR §257.91(e)(1) and Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10.

Plant Hammond is located in Floyd County, approximately 10 miles west of Rome, Georgia. The current groundwater monitoring system at AP-3 includes 12 wells associated with the CCR compliance monitoring well network and a network of secondary groundwater monitoring wells and groundwater level monitoring piezometers. The locations of these wells and piezometers are shown on **Figure 1**.

## 2. DRILLING AND WELL INSTALLATION

Well installation and development activities were performed according to accepted industry standards and following guidelines within the *Manual for Groundwater Monitoring* (GA EPD, 1991). Well drilling, installation, and surface completion activities were performed by Cascade Drilling, Inc of Midland, North Carolina under contact with, and the supervision of, Southern Company Services (SCS) Civil Field Services (CFS) personnel. In accordance with the Georgia Water Well Standards Act, the driller was required to have an insurance bond on file with the State of Georgia at the time of drilling. A copy of this bond is provided in **Appendix A**. A geologist under the supervision of a professional geologist (PG) registered to practice in the State of Georgia, both employed with Geosyntec Consultants (Geosyntec), documented the drilling and installation efforts to record observations, soil and rock descriptions, subsurface stratigraphy, water elevations, and other field activities. Geosyntec was also responsible for the development of the newly installed wells.

This report presents the details for the installation and development for AP-3 area wells HGWA-43D, HGWA-44D, HGWA-45D and MW-46D. The locations of these wells are shown on **Figure 1**. Well construction details are provided in **Table 1**; boring and well construction logs are included in **Appendix B**.

### 2.1 Drilling Method

The boreholes were advanced using rotasonic drilling techniques with continuous core collection. A Terra Sonic full size drill rig with a 6-inch sonic drill rod was used to install the wells. Care was taken so that the drilling methods did not introduce contamination of the groundwater from surface activities. Drilling equipment was cleaned between each borehole.

### 2.2 Screened Interval

Details regarding the well screen intervals are provided in **Table 1**. Wells are screened in the uppermost water bearing unit of the Site. The new wells are screened from approximately 544 to 482 feet (referenced to the North American Vertical Datum of 1988). All wells are constructed with 10 feet of well screen.

### 2.3 Well Casings and Screens

The wells were constructed of 2-inch inner diameter Schedule 40 polyvinyl chloride (PVC) casing with flush-threaded fittings. Each well was installed with a 10-foot nominal

length pre-packed dual-wall well screen with 0.010-inch slots. The casings and pre-packed screens arrived pre-cleaned and packaged by the manufacturer. The pre-packed well screen was constructed onsite by packing sand between slotted PVC and the well screen. Well construction materials are sufficiently durable to resist chemical and physical degradation and not interfere with the quality of groundwater samples. Casing and screens are flush-threaded. Solvent or glue was not used to construct the wells. A threaded bottom cap was attached to the bottom of the screen. The PVC products used were American Society for Testing and Materials (ASTM) and National Sanitation Foundation (NSF) rated. Well screen interval details are provided in **Table 1**.

#### **2.4 Well Intake Design**

Wells were designed and constructed to: (1) allow sufficient groundwater flow to the well for sampling; (2) minimize the passage of formation materials (turbidity) into the wells; and (3) ensure sufficient structural integrity to prevent collapse of the well. The annular space between the face of the formation and the screen was filled to minimize passage of formation materials into the wells. A filter pack of clean, well-rounded, quartz sand was installed in each well. The 0.01-inch slot size was selected to minimize the inflow of formation material without impairing influent groundwater flow.

#### **2.5 Filter Pack**

Highly Pure Quartzite of Southern Products & Silica Co. silica sand filter pack was used as the appropriate gradation for all wells. Highly Pure Quartzite meets the ASTM D5092 uniformity coefficient specification of 2.5 or less, with a uniformity coefficient of 1.6.

Filter pack material was placed within the pre-packed dual-wall well screens and in the annular space between the outside of the pre-pack screen and borehole wall to ensure an adequate thickness of filter pack material between the well and the formation. Filter pack material placed in the annular space outside of the well screen extended approximately 2 feet above the top of screen. No bridging occurred during filter pack placement.

Upon placement of the filter pack, each well was pumped with a submersible pump to assure settlement of the filter pack. The top of filter pack depth was measured following pumping to ensure appropriate extension of filter sand above the screen. The depth of top of filter pack was measured and recorded on the well construction logs provided in **Appendix B**.

## **2.6 Annular Seal**

A minimum of two feet of bentonite chips (PelPlug time-release-coated 3/8-inch bentonite pellets) were placed immediately above the filter pack by gravity-pouring into the annular space and hydrated per manufacture's specifications. A tremie pipe was used to probe the annular space to ensure that no bridging occurred. If any new well was installed within 15 feet of an existing well, the bentonite seal was also brought above the elevation corresponding to the screen top of the nearby well. This was done to prevent grout from entering the water-bearing or screen zone. The bentonite was hydrated with potable water for a duration meeting the manufacture's specifications prior to grouting the remaining annulus.

The annulus above the bentonite seal was grouted with Aqua Guard bentonite grout placed via tremie pipe from the top of the bentonite seal. During grouting, care was taken to assure that the bentonite seal was not disturbed by locating the base of the tremie pipe approximately 2 feet above the bentonite seal and injecting grout at low pressure/velocity. A cement apron 4-feet by 4-feet by 4-inches was poured around each well. The pad was mounded slightly outward to direct surface drainage away from the well.

## **2.7 Cap and Protective Casing**

The well risers were fitted with a locking cap and a lockable cover. A one-quarter inch vent hole was drilled into the PVC riser pipe to provide an avenue for the escape of gas. The protective cap guards the casing from damage and the locking cap serves as a security device to prevent well tampering. Bollards were installed around the four corners of the concrete pad to protect the well.

A weep hole was drilled in the outer protective casing near the bottom above the concrete pad. Pea gravel was placed inside the protective casing between the riser pipe and the outer casing. Wells were clearly marked with the proper well identification number on the stand-up casing. Construction details are documented on the well construction logs provided in **Appendix B**.

### 3. WELL DEVELOPMENT

Monitoring wells were developed using a combination of surging and pumping to (1) restore the natural hydraulic conductivity of the formation, and (2) to remove fine-grained sediment to ensure low-turbidity groundwater samples. Wells were alternately surged and purged until visually clear of particulates. Turbidity, pH, temperature, conductivity, oxidation-reduction potential (ORP), and dissolved oxygen (DO) measurements were recorded to ensure that each well was fully developed. The development forms are included in **Appendix C**.

All equipment and tubing placed in the well was decontaminated or disposed of between wells.

#### 4. SURVEY

Upon completion of the well installation, the horizontal locations and vertical elevations were surveyed by a Georgia-licensed surveyor. The top of the PVC well casing [top of casing (TOC) elevation] and the survey pin installed at each well pad were surveyed to within 0.5-foot horizontal accuracy and to 0.01-foot vertical accuracy. The horizontal location (i.e., northings and eastings) was recorded in feet relative to the North America Datum of 1983 (NAD) with the vertical elevation recorded in feet relative to the North American Vertical Datum of 1988. Certified survey data are provided in the well construction table (**Table 1**). A copy of the certified well survey data for the new wells is provided in **Appendix D**.

## 5. REFERENCES

Environmental Resources Management (ERM), 2017. *Well Design, Installation, Development, and Decommissioning Report – Plant Hammond Ash Ponds 1 and 2*. October 2017.

Georgia Environmental Protection Division (GA EPD), Georgia Department of Natural Resources, 1991. *Manual for Groundwater Monitoring*. September 1991.

Geosyntec Consultants, 2019. Well Design, Installation and Development Report – Addendum, Plant Hammond Ash Pond 3 (AP-3). April 2019.

Geosyntec Consultants, 2020. Well Design, Installation and Development Report – Addendum No. 2, Plant Hammond Ash Pond 3 (AP-3). July 2020.

United States Environmental Protection Agency. 2015a. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81, April 2015



# TABLE

**Table 1**  
**Summary of Well Construction Details**  
**Plant Hammond AP-3, Floyd County, Georgia**

| <b>Well ID</b> | <b>Purpose</b> | <b>Installation Date</b> | <b>Northing <sup>(1)</sup></b> | <b>Easting <sup>(1)</sup></b> | <b>Ground Surface Elevation <sup>(2)</sup><br/>(ft NAVD88)</b> | <b>Top of Casing Elevation<br/>(ft NAVD88)</b> | <b>Top of Screen Elevation<br/>(ft NAVD88)</b> | <b>Bottom of Screen Elevation<br/>(ft NAVD88)</b> | <b>Well Depth<br/>(ft bgs) <sup>(3)</sup></b> |
|----------------|----------------|--------------------------|--------------------------------|-------------------------------|--|--|--|---|---|
| HGWA-43D       | Background     | 8/26/2020                | 1550422.85                     | 1940753.80                    | 592.08   | 595.08   | 544.08   | 534.08  | 58.25   |
| HGWA-44D       | Background     | 8/25/2020                | 1550409.13                     | 1940756.18                    | 592.01   | 594.79   | 491.76   | 481.76  | 110.50  |
| HGWA-45D       | Background     | 8/19/2020                | 1551157.68                     | 1941907.54                    | 584.08   | 586.95   | 535.23   | 525.23  | 60.00   |
| MW-46D         | Piezometer     | 8/18/2020                | 1551056.48                     | 1942929.10                    | 603.17   | 605.72   | 513.92   | 503.92  | 99.50   |

Notes:

ft bgs = feet below ground surface.

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey was completed by GEL Solutions and certified September 10, 2020.

(2) Vertical elevations are referenced to the North American Vertical Datum (NAVD) of 1988. Ground surface elevation defined at the survey nail installed within the well pad. Survey was completed by GEL Solutions and certified September 10, 2020.



(3) Total well depth accounts for 3-inch sump.

FIGURE

\\naro-01\br11\S\GA Power\Plant Hammond\_GW\_Services\GIS\mxd\Hammond\2020\Well\_Installation\_Reports\2020.06\_AP-1\AP2\AP3\Figure\_1\_GW\_Monitoring\_Network\_AP3.mxd 9/18/2020 2:26:56 PM



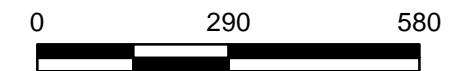
**LEGEND**

-  Compliance Monitoring Well
-  Piezometer



**Notes:**

1. Aerial photograph source: Google Earth Pro, August 2019.



**SCALE IN FEET**

**GROUNDWATER MONITORING NETWORK MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For:  Georgia Power

Prepared By:  Geosyntec  
consultants

**FIGURE  
1**

KENNESAW, GA

NOVEMBER 2020

## APPENDIX A

### Well Driller Performance Bonds



CONTINUATION  
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

dated effective 09/27/2017  
(MONTH-DAY-YEAR)

on behalf of Ricky Davis / Cascade Drilling, L.P.  
(PRINCIPAL)

and in favor of Department of Natural Resources, State of Georgia  
(OBLIGEE)

Issued on 9/27/2017  
Expires on 6/30/2019  
Renewed on 3/4/2019  
Expires on 6/30/2021

does hereby continue said bond in force for the further period

beginning on 06/30/2019  
(MONTH-DAY-YEAR)

and ending on 06/30/2021  
(MONTH-DAY-YEAR)

Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

Premium: \$1200.00

**PROVIDED:** That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on March 4th, 2019  
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By Andrew P. Larsen  
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.

Agent

2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

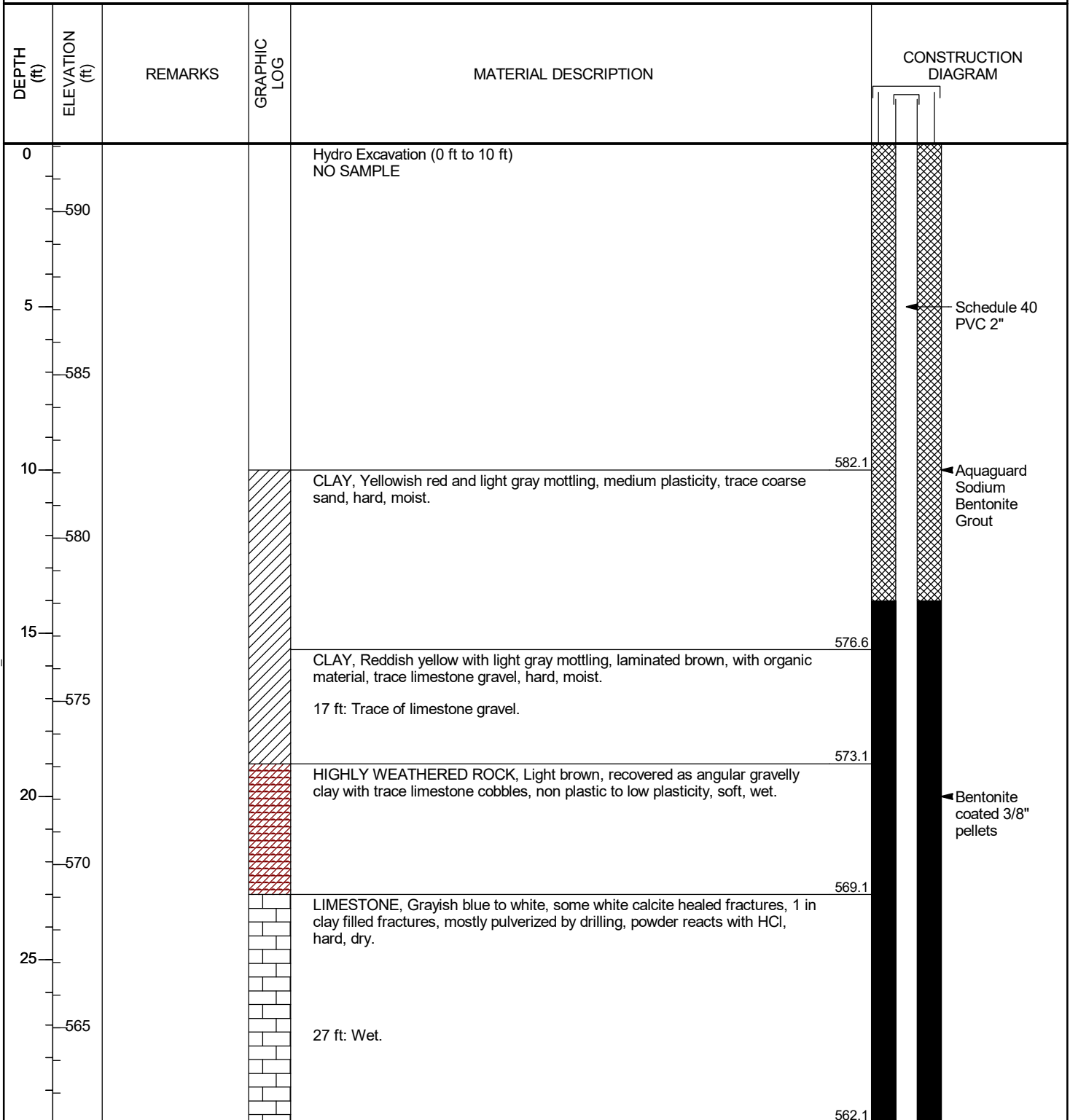
Telephone Number of Agent

## APPENDIX B

### Boring and Well Construction Logs

|  |   |
|--|---|
| <b>CLIENT</b> <u>Southern Company Services</u>                     | <b>PROJECT NAME</b> <u>Plant Hammond Well Installation</u>                  |
| <b>PROJECT NUMBER</b> <u>GW6581B</u>                               | <b>PROJECT LOCATION</b> <u>Plant Hammond</u>                                |
| <b>DATE STARTED</b> <u>8/26/20</u> <b>COMPLETED</b> <u>8/26/20</u> | <b>NORTHING</b> <u>1550422.85 ft</u> <b>EASTING</b> <u>1940753.80 ft</u>    |
| <b>DRILLER</b> <u>Cascade Drilling</u>                             | <b>GROUND ELEVATION</b> <u>592.08 ft</u> <b>BORING DIAMETER</b> <u>6 in</u> |
| <b>DRILLING METHOD</b> <u>Sonic</u>                                | <b>TOP OF CASING ELEVATION</b> <u>595.08 ft</u>                             |
| <b>SAMPLING METHOD</b> <u>4" core 6" override</u>                  | <b>GEOPHYSICAL CONTRACTOR</b> <u>---</u>                                    |
| <b>RIG TYPE</b> <u>Terrasonic 1051181</u>                          | <b>LOGGED BY</b> <u>A. Ramsey</u> <b>CHECKED BY</b> <u>J. Ivanowski</u>     |

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D\_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)



**CLIENT** Southern Company Services **PROJECT NAME** Plant Hammond Well Installation  
**PROJECT NUMBER** GW6581B **PROJECT LOCATION** Plant Hammond

| DEPTH (ft) | ELEVATION (ft) | REMARKS                            | GRAPHIC LOG | MATERIAL DESCRIPTION  | CONSTRUCTION DIAGRAM  |
|------------|----------------|------------------------------------|-------------|---|---|
| 30         | 560            | 30 ft to 50 ft: No voids reported. |             | 30 ft to 34.5 ft: No recovery.  |   |
| 35         | 555            |                                    |             | LIMESTONE, Grayish blue to white, hard, dry, some white calcite healed fractures, 1 in clay filled fractures, 38 ft to 39 ft pulverized by drilling, powder reacts with HCl, wet. |   |
| 40         | 550            |                                    |             | 40 ft: Up to 1 in thick calcite healed fractures.   | <p>Bentonite coated 3/8" pellets</p> <p>20/40 Silica Sand</p> <p>0.010 slot size 2" Pre Pack, U-Pack Screen</p> <p>Bottom of well: 58.25 ft</p> |
| 45         | 545            |                                    |             | 44 ft to 50 ft: No recovery.  |   |
| 50         | 540            |                                    |             | LIMESTONE, Grayish blue to white, hard, dry, up to 1 in thick calcite healed fractures, trace 1 in clay filled fractures, mostly pulverized by drilling, powder reacts with HCl.  |   |
| 55         | 535            |                                    |             |   |   |

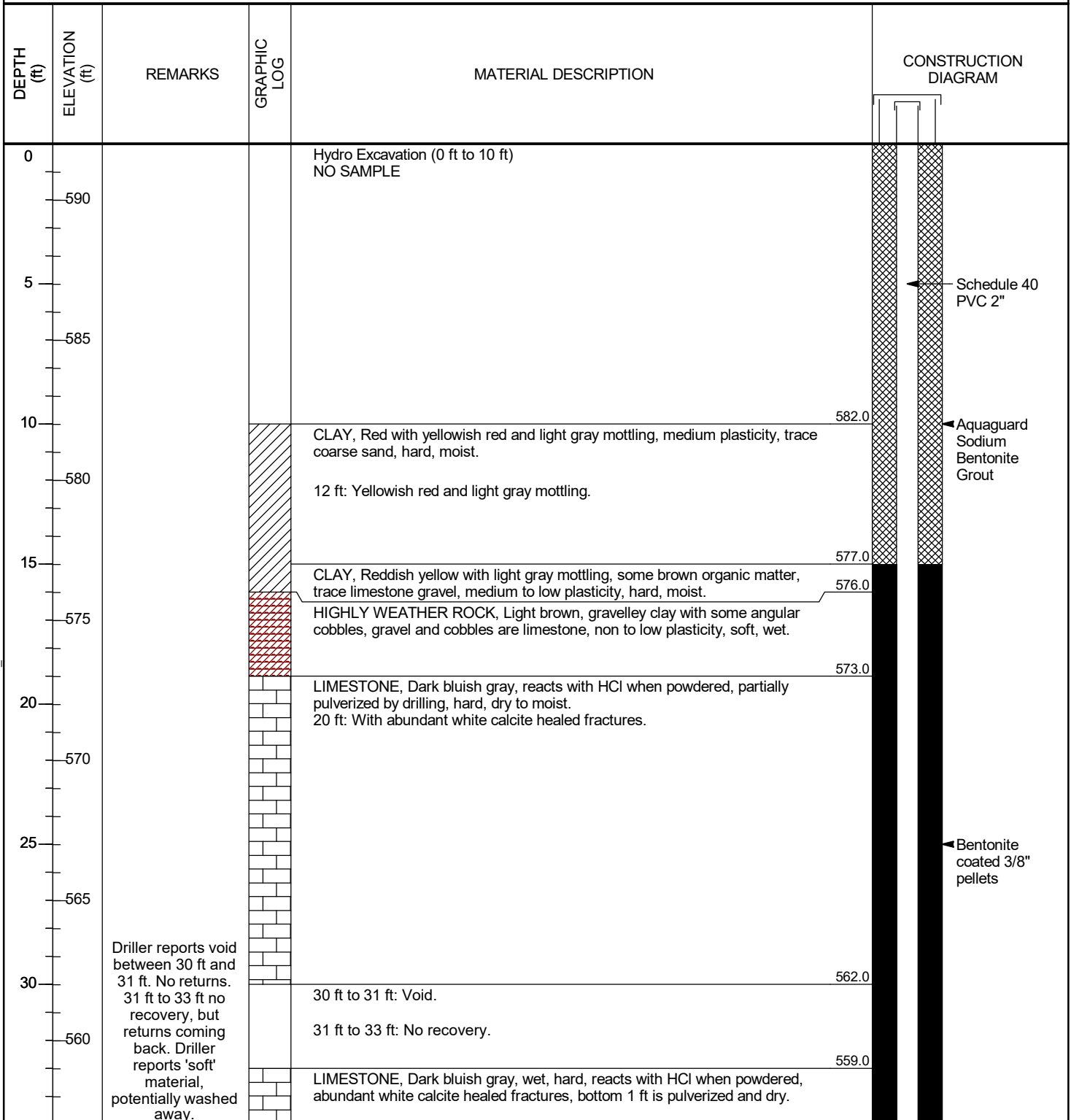
Bottom of borehole at 58.3 feet.

Easting and Northing in NAD 1983.  
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20

|  |   |
|--|---|
| <b>CLIENT</b> <u>Southern Company Services</u>                     | <b>PROJECT NAME</b> <u>Plant Hammond Well Installation</u>                  |
| <b>PROJECT NUMBER</b> <u>GW6581B</u>                               | <b>PROJECT LOCATION</b> <u>Plant Hammond</u>                                |
| <b>DATE STARTED</b> <u>8/24/20</u> <b>COMPLETED</b> <u>8/25/20</u> | <b>NORTHING</b> <u>1550409.13 ft</u> <b>EASTING</b> <u>1940756.18 ft</u>    |
| <b>DRILLER</b> <u>Cascade Drilling</u>                             | <b>GROUND ELEVATION</b> <u>592.01 ft</u> <b>BORING DIAMETER</b> <u>6 in</u> |
| <b>DRILLING METHOD</b> <u>Sonic</u>                                | <b>TOP OF CASING ELEVATION</b> <u>594.79 ft</u>                             |
| <b>SAMPLING METHOD</b> <u>4" core 6" override</u>                  | <b>GEOPHYSICAL CONTRACTOR</b> <u>---</u>                                    |
| <b>RIG TYPE</b> <u>Terrasonic 1051181</u>                          | <b>LOGGED BY</b> <u>A. Ramsey</u> <b>CHECKED BY</b> <u>J. Ivanowski</u>     |

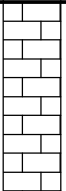
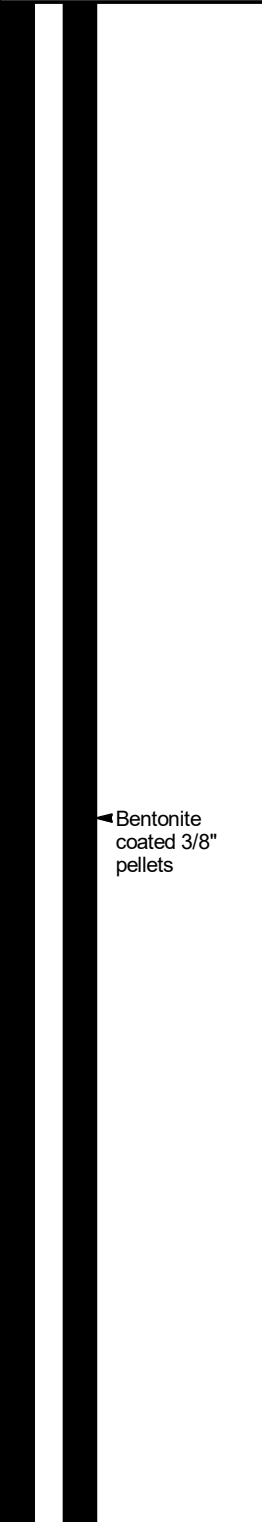
SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D\_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



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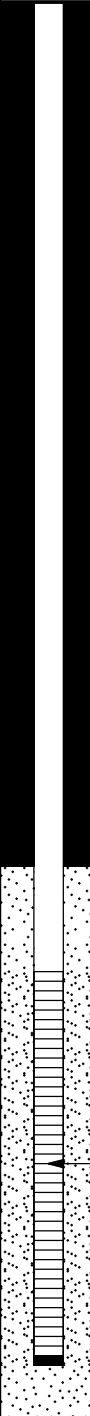







**CLIENT** Southern Company Services **PROJECT NAME** Plant Hammond Well Installation  
**PROJECT NUMBER** GW6581B **PROJECT LOCATION** Plant Hammond

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D\_AUGUST 2020.GPJ ACP GINT LIBRARY.CH.GLB 9/23/20

| DEPTH (ft) | ELEVATION (ft) | REMARKS                            | GRAPHIC LOG   | MATERIAL DESCRIPTION  | CONSTRUCTION DIAGRAM   |
|------------|----------------|------------------------------------|---|---|--|
| 35         | 555            | 40 ft: Driller reports no returns. |  | LIMESTONE, Dark bluish gray, wet, hard, reacts with HCl when powdered, abundant white calcite healed fractures, bottom 1 ft is pulverized and dry. (continued)                |  |
| 40         | 552.0          |                                    |   | 40 ft to 42 ft: No recovery.  |  |
|            | 550.0          |                                    |   | LIMESTONE, Dark bluish gray, wet, hard, reacts with HCl when powdered, abundant white calcite healed fractures, bottom 1 ft is pulverized by drilling.                        |  |
| 45         | 545            |                                    |   |   |  |
|            | 542.0          |                                    |   | 50 ft to 52 ft: No recovery.  |  |
| 50         | 540            |                                    |   | LIMESTONE, Dark bluish gray, wet, hard, reacts with HCl when powdered, abundant white calcite healed fractures, bottom 1 ft is pulverized by drilling.                        |  |
| 55         | 535            |                                    |   |   |  |
|            | 532.0          |                                    |   | 60 ft to 61 ft: No recovery.  |  |
| 60         | 531.0          |                                    |   | LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.      |  |
| 65         | 525            |                                    |   |   |  |
|            | 522.0          |                                    |   | 70 ft to 71 ft: No recovery.  |  |
| 70         | 521.0          |                                    |   | LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white hite 0.1 in to 2 in thick calcite healed fractures. |  |

← Bentonite coated 3/8" pellets

**CLIENT** Southern Company Services      **PROJECT NAME** Plant Hammond Well Installation  
**PROJECT NUMBER** GW6581B      **PROJECT LOCATION** Plant Hammond

| DEPTH (ft) | ELEVATION (ft) | REMARKS | GRAPHIC LOG   | MATERIAL DESCRIPTION  | CONSTRUCTION DIAGRAM   |
|------------|----------------|---------|---|---|--|
| 75         | 515            |         |    | LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white hite 0.1 in to 2 in thick calcite healed fractures. (continued) |  |
| 80         | 510            |         |    | 80 ft to 84 ft: No recovery.  |  |
| 85         | 505            |         |    | LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.                  | ← Bentonite coated 3/8" pellets  |
| 90         | 500            |         |   | 90 ft to 94 ft: No recovery.  |  |
| 95         | 495            |         |  | LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.                  |  |
| 100        | 490            |         |  | 100 ft to 102 ft: No recovery.  | ← 20/40 Silica Sand  |
| 105        | 485            |         |  | LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.                  | ← 0.010 slot size 2" Pre Pack, U-Pack Screen   |
| 110        | 480.0          |         |  |   | Bottom of well: 110.5 ft   |

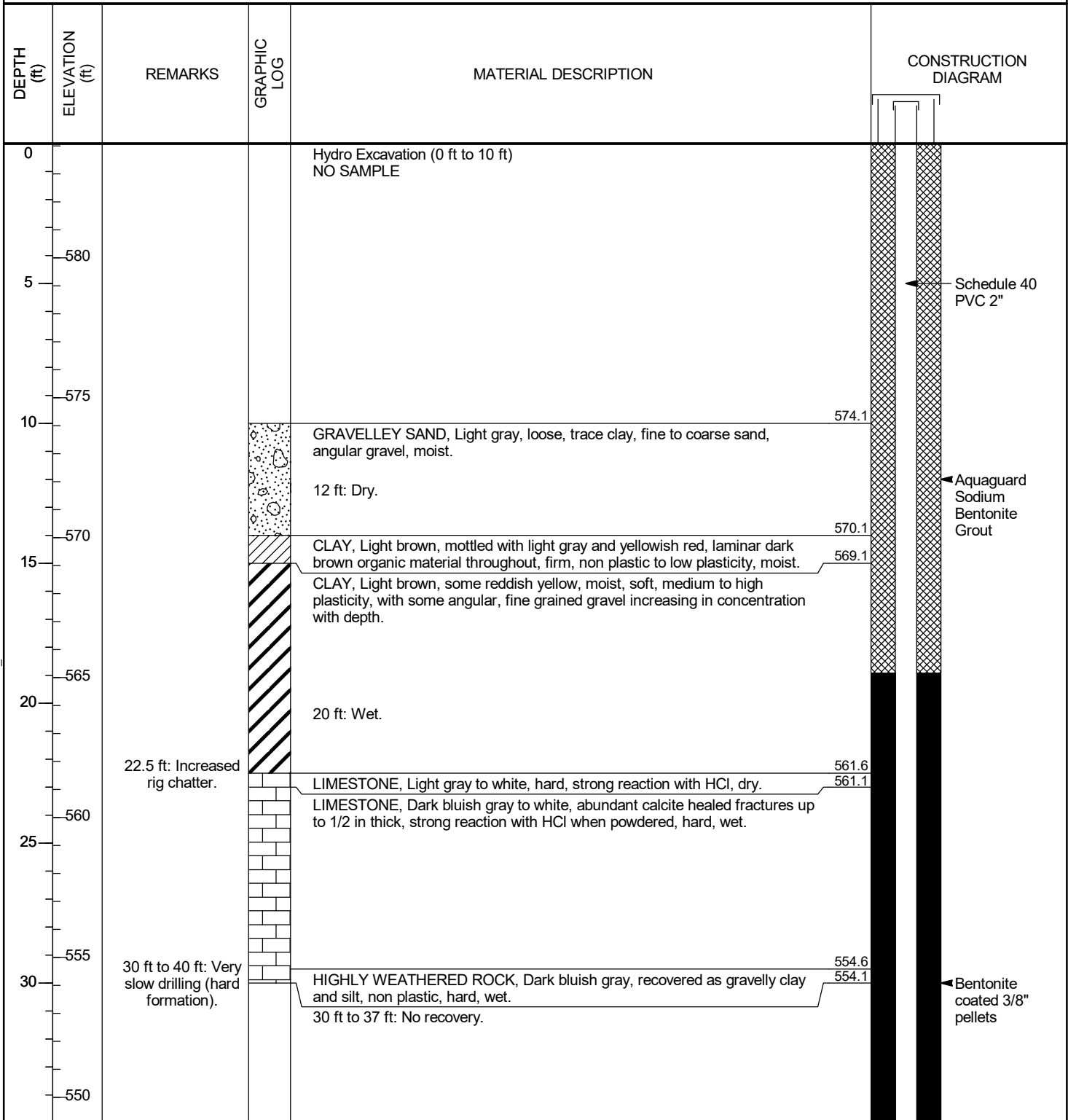
Bottom of borehole at 112.0 feet.

Eastings and Northing in NAD 1983.  
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D\_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLOB 9/23/20

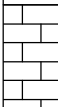

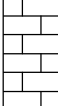
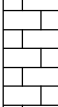

|  |   |
|--|---|
| <b>CLIENT</b> <u>Southern Company Services</u>                     | <b>PROJECT NAME</b> <u>Plant Hammond Well Installation</u>                  |
| <b>PROJECT NUMBER</b> <u>GW6581B</u>                               | <b>PROJECT LOCATION</b> <u>Plant Hammond</u>                                |
| <b>DATE STARTED</b> <u>8/19/20</u> <b>COMPLETED</b> <u>8/19/20</u> | <b>NORTHING</b> <u>1551157.68 ft</u> <b>EASTING</b> <u>1941907.54 ft</u>    |
| <b>DRILLER</b> <u>Cascade Drilling</u>                             | <b>GROUND ELEVATION</b> <u>584.08 ft</u> <b>BORING DIAMETER</b> <u>6 in</u> |
| <b>DRILLING METHOD</b> <u>Sonic</u>                                | <b>TOP OF CASING ELEVATION</b> <u>586.95 ft</u>                             |
| <b>SAMPLING METHOD</b> <u>4" core 6" override</u>                  | <b>GEOPHYSICAL CONTRACTOR</b> <u>---</u>                                    |
| <b>RIG TYPE</b> <u>Terrasonic 1051181</u>                          | <b>LOGGED BY</b> <u>A. Ramsey</u> <b>CHECKED BY</b> <u>J. Ivanowski</u>     |

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)

**CLIENT** Southern Company Services **PROJECT NAME** Plant Hammond Well Installation  
**PROJECT NUMBER** GW6581B **PROJECT LOCATION** Plant Hammond

| DEPTH (ft) | ELEVATION (ft) | REMARKS | GRAPHIC LOG   | MATERIAL DESCRIPTION   | CONSTRUCTION DIAGRAM |
|------------|----------------|---------|---|--|----------------------|
| 35         |                |         |   | 30 ft to 37 ft: No recovery. (continued)   |                      |
|            |                |         |   |  | 547.1                |
|            | 545            |         |    | LIMESTONE, Dark bluish gray to white, abundant calcite healed fractures up to 1/2 in thick, strong reaction with HCl when powdered, hard, wet. |                      |
| 40         |                |         |   | 40 ft to 43 ft: No recovery.   | 544.1                |
|            |                |         |   |  | 541.1                |
|            | 540            |         |    | LIMESTONE, Dark bluish gray to white, abundant calcite healed fractures up to 1/2 in thick, strong reaction with HCl when powdered, hard, wet. |                      |
| 45         |                |         |   |  |                      |
|            | 535            |         |  |  |                      |
| 50         |                |         |   |  |                      |
|            | 530            |         |  |  |                      |
| 55         |                |         |   |  |                      |
|            | 525            |         |  |  |                      |
| 60         |                |         |   |  | 524.1                |

← Bentonite coated 3/8" pellets

← 20/40 Silica Sand

← 0.010 slot size 2" Pre Pack, U-Pack Screen

Bottom of well: 60 ft

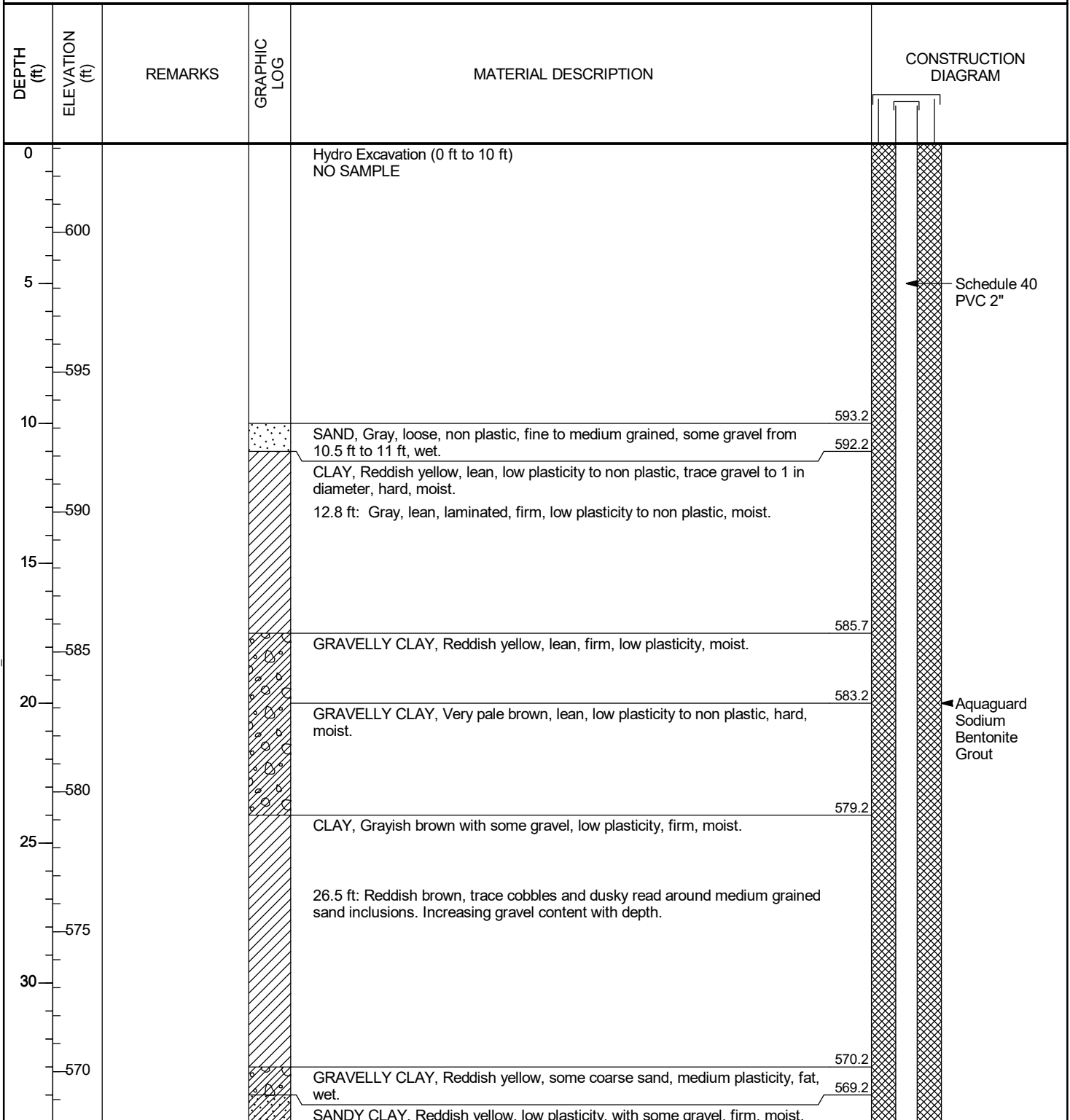
Bottom of borehole at 60.0 feet.

Easting and Northing in NAD 1983.  
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D\_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20

**CLIENT** Southern Company Services **PROJECT NAME** Plant Hammond Well Installation  
**PROJECT NUMBER** GW6581B **PROJECT LOCATION** Plant Hammond  
**DATE STARTED** 8/18/20 **COMPLETED** 8/18/20 **NORTHING** 1551056.48 ft **EASTING** 1942929.10 ft  
**DRILLER** Cascade Drilling **GROUND ELEVATION** 603.17 ft **BORING DIAMETER** 6 in  
**DRILLING METHOD** Sonic **TOP OF CASING ELEVATION** 605.72 ft  
**SAMPLING METHOD** 4" core 6" override **GEOPHYSICAL CONTRACTOR** ---  
**RIG TYPE** Terrasonic 1051181 **LOGGED BY** A. Ramsey **CHECKED BY** J. Ivanowski

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)

**CLIENT** Southern Company Services

**PROJECT NAME** Plant Hammond Well Installation

**PROJECT NUMBER** GW6581B

**PROJECT LOCATION** Plant Hammond

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH.GLB 9/23/20

| DEPTH (ft) | ELEVATION (ft) | REMARKS  | GRAPHIC LOG | MATERIAL DESCRIPTION  | CONSTRUCTION DIAGRAM |
|------------|----------------|--|-------------|---|----------------------|
| 35         |                |  |             | CLAY, Reddish yellow, high plasticity, very thin laminations, soft to very soft.  |                      |
|            | 565            |  |             |   |                      |
| 40         |                |  |             | 43 ft: Brown.   |                      |
|            | 560            |  |             |   |                      |
| 45         |                |  |             | PARTIALLY WEATHERED ROCK, Brown, recovered as CLAY with gravelly limestone, medium plasticity, no HCl reaction, soft, wet.  |                      |
|            | 559.2          |  |             |   |                      |
|            | 556.9          |  |             | LIMESTONE, Dark bluish gray, thin laminations, dolomitic, HCl reaction when powdered, very hard, some calcite healed fractures.   |                      |
|            | 555            |  |             |   |                      |
| 50         |                | 50 ft to 58 ft: 1-2 ft voids about every foot, no returns reported.                          |             | 50 to 58.5 ft: No recovery.   |                      |
|            | 550            |  |             |   |                      |
| 55         |                |  |             |   |                      |
|            | 545            |  |             |   |                      |
| 60         |                |  |             | LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures. Recovered as gravel and cobbles with coarse sand. |                      |
|            | 543.2          |  |             | 60 to 65 ft: No recovery.   |                      |
|            | 540            |  |             |   |                      |
| 65         |                |  |             | LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures. Recovered as gravel and cobbles with coarse sand. |                      |
|            | 538.2          |  |             |   |                      |
|            | 535            |  |             |   |                      |
| 70         |                |  |             | 70 to 77 ft: No recovery.   |                      |
|            | 533.2          |  |             |   |                      |
|            | 530            |  |             |   |                      |
|            |                | From 73 ft: Significantly increased rig chatter indicating hard drilling. No voids reported. |             |   |                      |

← Aquaguard Sodium Bentonite Grout

← Bentonite coated 3/8" pellets






**CLIENT** Southern Company Services

**PROJECT NAME** Plant Hammond Well Installation

**PROJECT NUMBER** GW6581B

**PROJECT LOCATION** Plant Hammond

| DEPTH (ft) | ELEVATION (ft) | REMARKS                   | GRAPHIC LOG   | MATERIAL DESCRIPTION  | CONSTRUCTION DIAGRAM |
|------------|----------------|---------------------------|---|---|----------------------|
| 75         |                |                           |   | 70 to 77 ft: No recovery. (continued)   |                      |
|            |                |                           |   |   | 526.2                |
|            | 525            |                           |    | LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures. Moderate to thin bedding.                   |                      |
| 80         |                | 80 ft: No voids reported. |   | 80 to 88 ft: No recovery.   | 523.2                |
|            | 520            |                           |   |   |                      |
|            | 85             |                           |   |   |                      |
|            | 515            |                           |   | LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures, some coarse sand to gravel sized fragments. | 515.2                |
| 90         |                |                           |   | 90 to 92 ft: No recovery.   | 513.2                |
|            | 510            |                           |  | LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, very hard, some calcite healed fractures, some coarse sand to gravel sized fragments.            | 511.2                |
|            | 95             |                           |   |   |                      |
|            | 505            |                           |   |   |                      |
| 100        |                |                           |   |   | 503.2                |

← Bentonite coated 3/8" pellets

← 20/40 Silica Sand

← 0.010 slot size 2" Pre Pack, U-Pack Screen

Bottom of well: 99.5 ft

Bottom of borehole at 100.0 feet.

Easting and Northing in NAD 1983.  
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20

# APPENDIX C

## Well Development Forms





WELL DEVELOPMENT LOG SHEET

Client: SCS/Georgia Power Company

Project No.: GW6581B

Development Date: 8/28/20

Site: Plant Hammond

Location: AP-3

Field Personnel Name: A. Ramsay

Well ID: ~~HP-M10-45D~~ HGWA-45D

Pump Type/Model: Mega Monsoon

Total Depth (ft) (after purge): 62.87 ft bTOC

Tubing Material: High Density Polyethylene (HDPE)

Depth to Water (ft): 12.38 ft bTOC

Pump Intake Depth (ft): 62 ft bTOC

Well Diameter (in): 2

Start/Stop Purge Time: 1010/1128

Well Volume (gal) = 0.041d<sub>2</sub>h: 8.29 gal

Purge Rate (mL/min): 1000

Well Volume (L) = gal \* 3.785: 31.38 L

Total Purge Volume (L): 78

d = well diameter (inches); h = length of water column (feet)

Well Type: Flush   Stick Up

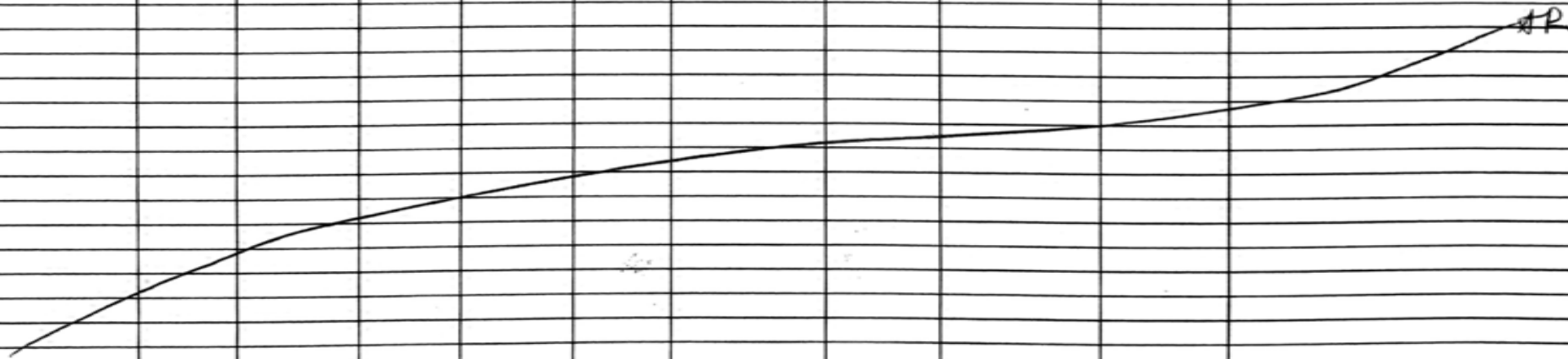
Well Lock:  Yes  No

Well Cap Condition:  Good  Replace

Well Tag Present:  Yes  No

| Time  | pH (SU) | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Temp. (°C) | Turbidity (NTUs) | DTW (ft bTOC)    | Purge Rate (mL/min) | Purged Volume (L) | Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|-------|---------|---------------------|----------|-----------|------------|------------------|------------------|---------------------|-------------------|---|
| 10:57 | 7.06    | 4.6                 | 311.6    | .01       | 19.2       | 5.39             | <del>14.10</del> | 1000                | 47                | began measurements w/ clear water   |
| 11:13 | 6.90    | 377.5               | -181.3   | .51       | 19.0       | 2.38             | 1000             | (w) 63              |                   |   |
| 11:28 | 6.89    | 378.6               | -211.8   | 0.00      | 19.2       | 1.97             | 1000             | (w) 78              |                   |   |

total



|                      |            |        |  |  |  |          |  |  |  |  |
|----------------------|------------|--------|--|--|--|----------|--|--|--|--|
| Stabilizing Criteria | +/- 0.1 SU | +/- 5% |  | 0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater) |  | < 5 NTUs |  |  |  |  |
|----------------------|------------|--------|--|--|--|----------|--|--|--|--|

WELL DEVELOPMENT LOG SHEET

Client: SCS/Georgia Power Company  
 Site: Plant Hammond  
 Well ID: WW-46D  
 Total Depth (ft) (after purge): 102.05 ft bTOC  
 Depth to Water (ft): 39.80 ft bTOC  
 Well Diameter (in): 2  
 Well Volume (gal) = 0.041d<sub>2</sub>h: 10.42 gal  
 Well Volume (L) = gal \* 3.785: 39.45 L

Project No.: GW6581B  
 Location: AP-3  
 Pump Type/Model: Mega Monsoon  
 Tubing Material: High Density Polyethylene (HDPE)  
 Pump Intake Depth (ft): 102 ft bTOC  
 Start/Stop Purge Time: 1150/1320  
 Purge Rate (mL/min): 1000  
 Total Purge Volume (L): 100

Development Date: 8/28/20  
 Field Personnel Name: A. Ramsey

d = well diameter (inches); h = length of water column (feet)

Well Type: Flush  Stick Lip  
 Well Lock:  Yes No  
 Well Cap Condition:  Good Replace  
 Well Tag Present:  Yes No

| Time                 | pH (SU)    | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L)  | Temp. (°C) | Turbidity (NTUs) | DTW (ft bTOC) | Purge Rate (mL/min) | Purged Volume (L) | Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|----------------------|------------|---------------------|----------|--|------------|------------------|---------------|---------------------|-------------------|---|
| 1205                 | 7.50       | 278.4               | 22.2     | 4.15   | 19.1       | 78.9             | 49.50         | 1000                | 15                |   |
| 1220                 | 7.31       | 339.5               | -17.9    | 3.57   | 19.4       | 62.4             | 53.42         | 1000                | (15) 30           |   |
| 1235                 | 7.31       | 469.0               | -63.3    | 2.08   | 20.0       | 55.1             | 57.16         | 1000                | (18) 45           |   |
| 1305                 | 7.12       | 605                 | -103.3   | 20.54 ← 1.19   | 20.0       | 28.8             | 56.05         | 1000                | (30) 75           |   |
| 1320                 | 6.96       | 715                 | -141.3   | 0.36   | 20.0       | 6.83             | 59.21         | 1000                | (15) 100          |   |
| AR                   |            |                     |          |  |            |                  |               |                     |                   |   |
|                      |            |                     |          |  |            |                  |               |                     |                   |   |
| Stabilizing Criteria | +/- 0.1 SU | +/- 5%              |          | 0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater) |            | < 5 NTUs         |               |                     |                   |   |

## APPENDIX D

### Certified Well Survey Data

| Well ID  | Casing Northing | Casing Easting | Top of Casing Elevation | Nail on Pad Northing | Nail on Pad Easting | Nail on Pad Elevation |
|----------|-----------------|----------------|-------------------------|----------------------|---------------------|-----------------------|
| HGWA-42D | 1549363.7180    | 1938443.8590   | 586.17                  | 1549362.3140         | 1938444.3210        | 583.39                |
| HGWA-43D | 1550422.8480    | 1940753.8050   | 595.08                  | 1550422.8120         | 1940754.9980        | 592.08                |
| HGWA-44D | 1550409.1260    | 1940756.1850   | 594.79                  | 1550409.2230         | 1940757.6150        | 592.01                |
| HGWA-45D | 1551157.6780    | 1941907.5370   | 586.95                  | 1551159.2250         | 1941907.4670        | 584.08                |
| MW-46D   | 1551056.4780    | 1942929.1010   | 605.72                  | 1551055.9530         | 1942927.8210        | 603.17                |
| HGWA-47  | 1548990.9600    | 1934171.8440   | 580.33                  | 1548989.2780         | 1934171.6440        | 577.39                |
| HGWA-48D | 1548989.3900    | 1934178.1460   | 580.26                  | 1548988.1150         | 1934177.8070        | 577.29                |

| Benchmark | Northing     | Easting      | Elevation |
|-----------|--------------|--------------|-----------|
| BM H-1    | 1547964.9650 | 1937219.0690 | 579.02    |
| BM H-2    | 1548149.4490 | 1938960.2220 | 590.68    |
| BM H-4    | 1549952.4470 | 1941611.3640 | 585.71    |

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING. DATE OF FIELD SURVEY & INSPECTION: 09/01/2020-09/02/2020. FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD'88. EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARKS BM H-1, BM-H2 & BM-H4 SET BY GEL SOLUTIONS DURING PREVIOUS SURVEYS USING A TRIMBLE DINI LEVEL



*[Handwritten signature in blue ink]*

9/10/2020



## APPENDIX B

### Well Inspection Forms

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-1  
 Date, field conditions 8/28/2020, overcast

|  |   | yes                                 | no                       | n/a                                 |
|--|---|-------------------------------------|--------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                          |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |   |                                     |                          |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |   |                                     |                          |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |   |                                     |                          |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                          |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                          |                                     |
|  |   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:  
well has fire ants, well was very hard to open, hinge rusted. well cap replaced

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name Hammond AD3  
 Permit Number \_\_\_\_\_  
 Well ID H/GWA-2  
 Date, field conditions 3/25/2020, morning

|   | yes                                 | no                                  | n/a                                 |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>  |                                     |                                     |                                     |
| a Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>  |                                     |                                     |                                     |
| a Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>  |                                     |                                     |                                     |
| a Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>  |                                     |                                     |                                     |
| a Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>  |                                     |                                     |                                     |
| a Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Corrective actions as needed, by date:  |                                     |                                     |                                     |
| _____   |                                     |                                     |                                     |
| _____   |                                     |                                     |                                     |

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID NCWA-3  
 Date, field conditions 8/25/2020 raining

|  |   | yes                                 | no                                  | n/a                      |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 7  | Corrective actions as needed, by date:  |                                     |                                     |                          |

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP 3  
 Permit Number \_\_\_\_\_  
 Well ID H6WA-122  
 Date, field conditions 8-24-2020

|  |   | yes                                 | no                                  | n/a                      |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>   |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>   |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>4 Internal casing</b>   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |                          |
|  |   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

7 Corrective actions as needed, by date:  
Pad is covered in weeds needs moved. Well Depth is different than original Log.

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID HGMW-12D  
 Date, field conditions 8/16/20 cloudy

|  |   | yes                                 | no                                  | n/a                      |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 7  | Corrective actions as needed, by date:  |                                     |                                     |                          |

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID H6VC-121A  
 Date, field conditions 8-25-2020

|  |   | yes | no | n/a |
|--|---|-----|----|-----|
| <b>1 Location/Identification</b>   |   |     |    |     |
| a  | Is the well visible and accessible?   | ✓   |    |     |
| b  | Is the well properly identified with the correct well ID?   | ✓   |    |     |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | ✓   |    |     |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | ✓   |    |     |
| <b>2 Protective Casing</b>   |   |     |    |     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | ✓   |    |     |
| b  | Is the casing free of degradation or deterioration?   | ✓   |    |     |
| c  | Does the casing have a functioning weep hole?   | ✓   |    |     |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | ✓   |    |     |
| e  | Is the well locked and is the lock in good condition?   | ✓   |    |     |
| <b>3 Surface pad</b>   |   |     |    |     |
| a  | Is the well pad in good condition (not cracked or broken)?  | ✓   |    |     |
| b  | Is the well pad sloped away from the protective casing?   | ✓   |    |     |
| c  | Is the well pad in complete contact with the protective casing?   | ✓   |    |     |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | ✓   |    |     |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | ✓   |    |     |
| <b>4 Internal casing</b>   |   |     |    |     |
| a  | Does the cap prevent entry of foreign material into the well?   | ✓   |    |     |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | ✓   |    |     |
| c  | Is the well properly vented for equilibration of air pressure?  | ✓   |    |     |
| d  | Is the survey point clearly marked on the inner casing?   | ✓   |    |     |
| e  | Is the depth of the well consistent with the original well log?   | ✓   |    |     |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | ✓   |    |     |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |     |    |     |
| a  | Does well recharge adequately when purged?  | ✓   |    |     |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | ✓   |    |     |
| c  | Does the well require redevelopment (low flow, turbid)?   |     | ✓  |     |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |     |    |     |
|  |   |     |    | ✓   |

7 Corrective actions as needed, by date: None at this time

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID HGWG-129  
 Date, field conditions 8/27/20 Sunny

|  |   | yes                                 | no                                  | n/a                      |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>   |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>   |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>4 Internal casing</b>   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |                          |
|  |   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

7 Corrective actions as needed, by date:

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 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID HL000C-125  
 Date, field conditions 8/25/2020

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

*fixing this event*

7 Corrective actions as needed, by date:

\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID MGWC-126  
 Date, field conditions 8/20/2020 raining

|  |   | yes                                 | no                                  | n/a  |
|--|---|-------------------------------------|-------------------------------------|--|
| <b>1 Location/Identification</b>           |   |                                     |                                     |  |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| b  | Is the well properly identified with the correct well ID?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> fixing this check |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                   |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |  |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| <b>3 Surface pad</b>                       |   |                                     |                                     |  |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| <b>4 Internal casing</b>                   |   |                                     |                                     |  |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |  |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                   |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                   |

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID MW-21  
 Date, field conditions 8-24-2020 DEMP

|  |   | yes                                 | no                                  | n/a                      |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

7 Corrective actions as needed, by date:  
Pad covered in weeds, needs mowed.

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID MW-23  
 Date, field conditions 8-24-2020 Damp

|  | yes   | no                                  | n/a                                 |                          |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

7 Corrective actions as needed, by date:  
Pad covered in weeds needs mowed.

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID MV 32  
 Date, field conditions B-25-2020 Damp

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |                                     |
|  |   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

7 Corrective actions as needed, by date: NONE at this time

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID MW-39  
 Date, field conditions 8-24-2020

|  | yes                                 | no                                  | n/a                                 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |                                     |                                     |                                     |
| a Is the well visible and accessible?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well properly identified with the correct well ID?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well in a high traffic area and does the well require protection from traffic?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |                                     |                                     |                                     |
| a Is the protective casing free from apparent damage and able to be secured?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of degradation or deterioration?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the casing have a functioning weep hole?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the well locked and is the lock in good condition?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |                                     |                                     |                                     |
| a Is the well pad in good condition (not cracked or broken)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well pad sloped away from the protective casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well pad in complete contact with the protective casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e Is the pad surface clean (not covered with sediment or debris)?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |                                     |                                     |                                     |
| a Does the cap prevent entry of foreign material into the well?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well properly vented for equilibration of air pressure?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the survey point clearly marked on the inner casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the depth of the well consistent with the original well log?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |                                     |                                     |                                     |
| a Does well recharge adequately when purged?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c Does the well require redevelopment (low flow, turbid)?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |                                     |                                     |                                     |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:  
Over grown need mowed. Needs well labels  
AP placed labels on 8-26-20

Signature and Seal of PE/PG responsible for inspection



**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP3  
 Permit Number \_\_\_\_\_  
 Well ID MW-41  
 Date, field conditions 8-24-2020 Damp

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |                                     |
|  |   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:  
Has small well tag, needs label.

Signature and Seal of PE/PG responsible for inspection

### Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AP 11213  
 Permit Number \_\_\_\_\_  
 Well ID HGW1-1  
 Date, field conditions 09-15-2020, 85°F OVERCAST

|  |   | yes   | no    | n/a   |
|--|---|-------|-------|-------|
| <b>1 Location/Identification</b>           |   |       |       |       |
| a  | Is the well visible and accessible?   | ✓     | _____ | _____ |
| b  | Is the well properly identified with the correct well ID?   | ✓     | _____ | _____ |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | _____ | ✓     | _____ |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | ✓     | _____ | _____ |
| <b>2 Protective Casing</b>                 |   |       |       |       |
| a  | Is the protective casing free from apparent damage and able to be secured?  | ✓     | _____ | _____ |
| b  | Is the casing free of degradation or deterioration?   | _____ | ✓     | _____ |
| c  | Does the casing have a functioning weep hole?   | ✓     | _____ | _____ |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | ✓     | _____ | _____ |
| e  | Is the well locked and is the lock in good condition?   | ✓     | _____ | _____ |
| <b>3 Surface pad</b>                       |   |       |       |       |
| a  | Is the well pad in good condition (not cracked or broken)?  | ✓     | _____ | _____ |
| b  | Is the well pad sloped away from the protective casing?   | ✓     | _____ | _____ |
| c  | Is the well pad in complete contact with the protective casing?   | ✓     | _____ | _____ |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | _____ | ✓     | _____ |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | ✓     | _____ | _____ |
| <b>4 Internal casing</b>                   |   |       |       |       |
| a  | Does the cap prevent entry of foreign material into the well?   | ✓     | _____ | _____ |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | ✓     | _____ | _____ |
| c  | Is the well properly vented for equilibration of air pressure?  | ✓     | _____ | _____ |
| d  | Is the survey point clearly marked on the inner casing?   | ✓     | _____ | _____ |
| e  | Is the depth of the well consistent with the original well log?   | ✓     | _____ | _____ |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | ✓     | _____ | _____ |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |       |       |       |
| a  | Does well recharge adequately when purged?  | ✓     | _____ | _____ |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | ✓     | _____ | _____ |
| c  | Does the well require redevelopment (low flow, turbid)?   | _____ | ✓     | _____ |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | ✓     | _____ | _____ |

TIGHT - MAY NEED HAMMER TO OPEN

7 Corrective actions as needed, by date:  
CHANGE COVER OF PROTECTIVE CASING (LESS TIGHT)

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_



### Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AID 1/2/13  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-2  
 Date, field conditions 09-15-20, 80°F OVERCAST

|   | yes                                 | no                                  | n/a                      |
|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>  |                                     |                                     |                          |
| a Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>  |                                     |                                     |                          |
| a Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>  |                                     |                                     |                          |
| a Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>4 Internal casing</b>  |                                     |                                     |                          |
| a Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b>  |                                     |                                     |                          |
| a Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

7 Corrective actions as needed, by date:

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\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-1/2-13  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-3  
 Date, field conditions 9/15/2020 cloudy

|  |   | yes                                 | no                                  | n/a                      |
|--|---|-------------------------------------|-------------------------------------|--------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                                     |                          |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>2 Protective Casing</b>   |   |                                     |                                     |                          |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>3 Surface pad</b>   |   |                                     |                                     |                          |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>4 Internal casing</b>   |   |                                     |                                     |                          |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |                          |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |                          |
|  |   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>7 Corrective actions as needed, by date:</b>  |   |                                     |                                     |                          |
| _____  |   |                                     |                                     |                          |
| _____  |   |                                     |                                     |                          |

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-1/2/3  
 Permit Number \_\_\_\_\_  
 Well ID MW-43D HGW-4-43D  
 Date, field conditions 7/16/2020 overcast

|  |   | yes                                 | no                                  | n/a   |
|--|---|-------------------------------------|-------------------------------------|---|
| <b>1 Location/Identification</b>   |   |                                     |                                     |   |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| b  | Is the well properly identified with the correct well ID?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> <i>correcting this event</i> |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                              |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| <b>2 Protective Casing</b>   |   |                                     |                                     |   |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| <b>3 Surface pad</b>   |   |                                     |                                     |   |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| <b>4 Internal casing</b>   |   |                                     |                                     |   |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |   |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/>                   |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                              |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |   |
|  |   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                              |

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-1/2/3  
 Permit Number \_\_\_\_\_  
 Well ID HW-44D HGLWA-44D  
 Date, field conditions 9/16/2010 rmpg

|  | yes                                 | no                                  | n/a                                 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |                                     |                                     |                                     |
| a  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |                                     |                                     |                                     |
| a  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |                                     |                                     |                                     |
| a  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |                                     |                                     |                                     |
| a  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |                                     |                                     |                                     |
| a  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |                                     |                                     |                                     |
|  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

being fixed

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Aluminum AP 3  
 Permit Number \_\_\_\_\_  
 Well ID HGW 4SD / MW 4SD  
 Date, field conditions 9/25 70° Rainy

|  |   | yes                                 | no                                  | n/a   |
|--|---|-------------------------------------|-------------------------------------|-------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |       |
| a  | Is the well visible and accessible?   | _____                               | <input checked="" type="checkbox"/> | _____ |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | _____                               | <input checked="" type="checkbox"/> | _____ |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | _____                               | _____ |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |       |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | _____                               | _____ |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| <b>3 Surface pad</b>                       |   |                                     |                                     |       |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | _____                               | _____ |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | _____                               | _____ |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| <b>4 Internal casing</b>                   |   |                                     |                                     |       |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | _____                               | _____ |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | _____                               | _____ |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |       |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | _____                               | _____ |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | _____                               | _____ |
| c  | Does the well require redevelopment (low flow, turbid)?   | _____                               | <input checked="" type="checkbox"/> | _____ |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | _____                               | _____ |
| 7  | Corrective actions as needed, by date:  | _____                               |                                     |       |

*No tags visible from above  
Difficult to access w/truck*

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-122  
 Date, field conditions 7/15/20 overcast

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Highland AP-3  
 Permit Number \_\_\_\_\_  
 Well ID UGWC-120  
 Date, field conditions 9/24/2020 sunny

|  |   | yes | no | n/a |
|--|---|-----|----|-----|
| <b>1 Location/Identification</b>           |   |     |    |     |
| a  | Is the well visible and accessible?   | ✓   |    |     |
| b  | Is the well properly identified with the correct well ID?   | ✓   |    |     |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   |     | ✓  |     |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | ✓   |    |     |
| <b>2 Protective Casing</b>                 |   |     |    |     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | ✓   |    |     |
| b  | Is the casing free of degradation or deterioration?   | ✓   |    |     |
| c  | Does the casing have a functioning weep hole?   | ✓   |    |     |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | ✓   |    |     |
| e  | Is the well locked and is the lock in good condition?   | ✓   |    |     |
| <b>3 Surface pad</b>                       |   |     |    |     |
| a  | Is the well pad in good condition (not cracked or broken)?  | ✓   |    |     |
| b  | Is the well pad sloped away from the protective casing?   | ✓   |    |     |
| c  | Is the well pad in complete contact with the protective casing?   | ✓   |    |     |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | ✓   |    |     |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | ✓   |    |     |
| <b>4 Internal casing</b>                   |   |     |    |     |
| a  | Does the cap prevent entry of foreign material into the well?   | ✓   |    |     |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | ✓   |    |     |
| c  | Is the well properly vented for equilibration of air pressure?  | ✓   |    |     |
| d  | Is the survey point clearly marked on the inner casing?   | ✓   |    |     |
| e  | Is the depth of the well consistent with the original well log?   |     |    | ✓   |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | ✓   |    |     |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |     |    |     |
| a  | Does well recharge adequately when purged?  | ✓   |    |     |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | ✓   |    |     |
| c  | Does the well require redevelopment (low flow, turbid)?   |     | ✓  |     |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | ✓   |    |     |

7 Corrective actions as needed, by date:

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\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID HGVC-121A  
 Date, field conditions 9-28-2020 DRY

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

7 Corrective actions as needed, by date: None

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID H6VC-124  
 Date, field conditions 9-28-2020 Dry

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

7 Corrective actions as needed, by date:  
Big Hole to the Right of the Well Needs Filled

Signature and Seal of PE/PG responsible for inspection

### Groundwater Monitoring Well Integrity Form

Site Name Hammond AP-3  
 Permit Number \_\_\_\_\_  
 Well ID HGWC-135  
 Date, field conditions 9/21/2016 Sunny

|  |   | yes   | no    | n/a   |
|--|---|-------|-------|-------|
| <b>1 Location/Identification</b>   |   |       |       |       |
| a  | Is the well visible and accessible?   | ✓     | _____ | _____ |
| b  | Is the well properly identified with the correct well ID?   | ✓     | _____ | _____ |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | _____ | ✓     | _____ |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | ✓     | _____ | _____ |
| <b>2 Protective Casing</b>   |   |       |       |       |
| a  | Is the protective casing free from apparent damage and able to be secured?  | ✓     | _____ | _____ |
| b  | Is the casing free of degradation or deterioration?   | ✓     | _____ | _____ |
| c  | Does the casing have a functioning weep hole?   | ✓     | _____ | _____ |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | ✓     | _____ | _____ |
| e  | Is the well locked and is the lock in good condition?   | ✓     | _____ | _____ |
| <b>3 Surface pad</b>   |   |       |       |       |
| a  | Is the well pad in good condition (not cracked or broken)?  | ✓     | _____ | _____ |
| b  | Is the well pad sloped away from the protective casing?   | ✓     | _____ | _____ |
| c  | Is the well pad in complete contact with the protective casing?   | ✓     | _____ | _____ |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | ✓     | _____ | _____ |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | ✓     | _____ | _____ |
| <b>4 Internal casing</b>   |   |       |       |       |
| a  | Does the cap prevent entry of foreign material into the well?   | ✓     | _____ | _____ |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | ✓     | _____ | _____ |
| c  | Is the well properly vented for equilibration of air pressure?  | ✓     | _____ | _____ |
| d  | Is the survey point clearly marked on the inner casing?   | ✓     | _____ | _____ |
| e  | Is the depth of the well consistent with the original well log?   | ✓     | _____ | _____ |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | ✓     | _____ | _____ |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |       |       |       |
| a  | Does well recharge adequately when purged?  | ✓     | _____ | _____ |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | _____ | _____ | ✓     |
| c  | Does the well require redevelopment (low flow, turbid)?   | _____ | ✓     | _____ |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |       |       |       |
|  |   | ✓     | _____ | _____ |

7 Corrective actions as needed, by date:

\_\_\_\_\_

\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Hummered AP 3  
 Permit Number \_\_\_\_\_  
 Well ID HGW-126  
 Date, field conditions 9/11/14 sunny

|  |   | yes | no | n/a |
|--|---|-----|----|-----|
| <b>1 Location/Identification</b>   |   |     |    |     |
| a  | Is the well visible and accessible?   | /   | —  | —   |
| b  | Is the well properly identified with the correct well ID?   | /   | —  | —   |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | /   | —  | —   |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | /   | —  | —   |
| <b>2 Protective Casing</b>   |   |     |    |     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | /   | —  | —   |
| b  | Is the casing free of degradation or deterioration?   | /   | —  | —   |
| c  | Does the casing have a functioning weep hole?   | /   | —  | —   |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | /   | —  | —   |
| e  | Is the well locked and is the lock in good condition?   | /   | —  | —   |
| <b>3 Surface pad</b>   |   |     |    |     |
| a  | Is the well pad in good condition (not cracked or broken)?  | /   | —  | —   |
| b  | Is the well pad sloped away from the protective casing?   | /   | —  | —   |
| c  | Is the well pad in complete contact with the protective casing?   | /   | —  | —   |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | /   | —  | —   |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | /   | —  | —   |
| <b>4 Internal casing</b>   |   |     |    |     |
| a  | Does the cap prevent entry of foreign material into the well?   | /   | —  | —   |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | /   | —  | —   |
| c  | Is the well properly vented for equilibration of air pressure?  | /   | —  | —   |
| d  | Is the survey point clearly marked on the inner casing?   | /   | —  | —   |
| e  | Is the depth of the well consistent with the original well log?   | /   | —  | —   |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | /   | —  | —   |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |     |    |     |
| a  | Does well recharge adequately when purged?  | /   | —  | —   |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | /   | —  | —   |
| c  | Does the well require redevelopment (low flow, turbid)?   | —   | /  | —   |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |     |    |     |
|  |   | /   | —  | —   |

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Huronville AP-3  
 Permit Number \_\_\_\_\_  
 Well ID MW-21  
 Date, field conditions 9/14/2022 partly cloudy

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond, AP3  
 Permit Number \_\_\_\_\_  
 Well ID MW-23  
 Date, field conditions 9/14/20 sunny, warm

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?                             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |   |                                     |                                     |                                     |
|  |   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:  
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 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection  
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**Groundwater Monitoring Well Integrity Form**

Site Name hammond (AP3)  
 Permit Number \_\_\_\_\_  
 Well ID MW-32  
 Date, field conditions 9/28, overcast

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date:  
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 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Hummer / AP3  
 Permit Number \_\_\_\_\_  
 Well ID mw-39  
 Date, field conditions 9/28/20 overcast

|  |   | yes                                 | no                                  | n/a                                 |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>           |   |                                     |                                     |                                     |
| a  | Is the well visible and accessible?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well properly identified with the correct well ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well in a high traffic area and does the well require protection from traffic?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>                 |   |                                     |                                     |                                     |
| a  | Is the protective casing free from apparent damage and able to be secured?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of degradation or deterioration?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Does the casing have a functioning weep hole?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the well locked and is the lock in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>                       |   |                                     |                                     |                                     |
| a  | Is the well pad in good condition (not cracked or broken)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the well pad sloped away from the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well pad in complete contact with the protective casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the pad surface clean (not covered with sediment or debris)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>                   |   |                                     |                                     |                                     |
| a  | Does the cap prevent entry of foreign material into the well?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c  | Is the well properly vented for equilibration of air pressure?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d  | Is the survey point clearly marked on the inner casing?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e  | Is the depth of the well consistent with the original well log?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f  | Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b> |   |                                     |                                     |                                     |
| a  | Does well recharge adequately when purged?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b  | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c  | Does the well require redevelopment (low flow, turbid)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6  | Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date: \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Hummerd LAP3  
 Permit Number \_\_\_\_\_  
 Well ID MW-41  
 Date, field conditions 9/28, Raining

|  | yes                                 | no                                  | n/a                                 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |                                     |                                     |                                     |
| a Is the well visible and accessible?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well properly identified with the correct well ID?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well in a high traffic area and does the well require protection from traffic?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |                                     |                                     |                                     |
| a Is the protective casing free from apparent damage and able to be secured?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of degradation or deterioration?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the casing have a functioning weep hole?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the well locked and is the lock in good condition?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |                                     |                                     |                                     |
| a Is the well pad in good condition (not cracked or broken)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well pad sloped away from the protective casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well pad in complete contact with the protective casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the pad surface clean (not covered with sediment or debris)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |                                     |                                     |                                     |
| a Does the cap prevent entry of foreign material into the well?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well properly vented for equilibration of air pressure?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the survey point clearly marked on the inner casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the depth of the well consistent with the original well log?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |                                     |                                     |                                     |
| a Does well recharge adequately when purged?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the well require redevelopment (low flow, turbid)?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |                                     |                                     |                                     |
|  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7 Corrective actions as needed, by date: n/a

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name HAMMOND IPS  
 Permit Number \_\_\_\_\_  
 Well ID MW-460  
 Date, field conditions 9-25-20, 65°F RAINY

|  | yes                                 | no                                  | n/a                                 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>1 Location/Identification</b>   |                                     |                                     |                                     |
| a Is the well visible and accessible?  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b Is the well properly identified with the correct well ID?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well in a high traffic area and does the well require protection from traffic?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>2 Protective Casing</b>   |                                     |                                     |                                     |
| a Is the protective casing free from apparent damage and able to be secured?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of degradation or deterioration?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the casing have a functioning weep hole?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the well locked and is the lock in good condition?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>3 Surface pad</b>   |                                     |                                     |                                     |
| a Is the well pad in good condition (not cracked or broken)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the well pad sloped away from the protective casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well pad in complete contact with the protective casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the pad surface clean (not covered with sediment or debris)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>4 Internal casing</b>   |                                     |                                     |                                     |
| a Does the cap prevent entry of foreign material into the well?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Is the well properly vented for equilibration of air pressure?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d Is the survey point clearly marked on the inner casing?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e Is the depth of the well consistent with the original well log?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>5 Sampling: Groundwater Wells Only:</b>   |                                     |                                     |                                     |
| a Does well recharge adequately when purged?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c Does the well require redevelopment (low flow, turbid)?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b> |                                     |                                     |                                     |
|  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <b>7 Corrective actions as needed, by date:</b>  |                                     |                                     |                                     |
| _____  |                                     |                                     |                                     |
| _____  |                                     |                                     |                                     |

TAG NOT VISIBLE FROM AFAR

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

## APPENDIX C

# Semiannual Remedy Selection and Design Progress Report



*Prepared for*

**Georgia Power Company**  
241 Ralph McGill Blvd NE  
Atlanta, Georgia 30308

# **SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT**

## **PLANT HAMMOND ASH POND 3 (AP-3)**

*Prepared by*

**Geosyntec**   
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engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200  
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Project Number GW6581

February 2021

**SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT**

**GEORGIA POWER COMPANY - PLANT HAMMOND**

**ASH POND 3 (AP-3)**

This *Semiannual Remedy Selection and Design Progress Report, Georgia Power Company - Plant Hammond, Ash Pond 3 (AP-3)*, has been prepared in accordance with the United States Environmental Protection Agency coal combustion residual rule, specifically 40 Code of Federal (CFR) 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a). This report describes the progress made in selecting and designing a remedy as previously documented in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3)* (Geosyntec, 2020a).

**Report Prepared by:**



---

Whitney B. Law, P.E.  
Georgia Professional Engineer No. 036641

February 26, 2021

Date

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## LIST OF ACRONYMS

|        |   |
|--------|---|
| ACM    | Assessment of Corrective Measures             |
| AEM    | advanced engineering method                   |
| Al     | aluminum                                      |
| AP     | ash pond                                      |
| CCR    | coal combustion residuals                     |
| CFR    | Code of Federal Regulations                   |
| CSM    | conceptual site model                         |
| DPT    | direct push technology                        |
| Fe     | iron  |
| ft bgs | feet below ground surface                     |
| GA EPD | Georgia Environmental Protection Division     |
| GWPS   | Groundwater Protection Standard               |
| HDPE   | high density polyethylene                     |
| Li     | lithium                                       |
| Mn     | manganese                                     |
| MNA    | monitored natural attenuation                 |
| Mo     | molybdenum                                    |
| PRB    | permeable reactive barriers                   |
| SAR    | sodium adsorption ratio                       |
| SSI    | statistically significant increase            |
| SSL    | statistically significant level               |
| USEPA  | United States Environmental Protection Agency |

## 1.0 INTRODUCTION

### 1.1 Purpose

This *Semiannual Remedy Selection and Design Progress Report* (the semiannual progress report) was prepared for Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 3 (AP-3 or Site) in accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR 257.97(a), and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semiannual progress report describes the progress made in selecting and designing a remedy since the issuance of the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3)* (Geosyntec, 2020a) (ACM Report). Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semiannual progress reports will be regularly submitted to document the efforts of evaluating and progressing towards selecting a groundwater corrective measure; this is the first semiannual progress report prepared since submitting the ACM Report in December 2020.

As discussed in the ACM Report, the following corrective measures were initially considered to be potentially feasible for use at AP-3. A comparative screening of the corrective measures is provided in **Table 1**.

1. Geochemical Manipulation (In-Situ Injection)
2. Hydraulic Containment (Pump and Treat)
3. Monitored Natural Attenuation (MNA)
4. Permeable Reactive Barrier (PRB)
5. Subsurface Vertical Barrier Walls

As outlined in the ACM Report, traditional phytoremediation was initially considered as a potential remedy but eliminated from further consideration given the groundwater that would be targeted for treatment is too deep for traditional root access (i.e., depths greater than 15 feet below ground surface (ft bgs)). However, Georgia Power has decided to install an engineered *TreeWell*<sup>®</sup> system as an Advanced Engineering Method (AEM). The *TreeWell* system can access deeper groundwater zones than traditional phytoremediation systems because vertical casings are used to drive root growth downward. The process of final design and installation of that *TreeWell* system is underway with the preparation of a separate pre-design investigation workplan. While the purpose of the AEM is different than corrective measures, Georgia Power plans to



evaluate the effectiveness of the AEM before determining if additional *TreeWell* or enhancements to the *TreeWell* system should be incorporated into this ACM. Data obtained as part of the pre-design investigation may be used to enhance the conceptual site model (CSM) and aid in evaluating potential corrective measures, to the extent relevant.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report to support the groundwater remedy selection process and address potential changes in site conditions (e.g., successful reduction of constituent concentrations or changing trends) as appropriate. The adaptive site management approach will take existing site conditions, including natural attenuation mechanisms, into account. Characterization activities to evaluate attenuation mechanisms at the Site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the USEPA guidelines for MNA (USEPA, 2015) summarized below.

- \* Tier I: Constituent concentrations & plume stability
- \* Tier II: Constituent attenuation mechanisms
- \* Tier III: Aquifer capacity and stability
- \* Tier IV: Performance monitoring

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate statistically significant levels (SSLs) of molybdenum (Mo) in groundwater at AP-3. The risk evaluation used a conservative, health-protective approach that is consistent with USEPA risk assessment guidance, GA EPD regulations and guidance, and standard practice for risk assessment in the State of Georgia. As part of the risk evaluation, a well survey of potential groundwater wells within a three-mile radius of AP-3 was conducted and consisted of reviewing federal, state, and county records and online sources in addition to conducting a windshield survey of the area. The risk evaluation relied on groundwater data collected by Georgia Power from August 2016 through March 2020 in compliance with the federal and state CCR rules. Based upon this risk evaluation, which included multiple conservative assumptions, concentrations of Mo detected in groundwater at AP-3 are not expected to pose a risk to human health or the environment. The *Risk Evaluation Report*

– *Georgia Power Company – Plant Hammond Ash Pond 3* (Geosyntec, 2020b) was submitted as Appendix A to the ACM Report (Geosyntec, 2020a).

## **1.2 Site Background and Overview of AP-3 Pond Closure**

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome and is bordered by Georgia Highway 20 (GA-20) on the north, the Coosa River on the south, Cabin Creek and industrial land on the east, and sparsely populated, forested, rural and industrial land on the west (**Figure 1**). The four coal-fired electric generating units at Plant Hammond are decommissioned and electricity is no longer produced at the Site.

AP-3 is a 25-acre former ash pond that was constructed in 1973 and 1974. Ash sluicing and placement operations at AP-3 commenced in June 1977. In the early 1980s, AP-3 was converted into a dry ash stacking area and, in the early 1990s, the pond stopped receiving CCR materials (i.e., AP-3 ceased receiving waste prior to the effective date of the CCR rule promulgated in April 2015).

Georgia Power commenced closure of AP-3 in 2016 via closure in place and capping. A notification of intent to close AP-3 was placed in the Operating Record on December 7, 2015, and posted to Plant Hammond’s CCR website within 30 days. The Closure Plan was submitted to the GA EPD as part of the closure permit application package, which described the closure activities and requirements in accordance with § 257.102. The Closure Plan and notification of closure completion are posted on Plant Hammond’s publicly available website.

Because AP-3 was converted to a dry stacking operation in the early 1980s and operated as such until the early 1990s when the unit ceased receiving CCR material, AP-3 did not contain standing water and minimal liquid removal was required to prepare the subgrade for final cover system construction. The CCR material remaining in AP-3 was graded and a final cover system was installed in the second quarter of 2018. The final cover system consists of a 60-mil high density polyethylene (HDPE) liner, geocomposite drainage media, a minimum 18-inch thick protective soil cover, and a 6-inch thick vegetative layer. The final cover system was designed to limit infiltration of precipitation with low permeability materials and is graded to promote positive drainage and shed stormwater away from AP-3 via riprap drainage ditches toward three outfall locations around AP-3.

The closure of AP-3 in the manner described minimizes the potential for migration of CCR constituents to groundwater. Corrective measures discussed in this progress report are being evaluated to address SSLs in groundwater at the waste boundary.

### **1.3 Regulatory Program Status and Nature and Extent**

CCR compliance groundwater monitoring-related activities have been performed for AP-3 since August 2016 pursuant to the CCR rule. Georgia Power initiated an assessment monitoring program in August 2019 after identifying statistically significant increases (SSIs) of Appendix III parameters in groundwater. Pursuant to § 257.95, samples were collected from the compliance monitoring well network, shown on **Figure 2**, and analyzed for Appendix IV constituents under the new assessment monitoring program in August and October 2019 and March 2020.

Statistical analyses of the assessment monitoring groundwater data identified SSLs of Mo and lithium (Li) at concentrations exceeding the state groundwater protection standards (GWPS), but not the associated federal GWPS, for the October 2019 event in compliance monitoring well HGWC-120. A lower Li groundwater concentration reported in March 2020 for HGWC-120 reduced the lower confidence interval to below the state GWPS, and therefore an SSL for Li was no longer identified in HGWC-120. Details regarding the statistical analyses are provided in the *2020 Annual Groundwater and Corrective Action Monitoring Report* (Geosyntec, 2020c). Pursuant to § 257.96, Georgia Power initiated an ACM for AP-3 in July 2020. The ACM Report was subsequently prepared for AP-3 and submitted to GA EPD in December 2020 and posted to the CCR compliance website. Statistical analysis of assessment monitoring groundwater data through December 2020 identified GA EPD CCR Rule Mo SSLs in HGWC-120, MW-32, and MW-39. Details are provided in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021a).

The current groundwater monitoring well network consists of seven upgradient compliance monitoring wells (HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122) and five downgradient compliance monitoring wells (HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126). In addition, three delineation wells (MW-32, MW-41, and MW-46D) and three piezometers (MW-21, MW-23, and MW-39) are used to characterize groundwater conditions upgradient and downgradient of AP-3. The locations of the monitoring wells, delineation wells, and piezometers associated with AP-3 are shown on **Figure 2**; well construction details are listed in **Table 2**.

Due to the presence of a surface water feature in the downgradient direction of MW-41, installation of an additional well to horizontally characterize this area is infeasible. Georgia Power proactively collected surface water samples in July and December 2020 from three locations along Cabin Creek, two of which are applicable to evaluating the surface water conditions in the vicinity of MW-41 (i.e., H-SCC NBR and H-SCC E41). The surface water locations are shown on **Figure 2**. Sample location H-SCC NBR is located upstream of the Site, and therefore the data are considered representative of background conditions. Sample location H-SCC E41 is located immediately downgradient of MW-41. The surface water sample collected from both locations for both events indicate Mo is not detected. Based on Mo results for data collected to date, no Mo impacts to surface water have been detected, and horizontal delineation to below the state GWPS is complete. The laboratory report associated with the December 2020 surface water sampling event is provided in Appendix D of the *2020 Semiannual Groundwater Monitoring and Corrective Action Report*; a copy of the analytical laboratory report from the July 2020 surface water sampling event was provided with the ACM Report. Georgia Power will continue collecting the surface water samples semiannually. The groundwater data from the September 2020 semiannual assessment monitoring event and the December 2020 surface water data were used to generate the Mo iso-concentration map presented on **Figure 3**.

In August 2020, Georgia Power installed a well (MW-46D) to vertically delineate the Mo SSL identified in compliance well HGWC-120. However, the current Appendix IV data set for MW-46D is limited to less than four independent sampling events which is the minimum required number to construct confidence intervals to statistically evaluate the results with respect to GWPS, consistent with Section 21.1.1 of the *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009). Georgia Power will continue to monitor this well until an adequately sized data set is available to complete statistical analyses. Regarding the SSLs in MW-32 and MW-39, vertical delineation of Mo may require the installation of additional wells adjacent to their respective locations and is currently under evaluation.

Pursuant to § 257.96, groundwater in the vicinity of AP-3 continues to be monitored during the ACM phase in accordance with the established assessment monitoring program.

## 2.0 ADDITIONAL SITE CHARACTERIZATION

The following summarizes additional site characterization efforts to supplement the current groundwater CSM with additional groundwater quality and mineralogical and geochemical evaluations of aquifer solids and groundwater samples to better understand site conditions and to provide a technical justification to support the selection of an appropriate groundwater remedy at the Site.

### 2.1 Hydrogeologic and Agronomic Assessment

As presented in Section 1.1, a pre-design investigation is being conducted in parallel to the ACM efforts to develop a design for the implementation of the AEM *TreeWell* system. The pre-design investigation will include the collection of data related to (i) improving the understanding of the lithology downgradient of AP-3 by advancing borings at five locations (**Figure 4**); (ii) improving the understanding of the hydrogeologic conditions downgradient of AP-3 through the installation of five temporary piezometers within the boreholes mentioned above and slug testing these five new piezometers together with three existing wells (i.e., MW-32, MW-39, and MW-41); (iii) gaining an understanding of the agronomic conditions of soils and groundwater by submitting two soil samples collected from the boreholes and one groundwater sample from existing well MW-32 or MW-39 for agronomic parameters<sup>1</sup>; and (iv) updating the existing groundwater flow model for optimization of placement of the *TreeWell* units.

The temporary piezometers installed in the five boreholes advanced during the pre-design investigation will be used to monitor the hydraulic performance of the *TreeWell* system following system installation. These piezometers are separate from the compliance and delineation well network used to assess groundwater quality, and are only intended to be used for water level measurements across the footprint of the *TreeWell* system.

The data obtained from the pre-design investigation will also be used, to the extent relevant, to generally refine the current CSM, which will support the selection of a groundwater corrective measure, if needed.

---

<sup>1</sup> The agronomic suitability analysis will report results for the following constituents/parameters: chloride, sulfate-sulfur, carbonate alkalinity, bicarbonate alkalinity, total alkalinity, calcium, magnesium, sodium, potassium, boron, total hardness, total dissolved solids, electrical conductivity, sodium adsorption ratio (SAR), adjusted SAR (SARa), % base saturation, pH, total Kjeldahl nitrogen, ammonia nitrogen, nitrate nitrogen, total nitrogen (calc), and total phosphorus.

## 2.2 Characterization of Aquifer Solids

A direct-push technology (DPT) rig was used to collect aquifer matrix samples from the saturated unconsolidated zone at four locations in the vicinity of AP-3 on January 29 and February 1, 2021. Three borehole locations were selected to provide representative materials east and downgradient of AP-3. A sample was also collected from one location upgradient of the unit to be representative of background conditions. The approximate locations of the boreholes are illustrated on **Figure 4**. The sample depths were selected based on review of available boring logs from monitoring wells in the vicinity of the DPT boreholes to target the alluvium, residuum and/or highly weathered rock zones, which are consistent with the screened intervals of nearby monitoring wells. The field logs associated with the DPT soil sampling are provided in **Appendix A**.

The analytical program to characterize the aquifer solids is designed to support a tiered evaluation of MNA in accordance with the USEPA guidelines (USEPA, 2015) outlined in Section 1.1. In addition, the data obtained from this analytical program can also be used in the evaluation of other potential corrective measures under consideration. The aquifer matrix samples will be sent to SiREM analytical laboratory (Guelph, Ontario) to evaluate attenuation mechanisms and rates and aquifer capacity for attenuation, as well as the mineralogical characterization by application of the following analytical/testing methods.

- *Cation and Anion Exchange Capacity*: Separate tests that indicate relative adsorptive capacity for cationic and anionic metals/constituents. Understanding the capacity of solids in the subsurface to retain positively and negatively charged solutes helps in the evaluation of attenuation mechanisms and capacity (USEPA Tiers II and III).
- *Total Sulfur, Sulfide*: Total amount of oxidized and reduced sulfur relevant to metals that are prone to coprecipitate with and/or form sulfide minerals. Understanding the presence and speciation of sulfur compounds allows an estimation of whether certain metals are likely to form sparingly soluble sulfide minerals as a possible attenuation mechanism (USEPA Tiers II and III).
- *Organic Carbon Content*: Presence of substrate for adsorption and energy source for microbially mediated metal(loid)s transformations. Organic carbon in the subsurface can serve to sorb/retain metals, but it can also provide food to microorganisms that use certain metal(loid)s as electron acceptors and therefore

change their oxidation-reduction (redox) state, which affects their mobilization/immobilization (USEPA Tiers II and III).

- *Total Metals Concentration:* Total concentrations of targeted constituents in the solid phase. The samples will be analyzed for Mo, Li, iron (Fe), aluminum (Al), and manganese (Mn). This analysis helps to understand the presence of site-specific constituents in aquifer solids as well as the elements Fe, Al, and Mn that form major mineral phases known to sorb/retain many metals (USEPA Tiers II and III).
- *X-Ray Diffraction, Scanning Electron Microscopy (SEM) and Energy Dispersive X-Ray Analysis (EDXA):* Qualitative and quantitative confirmation of mineral phases present, including Whole Rock Analysis (WRA) for quantitative confirmation of XRD results. Identifying crystalline and non-crystalline mineral phases aids in the evaluation of attenuation mechanisms and capacity (USEPA Tiers II and III).

### 3.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

Source control at AP-3 is considered addressed, as a result of the closure and capping described in Section 1.2. Specifically, closure of AP-3 was completed in 2018 via closure in place with the construction of a final engineered cover system, including a geomembrane component, to cap the unit. The closure of AP-3 in this manner minimizes the potential for migration of CCR constituents to groundwater.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report to support the remedial strategy and address potential changes in site conditions as appropriate. The adaptive site management approach may be adjusted over the Site's life cycle as new site information and technologies become available. To this end, Georgia Power will continue its data collection efforts as necessary in support of efforts to refine the CSM and to further evaluate the feasibility of the corrective measures retained for evaluation. Once sufficient data are available to support decision making regarding the ability to implement one or more specific corrective measures, necessary steps will be taken to select, design, and implement a remedy for AP-3 in accordance with § 257.98.

The supplemental data collection and evaluation activities proposed to be completed during the next semiannual reporting period are presented in **Table 3** and summarized below.

- *Incorporate applicable lithological, hydrogeological, and geochemical data garnered from the TreeWell pre-design investigation to refine the CSM.*
- *Conduct a series of specialized analyses (e.g., column studies) on unconsolidated aquifer solids to evaluate the attenuation capacity of constituents of interest and attenuation rates.*
- *Evaluate potential adaptive triggers that may be incorporated into a long-term adaptive management strategy in response to changing groundwater conditions after pond closure.*
- *Evaluate conceptual layouts for hydraulic containment and/or permeable reactive barrier (PRB) and vertical barrier wall corrective measures to evaluate hydraulic capture zones as well as hydraulic effects of a PRB or barrier wall under current and anticipated future closure conditions.*



Georgia Power will continue to prepare semiannual progress reports to document AP-3 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future semiannual progress reports in routine groundwater monitoring and corrective action reports. Record keeping, notifications, and publicly accessible internet site requirements for the semiannual progress reports will be provided in accordance with § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

#### 4.0 REFERENCES

- Geosyntec Consultants, 2020a. *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3)*. December 2020.
- Geosyntec Consultants. 2020b. *Risk Evaluation Report – Plant Hammond Ash Pond 3, Rome, Floyd County, Georgia*. December 2020.
- Geosyntec Consultants. 2020c. *2020 Annual Groundwater Monitoring and Corrective Action Report - Plant Hammond Ash Pond 3 (AP-3)*. July 2020.
- Geosyntec Consultants. 2021a. *2020 Semiannual Groundwater Monitoring and Corrective Action Report - Plant Hammond Ash Pond 3 (AP-3)*. January 2021.
- USEPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery – Program Implementation and Information Division. March 2009.
- USEPA. 2015. *Use of Monitored Natural Attenuation for Inorganic Contaminants in Groundwater at Superfund Sites*. Office of Solid Waste and Emergency Response Directive 9283.1-36. August 2015.

# TABLES

**Table 1**  
Evaluation of Remedial Technologies  
Plant Hammond AP-3, Floyd County, Georgia

| Corrective Measure                                | Regulatory Citation for Criteria:   |  |   |   |
|---|---|--|---|---|
|   | Description   | Performance  | Reliability   | Ease of Implementation  |
| <b>Geochemical Approaches (In-Situ Injection)</b> | Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of molybdenum (Mo). Under anaerobic conditions, Mo may be attenuated within sparingly soluble sulfide minerals. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Mo onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Mo.   | The effective immobilization of Mo under promoted anaerobic condition (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether Mo can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics. Mo attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Mo is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to other inorganics [e.g., arsenic (As)].  | Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Mo in groundwater. | Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.  |
| <b>Hydraulic Containment (Pump and Treat)</b>     | Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved Mo.   | Hydraulic containment is effective, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At AP-3, implementation of the corrective measure is contingent on completing additional assessment activities (i.e. high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/ effectiveness and to further evaluate the potential remedy performance. Proximity of the extraction system to Cabin Creek needs to be considered to avoid capturing surface water.  | Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.   | Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Mo. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.   |
| <b>Monitored Natural Attenuation (MNA)</b>        | MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Mo, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation, and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Mo, the main attenuation process includes sorption to iron and manganese oxides and formation of insoluble minerals under sulfate-reducing conditions. | Physical and chemical MNA mechanisms for Mo, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame.   | Reliable as long as the aquifer conditions that result in Mo attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA may be used as a stand-alone corrective measure for groundwater impacted by dissolved Mo, but is frequently used in combination with a second technology.   | Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.  |
| <b>Permeable Reactive Barrier</b>                 | Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the removal of Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is determined by site-specific characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.  | PRBs have been tested to address Mo in groundwater, but additional testing is required to select the appropriate reactive media. The approach is expected to achieve GWPS for Mo as impacted groundwater passes through the reactive barrier. Mo redox kinetics may be slow and hence a thicker wall might be needed relative to the treatment of other inorganics (e.g., arsenic).  | Reliable groundwater corrective measure technology for select inorganics, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.   | Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas   |
| <b>Subsurface Vertical Barrier Walls</b>          | This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.  | Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation; sheet piling and trenching are typically limited to depths of approximately 50 feet belowground surface (ft bgs); specialty drilling/installation techniques can achieve depths greater up to approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-3, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with Mo above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed. | Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.  | Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a barrier wall along the entire length and depth of the affected areas |

**Table 1**  
Evaluation of Remedial Technologies  
Plant Hammond AP-3, Floyd County, Georgia

| Corrective Measure                                | 40 CFR 257.96(C)(1)   | 40 CFR 257.96(C)(2)  | 40 CFR 257.96(C)(3)  |
|---|---|--|--|
|   | Potential Impacts   | Time Requirement to Begin/Complete   | Institutional Requirements   |
| <b>Geochemical Approaches (In-Situ Injection)</b> | Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.   | Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable. | Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.   |
| <b>Hydraulic Containment (Pump and Treat)</b>     | Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone. Proximity of the extraction system to Cabin Creek needs to be considered to avoid capturing surface water.  | Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for Mo.                    | Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required as long as groundwater conditions are above regulatory standards for unrestricted use. |
| <b>Monitored Natural Attenuation (MNA)</b>        | None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.   | The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months.  | MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.   |
| <b>Permeable Reactive Barrier</b>                 | Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.   | Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot-testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick.   | Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.   |
| <b>Subsurface Vertical Barrier Walls</b>          | Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment. | Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.                                  | Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.   |

**Table 1**  
Evaluation of Remedial Technologies  
Plant Hammond AP-3, Floyd County, Georgia

| 40 CFR 257.96(C)(3)                                   |  |   |   |
|---|--|---|---|
| Corrective Measure                                    | Other Env or Public Health Requirements  | Relative Costs  | Evaluation of Retainage   |
| <b>Geochemical Approaches<br/>(In-Situ Injection)</b> | Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Potential for mobilization of redox-sensitive constituents exists during implementation of an anaerobic attenuation approach. Following installation, the remedy is passive.   | Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)   | Retained for further analysis. Mo is the primary constituent of concern, yet immobilization of Mo with in-situ injections is less established and may prove less effective than other viable options. Further evaluation pending receipt of initial ACM-related field investigation results.  |
| <b>Hydraulic Containment (Pump and Treat)</b>         | Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.   | Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed) | Retained for further analysis; the installation of extraction wells is not being considered in the immediate vicinity of AP-3 due to geotechnical considerations in the context of the site-specific geology; may need to be used in conjunction with other potential groundwater corrective measures; could be considered an effective measure to maintain hydraulic control along Cabin Creek as an interim groundwater treatment measure, if warranted. Further evaluation pending receipt of initial ACM-related field investigation results. |
| <b>Monitored Natural Attenuation (MNA)</b>            | Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.   | Low to medium   | Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures. Further evaluation pending receipt of initial ACM-related field investigation results.   |
| <b>Permeable Reactive Barrier</b>                     | Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.                                     | Medium to high (for installation) - minimal O&M requirements if replacement is not necessary                              | Retained for further analysis. Additional subsurface investigations, aquifer testing, reactive media testing, and compatibility testing of groundwater and a slurry wall component of a PRB will be needed to further evaluate the feasibility of installing a PRB at AP-3. Further evaluation pending receipt of initial ACM-related field investigation results.  |
| <b>Subsurface Vertical Barrier Walls</b>              | Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal. | Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)   | Retained for further analysis. Additional subsurface investigations, aquifer testing, and wall compatibility testing with the groundwater chemistry will be needed to further evaluate the feasibility as well as the placement of a barrier wall at AP-3. Further evaluation pending receipt of initial ACM-related field investigation results.   |

**Table 2**  
Monitoring Well Network Summary  
Plant Hammond AP-3, Floyd County, Georgia

| Well ID                           | Hydraulic Location | Installation Date | Northing <sup>(1)</sup> | Easting <sup>(1)</sup> | Top of Casing Elevation <sup>(2)</sup> (ft) | Top of Screen Elevation <sup>(2)</sup> (ft) | Bottom of Screen Elevation <sup>(2)</sup> (ft) | Well Depth (ft BTOC) <sup>(3)</sup> | Screen Interval Length |
|-----------------------------------|--------------------|-------------------|-------------------------|------------------------|---|---|--|-------------------------------------|------------------------|
| <b>Compliance Monitoring Well</b> |                    |                   |                         |                        |   |   |  |                                     |                        |
| HGWA-1                            | Upgradient         | 12/3/2014         | 1550423.32              | 1940770.00             | 595.21                                      | 573.12                                      | 563.12   | 32.49                               | 10                     |
| HGWA-2                            | Upgradient         | 12/2/2015         | 1549796.87              | 1939845.15             | 587.92                                      | 570.29                                      | 560.29   | 27.95                               | 10                     |
| HGWA-3                            | Upgradient         | 12/2/2015         | 1549794.41              | 1939833.39             | 587.74                                      | 553.23                                      | 543.23   | 44.51                               | 10                     |
| HGWA-43D                          | Upgradient         | 8/26/2020         | 1550422.85              | 1940753.80             | 595.08                                      | 544.08                                      | 534.08   | 61.25                               | 10                     |
| HGWA-44D                          | Upgradient         | 8/25/2020         | 1550409.13              | 1940756.18             | 594.79                                      | 491.76                                      | 481.76   | 113.28                              | 10                     |
| HGWA-45D                          | Upgradient         | 8/19/2020         | 1551157.68              | 1941907.54             | 586.95                                      | 535.23                                      | 525.23   | 62.87                               | 10                     |
| HGWA-122                          | Upgradient         | 11/20/2014        | 1551251.42              | 1941887.11             | 587.90                                      | 570.54                                      | 560.54   | 27.76                               | 10                     |
| HGWC-120                          | Downgradient       | 6/27/2016         | 1551067.24              | 1942926.62             | 605.82                                      | 548.83                                      | 538.83   | 67.00                               | 10                     |
| HGWC-121A                         | Downgradient       | 7/17/2017         | 1550607.97              | 1943030.44             | 584.69                                      | 556.71                                      | 546.71   | 37.98                               | 10                     |
| HGWC-124                          | Downgradient       | 11/13/2014        | 1551624.93              | 1942781.05             | 582.52                                      | 557.80                                      | 547.80   | 35.12                               | 10                     |
| HGWC-125                          | Downgradient       | 5/4/2020          | 1550821.41              | 1942962.87             | 608.89                                      | 556.03                                      | 546.03   | 63.19                               | 10                     |
| HGWC-126 <sup>(4)</sup>           | Downgradient       | 11/25/2019        | 1550422.03              | 1942689.40             | 611.24                                      | 552.72                                      | 542.72   | 68.52                               | 10                     |
| <b>Delineation Well</b>           |                    |                   |                         |                        |   |   |  |                                     |                        |
| MW-32                             | Downgradient       | 11/22/2019        | 1551092.83              | 1943021.47             | 585.46                                      | 559.30                                      | 549.30   | 36.16                               | 10                     |
| MW-41                             | Downgradient       | 5/18/2020         | 1551158.16              | 1943196.47             | 577.25                                      | 563.20                                      | 553.20   | 24.38                               | 10                     |
| MW-46D                            | Downgradient       | 8/18/2020         | 1551056.48              | 1942929.10             | 605.72                                      | 513.92                                      | 503.92   | 102.05                              | 10                     |
| <b>Piezometer</b>                 |                    |                   |                         |                        |   |   |  |                                     |                        |
| MW-21                             | Downgradient       | 12/3/2014         | 1550270.15              | 1941809.76             | 586.27                                      | 570.40                                      | 560.40   | 26.28                               | 10                     |
| MW-23                             | Downgradient       | 11/24/2014        | 1551641.44              | 1942496.83             | 584.91                                      | 563.03                                      | 553.03   | 32.28                               | 10                     |
| MW-39                             | Downgradient       | 3/16/2020         | 1551111.45              | 1943089.26             | 580.42                                      | 564.93                                      | 554.93   | 25.82                               | 10                     |

Notes:

ft = feet.

ft BTOC = feet below top of casing.

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.

(3) Total well depth accounts for sump if sump depth data was provided on well construction logs.

(4) Well HGWC-126 was originally installed as piezometer MW-31 but reclassified as a compliance monitoring well in May 2020.

**Table 3**  
Proposed ACM Supplementary Data Analyses and Collection Tasks for First Semiannual Period 2021  
Plant Hammond AP-3, Floyd County, Georgia

| Data Collection Event   | Applicable CMs <sup>(1)</sup> | Applicability/Rationale   | Field Component  | Parameters of Interest (POI)   | Analytical Lab Performing Analysis   |
|---|-------------------------------|---|--|--|--|
| Incorporate applicable lithological, hydrogeological, and geochemical data obtained from the pre-design investigation completed for the design and implementation of a TreeWell® system | 1, 2, 3, 4, 5                 | The lithologic, hydrologic, and agronomic characterization of the soils/aquifer may be used to further evaluate all five retained potential corrective measures.  | Installation of five additional soil borings and completion of these borings as temporary piezometers; collection of two soil samples and one groundwater sample for agronomic analyses; completion of slug testing in the five newly installed temporary piezometers and in three existing piezometers/wells. | Description of lithology; hydraulic conductivity measurements;<br>Soils: NO3-N, P, K, S, Ca, Mg, Na, Zn, Fe, Mn, Cu, OM, soil pH, buffer pH, soluble salts, cation exchange capacity, % base saturation;<br>Groundwater: Cl, SO4-S, carbonate alkalinity, bicarbonate alkalinity, total alkalinity, Ca, Mg, Na, K, B, total hardness, TDS, electrical conductivity, sodium adsorption ratio (SAR), adjusted SAR, % base saturation, pH, TKN, NH3-N, NO3-N, total N, and total P. | Field measurements;<br>Agronomic analyses:<br>ServiTech Laboratories in Dodge City, Kansas |
| Complete an evaluation of the analytical results from specialized analysis of saturated unconsolidated aquifer matrix samples   | 1, 3                          | Evaluation of aquifer matrix for:<br>(i) attenuation mechanisms and rates, and aquifer capacity for attenuation; and<br>(ii) mineralogical characterization.  | Collected unconsolidated aquifer solid material from the alluvium, residuum, and/or highly weathered rock zones using a DPT rig (3 locations downgradient and 1 background location).  | Total sulfur, sulfide; organic carbon content; total concentrations of Mo, Li, Fe, Al, Mn; X-Ray Diffraction, Scanning Electron Microscopy (SEM) and energy dispersive x-ray analysis (EDXA); cation/anion exchange capacity; potentially add sequential extraction procedures of Mo and Li.   | SiREM and subcontracted labs   |
| Evaluate potential adaptive triggers for response to protection of human health and the environment under an applied MNA corrective measure   | 3                             | Initial evaluation of interim measures to address potentially changing groundwater conditions   | Not Applicable (Desktop Study)   | Appendix III and IV constituents historically identified as SSIs and SSLs  | No lab data required;<br>Geosyntec desktop analyses  |
| Perform a conceptual-level feasibility study of applied corrective measures   | 2, 4, 5                       | Evaluate potential hydraulic capture zones using groundwater extraction systems (extraction well gallery); determine conceptual layouts to achieve hydraulic capture; evaluate feasibility and placement of PRB and/or vertical barrier wall to address Mo and Li in groundwater. | Not Applicable (Desktop Study)   | Conceptually determine layouts for extraction well gallery to provide effective hydraulic containment while minimizing additional infrastructure or land requirements; will also include an evaluation of the placement and hydrologic effects of a PRB and/or a subsurface vertical barrier wall.   | No lab data required;<br>Geosyntec desktop analyses  |

Note:

(1) Corrective Measure (CM) Codes:

- 1 - Geochemical Injections
- 2 - Hydraulic Containment
- 3 - Monitored Natural Attenuation (MNA)
- 4 - Permeable Reactive Barrier
- 5- Subsurface Vertical Barrier Wall

"NO3-N" - Nitrate as Nitrogen  
"P" - Phosphorous  
"K" - Potassium  
"S" - Sulfur  
"Ca" - Calcium  
"Mg" - Magnesium

"Na" - Sodium  
"Zn" - Zinc  
"Fe" - Iron  
"Mn" - Manganese  
"Cu" - Copper  
"OM" - Organic Matter

"B" - Boron  
"TKN" - Total Kjeldahl Nitrogen  
"NH3-N" - Ammonia as Nitrogen  
"SO4-S" - Sulfate - Sulfur  
"TDS" - Total Dissolved Solids



# FIGURES





Note:  
1. Aerial photograph source: Google Earth Pro, August 2019.



**SITE LOCATION MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For:  Georgia Power

Prepared By:  Geosyntec  
consultants

KENNESAW, GA

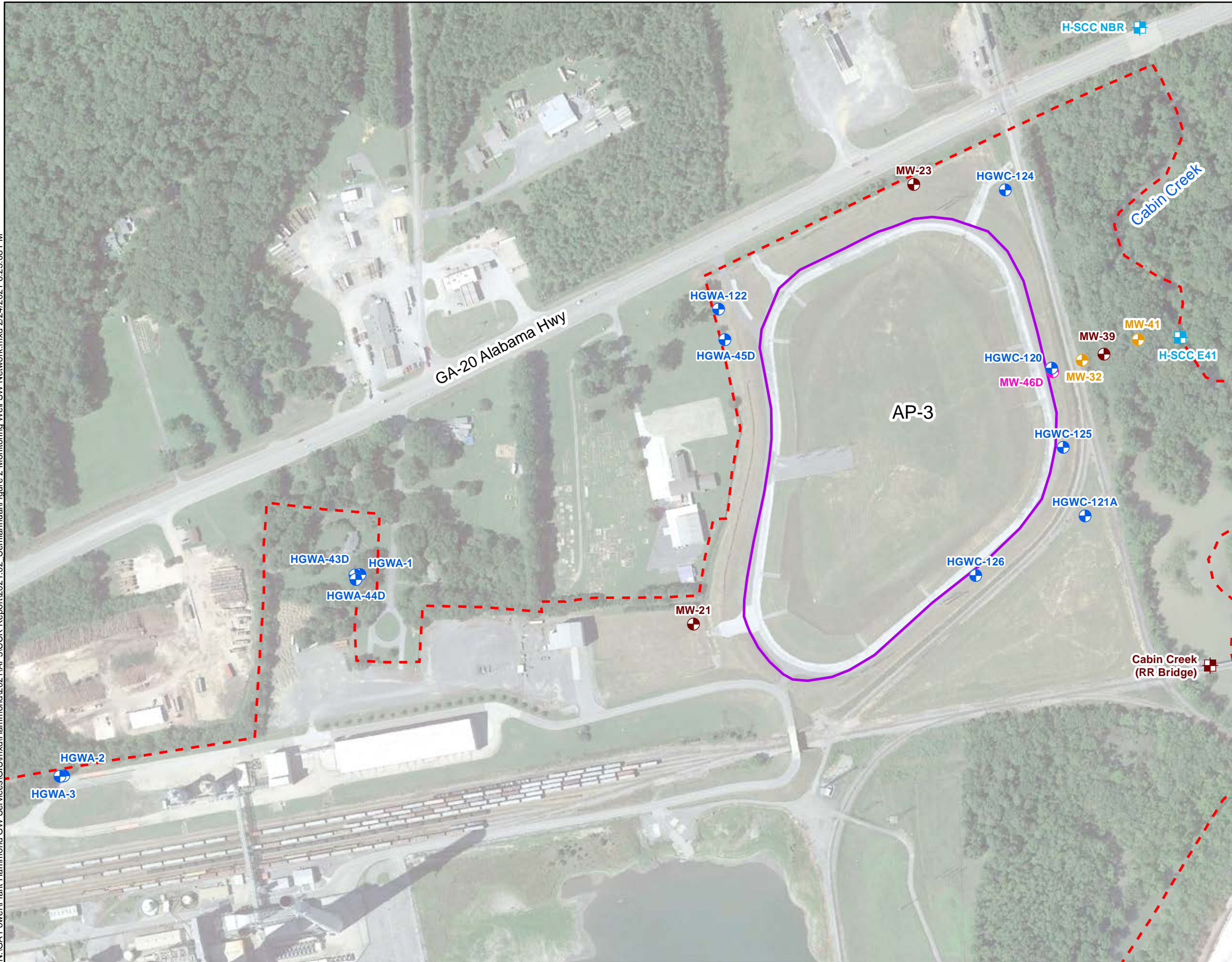
FEBRUARY 2021

**FIGURE**  
**1**

N:\GA Power\Plant Hammond\GIS\mxd\Hammond2020\CCR\_Reports\AP-3\Figure 1\_SiteMap.mxd 9/30/2020 11:08:37 AM



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP3\CCR Report\2021.02\_Semiannual\Figure 2\_Monitoring Well SW Network.mxd 2/24/2021 6:23:08 PM



**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Surface Water Sample Point
- Surface Water Level Gauge Point
- Approximate AP-3 Boundary
- Plant Hammond Property Boundary

Notes:  
1. Aerial photograph source: Google Earth Pro, August 2019.



**MONITORING WELL NETWORK AND SAMPLING LOCATION MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

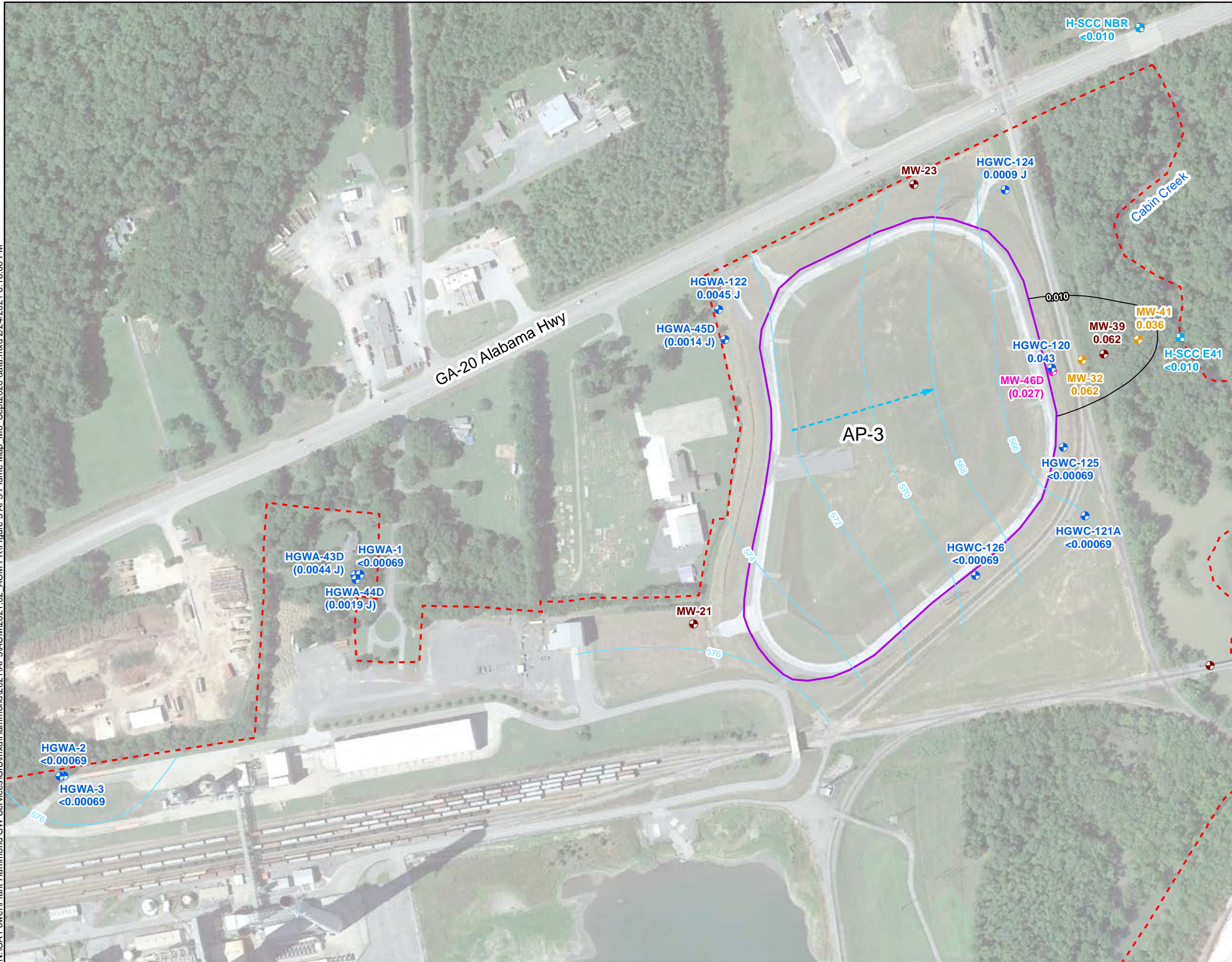
Prepared By: Geosyntec  
consultants

KENNESAW, GA    FEBRUARY 2021

**FIGURE 2**



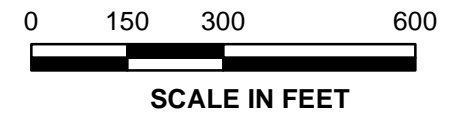
N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP3\ACM\2021.02\_ACM\_PR\Figure 3 AP3 Plume Map Mo\_Sep\2020\_data.mxd 2/24/2021 6:18:06 PM



**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- Surface Water Sample Point
- State GWPS Molybdenum Iso-Concentration Contour (mg/L)
- Groundwater Elevation Iso-Contour
- ➔ Approximate Groundwater Flow
- Approximate AP-3 Boundary
- Plant Hammond Property Boundary

Notes:  
 1. Concentration data from groundwater samples collected during the September 2020 semiannual monitoring event. Surface water data collected in December 2020. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-43D, HGWA-44D, HGWA-45D, MW-46D). Concentrations are reported in mg/L.  
 2. Water level elevation recorded on September 14, 2020. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.  
 3. EPD Groundwater Protection Standard (GWPS) for Molybdenum is 0.010 mg/L.  
 4. Aerial photograph source: Google Earth Pro, August 2019.



**ISO-CONCENTRATION MAP  
MOLYBDENUM - SEPTEMBER 2020**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

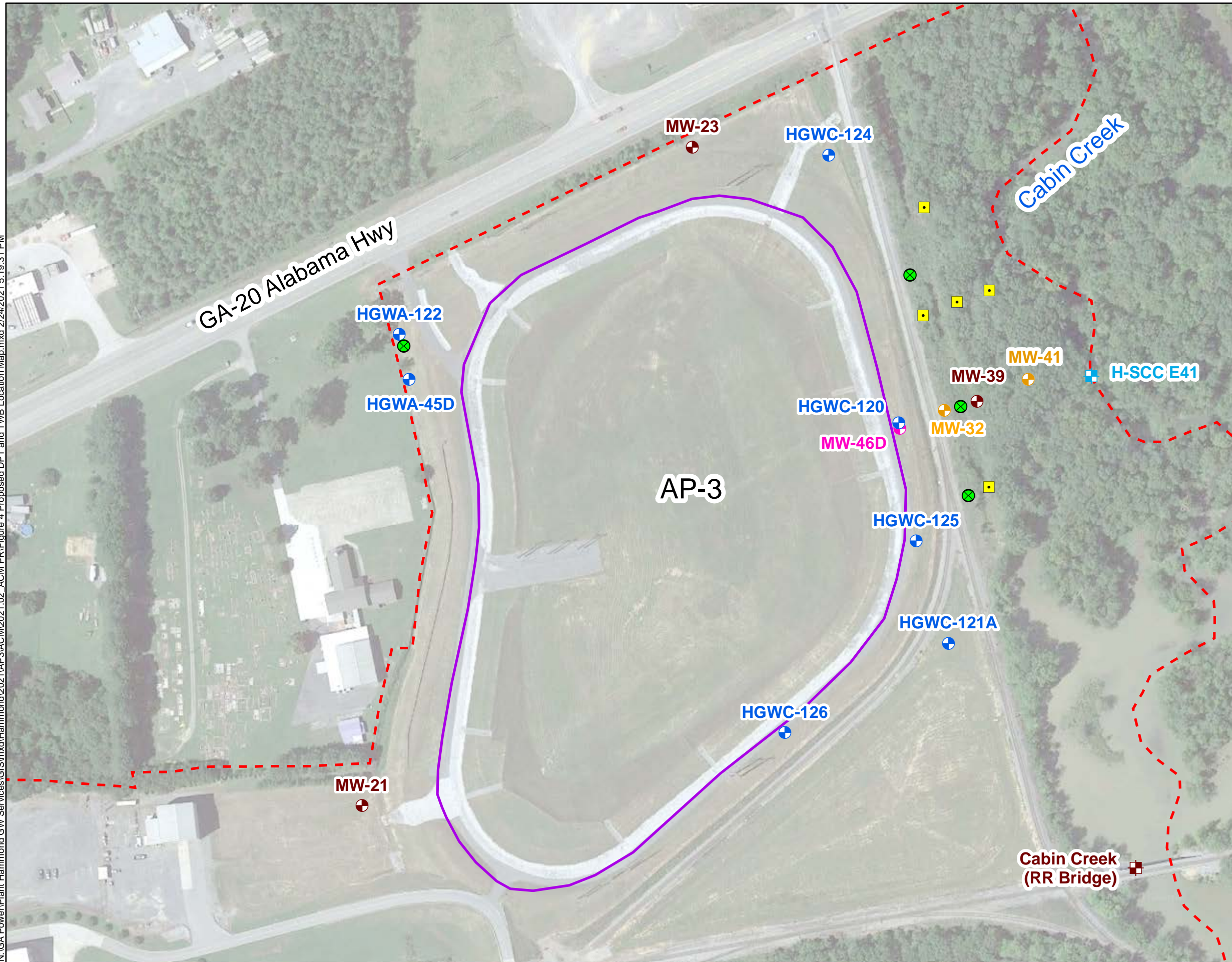
Prepared By: Geosyntec  
consultants

**FIGURE  
3**











KENNESAW, GA    FEBRUARY 2021



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP3\ACM\2021.02\_ACM\_PR\Figure 4 Proposed DPT and TWB Location Map.mxd 2/24/2021 5:19:31 PM



**LEGEND**

-  Temporary Piezometer (AEM Related)
-  DPT Borehole
-  Compliance Monitoring Well
-  Horizontal Delineation Well
-  Vertical Delineation Well
-  Piezometer
-  Surface Water Sample Point
-  Surface Water Level Gauge Point
-  Approximate AP-3 Boundary
-  Plant Hammond Property Boundary

Notes:  
 1. Aerial photograph source: Google Earth Pro, August 2019.  
 2. The DPT and temporary piezometer (AEM related) locations are approximate pending final survey.



**DPT AND TEMPORARY PIEZOMETER (AEM RELATED) LOCATIONS**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-3  
FLOYD COUNTY, GEORGIA

Prepared For:  Georgia Power

Prepared By: 

KENNESAW, GA    FEBRUARY 2021

**FIGURE 4**

# APPENDIX A

## DPT Field Sampling Logs



# BORING LOG



BORING NO.: DPT-01 PROJECT NO.: GW06581 PAGE 1 OF 1  
 SITE: Plant Hammond DATE: 01/29/21  
 TOOLS AND METHOD: DPT BIT DIA: 1"  
 TOTAL DEPTH: 18' GROUNDWATER DEPTH: -  
 DRILLING COMPANY: Cascade RIG: Geoprobe  
 DRILLERS: Cesey LOGGERS: Thomas Kessler

LITHOLOGY LOG

DEPTH (ft) GRAPHIC LOG SAMPLE ID AND DEPTH

DRILLING LOG

| LITHOLOGY LOG   | DEPTH (ft) | GRAPHIC LOG | SAMPLE ID AND DEPTH | DRILLING LOG   |
|---|------------|-------------|---------------------|--|
| 0-5 Silty clay, Brownish yellow (10YR7/6), dry to moist, trace sands, <del>low to</del> <sup>non to</sup> medium plasticity, sand and rock fragments throughout | 0-5        |             |                     | no sample, arrive in ct eval   |
| 5-10 well graded Silt   | 5-10       |             |                     |  |
| 10-13 Clay, Reddish yellow (7.5YR7/6) Wet, soft to firm, trace silts and sands, med. plasticity   | 10-13      |             |                     | Standing water in sleeves  |
| 13-18 Clay, Reddish yellow (7.5YR7/6) Wet, soft, trace sands and gravel <del>with gravel</del> medium plasticity  | 13-18      |             |                     | Samples<br>DPT-01A (Bugs) 0344<br>DPT-01B (control) 0900<br>DPT-01C (control) 0923<br><br>DPT-01B - 10-18'<br>DPT-01C - 10-18' |
| EOB   |            |             |                     | Soil samples collected from depth interval 10-18 ft bgs at DPT-01A, DPT-01B, and DPT-01C                                       |

# BORING LOG

BOREHOLE LOCATION MAP



BORING NO.: DPT-02 PROJECT NO.: CAW6801 PAGE 1 OF 1  
 SITE: Hammond DATE: 2/1/2021  
 TOOLS AND METHOD: DPT BIT DIA: ✓  
 TOTAL DEPTH: 18' GROUNDWATER DEPTH: \_\_\_\_\_  
 DRILLING COMPANY: Cascade RIG: Cycloprobe  
 DRILLERS: \_\_\_\_\_ LOGGERS: Chad RUSSO

| LITHOLOGY LOG                            | DEPTH (ft) | GRAPHIC LOG | SAMPLE ID AND DEPTH | DRILLING LOG   |
|--|------------|-------------|---------------------|--|
| 0-10' No recovery                        |            |             |                     |  |
| 10'-13'<br>CLAY<br>reddish yellow, moist |            |             |                     |  |
| 13'-18'<br>CLAY<br>very dark brown, wet  |            |             |                     | Soil samples collected from depth interval 13-18 ft bgs at DPT-02A, DPT-02B, and DPT-02C |
| end of hole                              |            |             |                     |  |





# BORING LOG



BORING NO.: DPT-04 PROJECT NO.: 62642881 PAGE 1 OF 1  
 SITE: Plant Hammond DATE: 01/29/21  
 TOOLS AND METHOD: DPT BIT DIA: 2 1/4"  
 TOTAL DEPTH: 18' GROUNDWATER DEPTH: -  
 DRILLING COMPANY: Cascade RIG: Geoprobe  
 DRILLERS: Casey LOGGERS: Thomas Kessler

LITHOLOGY LOG

DEPTH (ft) GRAPHIC LOG SAMPLE ID AND DEPTH

DRILLING LOG

0-5  
Clay, Strong Brown (7.54R 5/8)  
dry-moist, trace sands, medium  
plasticity

5-10  
SAA

10-13 Clay, Strong Brown (7.54R 5/8)  
moist, firm, trace sands

13-18  
Clay Yellow (2.54R 7/8)  
moist, firm to soft, increasing  
moisture with depth, white  
mottling throughout

Hand augered, No samples



Samples 13-18'

Soil samples collected from depth interval 13-18 ft bgs at DPT-04A, DPT-04B, and DPT-04C.

ECB

D

# BORING LOG

BOREHOLE LOCATION MAP



BORING NO.: DPT-04A PROJECT NO.: GW6581 PAGE 1 OF 1  
 SITE: Hammond DATE: 2/1/2021  
 TOOLS AND METHOD: DPT BIT DIA: \_\_\_\_\_  
 TOTAL DEPTH: 21' GROUNDWATER DEPTH: \_\_\_\_\_  
 DRILLING COMPANY: Cascade RIG: Geoprobe  
 DRILLERS: \_\_\_\_\_ LOGGERS: Chad Russel

| LITHOLOGY LOG  | DEPTH (ft) | GRAPHIC LOG | SAMPLE ID AND DEPTH | DRILLING LOG  |
|--|------------|-------------|---------------------|---|
| <p><del>(S)</del> (S)</p> <p>0' - 18'</p> <p>No recovery</p> |            |             |                     |   |
| <p>18' - 21'</p> <p>CLAY<br/>brown, wet</p>                  |            |             |                     | <p>Soil samples collected from depth interval 18-21 ft bgs at DPT-04A, DPT-04B, and DPT-04C. The original DPT push conducted on 1/29/21 did not go deep enough. The team returned to collect a deeper sample from the above interval.</p> |
| <p>end of hole</p>   |            |             |                     |   |

## APPENDIX D

### Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL  
RESULTS

August 2020

November 10, 2020

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 25, 2020 and August 31, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tyler Forney for  
Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92492418001 | HGWA-122  | Water  | 08/24/20 16:52 | 08/25/20 11:25 |
| 92492418002 | HGWA-2    | Water  | 08/25/20 10:38 | 08/26/20 12:00 |
| 92492418003 | HGWA-3    | Water  | 08/25/20 09:29 | 08/26/20 12:00 |
| 92492418004 | HGWC-125  | Water  | 08/25/20 14:51 | 08/26/20 12:00 |
| 92492418005 | HGWC-126  | Water  | 08/25/20 12:55 | 08/26/20 12:00 |
| 92492418006 | FB-01     | Water  | 08/25/20 16:00 | 08/26/20 12:00 |
| 92492418007 | HGWC-121A | Water  | 08/26/20 15:17 | 08/27/20 08:56 |
| 92492418008 | MW-32     | Water  | 08/26/20 13:10 | 08/27/20 08:56 |
| 92492418009 | MW-39     | Water  | 08/26/20 10:23 | 08/27/20 08:56 |
| 92492418010 | MW-41     | Water  | 08/26/20 11:37 | 08/27/20 08:56 |
| 92492418011 | HGWC-120  | Water  | 08/26/20 16:50 | 08/27/20 08:56 |
| 92492418012 | FD-01     | Water  | 08/26/20 00:00 | 08/27/20 08:56 |
| 92492418013 | HGWC-124  | Water  | 08/27/20 11:17 | 08/28/20 11:08 |
| 92492418014 | HGWA-1    | Water  | 08/28/20 09:26 | 08/31/20 12:08 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported |
|-------------|-----------|------------------------|----------|-------------------|
| 92492418001 | HGWA-122  | EPA 6020B              | CW1, KH  | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
| 92492418002 | HGWA-2    | EPA 6020B              | CW1, KH  | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 1                 |
| 92492418003 | HGWA-3    | EPA 6020B              | CW1      | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 1                 |
| 92492418004 | HGWC-125  | EPA 6010D              | DRB      | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | ALW      | 1                 |
| 92492418005 | HGWC-126  | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
| 92492418006 | FB-01     | SM 2450C-2011          | ALW      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
| 92492418007 | HGWC-121A | EPA 7470A              | VB       | 1                 |
|             |           | EPA 6020B              | CW1, KH  | 12                |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
|             |           | EPA 6020B              | CW1      | 12                |
| 92492418008 | MW-32     | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
|             |           | EPA 6020B              | CW1      | 12                |
| 92492418009 | MW-39     | EPA 7470A              | VB       | 1                 |
|             |           | EPA 6020B              | CW1      | 12                |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
| 92492418010 | MW-41     | EPA 6020B              | CW1      | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
| 92492418011 | HGWC-120  | EPA 6020B              | CW1      | 12                |

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported |
|-------------|-----------|------------------------|----------|-------------------|
| 92492418012 | FD-01     | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
|             |           | EPA 6020B              | CW1      | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
| 92492418013 | HGWC-124  | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |
|             |           | EPA 6020B              | CW1      | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
| 92492418014 | HGWA-1    | EPA 300.0 Rev 2.1 1993 | BRJ      | 1                 |
|             |           | EPA 6020B              | CW1      | 12                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 1                 |

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Lab Sample ID          | Client Sample ID       | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters             |           |            |              |                |            |
| <b>92492418001</b>     | <b>HGWA-122</b>        |           |            |              |                |            |
|                        | pH                     | 6.54      | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium                 | 0.041     | mg/L       | 0.010        | 08/28/20 16:22 |            |
| EPA 6020B              | Chromium               | 0.00093J  | mg/L       | 0.010        | 08/28/20 16:22 |            |
| EPA 6020B              | Lead                   | 0.000077J | mg/L       | 0.0050       | 08/28/20 16:22 |            |
| EPA 6020B              | Molybdenum             | 0.0031J   | mg/L       | 0.010        | 08/28/20 16:22 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.075J    | mg/L       | 0.10         | 08/26/20 20:34 |            |
| <b>92492418002</b>     | <b>HGWA-2</b>          |           |            |              |                |            |
|                        | pH                     | 5.17      | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium                 | 0.11      | mg/L       | 0.010        | 08/28/20 16:27 |            |
| EPA 6020B              | Beryllium              | 0.00014J  | mg/L       | 0.0030       | 08/28/20 16:27 |            |
| EPA 6020B              | Chromium               | 0.00067J  | mg/L       | 0.010        | 08/28/20 16:27 |            |
| EPA 6020B              | Cobalt                 | 0.018     | mg/L       | 0.0050       | 08/28/20 16:27 |            |
| EPA 6020B              | Lead                   | 0.000085J | mg/L       | 0.0050       | 08/28/20 16:27 |            |
| EPA 6020B              | Lithium                | 0.0015J   | mg/L       | 0.030        | 08/28/20 16:27 |            |
| <b>92492418003</b>     | <b>HGWA-3</b>          |           |            |              |                |            |
|                        | pH                     | 7.14      | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium                 | 0.11      | mg/L       | 0.010        | 08/28/20 16:33 |            |
| EPA 6020B              | Lithium                | 0.0027J   | mg/L       | 0.030        | 08/28/20 16:33 |            |
| <b>92492418004</b>     | <b>HGWC-125</b>        |           |            |              |                |            |
|                        | pH                     | 6.36      | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6010D              | Calcium                | 186       | mg/L       | 1.0          | 09/08/20 21:53 | M1         |
| EPA 6020B              | Barium                 | 0.045     | mg/L       | 0.010        | 08/28/20 17:06 |            |
| EPA 6020B              | Boron                  | 1.4       | mg/L       | 0.10         | 08/28/20 17:06 |            |
| EPA 6020B              | Cobalt                 | 0.0087    | mg/L       | 0.0050       | 08/28/20 17:06 |            |
| EPA 6020B              | Lithium                | 0.0037J   | mg/L       | 0.030        | 08/28/20 17:06 |            |
| EPA 6020B              | Molybdenum             | 0.00099J  | mg/L       | 0.010        | 08/28/20 17:06 |            |
| SM 2450C-2011          | Total Dissolved Solids | 772       | mg/L       | 10.0         | 08/31/20 18:02 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 10.6      | mg/L       | 1.0          | 08/27/20 17:11 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.16      | mg/L       | 0.10         | 08/27/20 17:11 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 353       | mg/L       | 1.0          | 08/27/20 17:11 |            |
| <b>92492418005</b>     | <b>HGWC-126</b>        |           |            |              |                |            |
|                        | pH                     | 6.78      | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6010D              | Calcium                | 130       | mg/L       | 1.0          | 09/08/20 22:11 |            |
| EPA 6020B              | Barium                 | 0.23      | mg/L       | 0.010        | 08/28/20 17:12 |            |
| EPA 6020B              | Boron                  | 0.016J    | mg/L       | 0.10         | 08/28/20 17:12 |            |
| EPA 6020B              | Chromium               | 0.00096J  | mg/L       | 0.010        | 08/28/20 17:12 |            |
| EPA 6020B              | Lead                   | 0.000045J | mg/L       | 0.0050       | 08/28/20 17:12 |            |
| EPA 6020B              | Lithium                | 0.0037J   | mg/L       | 0.030        | 08/28/20 17:12 |            |
| SM 2450C-2011          | Total Dissolved Solids | 505       | mg/L       | 10.0         | 08/31/20 18:02 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 8.7       | mg/L       | 1.0          | 08/27/20 17:26 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.52      | mg/L       | 0.10         | 08/27/20 17:26 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 62.8      | mg/L       | 1.0          | 08/27/20 17:26 |            |
| <b>92492418006</b>     | <b>FB-01</b>           |           |            |              |                |            |
| EPA 6020B              | Barium                 | 0.0022J   | mg/L       | 0.010        | 08/28/20 17:18 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Lab Sample ID          | Client Sample ID | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters       |          |            |              |                |            |
| <b>92492418007</b>     | <b>HGWC-121A</b> |          |            |              |                |            |
|                        | pH               | 6.73     | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium           | 0.057    | mg/L       | 0.010        | 09/01/20 19:53 |            |
| EPA 6020B              | Lithium          | 0.0071J  | mg/L       | 0.030        | 09/01/20 19:53 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.16     | mg/L       | 0.10         | 08/29/20 01:52 |            |
| <b>92492418008</b>     | <b>MW-32</b>     |          |            |              |                |            |
|                        | pH               | 6.75     | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Antimony         | 0.00035J | mg/L       | 0.0030       | 09/01/20 19:59 |            |
| EPA 6020B              | Barium           | 0.055    | mg/L       | 0.010        | 09/01/20 19:59 |            |
| EPA 6020B              | Cobalt           | 0.0048J  | mg/L       | 0.0050       | 09/01/20 19:59 |            |
| EPA 6020B              | Lithium          | 0.031    | mg/L       | 0.030        | 09/01/20 19:59 |            |
| EPA 6020B              | Molybdenum       | 0.065    | mg/L       | 0.010        | 09/01/20 19:59 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.33     | mg/L       | 0.10         | 08/29/20 02:07 |            |
| <b>92492418009</b>     | <b>MW-39</b>     |          |            |              |                |            |
|                        | pH               | 6.74     | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium           | 0.059    | mg/L       | 0.010        | 09/01/20 20:04 |            |
| EPA 6020B              | Cobalt           | 0.0026J  | mg/L       | 0.0050       | 09/01/20 20:04 |            |
| EPA 6020B              | Lithium          | 0.031    | mg/L       | 0.030        | 09/01/20 20:04 |            |
| EPA 6020B              | Molybdenum       | 0.064    | mg/L       | 0.010        | 09/01/20 20:04 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.32     | mg/L       | 0.10         | 08/29/20 02:22 |            |
| <b>92492418010</b>     | <b>MW-41</b>     |          |            |              |                |            |
|                        | pH               | 6.74     | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium           | 0.066    | mg/L       | 0.010        | 09/01/20 20:10 |            |
| EPA 6020B              | Cobalt           | 0.00068J | mg/L       | 0.0050       | 09/01/20 20:10 |            |
| EPA 6020B              | Lithium          | 0.027J   | mg/L       | 0.030        | 09/01/20 20:10 |            |
| EPA 6020B              | Molybdenum       | 0.039    | mg/L       | 0.010        | 09/01/20 20:10 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.24     | mg/L       | 0.10         | 08/29/20 02:37 |            |
| <b>92492418011</b>     | <b>HGWC-120</b>  |          |            |              |                |            |
|                        | pH               | 6.96     | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium           | 0.041    | mg/L       | 0.010        | 09/01/20 20:27 |            |
| EPA 6020B              | Cobalt           | 0.0023J  | mg/L       | 0.0050       | 09/01/20 20:27 |            |
| EPA 6020B              | Lithium          | 0.023J   | mg/L       | 0.030        | 09/01/20 20:27 |            |
| EPA 6020B              | Molybdenum       | 0.050    | mg/L       | 0.010        | 09/01/20 20:27 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.48     | mg/L       | 0.10         | 08/29/20 03:22 |            |
| <b>92492418012</b>     | <b>FD-01</b>     |          |            |              |                |            |
| EPA 6020B              | Barium           | 0.057    | mg/L       | 0.010        | 09/01/20 20:33 |            |
| EPA 6020B              | Cobalt           | 0.0046J  | mg/L       | 0.0050       | 09/01/20 20:33 |            |
| EPA 6020B              | Lithium          | 0.031    | mg/L       | 0.030        | 09/01/20 20:33 |            |
| EPA 6020B              | Molybdenum       | 0.067    | mg/L       | 0.010        | 09/01/20 20:33 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.33     | mg/L       | 0.10         | 08/29/20 03:37 |            |
| <b>92492418013</b>     | <b>HGWC-124</b>  |          |            |              |                |            |
|                        | pH               | 7.15     | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium           | 0.062    | mg/L       | 0.010        | 09/01/20 20:44 |            |
| EPA 6020B              | Lithium          | 0.00091J | mg/L       | 0.030        | 09/01/20 20:44 |            |
| EPA 6020B              | Molybdenum       | 0.00091J | mg/L       | 0.010        | 09/01/20 20:44 |            |

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Lab Sample ID          | Client Sample ID |           |            |              |                |            |
|------------------------|------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters       | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
| <b>92492418014</b>     | <b>HGWA-1</b>    |           |            |              |                |            |
|                        | pH               | 7.02      | Std. Units |              | 09/08/20 11:50 |            |
| EPA 6020B              | Barium           | 0.036     | mg/L       | 0.010        | 09/02/20 17:11 |            |
| EPA 6020B              | Lead             | 0.000070J | mg/L       | 0.0050       | 09/02/20 17:11 |            |
| EPA 6020B              | Lithium          | 0.00087J  | mg/L       | 0.030        | 09/02/20 17:11 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride         | 0.080J    | mg/L       | 0.10         | 09/03/20 19:50 |            |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Sample: HGWA-122   |           | Lab ID: 92492418001 |              | Collected: 08/24/20 16:52 |    | Received: 08/25/20 11:25 |                | Matrix: Water |      |
|--|-----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results   | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |           |                     |              |                           |    |                          |                |               |      |
| pH   | 6.54      | Std. Units          |              |                           | 1  |                          | 09/08/20 11:50 |               |      |
| <b>6020 MET ICPMS</b>                                      |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND        | mg/L                | 0.0030       | 0.00028                   | 1  | 09/18/20 15:00           | 09/18/20 18:07 | 7440-36-0     |      |
| Arsenic  | ND        | mg/L                | 0.0050       | 0.00078                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-38-2     |      |
| Barium   | 0.041     | mg/L                | 0.010        | 0.00071                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-39-3     |      |
| Beryllium  | ND        | mg/L                | 0.0030       | 0.000046                  | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-41-7     |      |
| Cadmium  | ND        | mg/L                | 0.0025       | 0.00012                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-43-9     |      |
| Chromium   | 0.00093J  | mg/L                | 0.010        | 0.00055                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-47-3     |      |
| Cobalt   | ND        | mg/L                | 0.0050       | 0.00038                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-48-4     |      |
| Lead   | 0.000077J | mg/L                | 0.0050       | 0.000036                  | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7439-92-1     |      |
| Lithium  | ND        | mg/L                | 0.030        | 0.00081                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7439-93-2     |      |
| Molybdenum   | 0.0031J   | mg/L                | 0.010        | 0.00069                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7439-98-7     |      |
| Selenium   | ND        | mg/L                | 0.010        | 0.0016                    | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7782-49-2     |      |
| Thallium   | ND        | mg/L                | 0.0010       | 0.00014                   | 1  | 08/27/20 17:10           | 08/28/20 16:22 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND        | mg/L                | 0.00050      | 0.000078                  | 1  | 08/26/20 12:00           | 08/27/20 10:26 | 7439-97-6     |      |
| <b>300.0 IC Anions 28 Days</b>                             |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Fluoride   | 0.075J    | mg/L                | 0.10         | 0.050                     | 1  |                          | 08/26/20 20:34 | 16984-48-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

**Sample: HGWA-2**      **Lab ID: 92492418002**      Collected: 08/25/20 10:38      Received: 08/26/20 12:00      Matrix: Water

| Parameters  | Results  | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual   |
|---|----------|------------|---------|----------|----|----------------|----------------|------------|--------|
|   |          |            | Limit   | MDL      | DF |                |                |            |        |
| <b>Field Data</b>   |          |            |         |          |    |                |                |            |        |
| Analytical Method: Pace Analytical Services - Charlotte   |          |            |         |          |    |                |                |            |        |
| pH  | 5.17     | Std. Units |         |          | 1  |                | 09/08/20 11:50 |            |        |
| <b>6020 MET ICPMS</b>   |          |            |         |          |    |                |                |            |        |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |          |            |         |          |    |                |                |            |        |
| Antimony  | ND       | mg/L       | 0.0030  | 0.00028  | 1  | 09/18/20 15:00 | 09/18/20 18:12 | 7440-36-0  | M1, R1 |
| Arsenic   | ND       | mg/L       | 0.0050  | 0.00078  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-38-2  |        |
| Barium  | 0.11     | mg/L       | 0.010   | 0.00071  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-39-3  |        |
| Beryllium   | 0.00014J | mg/L       | 0.0030  | 0.000046 | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-41-7  |        |
| Cadmium   | ND       | mg/L       | 0.0025  | 0.00012  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-43-9  |        |
| Chromium  | 0.00067J | mg/L       | 0.010   | 0.00055  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-47-3  |        |
| Cobalt  | 0.018    | mg/L       | 0.0050  | 0.00038  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-48-4  |        |
| Lead  | 0.00085J | mg/L       | 0.0050  | 0.000036 | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7439-92-1  |        |
| Lithium   | 0.0015J  | mg/L       | 0.030   | 0.00081  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7439-93-2  |        |
| Molybdenum  | ND       | mg/L       | 0.010   | 0.00069  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7439-98-7  |        |
| Selenium  | ND       | mg/L       | 0.010   | 0.0016   | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7782-49-2  |        |
| Thallium  | ND       | mg/L       | 0.0010  | 0.00014  | 1  | 08/27/20 17:10 | 08/28/20 16:27 | 7440-28-0  |        |
| <b>7470 Mercury</b>   |          |            |         |          |    |                |                |            |        |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |          |            |         |          |    |                |                |            |        |
| Mercury   | ND       | mg/L       | 0.00050 | 0.000078 | 1  | 08/31/20 11:00 | 09/01/20 10:06 | 7439-97-6  |        |
| <b>300.0 IC Anions 28 Days</b>  |          |            |         |          |    |                |                |            |        |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                   |          |            |         |          |    |                |                |            |        |
| Fluoride  | ND       | mg/L       | 0.10    | 0.050    | 1  |                | 08/27/20 16:41 | 16984-48-8 |        |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

**Sample: HGWA-3**      **Lab ID: 92492418003**      Collected: 08/25/20 09:29      Received: 08/26/20 12:00      Matrix: Water

| Parameters  | Results | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|---------|------------|---------|----------|----|----------------|----------------|------------|------|
|   |         |            | Limit   | MDL      | DF |                |                |            |      |
| <b>Field Data</b>   |         |            |         |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte         |         |            |         |          |    |                |                |            |      |
| pH  | 7.14    | Std. Units |         |          | 1  |                | 09/08/20 11:50 |            |      |
| <b>6020 MET ICPMS</b>   |         |            |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A |         |            |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA                |         |            |         |          |    |                |                |            |      |
| Antimony  | ND      | mg/L       | 0.0030  | 0.00028  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-36-0  |      |
| Arsenic   | ND      | mg/L       | 0.0050  | 0.00078  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-38-2  |      |
| Barium  | 0.11    | mg/L       | 0.010   | 0.00071  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-39-3  |      |
| Beryllium   | ND      | mg/L       | 0.0030  | 0.000046 | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-41-7  |      |
| Cadmium   | ND      | mg/L       | 0.0025  | 0.00012  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-43-9  |      |
| Chromium  | ND      | mg/L       | 0.010   | 0.00055  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-47-3  |      |
| Cobalt  | ND      | mg/L       | 0.0050  | 0.00038  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-48-4  |      |
| Lead  | ND      | mg/L       | 0.0050  | 0.000036 | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7439-92-1  |      |
| Lithium   | 0.0027J | mg/L       | 0.030   | 0.00081  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7439-93-2  |      |
| Molybdenum  | ND      | mg/L       | 0.010   | 0.00069  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7439-98-7  |      |
| Selenium  | ND      | mg/L       | 0.010   | 0.0016   | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7782-49-2  |      |
| Thallium  | ND      | mg/L       | 0.0010  | 0.00014  | 1  | 08/27/20 17:10 | 08/28/20 16:33 | 7440-28-0  |      |
| <b>7470 Mercury</b>   |         |            |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A |         |            |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA                |         |            |         |          |    |                |                |            |      |
| Mercury   | ND      | mg/L       | 0.00050 | 0.000078 | 1  | 08/31/20 11:00 | 09/01/20 10:08 | 7439-97-6  |      |
| <b>300.0 IC Anions 28 Days</b>                                  |         |            |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                       |         |            |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                            |         |            |         |          |    |                |                |            |      |
| Fluoride  | ND      | mg/L       | 0.10    | 0.050    | 1  |                | 08/27/20 16:56 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Sample: HGWC-125   |          | Lab ID: 92492418004 |              | Collected: 08/25/20 14:51 |    | Received: 08/26/20 12:00 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| pH   | 6.36     | Std. Units          |              |                           | 1  |                          | 09/08/20 11:50 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Calcium  | 186      | mg/L                | 1.0          | 0.070                     | 1  | 09/08/20 13:08           | 09/08/20 21:53 | 7440-70-2     | M1   |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00028                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-36-0     |      |
| Arsenic  | ND       | mg/L                | 0.0050       | 0.00078                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-38-2     |      |
| Barium   | 0.045    | mg/L                | 0.010        | 0.00071                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.0030       | 0.000046                  | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-41-7     |      |
| Boron  | 1.4      | mg/L                | 0.10         | 0.0052                    | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.0025       | 0.00012                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.010        | 0.00055                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-47-3     |      |
| Cobalt   | 0.0087   | mg/L                | 0.0050       | 0.00038                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-48-4     |      |
| Lead   | ND       | mg/L                | 0.0050       | 0.000036                  | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7439-92-1     |      |
| Lithium  | 0.0037J  | mg/L                | 0.030        | 0.00081                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7439-93-2     |      |
| Molybdenum   | 0.00099J | mg/L                | 0.010        | 0.00069                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7439-98-7     |      |
| Selenium   | ND       | mg/L                | 0.010        | 0.0016                    | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7782-49-2     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00014                   | 1  | 08/27/20 17:10           | 08/28/20 17:06 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00050      | 0.000078                  | 1  | 08/31/20 11:00           | 09/01/20 10:15 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 772      | mg/L                | 10.0         | 10.0                      | 1  |                          | 08/31/20 18:02 |               |      |
| <b>300.0 IC Anions 28 Days</b>                             |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |          |                     |              |                           |    |                          |                |               |      |
| Chloride   | 10.6     | mg/L                | 1.0          | 0.60                      | 1  |                          | 08/27/20 17:11 | 16887-00-6    |      |
| Fluoride   | 0.16     | mg/L                | 0.10         | 0.050                     | 1  |                          | 08/27/20 17:11 | 16984-48-8    |      |
| Sulfate  | 353      | mg/L                | 1.0          | 0.50                      | 1  |                          | 08/27/20 17:11 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Sample: HGWC-126   |           | Lab ID: 92492418005 |              | Collected: 08/25/20 12:55 |    | Received: 08/26/20 12:00 |                | Matrix: Water |      |
|--|-----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results   | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |           |                     |              |                           |    |                          |                |               |      |
| pH   | 6.78      | Std. Units          |              |                           | 1  |                          | 09/08/20 11:50 |               |      |
| <b>6010D ATL ICP</b>                                       |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Calcium  | 130       | mg/L                | 1.0          | 0.070                     | 1  | 09/08/20 13:08           | 09/08/20 22:11 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>                                      |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND        | mg/L                | 0.0030       | 0.00028                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-36-0     |      |
| Arsenic  | ND        | mg/L                | 0.0050       | 0.00078                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-38-2     |      |
| Barium   | 0.23      | mg/L                | 0.010        | 0.00071                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-39-3     |      |
| Beryllium  | ND        | mg/L                | 0.0030       | 0.000046                  | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-41-7     |      |
| Boron  | 0.016J    | mg/L                | 0.10         | 0.0052                    | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-42-8     |      |
| Cadmium  | ND        | mg/L                | 0.0025       | 0.00012                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-43-9     |      |
| Chromium   | 0.00096J  | mg/L                | 0.010        | 0.00055                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-47-3     |      |
| Cobalt   | ND        | mg/L                | 0.0050       | 0.00038                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-48-4     |      |
| Lead   | 0.000045J | mg/L                | 0.0050       | 0.000036                  | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7439-92-1     |      |
| Lithium  | 0.0037J   | mg/L                | 0.030        | 0.00081                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7439-93-2     |      |
| Molybdenum   | ND        | mg/L                | 0.010        | 0.00069                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7439-98-7     |      |
| Selenium   | ND        | mg/L                | 0.010        | 0.0016                    | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7782-49-2     |      |
| Thallium   | ND        | mg/L                | 0.0010       | 0.00014                   | 1  | 08/27/20 17:10           | 08/28/20 17:12 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND        | mg/L                | 0.00050      | 0.000078                  | 1  | 08/31/20 11:00           | 09/01/20 10:18 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 505       | mg/L                | 10.0         | 10.0                      | 1  |                          | 08/31/20 18:02 |               |      |
| <b>300.0 IC Anions 28 Days</b>                             |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Chloride   | 8.7       | mg/L                | 1.0          | 0.60                      | 1  |                          | 08/27/20 17:26 | 16887-00-6    |      |
| Fluoride   | 0.52      | mg/L                | 0.10         | 0.050                     | 1  |                          | 08/27/20 17:26 | 16984-48-8    |      |
| Sulfate  | 62.8      | mg/L                | 1.0          | 0.50                      | 1  |                          | 08/27/20 17:26 | 14808-79-8    |      |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

| Sample: FB-01                       |                | Lab ID: 92492418006  |         | Collected: 08/25/20 16:00 |    | Received: 08/26/20 12:00 |                | Matrix: Water |      |  |
|-------------------------------------|----------------|--|---------|---------------------------|----|--------------------------|----------------|---------------|------|--|
| Parameters                          | Results        | Units  | Report  |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual |  |
|                                     |                |  | Limit   | MDL                       | DF |                          |                |               |      |  |
| <b>6010D ATL ICP</b>                |                | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Calcium                             | ND             | mg/L   | 1.0     | 0.070                     | 1  | 09/08/20 13:08           | 09/08/20 22:15 | 7440-70-2     |      |  |
| <b>6020 MET ICPMS</b>               |                | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Antimony                            | ND             | mg/L   | 0.0030  | 0.00028                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-36-0     |      |  |
| Arsenic                             | ND             | mg/L   | 0.0050  | 0.00078                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-38-2     |      |  |
| Barium                              | <b>0.0022J</b> | mg/L   | 0.010   | 0.00071                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-39-3     |      |  |
| Beryllium                           | ND             | mg/L   | 0.0030  | 0.000046                  | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-41-7     |      |  |
| Boron                               | ND             | mg/L   | 0.10    | 0.0052                    | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-42-8     |      |  |
| Cadmium                             | ND             | mg/L   | 0.0025  | 0.00012                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-43-9     |      |  |
| Chromium                            | ND             | mg/L   | 0.010   | 0.00055                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-47-3     |      |  |
| Cobalt                              | ND             | mg/L   | 0.0050  | 0.00038                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-48-4     |      |  |
| Lead                                | ND             | mg/L   | 0.0050  | 0.000036                  | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7439-92-1     |      |  |
| Lithium                             | ND             | mg/L   | 0.030   | 0.00081                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7439-93-2     |      |  |
| Molybdenum                          | ND             | mg/L   | 0.010   | 0.00069                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7439-98-7     |      |  |
| Selenium                            | ND             | mg/L   | 0.010   | 0.0016                    | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7782-49-2     |      |  |
| Thallium                            | ND             | mg/L   | 0.0010  | 0.00014                   | 1  | 08/27/20 17:10           | 08/28/20 17:18 | 7440-28-0     |      |  |
| <b>7470 Mercury</b>                 |                | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Mercury                             | ND             | mg/L   | 0.00050 | 0.000078                  | 1  | 08/31/20 11:00           | 09/01/20 10:20 | 7439-97-6     |      |  |
| <b>2540C Total Dissolved Solids</b> |                | Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |    |                          |                |               |      |  |
| Total Dissolved Solids              | ND             | mg/L   | 10.0    | 10.0                      | 1  |                          | 08/31/20 18:02 |               |      |  |
| <b>300.0 IC Anions 28 Days</b>      |                | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |    |                          |                |               |      |  |
| Chloride                            | ND             | mg/L   | 1.0     | 0.60                      | 1  |                          | 08/27/20 17:41 | 16887-00-6    |      |  |
| Fluoride                            | ND             | mg/L   | 0.10    | 0.050                     | 1  |                          | 08/27/20 17:41 | 16984-48-8    |      |  |
| Sulfate                             | ND             | mg/L   | 1.0     | 0.50                      | 1  |                          | 08/27/20 17:41 | 14808-79-8    |      |  |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Sample: HGWC-121A  |         | Lab ID: 92492418007 |              | Collected: 08/26/20 15:17 |    | Received: 08/27/20 08:56 |                | Matrix: Water |      |
|--|---------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |         |                     |              |                           |    |                          |                |               |      |
| pH   | 6.73    | Std. Units          |              |                           | 1  |                          | 09/08/20 11:50 |               |      |
| <b>6020 MET ICPMS</b>                                      |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND      | mg/L                | 0.0030       | 0.00028                   | 1  | 09/18/20 15:00           | 09/18/20 18:47 | 7440-36-0     |      |
| Arsenic  | ND      | mg/L                | 0.0050       | 0.00078                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7440-38-2     |      |
| Barium   | 0.057   | mg/L                | 0.010        | 0.00071                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7440-39-3     |      |
| Beryllium  | ND      | mg/L                | 0.0030       | 0.000046                  | 1  | 09/01/20 14:03           | 09/02/20 16:53 | 7440-41-7     |      |
| Cadmium  | ND      | mg/L                | 0.0025       | 0.00012                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7440-43-9     |      |
| Chromium   | ND      | mg/L                | 0.010        | 0.00055                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7440-47-3     |      |
| Cobalt   | ND      | mg/L                | 0.0050       | 0.00038                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7440-48-4     |      |
| Lead   | ND      | mg/L                | 0.0050       | 0.000036                  | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7439-92-1     |      |
| Lithium  | 0.0071J | mg/L                | 0.030        | 0.00081                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7439-93-2     |      |
| Molybdenum   | ND      | mg/L                | 0.010        | 0.00069                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7439-98-7     |      |
| Selenium   | ND      | mg/L                | 0.010        | 0.0016                    | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7782-49-2     |      |
| Thallium   | ND      | mg/L                | 0.0010       | 0.00014                   | 1  | 09/01/20 14:03           | 09/01/20 19:53 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND      | mg/L                | 0.00050      | 0.000078                  | 1  | 08/31/20 11:00           | 09/01/20 10:22 | 7439-97-6     |      |
| <b>300.0 IC Anions 28 Days</b>                             |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |         |                     |              |                           |    |                          |                |               |      |
| Fluoride   | 0.16    | mg/L                | 0.10         | 0.050                     | 1  |                          | 08/29/20 01:52 | 16984-48-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

**Sample: MW-32**      **Lab ID: 92492418008**      Collected: 08/26/20 13:10      Received: 08/27/20 08:56      Matrix: Water

| Parameters   | Results  | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|--|----------|------------|---------|----------|----|----------------|----------------|------------|------|
|  |          |            | Limit   | MDL      | DF |                |                |            |      |
| <b>Field Data</b>  |          |            |         |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |            |         |          |    |                |                |            |      |
| pH   | 6.75     | Std. Units |         |          | 1  |                | 09/08/20 11:50 |            |      |
| <b>6020 MET ICPMS</b>                                      |          |            |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |            |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |            |         |          |    |                |                |            |      |
| Antimony   | 0.00035J | mg/L       | 0.0030  | 0.00028  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-36-0  |      |
| Arsenic  | ND       | mg/L       | 0.0050  | 0.00078  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-38-2  |      |
| Barium   | 0.055    | mg/L       | 0.010   | 0.00071  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-39-3  |      |
| Beryllium  | ND       | mg/L       | 0.0030  | 0.000046 | 1  | 09/01/20 14:03 | 09/02/20 16:58 | 7440-41-7  |      |
| Cadmium  | ND       | mg/L       | 0.0025  | 0.00012  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-43-9  |      |
| Chromium   | ND       | mg/L       | 0.010   | 0.00055  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-47-3  |      |
| Cobalt   | 0.0048J  | mg/L       | 0.0050  | 0.00038  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-48-4  |      |
| Lead   | ND       | mg/L       | 0.0050  | 0.000036 | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7439-92-1  |      |
| Lithium  | 0.031    | mg/L       | 0.030   | 0.00081  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7439-93-2  |      |
| Molybdenum   | 0.065    | mg/L       | 0.010   | 0.00069  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7439-98-7  |      |
| Selenium   | ND       | mg/L       | 0.010   | 0.0016   | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7782-49-2  |      |
| Thallium   | ND       | mg/L       | 0.0010  | 0.00014  | 1  | 09/01/20 14:03 | 09/01/20 19:59 | 7440-28-0  |      |
| <b>7470 Mercury</b>  |          |            |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |            |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |            |         |          |    |                |                |            |      |
| Mercury  | ND       | mg/L       | 0.00050 | 0.000078 | 1  | 08/31/20 11:00 | 09/01/20 10:25 | 7439-97-6  |      |
| <b>300.0 IC Anions 28 Days</b>                             |          |            |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |          |            |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                       |          |            |         |          |    |                |                |            |      |
| Fluoride   | 0.33     | mg/L       | 0.10    | 0.050    | 1  |                | 08/29/20 02:07 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

| Sample: MW-39  |         | Lab ID: 92492418009 |              | Collected: 08/26/20 10:23 |    | Received: 08/27/20 08:56 |                | Matrix: Water |      |
|--|---------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |         |                     |              |                           |    |                          |                |               |      |
| pH   | 6.74    | Std. Units          |              |                           | 1  |                          | 09/08/20 11:50 |               |      |
| <b>6020 MET ICPMS</b>                                      |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND      | mg/L                | 0.0030       | 0.00028                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-36-0     |      |
| Arsenic  | ND      | mg/L                | 0.0050       | 0.00078                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-38-2     |      |
| Barium   | 0.059   | mg/L                | 0.010        | 0.00071                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-39-3     |      |
| Beryllium  | ND      | mg/L                | 0.0030       | 0.000046                  | 1  | 09/01/20 14:03           | 09/02/20 17:04 | 7440-41-7     |      |
| Cadmium  | ND      | mg/L                | 0.0025       | 0.00012                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-43-9     |      |
| Chromium   | ND      | mg/L                | 0.010        | 0.00055                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-47-3     |      |
| Cobalt   | 0.0026J | mg/L                | 0.0050       | 0.00038                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-48-4     |      |
| Lead   | ND      | mg/L                | 0.0050       | 0.000036                  | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7439-92-1     |      |
| Lithium  | 0.031   | mg/L                | 0.030        | 0.00081                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7439-93-2     |      |
| Molybdenum   | 0.064   | mg/L                | 0.010        | 0.00069                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7439-98-7     |      |
| Selenium   | ND      | mg/L                | 0.010        | 0.0016                    | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7782-49-2     |      |
| Thallium   | ND      | mg/L                | 0.0010       | 0.00014                   | 1  | 09/01/20 14:03           | 09/01/20 20:04 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND      | mg/L                | 0.00050      | 0.000078                  | 1  | 08/31/20 11:00           | 09/01/20 11:36 | 7439-97-6     |      |
| <b>300.0 IC Anions 28 Days</b>                             |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |         |                     |              |                           |    |                          |                |               |      |
| Fluoride   | 0.32    | mg/L                | 0.10         | 0.050                     | 1  |                          | 08/29/20 02:22 | 16984-48-8    |      |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: **MW-41** Lab ID: **92492418010** Collected: 08/26/20 11:37 Received: 08/27/20 08:56 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|

**Field Data**

Analytical Method:  
Pace Analytical Services - Charlotte

|    |             |            |  |  |   |  |                |  |  |
|----|-------------|------------|--|--|---|--|----------------|--|--|
| pH | <b>6.74</b> | Std. Units |  |  | 1 |  | 09/08/20 11:50 |  |  |
|----|-------------|------------|--|--|---|--|----------------|--|--|

**6020 MET ICPMS**

Analytical Method: EPA 6020B Preparation Method: EPA 3005A  
Pace Analytical Services - Peachtree Corners, GA

|            |                 |      |        |          |   |                |                |           |  |
|------------|-----------------|------|--------|----------|---|----------------|----------------|-----------|--|
| Antimony   | ND              | mg/L | 0.0030 | 0.00028  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-36-0 |  |
| Arsenic    | ND              | mg/L | 0.0050 | 0.00078  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-38-2 |  |
| Barium     | <b>0.066</b>    | mg/L | 0.010  | 0.00071  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-39-3 |  |
| Beryllium  | ND              | mg/L | 0.0030 | 0.000046 | 1 | 09/01/20 14:03 | 09/02/20 17:10 | 7440-41-7 |  |
| Cadmium    | ND              | mg/L | 0.0025 | 0.00012  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-43-9 |  |
| Chromium   | ND              | mg/L | 0.010  | 0.00055  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-47-3 |  |
| Cobalt     | <b>0.00068J</b> | mg/L | 0.0050 | 0.00038  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-48-4 |  |
| Lead       | ND              | mg/L | 0.0050 | 0.000036 | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7439-92-1 |  |
| Lithium    | <b>0.027J</b>   | mg/L | 0.030  | 0.00081  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7439-93-2 |  |
| Molybdenum | <b>0.039</b>    | mg/L | 0.010  | 0.00069  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7439-98-7 |  |
| Selenium   | ND              | mg/L | 0.010  | 0.0016   | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7782-49-2 |  |
| Thallium   | ND              | mg/L | 0.0010 | 0.00014  | 1 | 09/01/20 14:03 | 09/01/20 20:10 | 7440-28-0 |  |

**7470 Mercury**

Analytical Method: EPA 7470A Preparation Method: EPA 7470A  
Pace Analytical Services - Peachtree Corners, GA

|         |    |      |         |          |   |                |                |           |  |
|---------|----|------|---------|----------|---|----------------|----------------|-----------|--|
| Mercury | ND | mg/L | 0.00050 | 0.000078 | 1 | 09/08/20 11:15 | 09/09/20 11:08 | 7439-97-6 |  |
|---------|----|------|---------|----------|---|----------------|----------------|-----------|--|

**300.0 IC Anions 28 Days**

Analytical Method: EPA 300.0 Rev 2.1 1993  
Pace Analytical Services - Asheville

|          |             |      |      |       |   |  |                |            |  |
|----------|-------------|------|------|-------|---|--|----------------|------------|--|
| Fluoride | <b>0.24</b> | mg/L | 0.10 | 0.050 | 1 |  | 08/29/20 02:37 | 16984-48-8 |  |
|----------|-------------|------|------|-------|---|--|----------------|------------|--|

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Sample: HGWC-120   |         | Lab ID: 92492418011 |              | Collected: 08/26/20 16:50 |    | Received: 08/27/20 08:56 |                | Matrix: Water |      |
|--|---------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |         |                     |              |                           |    |                          |                |               |      |
| pH   | 6.96    | Std. Units          |              |                           | 1  |                          | 09/08/20 11:50 |               |      |
| <b>6020 MET ICPMS</b>                                      |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND      | mg/L                | 0.0030       | 0.00028                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-36-0     |      |
| Arsenic  | ND      | mg/L                | 0.0050       | 0.00078                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-38-2     |      |
| Barium   | 0.041   | mg/L                | 0.010        | 0.00071                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-39-3     |      |
| Beryllium  | ND      | mg/L                | 0.0030       | 0.000046                  | 1  | 09/01/20 14:03           | 09/02/20 17:15 | 7440-41-7     |      |
| Cadmium  | ND      | mg/L                | 0.0025       | 0.00012                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-43-9     |      |
| Chromium   | ND      | mg/L                | 0.010        | 0.00055                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-47-3     |      |
| Cobalt   | 0.0023J | mg/L                | 0.0050       | 0.00038                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-48-4     |      |
| Lead   | ND      | mg/L                | 0.0050       | 0.000036                  | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7439-92-1     |      |
| Lithium  | 0.023J  | mg/L                | 0.030        | 0.00081                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7439-93-2     |      |
| Molybdenum   | 0.050   | mg/L                | 0.010        | 0.00069                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7439-98-7     |      |
| Selenium   | ND      | mg/L                | 0.010        | 0.0016                    | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7782-49-2     |      |
| Thallium   | ND      | mg/L                | 0.0010       | 0.00014                   | 1  | 09/01/20 14:03           | 09/01/20 20:27 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND      | mg/L                | 0.00050      | 0.000078                  | 1  | 09/08/20 11:15           | 09/09/20 11:10 | 7439-97-6     |      |
| <b>300.0 IC Anions 28 Days</b>                             |         |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |         |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |         |                     |              |                           |    |                          |                |               |      |
| Fluoride   | 0.48    | mg/L                | 0.10         | 0.050                     | 1  |                          | 08/29/20 03:22 | 16984-48-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Sample: FD-01                  |                | Lab ID: 92492418012  |         | Collected: 08/26/20 00:00 |    | Received: 08/27/20 08:56 |                | Matrix: Water |      |  |
|--------------------------------|----------------|--|---------|---------------------------|----|--------------------------|----------------|---------------|------|--|
| Parameters                     | Results        | Units  | Report  |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual |  |
|                                |                |  | Limit   | MDL                       | DF |                          |                |               |      |  |
| <b>6020 MET ICPMS</b>          |                | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Antimony                       | ND             | mg/L   | 0.0030  | 0.00028                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-36-0     |      |  |
| Arsenic                        | ND             | mg/L   | 0.0050  | 0.00078                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-38-2     |      |  |
| Barium                         | <b>0.057</b>   | mg/L   | 0.010   | 0.00071                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-39-3     |      |  |
| Beryllium                      | ND             | mg/L   | 0.0030  | 0.000046                  | 1  | 09/01/20 14:03           | 09/02/20 17:21 | 7440-41-7     |      |  |
| Cadmium                        | ND             | mg/L   | 0.0025  | 0.00012                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-43-9     |      |  |
| Chromium                       | ND             | mg/L   | 0.010   | 0.00055                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-47-3     |      |  |
| Cobalt                         | <b>0.0046J</b> | mg/L   | 0.0050  | 0.00038                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-48-4     |      |  |
| Lead                           | ND             | mg/L   | 0.0050  | 0.000036                  | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7439-92-1     |      |  |
| Lithium                        | <b>0.031</b>   | mg/L   | 0.030   | 0.00081                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7439-93-2     |      |  |
| Molybdenum                     | <b>0.067</b>   | mg/L   | 0.010   | 0.00069                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7439-98-7     |      |  |
| Selenium                       | ND             | mg/L   | 0.010   | 0.0016                    | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7782-49-2     |      |  |
| Thallium                       | ND             | mg/L   | 0.0010  | 0.00014                   | 1  | 09/01/20 14:03           | 09/01/20 20:33 | 7440-28-0     |      |  |
| <b>7470 Mercury</b>            |                | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Mercury                        | ND             | mg/L   | 0.00050 | 0.000078                  | 1  | 09/08/20 11:15           | 09/09/20 11:13 | 7439-97-6     |      |  |
| <b>300.0 IC Anions 28 Days</b> |                | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |    |                          |                |               |      |  |
| Fluoride                       | <b>0.33</b>    | mg/L   | 0.10    | 0.050                     | 1  |                          | 08/29/20 03:37 | 16984-48-8    |      |  |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

**Sample: HGWC-124**      **Lab ID: 92492418013**      Collected: 08/27/20 11:17      Received: 08/28/20 11:08      Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|

**Field Data**

Analytical Method:  
Pace Analytical Services - Charlotte

|    |      |            |  |  |   |  |                |  |  |
|----|------|------------|--|--|---|--|----------------|--|--|
| pH | 7.15 | Std. Units |  |  | 1 |  | 09/08/20 11:50 |  |  |
|----|------|------------|--|--|---|--|----------------|--|--|

**6020 MET ICPMS**

Analytical Method: EPA 6020B      Preparation Method: EPA 3005A  
Pace Analytical Services - Peachtree Corners, GA

|            |          |      |        |          |   |                |                |           |  |
|------------|----------|------|--------|----------|---|----------------|----------------|-----------|--|
| Antimony   | ND       | mg/L | 0.0030 | 0.00028  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-36-0 |  |
| Arsenic    | ND       | mg/L | 0.0050 | 0.00078  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-38-2 |  |
| Barium     | 0.062    | mg/L | 0.010  | 0.00071  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-39-3 |  |
| Beryllium  | ND       | mg/L | 0.0030 | 0.000046 | 1 | 09/01/20 14:03 | 09/02/20 17:33 | 7440-41-7 |  |
| Cadmium    | ND       | mg/L | 0.0025 | 0.00012  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-43-9 |  |
| Chromium   | ND       | mg/L | 0.010  | 0.00055  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-47-3 |  |
| Cobalt     | ND       | mg/L | 0.0050 | 0.00038  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-48-4 |  |
| Lead       | ND       | mg/L | 0.0050 | 0.000036 | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7439-92-1 |  |
| Lithium    | 0.00091J | mg/L | 0.030  | 0.00081  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7439-93-2 |  |
| Molybdenum | 0.00091J | mg/L | 0.010  | 0.00069  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7439-98-7 |  |
| Selenium   | ND       | mg/L | 0.010  | 0.0016   | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7782-49-2 |  |
| Thallium   | ND       | mg/L | 0.0010 | 0.00014  | 1 | 09/01/20 14:03 | 09/01/20 20:44 | 7440-28-0 |  |

**7470 Mercury**

Analytical Method: EPA 7470A      Preparation Method: EPA 7470A  
Pace Analytical Services - Peachtree Corners, GA

|         |    |      |         |          |   |                |                |           |  |
|---------|----|------|---------|----------|---|----------------|----------------|-----------|--|
| Mercury | ND | mg/L | 0.00050 | 0.000078 | 1 | 09/08/20 11:15 | 09/09/20 11:15 | 7439-97-6 |  |
|---------|----|------|---------|----------|---|----------------|----------------|-----------|--|

**300.0 IC Anions 28 Days**

Analytical Method: EPA 300.0 Rev 2.1 1993  
Pace Analytical Services - Asheville

|          |    |      |      |       |   |  |                |            |  |
|----------|----|------|------|-------|---|--|----------------|------------|--|
| Fluoride | ND | mg/L | 0.10 | 0.050 | 1 |  | 08/29/20 20:26 | 16984-48-8 |  |
|----------|----|------|------|-------|---|--|----------------|------------|--|

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

**Sample: HGWA-1**      **Lab ID: 92492418014**      Collected: 08/28/20 09:26      Received: 08/31/20 12:08      Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|

**Field Data**

Analytical Method:  
Pace Analytical Services - Charlotte

|    |             |            |  |  |   |  |                |  |  |
|----|-------------|------------|--|--|---|--|----------------|--|--|
| pH | <b>7.02</b> | Std. Units |  |  | 1 |  | 09/08/20 11:50 |  |  |
|----|-------------|------------|--|--|---|--|----------------|--|--|

**6020 MET ICPMS**

Analytical Method: EPA 6020B      Preparation Method: EPA 3005A  
Pace Analytical Services - Peachtree Corners, GA

|            |                  |      |        |          |   |                |                |           |  |
|------------|------------------|------|--------|----------|---|----------------|----------------|-----------|--|
| Antimony   | ND               | mg/L | 0.0030 | 0.00028  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-36-0 |  |
| Arsenic    | ND               | mg/L | 0.0050 | 0.00078  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-38-2 |  |
| Barium     | <b>0.036</b>     | mg/L | 0.010  | 0.00071  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-39-3 |  |
| Beryllium  | ND               | mg/L | 0.0030 | 0.000046 | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-41-7 |  |
| Cadmium    | ND               | mg/L | 0.0025 | 0.00012  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-43-9 |  |
| Chromium   | ND               | mg/L | 0.010  | 0.00055  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-47-3 |  |
| Cobalt     | ND               | mg/L | 0.0050 | 0.00038  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-48-4 |  |
| Lead       | <b>0.000070J</b> | mg/L | 0.0050 | 0.000036 | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7439-92-1 |  |
| Lithium    | <b>0.00087J</b>  | mg/L | 0.030  | 0.00081  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7439-93-2 |  |
| Molybdenum | ND               | mg/L | 0.010  | 0.00069  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7439-98-7 |  |
| Selenium   | ND               | mg/L | 0.010  | 0.0016   | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7782-49-2 |  |
| Thallium   | ND               | mg/L | 0.0010 | 0.00014  | 1 | 09/01/20 14:06 | 09/02/20 17:11 | 7440-28-0 |  |

**7470 Mercury**

Analytical Method: EPA 7470A      Preparation Method: EPA 7470A  
Pace Analytical Services - Peachtree Corners, GA

|         |    |      |         |          |   |                |                |           |  |
|---------|----|------|---------|----------|---|----------------|----------------|-----------|--|
| Mercury | ND | mg/L | 0.00050 | 0.000078 | 1 | 09/08/20 11:15 | 09/09/20 11:18 | 7439-97-6 |  |
|---------|----|------|---------|----------|---|----------------|----------------|-----------|--|

**300.0 IC Anions 28 Days**

Analytical Method: EPA 300.0 Rev 2.1 1993  
Pace Analytical Services - Asheville

|          |               |      |      |       |   |  |                |            |  |
|----------|---------------|------|------|-------|---|--|----------------|------------|--|
| Fluoride | <b>0.080J</b> | mg/L | 0.10 | 0.050 | 1 |  | 09/03/20 19:50 | 16984-48-8 |  |
|----------|---------------|------|------|-------|---|--|----------------|------------|--|

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 564973      Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A      Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92492418004, 92492418005, 92492418006

METHOD BLANK: 2994728      Matrix: Water  
Associated Lab Samples: 92492418004, 92492418005, 92492418006

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070 | 09/08/20 21:36 |            |

LABORATORY CONTROL SAMPLE: 2994729

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 0.95J      | 95        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2994730      2994731

| Parameter | Units | 2994730        |                 | 2994731   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 186            | 1               | 1         | 180        | 183      | -551      | -205         | 75-125 | 2       | 20 M1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 562831 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92492418001, 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

METHOD BLANK: 2984655 Matrix: Water  
Associated Lab Samples: 92492418001, 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 08/28/20 15:42 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 08/28/20 15:42 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 08/28/20 15:42 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 08/28/20 15:42 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 08/28/20 15:42 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 08/28/20 15:42 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 08/28/20 15:42 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 08/28/20 15:42 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 08/28/20 15:42 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 08/28/20 15:42 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 08/28/20 15:42 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 08/28/20 15:42 |            |

LABORATORY CONTROL SAMPLE: 2984656

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.093      | 93        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.089      | 89        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.089      | 89        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984657 2984658

| Parameter | Units | MS                 |             | MSD         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | 92491917001 Result | Spike Conc. | Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Antimony  | mg/L  | ND                 | 0.1         | 0.1         | 0.097     | 0.095    | 97        | 95           | 75-125 | 2       | 20   |            |
| Arsenic   | mg/L  | ND                 | 0.1         | 0.1         | 0.094     | 0.094    | 94        | 94           | 75-125 | 0       | 20   |            |
| Barium    | mg/L  | 0.030              | 0.1         | 0.1         | 0.12      | 0.12     | 94        | 89           | 75-125 | 4       | 20   |            |
| Beryllium | mg/L  | ND                 | 0.1         | 0.1         | 0.098     | 0.096    | 98        | 96           | 75-125 | 1       | 20   |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Parameter  | Units | 2984657               |                      | 2984658               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | Max<br>RPD | RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
|            |       | 92491917001<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |            |     |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.095        | 97            | 95          | 75-125       | 3               | 20         |     |      |
| Chromium   | mg/L  | 0.00063J              | 0.1                  | 0.1                   | 0.098        | 0.095        | 98            | 94          | 75-125       | 4               | 20         |     |      |
| Cobalt     | mg/L  | 0.0039J               | 0.1                  | 0.1                   | 0.10         | 0.098        | 96            | 94          | 75-125       | 3               | 20         |     |      |
| Lead       | mg/L  | ND                    | 0.1                  | 0.1                   | 0.090        | 0.088        | 90            | 88          | 75-125       | 2               | 20         |     |      |
| Lithium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.098        | 0.096        | 97            | 96          | 75-125       | 2               | 20         |     |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.095        | 97            | 95          | 75-125       | 2               | 20         |     |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.093        | 0.093        | 93            | 93          | 75-125       | 1               | 20         |     |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.090        | 0.089        | 90            | 89          | 75-125       | 1               | 20         |     |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 563747 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012, 92492418013

METHOD BLANK: 2988642 Matrix: Water  
Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012, 92492418013

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 09/01/20 19:19 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 09/01/20 19:19 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 09/01/20 19:19 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 09/02/20 16:41 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 09/01/20 19:19 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 09/01/20 19:19 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 09/01/20 19:19 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 09/01/20 19:19 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 09/01/20 19:19 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 09/01/20 19:19 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 09/01/20 19:19 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 09/01/20 19:19 |            |

LABORATORY CONTROL SAMPLE: 2988643

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.092      | 92        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.092      | 92        | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2988644 2988645

| Parameter | Units | MS 92492563004 |             | MSD 2988645 |        | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |  |
|-----------|-------|----------------|-------------|-------------|--------|----------|-----------|--------------|--------|---------|------|--|
|           |       | Result         | Spike Conc. | Spike Conc. | Result |          |           |              |        |         |      |  |
| Antimony  | mg/L  | ND             | 0.1         | 0.1         | 0.10   | 0.095    | 100       | 95           | 75-125 | 5       | 20   |  |
| Arsenic   | mg/L  | ND             | 0.1         | 0.1         | 0.10   | 0.093    | 99        | 92           | 75-125 | 7       | 20   |  |
| Barium    | mg/L  | 0.056          | 0.1         | 0.1         | 0.15   | 0.15     | 93        | 90           | 75-125 | 2       | 20   |  |
| Beryllium | mg/L  | ND             | 0.1         | 0.1         | 0.091  | 0.089    | 91        | 89           | 75-125 | 2       | 20   |  |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Parameter  | Units | 2988644               |                      | 2988645               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | Max<br>RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|------|
|            |       | 92492563004<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |            |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.094        | 97            | 94          | 75-125       | 3               | 20         |      |
| Chromium   | mg/L  | 0.00098J              | 0.1                  | 0.1                   | 0.098        | 0.10         | 97            | 100         | 75-125       | 3               | 20         |      |
| Cobalt     | mg/L  | 0.00061J              | 0.1                  | 0.1                   | 0.097        | 0.098        | 97            | 97          | 75-125       | 1               | 20         |      |
| Lead       | mg/L  | 0.00036J              | 0.1                  | 0.1                   | 0.094        | 0.095        | 94            | 95          | 75-125       | 1               | 20         |      |
| Lithium    | mg/L  | 0.0028J               | 0.1                  | 0.1                   | 0.092        | 0.091        | 89            | 88          | 75-125       | 1               | 20         |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.10         | 100           | 100         | 75-125       | 0               | 20         |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.093        | 98            | 92          | 75-125       | 7               | 20         |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.093        | 0.095        | 93            | 95          | 75-125       | 1               | 20         |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 563754 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418014

METHOD BLANK: 2988660 Matrix: Water  
Associated Lab Samples: 92492418014

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | 0.00031J     | 0.0030          | 0.00028  | 09/02/20 15:28 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 09/02/20 15:28 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 09/02/20 15:28 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 09/02/20 15:28 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 09/02/20 15:28 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 09/02/20 15:28 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 09/02/20 15:28 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 09/02/20 15:28 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 09/02/20 15:28 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 09/02/20 15:28 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 09/02/20 15:28 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 09/02/20 15:28 |            |

LABORATORY CONTROL SAMPLE: 2988661

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2988662 2988663

| Parameter | Units | MS          |        | MSD   |       | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |        |
|-----------|-------|-------------|--------|-------|-------|----------|-----------|--------------|--------|---------|------|--------|
|           |       | 92493129002 | Result | Conc. | Conc. |          |           |              |        |         |      | Result |
| Antimony  | mg/L  | ND          | 0.1    | 0.1   | 0.097 | 0.099    | 97        | 98           | 75-125 | 2       | 20   |        |
| Arsenic   | mg/L  | ND          | 0.1    | 0.1   | 0.097 | 0.099    | 97        | 99           | 75-125 | 2       | 20   |        |
| Barium    | mg/L  | 0.021       | 0.1    | 0.1   | 0.12  | 0.12     | 95        | 98           | 75-125 | 3       | 20   |        |
| Beryllium | mg/L  | ND          | 0.1    | 0.1   | 0.089 | 0.093    | 89        | 93           | 75-125 | 5       | 20   |        |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

| Parameter  | Units | 2988662               |                      | 2988663               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | Max<br>RPD | RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
|            |       | 92493129002<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |            |     |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.096        | 94            | 96          | 75-125       | 3               | 20         |     |      |
| Chromium   | mg/L  | 0.00059J              | 0.1                  | 0.1                   | 0.099        | 0.10         | 99            | 100         | 75-125       | 1               | 20         |     |      |
| Cobalt     | mg/L  | 0.0021J               | 0.1                  | 0.1                   | 0.097        | 0.099        | 94            | 97          | 75-125       | 2               | 20         |     |      |
| Lead       | mg/L  | 0.000095J             | 0.1                  | 0.1                   | 0.096        | 0.097        | 96            | 97          | 75-125       | 1               | 20         |     |      |
| Lithium    | mg/L  | 0.0047J               | 0.1                  | 0.1                   | 0.096        | 0.099        | 92            | 94          | 75-125       | 2               | 20         |     |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.10         | 100           | 102         | 75-125       | 2               | 20         |     |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.098        | 0.098        | 97            | 97          | 75-125       | 0               | 20         |     |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.097        | 96            | 97          | 75-125       | 1               | 20         |     |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 567520 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92492418001, 92492418002, 92492418007

METHOD BLANK: 3007459 Matrix: Water  
Associated Lab Samples: 92492418001, 92492418002, 92492418007

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00028 | 09/18/20 17:55 |            |

LABORATORY CONTROL SAMPLE: 3007460

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007461 3007462

| Parameter | Units | 3007461            |                | 3007462         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual     |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|----------|
|           |       | 92492418002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |          |
| Antimony  | mg/L  | ND                 | 0.1            | 0.1             | 0.17      | 0.098    | 170       | 98           | 75-125 | 54      | 20 M1,R1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 562436

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418001

METHOD BLANK: 2982834

Matrix: Water

Associated Lab Samples: 92492418001

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 08/27/20 10:10 |            |

LABORATORY CONTROL SAMPLE: 2982835

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0025     | 98        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982836 2982837

| Parameter | Units | 2982836        |                 | 2982837   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0025    | 0.0024     | 97       | 96        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 563370    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006, 92492418007, 92492418008

METHOD BLANK: 2987104 Matrix: Water  
Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006, 92492418007, 92492418008

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | 0.00011J     | 0.00050         | 0.000078 | 09/01/20 09:18 |            |

LABORATORY CONTROL SAMPLE: 2987105

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0024     | 97        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2987106 2987107

| Parameter | Units | 2987106        |                 | 2987107   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0024    | 0.0024     | 93       | 94        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 563371

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418009

METHOD BLANK: 2987108

Matrix: Water

Associated Lab Samples: 92492418009

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 09/01/20 10:32 |            |

LABORATORY CONTROL SAMPLE: 2987109

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0023     | 93        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2987110 2987111

| Parameter | Units | 2987110        |                 | 2987111   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | 0.00017J       | 0.0025          | 0.0026    | 0.0025     | 95       | 95        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 564593    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92492418010, 92492418011, 92492418012, 92492418013, 92492418014

METHOD BLANK: 2992563

Matrix: Water

Associated Lab Samples: 92492418010, 92492418011, 92492418012, 92492418013, 92492418014

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 09/09/20 10:18 |            |

LABORATORY CONTROL SAMPLE: 2992564

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0024     | 95        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2992565 2992566

| Parameter | Units | 2992565        |                 | 2992566   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0024    | 0.0023     | 95       | 94        | 75-125       | 2   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

|                                |  |
|--------------------------------|--|
| QC Batch: 563552               | Analysis Method: SM 2450C-2011                               |
| QC Batch Method: SM 2450C-2011 | Analysis Description: 2540C Total Dissolved Solids           |
|                                | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92492418004, 92492418005, 92492418006

METHOD BLANK: 2988051 Matrix: Water

Associated Lab Samples: 92492418004, 92492418005, 92492418006

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 08/31/20 17:59 |            |

LABORATORY CONTROL SAMPLE: 2988052

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 397        | 99        | 84-108       |            |

SAMPLE DUPLICATE: 2988053

| Parameter              | Units | 92492424001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 246                | 252        | 2   | 10      |            |

SAMPLE DUPLICATE: 2988054

| Parameter              | Units | 92492418006 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | ND                 | ND         |     | 10      |            |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 562433

Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92492418001

METHOD BLANK: 2982806

Matrix: Water

Associated Lab Samples: 92492418001

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 08/26/20 18:18 |            |

LABORATORY CONTROL SAMPLE: 2982807

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 2.5         | 2.5        | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982808 2982809

| Parameter | Units | 92492436002 |       | MS          |             | MSD    |        | % Rec |       | Max    |     | Qual |     |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|-------|--------|-----|------|-----|
|           |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | Limits | RPD |      | RPD |
| Fluoride  | mg/L  | 0.41        | 2.5   | 2.5         | 2.5         | 2.9    | 2.9    | 100   | 101   | 90-110 | 0   | 10   |     |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982810 2982811

| Parameter | Units | 92492228007 |       | MS          |             | MSD    |        | % Rec |       | Max    |     | Qual |     |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|-------|--------|-----|------|-----|
|           |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | Limits | RPD |      | RPD |
| Fluoride  | mg/L  | 0.077J      | 2.5   | 2.5         | 2.5         | 2.5    | 2.6    | 98    | 101   | 90-110 | 3   | 10   |     |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 562698 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville  
 Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

METHOD BLANK: 2984151 Matrix: Water  
 Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 08/27/20 13:21 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 08/27/20 13:21 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 08/27/20 13:21 |            |

LABORATORY CONTROL SAMPLE: 2984152

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 50.5       | 101       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.6        | 103       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.9       | 102       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984153 2984154

| Parameter | Units | MS     |       | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------|-------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | Result | Conc. | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 25.8   | 50    | 50          | 50          | 77.8      | 78.7       | 104      | 106       | 90-110       | 1   | 10      |      |
| Fluoride  | mg/L  | ND     | 2.5   | 2.5         | 2.5         | 2.1       | 2.1        | 82       | 84        | 90-110       | 2   | 10      | M1   |
| Sulfate   | mg/L  | 61.1   | 50    | 50          | 50          | 106       | 105        | 90       | 89        | 90-110       | 1   | 10      | M1   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984155 2984156

| Parameter | Units | MS     |       | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------|-------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | Result | Conc. | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | ND     | 50    | 50          | 50          | 52.4      | 53.3       | 105      | 106       | 90-110       | 2   | 10      |      |
| Fluoride  | mg/L  | ND     | 2.5   | 2.5         | 2.5         | 2.6       | 2.7        | 105      | 107       | 90-110       | 1   | 10      |      |
| Sulfate   | mg/L  | ND     | 50    | 50          | 50          | 52.2      | 53.0       | 104      | 106       | 90-110       | 2   | 10      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 563042 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012

METHOD BLANK: 2985604 Matrix: Water  
 Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 08/28/20 19:55 |            |

LABORATORY CONTROL SAMPLE: 2985605

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 2.5         | 2.7        | 107       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2985606 2985607

| Parameter | Units | 2985606            |                | 2985607         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | 92492821006 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Fluoride  | mg/L  | 0.062J             | 2.5            | 2.5             | 2.7       | 2.7      | 105       | 106          | 90-110 | 1       | 10   |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2985608 2985609

| Parameter | Units | 2985608            |                | 2985609         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | 92492821016 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Fluoride  | mg/L  | 0.14               | 2.5            | 2.5             | 2.8       | 2.8      | 106       | 106          | 90-110 | 0       | 10   |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 563290 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92492418013

METHOD BLANK: 2986801 Matrix: Water  
Associated Lab Samples: 92492418013

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 08/29/20 14:28 |            |

LABORATORY CONTROL SAMPLE: 2986802

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 2.5         | 2.6        | 105       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986803 2986804

| Parameter | Units | 2986803        |                 | 2986804   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|--|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |  |
| Fluoride  | mg/L  | 0.14           | 2.5             | 2.5       | 2.8        | 2.8      | 105       | 106          | 90-110 | 1       | 10   |  |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986805 2986806

| Parameter | Units | 2986805        |                 | 2986806   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|--|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |  |
| Fluoride  | mg/L  | 0.15           | 2.5             | 2.5       | 2.8        | 2.8      | 105       | 107          | 90-110 | 1       | 10   |  |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

QC Batch: 564239 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92492418014

METHOD BLANK: 2990890 Matrix: Water  
Associated Lab Samples: 92492418014

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 09/03/20 15:51 |            |

LABORATORY CONTROL SAMPLE: 2990891

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 2.5         | 2.7        | 110       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2990892 2990893

| Parameter | Units | 2990892            |                | 2990893         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|-------|
|           |       | 92493471003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |       |
| Fluoride  | mg/L  | 10.9               | 2.5            | 2.5             | 12.8      | 12.9     | 76        | 80           | 90-110 | 1       | 10 M6 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2990894 2990895

| Parameter | Units | 2990894            |                | 2990895         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|           |       | 92493567003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Fluoride  | mg/L  | 0.57               | 2.5            | 2.5             | 3.3       | 3.3      | 108       | 110          | 90-110 | 2       | 10   |

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## QUALIFIERS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92492418001 | HGWA-122  |                 |          |                   |                  |
| 92492418002 | HGWA-2    |                 |          |                   |                  |
| 92492418003 | HGWA-3    |                 |          |                   |                  |
| 92492418004 | HGWC-125  |                 |          |                   |                  |
| 92492418005 | HGWC-126  |                 |          |                   |                  |
| 92492418007 | HGWC-121A |                 |          |                   |                  |
| 92492418008 | MW-32     |                 |          |                   |                  |
| 92492418009 | MW-39     |                 |          |                   |                  |
| 92492418010 | MW-41     |                 |          |                   |                  |
| 92492418011 | HGWC-120  |                 |          |                   |                  |
| 92492418013 | HGWC-124  |                 |          |                   |                  |
| 92492418014 | HGWA-1    |                 |          |                   |                  |
| 92492418004 | HGWC-125  | EPA 3010A       | 564973   | EPA 6010D         | 565003           |
| 92492418005 | HGWC-126  | EPA 3010A       | 564973   | EPA 6010D         | 565003           |
| 92492418006 | FB-01     | EPA 3010A       | 564973   | EPA 6010D         | 565003           |
| 92492418001 | HGWA-122  | EPA 3005A       | 562831   | EPA 6020B         | 562944           |
| 92492418001 | HGWA-122  | EPA 3005A       | 567520   | EPA 6020B         | 567541           |
| 92492418002 | HGWA-2    | EPA 3005A       | 562831   | EPA 6020B         | 562944           |
| 92492418002 | HGWA-2    | EPA 3005A       | 567520   | EPA 6020B         | 567541           |
| 92492418003 | HGWA-3    | EPA 3005A       | 562831   | EPA 6020B         | 562944           |
| 92492418004 | HGWC-125  | EPA 3005A       | 562831   | EPA 6020B         | 562944           |
| 92492418005 | HGWC-126  | EPA 3005A       | 562831   | EPA 6020B         | 562944           |
| 92492418006 | FB-01     | EPA 3005A       | 562831   | EPA 6020B         | 562944           |
| 92492418007 | HGWC-121A | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418007 | HGWC-121A | EPA 3005A       | 567520   | EPA 6020B         | 567541           |
| 92492418008 | MW-32     | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418009 | MW-39     | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418010 | MW-41     | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418011 | HGWC-120  | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418012 | FD-01     | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418013 | HGWC-124  | EPA 3005A       | 563747   | EPA 6020B         | 563831           |
| 92492418014 | HGWA-1    | EPA 3005A       | 563754   | EPA 6020B         | 563832           |
| 92492418001 | HGWA-122  | EPA 7470A       | 562436   | EPA 7470A         | 562585           |
| 92492418002 | HGWA-2    | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418003 | HGWA-3    | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418004 | HGWC-125  | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418005 | HGWC-126  | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418006 | FB-01     | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418007 | HGWC-121A | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418008 | MW-32     | EPA 7470A       | 563370   | EPA 7470A         | 563482           |
| 92492418009 | MW-39     | EPA 7470A       | 563371   | EPA 7470A         | 563653           |
| 92492418010 | MW-41     | EPA 7470A       | 564593   | EPA 7470A         | 564990           |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SCAN/BKG 03  
Pace Project No.: 92492418

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92492418011 | HGWC-120  | EPA 7470A              | 564593   | EPA 7470A         | 564990           |
| 92492418012 | FD-01     | EPA 7470A              | 564593   | EPA 7470A         | 564990           |
| 92492418013 | HGWC-124  | EPA 7470A              | 564593   | EPA 7470A         | 564990           |
| 92492418014 | HGWA-1    | EPA 7470A              | 564593   | EPA 7470A         | 564990           |
| 92492418004 | HGWC-125  | SM 2450C-2011          | 563552   |                   |                  |
| 92492418005 | HGWC-126  | SM 2450C-2011          | 563552   |                   |                  |
| 92492418006 | FB-01     | SM 2450C-2011          | 563552   |                   |                  |
| 92492418001 | HGWA-122  | EPA 300.0 Rev 2.1 1993 | 562433   |                   |                  |
| 92492418002 | HGWA-2    | EPA 300.0 Rev 2.1 1993 | 562698   |                   |                  |
| 92492418003 | HGWA-3    | EPA 300.0 Rev 2.1 1993 | 562698   |                   |                  |
| 92492418004 | HGWC-125  | EPA 300.0 Rev 2.1 1993 | 562698   |                   |                  |
| 92492418005 | HGWC-126  | EPA 300.0 Rev 2.1 1993 | 562698   |                   |                  |
| 92492418006 | FB-01     | EPA 300.0 Rev 2.1 1993 | 562698   |                   |                  |
| 92492418007 | HGWC-121A | EPA 300.0 Rev 2.1 1993 | 563042   |                   |                  |
| 92492418008 | MW-32     | EPA 300.0 Rev 2.1 1993 | 563042   |                   |                  |
| 92492418009 | MW-39     | EPA 300.0 Rev 2.1 1993 | 563042   |                   |                  |
| 92492418010 | MW-41     | EPA 300.0 Rev 2.1 1993 | 563042   |                   |                  |
| 92492418011 | HGWC-120  | EPA 300.0 Rev 2.1 1993 | 563042   |                   |                  |
| 92492418012 | FD-01     | EPA 300.0 Rev 2.1 1993 | 563042   |                   |                  |
| 92492418013 | HGWC-124  | EPA 300.0 Rev 2.1 1993 | 563290   |                   |                  |
| 92492418014 | HGWA-1    | EPA 300.0 Rev 2.1 1993 | 564239   |                   |                  |

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Sample Condition Upon Rec

WO#: 92492418

Client Name: G. A. Power



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 214

Type of Ice:  Wet  Blue  None

Samples on ice, cooling process has begun

Cooler Temperature 5.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/25/2004

Temp should be above freezing to 6°C

Comments:

|  |  |                             |
|--|--|-----------------------------|
| Chain of Custody Present:  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.                          |
| Chain of Custody Filled Out:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.                          |
| Chain of Custody Relinquished:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 3.                          |
| Sampler Name & Signature on COC:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 4.                          |
| Samples Arrived within Hold Time:  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.                          |
| Short Hold Time Analysis (<72hr):  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 6.                          |
| Rush Turn Around Time Requested:   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 7.                          |
| Sufficient Volume:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 8.                          |
| Correct Containers Used:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.                          |
| -Pace Containers Used:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |                             |
| Containers Intact:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 10.                         |
| Filtered volume received for Dissolved tests   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11.                         |
| Sample Labels match COC:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 12.                         |
| -Includes date/time/ID/Analysis Matrix: <u>W</u>   |  |                             |
| All containers needing preservation have been checked.                                     | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 13.                         |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |                             |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                              | Initial when completed      |
| Samples checked for dechlorination:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 14.                         |
| Headspace in VOA Vials (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 15.                         |
| Trip Blank Present:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 16.                         |
| Trip Blank Custody Seals Present   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |                             |
| Pace Trip Blank Lot # (if purchased):  |  | Lot # of added preservative |

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)









# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

|   |  |   |                            |  |  |
|---|--|---|----------------------------|--|--|
| <b>Section A</b><br>Required Client Information<br>Company: GA Power<br>Address: Atlanta, GA<br>Email To: SCS Contacts<br>Phone: _____<br>Requested Due Date/TAT: 10 day  |  | <b>Section B</b><br>Required Project Information<br>Report To: SCS Contacts<br>Copy To: Goosynite Contacts<br>Purchase Order No.: _____<br>Project Name: Plant Hammond AP-3 Scar/BKG 03<br>Project Number: GW0581 |                            | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co.<br>Company Name: _____<br>Address: _____<br>POC Name: _____<br>POC Title: _____<br>POC Project Manager: Kevin Herring<br>Price Point: \$ _____ |  |
| <b>REGULATORY AGENCY</b><br><input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCR |  |   | Site Location<br>STATE: GA |  |  |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE               | MATRIX CODE (See valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|--------|--|---|---------------------------------------|-----------------------------|-----------|------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|------------|-----------------------|-----------------------------|----------------------|
|        |  |   |                                       |                             | DATE      | TIME | DATE |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 1      | HGWC-125                                 | WASTE WATER<br>WASTE WATER PRODUCT<br>SOL/SOLID | WT G                                  | G                           | 8/25      | 1151 | 19   | 5                         | 2               | 3             | X             | N                                 | 62.3                    |            |                       |                             |                      |
| 2      | HGWC-126                                 |   | WT G                                  | G                           | 8/25      | 1255 | 20   | 5                         | 2               | 3             | X             | N                                 | 6.3                     |            |                       |                             |                      |
| 3      | FB-01                                    |   | WT G                                  | G                           | 8/25      | 1600 | -    | 5                         | 2               | 3             | X             | N                                 | 6.78                    |            |                       |                             |                      |
| 4      | FB-01                                    |   | WT G                                  | G                           |           |      |      | 5                         | 2               | 3             | X             | N                                 |                         |            |                       |                             |                      |
| 5      |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 6      |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 7      |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 8      |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 9      |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 10     |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 11     |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |
| 12     |  |   |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |            |                       |                             |                      |

**ADDITIONAL COMMENTS**  
 Please note dry wells, state through dry wells not sampled, and note when the last sample for the event has been taken.

**RELEASUED BY / AFFILIATION**  
 Date: 8/15/15 Time: 11:15  
 Date: 8/25/15 Time: 18:30  
 Date: 8/26/15 Time: 09:49

**ACCEPTED BY / AFFILIATION**  
 Date: 8/25/15 Time: 16:15  
 Date: 8/25/15 Time: 17:30  
 Date: 8/26/15 Time: 9:30a

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Chad Russell  
 SIGNATURE of SAMPLER: [Signature]

**DATE Signed (MANDATORY):** 8/25/2015

**Temp in °C**: 4.6  
**Received on Ice (Y/N)**: Y  
**Custody Sealed Cooler (Y/N)**: Y  
**Samples Intact (Y/N)**: Y

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020REV 07, 15.F-06-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

|   |  |   |                      |
|---|--|---|----------------------|
| Section A<br>Required Client Information<br>Company: GA Power<br>Address: Atlanta, GA | Section B<br>Required Project Information<br>Report To: SCS Contacts<br>Copy To: Geosynthetic Contacts | Section C<br>Invoicing Information<br>Attention: Southern Co. | Page: _____ of _____ |
|---|--|---|----------------------|

|                                 |  |                    |                             |
|---------------------------------|--|--------------------|-----------------------------|
| Requested Due Date/TIME: 18 Day | Project Name: Plant Hammond AP-3 Scan/BKG 03 | Address: _____     | Company Name: _____         |
| Requested Due Date/TIME: 18 Day | Project Number: GW6581                       | Price Quote: _____ | Price Manager: Kevin Heming |
| Requested Due Date/TIME: 18 Day | Project Number: GW6581                       | Price Quote: _____ | Price Manager: Kevin Heming |
| Requested Due Date/TIME: 18 Day | Project Number: GW6581                       | Price Quote: _____ | Price Manager: Kevin Heming |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>E001E<br>D001E<br>W001E<br>W002E<br>W003E<br>W004E<br>W005E<br>W006E<br>W007E<br>W008E<br>W009E<br>W010E<br>W011E<br>W012E<br>W013E<br>W014E<br>W015E<br>W016E<br>W017E<br>W018E<br>W019E<br>W020E<br>W021E<br>W022E<br>W023E<br>W024E<br>W025E<br>W026E<br>W027E<br>W028E<br>W029E<br>W030E<br>W031E<br>W032E<br>W033E<br>W034E<br>W035E<br>W036E<br>W037E<br>W038E<br>W039E<br>W040E<br>W041E<br>W042E<br>W043E<br>W044E<br>W045E<br>W046E<br>W047E<br>W048E<br>W049E<br>W050E<br>W051E<br>W052E<br>W053E<br>W054E<br>W055E<br>W056E<br>W057E<br>W058E<br>W059E<br>W060E<br>W061E<br>W062E<br>W063E<br>W064E<br>W065E<br>W066E<br>W067E<br>W068E<br>W069E<br>W070E<br>W071E<br>W072E<br>W073E<br>W074E<br>W075E<br>W076E<br>W077E<br>W078E<br>W079E<br>W080E<br>W081E<br>W082E<br>W083E<br>W084E<br>W085E<br>W086E<br>W087E<br>W088E<br>W089E<br>W090E<br>W091E<br>W092E<br>W093E<br>W094E<br>W095E<br>W096E<br>W097E<br>W098E<br>W099E<br>W100E | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | DATE | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other | Preservatives | Analysis Test | Requested Analyte Filtered (Y/N) | Residual Chlorine (Y/N) | pH |
|--------|--|--|---------------------------------------|-----------------------------|------|------|------|------|---------------------------|-----------------|--|---------------|---------------|----------------------------------|-------------------------|----|
|        |  |  |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 1      | HQWA-1                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 2      | HQWA-2                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 3      | HQWA-3                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 4      | HQWA-4                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 5      | HQWA-5                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 6      | HQWA-6                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 7      | HQWA-7                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 8      | HQWA-8                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 9      | HQWA-9                                   | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 10     | HQWA-10                                  | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 11     | HQWA-11                                  | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |
| 12     | HQWA-12                                  | WT G   |                                       |                             |      |      |      |      |                           |                 |  |               |               |                                  |                         |    |

|  |                               |         |      |                           |         |      |                   |
|--|-------------------------------|---------|------|---------------------------|---------|------|-------------------|
| ADDITIONAL COMMENTS  | RELINQUISHED BY / AFFILIATION | DATE    | TIME | ACCEPTED BY / AFFILIATION | DATE    | TIME | SAMPLE CONDITIONS |
| Please note dry wells, stone through any well not sampled, and note when the last sample for the event has been taken. | Baron Reeder                  | 8/27/20 | 0805 | Baron Reeder              | 8/27/20 | 0805 |                   |
|  | Baron Reeder                  | 8/27/20 | 0856 | Baron Reeder              | 8/27/20 | 0856 |                   |
|  | Baron Reeder                  | 8/27/20 | 1240 | Baron Reeder              | 8/27/20 | 1240 |                   |

|                            |                                     |                                      |            |                       |                             |                      |
|----------------------------|-------------------------------------|--------------------------------------|------------|-----------------------|-----------------------------|----------------------|
| SAMPLER NAME AND SIGNATURE | PRINT NAME OF SAMPLER: Baron Reeder | DATE SIGNED (MM/DD/YYYY): 08/26/2020 | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|                            | Baron Reeder                        | 08/26/2020                           |            |                       |                             |                      |

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any amounts not paid within 30 days.

F-ALL-Q-020Rev.07 15-Feb-2007





# CHAIN-OF-CUSTODY / Analytical Request Document

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

|  |  |  |  |
|--|--|--|--|
| <b>Section A</b><br>Required Client Information<br>Company: GA Power<br>Address: Atlanta, GA | <b>Section B</b><br>Required Project Information<br>Report to: SCS Contacts<br>Copy to: Geosynlec Contacts | <b>Section C</b><br>Invoicing Information<br>Attention: Southern Co.<br>Company Name:<br>Address:<br>Purchase Order No.:<br>Plant Name: Plant Hammond AP-3 Scan/BKG 03<br>Project Number: GW6581 | <b>REGULATORY AGENCY</b><br><input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCR<br>Site Location: CA<br>STATE: CA |
|--|--|--|--|

|  |                                       |                             |      |      |      |      |                           |                 |  |               |               |  |                                   |                         |                                       |
|--|---------------------------------------|-----------------------------|------|------|------|------|---------------------------|-----------------|--|---------------|---------------|--|-----------------------------------|-------------------------|---------------------------------------|
| <b>Section D</b><br>Required Chain Information<br>Valid Matrix Codes<br>MATRIX CODE<br>SCS CODE<br>DW: DOMESTIC WATER<br>WT: WASTE WATER<br>WW: WASTE WATER<br>P: PRODUCT<br>S: SOIL<br>G: GROUND<br>W: WASTE<br>A: AIR<br>O: OTHER<br>T: TISSUE | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | DATE | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other | Preservatives | Analysis Test | Fluoride<br>App IV Metals 6020/470*<br>RAD 226/228 | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab ID.<br>42442418 |
|--|---------------------------------------|-----------------------------|------|------|------|------|---------------------------|-----------------|--|---------------|---------------|--|-----------------------------------|-------------------------|---------------------------------------|

| ITEM # | MATRIX CODE | SAMPLE TYPE | DATE | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol | Other | Analysis Test | Fluoride | App IV Metals 6020/470* | RAD 226/228 | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab ID. |  |
|--------|-------------|-------------|------|------|------|------|---------------------------|-----------------|-------------|--------------------------------|------------------|-----|------|---|----------|-------|---------------|----------|-------------------------|-------------|-----------------------------------|-------------------------|---------------------------|--|
| 1      | HGMWA-1     | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 2      | HGMWA-2     | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 3      | HGMWA-3     | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 4      | HGMWA-122   | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 5      | HGMWA-120   | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 6      | HGMWA-121   | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 7      | HGMWA-124   | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 8      | MWV-32      | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 9      | MWV-39      | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 10     | MWV-21      | WT G        |      |      |      |      |                           | 4               | 1           | 3                              | X                | X   | X    | X   | X        | X     | X             | X        | X                       | X           |                                   |                         |                           |  |
| 11     |             |             |      |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |          |                         |             |                                   |                         |                           |  |
| 12     |             |             |      |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |          |                         |             |                                   |                         |                           |  |

|  |  |                        |                     |   |                        |                     |
|--|--|------------------------|---------------------|---|------------------------|---------------------|
| <b>ADDITIONAL COMMENTS</b><br>Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. | <b>REQUISITIONED BY / AFFILIATION</b><br>Blad Rutter / gco | <b>DATE</b><br>8/14/10 | <b>TIME</b><br>1740 | <b>ACCEPTED BY / AFFILIATION</b><br>Ken Herring | <b>DATE</b><br>8/16/10 | <b>TIME</b><br>1740 |
| App. IV Metals-Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mn, Se, Ni  | Ken Herring / gco  | 8/17/10                | 0805                | Ken Herring / gco                               | 8/17/10                | 0805                |
|  | Ken Herring / gco  | 8/17/10                | 0856                | Ken Herring / gco                               | 8/17/10                | 0856                |
|  | Pace   | 8/27/10                | 13:40               | Ken Herring / gco                               | 8/27/10                | 1240                |

|   |  |
|---|--|
| <b>PRINT Name of SAMPLER:</b> Chad Rutter | <b>DATE Signed (MM/DD/YYYY):</b> 8/26/10 |
| <b>SIGNATURE OF SAMPLER:</b> Chad Rutter  |  |
| <b>SAMPLER NAME AND SIGNATURE</b>         |  |

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days.







# CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

|   |  |   |  |  |  |
|---|--|---|--|--|--|
| Section A<br>Required Client Information<br>Company: GA Power<br>Address: Atlanta, GA |  | Section B<br>Required Project Information<br>Report to: SCS Contacts<br>Copy to: Geosynlec Contacts |  | Section C<br>Address Information<br>Address: Southern Co.<br>Company Name: Southern Co.<br>Person Contact: Kevin Herring<br>Reference: Plant Hammond AP-3 Scan/BKG 03<br>Project Manager: Kevin Herring<br>Plant Number: 6   |  |
| Email to: SCS Contacts  |  | Purchase Order No.:   |  | REGULATORY AGENCY<br>NPDES <input type="checkbox"/> GROUND WAT <input type="checkbox"/> DRINKING WATER <input type="checkbox"/><br>UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> |  |
| Phone: Fax:   |  | Project Name: Plant Hammond AP-3 Scan/BKG 03  |  | Site Location<br>STATE: CA   |  |
| Requested Date Data/TAT: to day   |  | Project Number: GWS681  |  | Requested Analysis Filtered (Y/N)  |  |

| ITEM # | Section D<br>Required Client Information<br>Valid Matrix Codes<br>MATRIX CODE<br>SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |           | SAMPLE TEMP AT COLLECTION |      | PRESERVED   |               | ANALYSIS TEST |                          | Residual Chlorine (Y/N) | pH = 7.02 |
|--------|--|-----------|-----------|---------------------------|------|-------------|---------------|---------------|--------------------------|-------------------------|-----------|
|        |  | DATE      | TIME      | DATE                      | TIME | UNPRESERVED | PRESERVATIVES | FLUORIDE      | APP IV METALS 6020/7470* |                         |           |
| 1      | HQWA-1   | WT G      | 8/28 9:26 |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 2      | HQWA-2   | WT G      | 8/28 9:26 |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 3      | HQWA-3   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 4      | HQWA-422   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 5      | HQWG-120   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 6      | HQWC-121   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 7      | HQWG-124   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 8      | MMW-32   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 9      | MMW-30   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 10     | MMW-41   | WT G      |           |                           |      | 4           | 1             | 3             | X                        | X                       | X         |
| 11     |  |           |           |                           |      |             |               |               |                          |                         |           |
| 12     |  |           |           |                           |      |             |               |               |                          |                         |           |

|   |  |           |  |           |  |           |  |           |  |            |                       |                             |                      |
|---|--|-----------|--|-----------|--|-----------|--|-----------|--|------------|-----------------------|-----------------------------|----------------------|
| SAMPLER NAME AND SIGNATURE                  |  | DATE      |  | DATE      |  | DATE      |  | DATE      |  | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
| PRINT NAME OF SAMPLER: Thomas Kestler       |  | 8/28/2008 |  | 8/28/2008 |  | 8/28/2008 |  | 8/28/2008 |  | 55         | Y                     | N                           | Y                    |
| SIGNATURE OF SAMPLER: <i>Thomas Kestler</i> |  | 8/28/2008 |  | 8/28/2008 |  | 8/28/2008 |  | 8/28/2008 |  |            |                       |                             |                      |

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev 07, 15-Feb-2007



September 18, 2020

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
Pace Project No.: 92492413

Dear Joju Abraham:

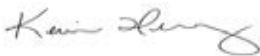
Enclosed are the analytical results for sample(s) received by the laboratory between August 25, 2020 and August 31, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
Pace Project No.: 92492413

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
Pace Project No.: 92492413

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92492413001 | HGWA-122  | Water  | 08/24/20 16:52 | 08/25/20 11:25 |
| 92492413002 | HGWA-2    | Water  | 08/25/20 10:38 | 08/26/20 12:00 |
| 92492413003 | HGWA-3    | Water  | 08/25/20 09:29 | 08/26/20 12:00 |
| 92492413004 | HGWC-125  | Water  | 08/25/20 14:51 | 08/26/20 12:00 |
| 92492413005 | HGWC-126  | Water  | 08/25/20 12:55 | 08/26/20 12:00 |
| 92492413006 | FB-01     | Water  | 08/25/20 16:00 | 08/26/20 12:00 |
| 92492413007 | HGWC-121A | Water  | 08/26/20 15:17 | 08/27/20 08:56 |
| 92492413008 | MW-32     | Water  | 08/26/20 13:10 | 08/27/20 08:56 |
| 92492413009 | MW-39     | Water  | 08/26/20 10:23 | 08/27/20 08:56 |
| 92492413010 | MW-41     | Water  | 08/26/20 11:37 | 08/27/20 08:56 |
| 92492413011 | HGWC-120  | Water  | 08/26/20 16:50 | 08/27/20 08:56 |
| 92492413012 | FD-01     | Water  | 08/26/20 00:00 | 08/27/20 08:56 |
| 92492413013 | HGWC-124  | Water  | 08/27/20 11:17 | 08/28/20 11:08 |
| 92492413014 | HGWA-1    | Water  | 08/28/20 09:26 | 08/31/20 12:08 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Lab ID      | Sample ID | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|--------------------------|----------|-------------------|------------|
| 92492413001 | HGWA-122  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413002 | HGWA-2    | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413003 | HGWA-3    | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413004 | HGWC-125  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413005 | HGWC-126  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413006 | FB-01     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413007 | HGWC-121A | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413008 | MW-32     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413009 | MW-39     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413010 | MW-41     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413011 | HGWC-120  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413012 | FD-01     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413013 | HGWC-124  | EPA 9315                 | LAL      | 1                 | PASI-PA    |

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
Pace Project No.: 92492413

| Lab ID      | Sample ID | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|--------------------------|----------|-------------------|------------|
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92492413014 | HGWA-1    | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
 Pace Project No.: 92492413

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92492413001</b>       | <b>HGWA-122</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | -0.00628 ±<br>0.143<br>(0.392)<br>C:79% T:NA  | pCi/L |              | 09/14/20 07:28 |            |
| EPA 9320                 | Radium-228                     | 0.883 ±<br>0.601<br>(1.16)<br>C:58%<br>T:72%  | pCi/L |              | 09/16/20 11:38 |            |
| Total Radium Calculation | Total Radium                   | 0.883 ±<br>0.744<br>(1.55)                    | pCi/L |              | 09/17/20 11:28 |            |
| <b>92492413002</b>       | <b>HGWA-2</b>                  |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.247 ±<br>0.197<br>(0.321)<br>C:67% T:NA     | pCi/L |              | 09/14/20 07:06 |            |
| EPA 9320                 | Radium-228                     | 0.531 ±<br>0.470<br>(0.952)<br>C:59%<br>T:82% | pCi/L |              | 09/16/20 11:38 |            |
| Total Radium Calculation | Total Radium                   | 0.778 ±<br>0.667<br>(1.27)                    | pCi/L |              | 09/17/20 11:28 |            |
| <b>92492413003</b>       | <b>HGWA-3</b>                  |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0110 ±<br>0.154<br>(0.407)<br>C:81% T:NA    | pCi/L |              | 09/14/20 07:12 |            |
| EPA 9320                 | Radium-228                     | 0.319 ±<br>0.502<br>(1.09)<br>C:59%<br>T:67%  | pCi/L |              | 09/16/20 11:38 |            |
| Total Radium Calculation | Total Radium                   | 0.330 ±<br>0.656<br>(1.50)                    | pCi/L |              | 09/17/20 11:28 |            |
| <b>92492413004</b>       | <b>HGWC-125</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.342 ±<br>0.208<br>(0.292)<br>C:84% T:NA     | pCi/L |              | 09/14/20 07:12 |            |
| EPA 9320                 | Radium-228                     | 1.31 ±<br>0.601<br>(1.02)<br>C:58%<br>T:82%   | pCi/L |              | 09/16/20 11:39 |            |
| Total Radium Calculation | Total Radium                   | 1.65 ±<br>0.809<br>(1.31)                     | pCi/L |              | 09/17/20 11:28 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
 Pace Project No.: 92492413

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result   | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|--|-------|--------------|----------------|------------|
| <b>92492413005</b>       | <b>HGWC-126</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.584 ±<br>0.290<br>(0.456)<br>C:84% T:NA      | pCi/L |              | 09/14/20 07:26 |            |
| EPA 9320                 | Radium-228                     | 1.24 ±<br>0.706<br>(1.30)<br>C:56%<br>T:67%    | pCi/L |              | 09/16/20 11:39 |            |
| Total Radium Calculation | Total Radium                   | 1.82 ±<br>0.996<br>(1.76)                      | pCi/L |              | 09/17/20 11:28 |            |
| <b>92492413006</b>       | <b>FB-01</b>                   |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.142 ±<br>0.149<br>(0.287)<br>C:86% T:NA      | pCi/L |              | 09/14/20 08:24 |            |
| EPA 9320                 | Radium-228                     | 0.359 ±<br>0.465<br>(0.990)<br>C:61%<br>T:80%  | pCi/L |              | 09/16/20 11:39 |            |
| Total Radium Calculation | Total Radium                   | 0.501 ±<br>0.614<br>(1.28)                     | pCi/L |              | 09/17/20 11:28 |            |
| <b>92492413007</b>       | <b>HGWC-121A</b>               |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.153 ±<br>0.141<br>(0.251)<br>C:89% T:NA      | pCi/L |              | 09/14/20 08:24 |            |
| EPA 9320                 | Radium-228                     | 1.81 ±<br>0.712<br>(1.14)<br>C:61%<br>T:75%    | pCi/L |              | 09/16/20 11:39 |            |
| Total Radium Calculation | Total Radium                   | 1.96 ±<br>0.853<br>(1.39)                      | pCi/L |              | 09/17/20 11:28 |            |
| <b>92492413008</b>       | <b>MW-32</b>                   |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.281 ±<br>0.176<br>(0.244)<br>C:89% T:NA      | pCi/L |              | 09/14/20 08:24 |            |
| EPA 9320                 | Radium-228                     | -0.0335 ±<br>0.466<br>(1.08)<br>C:65%<br>T:82% | pCi/L |              | 09/16/20 11:39 |            |
| Total Radium Calculation | Total Radium                   | 0.281 ±<br>0.642<br>(1.32)                     | pCi/L |              | 09/17/20 11:28 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
 Pace Project No.: 92492413

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92492413009</b>       | <b>MW-39</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.500 ±<br>0.240<br>(0.304)<br>C:91% T:NA     | pCi/L |              | 09/14/20 08:24 |            |
| EPA 9320                 | Radium-228                     | 0.883 ±<br>0.510<br>(0.913)<br>C:59%<br>T:79% | pCi/L |              | 09/16/20 14:42 |            |
| Total Radium Calculation | Total Radium                   | 1.38 ±<br>0.750<br>(1.22)                     | pCi/L |              | 09/17/20 14:16 |            |
| <b>92492413010</b>       | <b>MW-41</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.313 ±<br>0.197<br>(0.304)<br>C:89% T:NA     | pCi/L |              | 09/14/20 08:24 |            |
| EPA 9320                 | Radium-228                     | 1.22 ±<br>0.594<br>(1.01)<br>C:59%<br>T:78%   | pCi/L |              | 09/16/20 14:42 |            |
| Total Radium Calculation | Total Radium                   | 1.53 ±<br>0.791<br>(1.31)                     | pCi/L |              | 09/17/20 14:16 |            |
| <b>92492413011</b>       | <b>HGWC-120</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.357 ±<br>0.217<br>(0.331)<br>C:83% T:NA     | pCi/L |              | 09/14/20 08:24 |            |
| EPA 9320                 | Radium-228                     | -0.169 ±<br>0.477<br>(1.17)<br>C:57%<br>T:67% | pCi/L |              | 09/16/20 14:42 |            |
| Total Radium Calculation | Total Radium                   | 0.357 ±<br>0.694<br>(1.50)                    | pCi/L |              | 09/17/20 14:16 |            |
| <b>92492413012</b>       | <b>FD-01</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.102 ±<br>0.145<br>(0.312)<br>C:89% T:NA     | pCi/L |              | 09/14/20 09:00 |            |
| EPA 9320                 | Radium-228                     | 1.05 ±<br>0.508<br>(0.849)<br>C:63%<br>T:79%  | pCi/L |              | 09/16/20 14:42 |            |
| Total Radium Calculation | Total Radium                   | 1.15 ±<br>0.653<br>(1.16)                     | pCi/L |              | 09/17/20 14:16 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92492413013</b>       | <b>HGWC-124</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0465 ±<br>0.0876<br>(0.174)<br>C:76% T:NA   | pCi/L |              | 09/10/20 19:37 |            |
| EPA 9320                 | Radium-228                     | 0.447 ±<br>0.478<br>(0.997)<br>C:66%<br>T:77% | pCi/L |              | 09/15/20 15:05 |            |
| Total Radium Calculation | Total Radium                   | 0.494 ±<br>0.566<br>(1.17)                    | pCi/L |              | 09/16/20 11:24 |            |
| <b>92492413014</b>       | <b>HGWA-1</b>                  |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | -0.0409 ±<br>0.114<br>(0.247)<br>C:91% T:NA   | pCi/L |              | 09/11/20 18:15 |            |
| EPA 9320                 | Radium-228                     | -0.622 ±<br>0.521<br>(1.31)<br>C:60%<br>T:80% | pCi/L |              | 09/16/20 12:46 |            |
| Total Radium Calculation | Total Radium                   | 0.000 ±<br>0.635<br>(1.56)                    | pCi/L |              | 09/17/20 14:16 |            |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-122</b> <b>Lab ID: 92492413001</b> Collected: 08/24/20 16:52      Received: 08/25/20 11:25      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>-0.00628 ± 0.143 (0.392)</b><br><b>C:79% T:NA</b> | pCi/L | 09/14/20 07:28 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.883 ± 0.601 (1.16)</b><br><b>C:58% T:72%</b>    | pCi/L | 09/16/20 11:38 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.883 ± 0.744 (1.55)</b>                          | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: HGWA-2**      **Lab ID: 92492413002**      Collected: 08/25/20 10:38      Received: 08/26/20 12:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.247 ± 0.197 (0.321)</b><br><b>C:67% T:NA</b>  | pCi/L | 09/14/20 07:06 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.531 ± 0.470 (0.952)</b><br><b>C:59% T:82%</b> | pCi/L | 09/16/20 11:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.778 ± 0.667 (1.27)</b>                        | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: HGWA-3**      **Lab ID: 92492413003**      Collected: 08/25/20 09:29      Received: 08/26/20 12:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0110 ± 0.154 (0.407)</b><br><b>C:81% T:NA</b> | pCi/L | 09/14/20 07:12 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.319 ± 0.502 (1.09)</b><br><b>C:59% T:67%</b>  | pCi/L | 09/16/20 11:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.330 ± 0.656 (1.50)</b>                        | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: HGWC-125**      **Lab ID: 92492413004**      Collected: 08/25/20 14:51      Received: 08/26/20 12:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.342 ± 0.208 (0.292)</b><br><b>C:84% T:NA</b> | pCi/L | 09/14/20 07:12 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>1.31 ± 0.601 (1.02)</b><br><b>C:58% T:82%</b>  | pCi/L | 09/16/20 11:39 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.65 ± 0.809 (1.31)</b>                        | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|---|-------|----------------|------------|------|
| <b>Sample: HGWC-126</b> <b>Lab ID: 92492413005</b> Collected: 08/25/20 12:55      Received: 08/26/20 12:00      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |   |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |   |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.584 ± 0.290 (0.456)</b><br><b>C:84% T:NA</b> | pCi/L | 09/14/20 07:26 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |   |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>1.24 ± 0.706 (1.30)</b><br><b>C:56% T:67%</b>  | pCi/L | 09/16/20 11:39 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |   |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>1.82 ± 0.996 (1.76)</b>                        | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: FB-01**      **Lab ID: 92492413006**      Collected: 08/25/20 16:00      Received: 08/26/20 12:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.142 ± 0.149 (0.287)</b><br><b>C:86% T:NA</b>  | pCi/L | 09/14/20 08:24 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.359 ± 0.465 (0.990)</b><br><b>C:61% T:80%</b> | pCi/L | 09/16/20 11:39 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.501 ± 0.614 (1.28)</b>                        | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--|---------------------------------------|---|-------|----------------|------------|------|
| <b>Sample: HGWC-121A</b> <b>Lab ID: 92492413007</b> Collected: 08/26/20 15:17      Received: 08/27/20 08:56      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                                       |   |       |                |            |      |
|  | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.153 ± 0.141 (0.251)</b><br><b>C:89% T:NA</b> | pCi/L | 09/14/20 08:24 | 13982-63-3 |      |
|  | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>1.81 ± 0.712 (1.14)</b><br><b>C:61% T:75%</b>  | pCi/L | 09/16/20 11:39 | 15262-20-1 |      |
|  | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium   | Total Radium Calculation              | <b>1.96 ± 0.853 (1.39)</b>                        | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--|--------------------------|---|-------|----------------|------------|------|
| <b>Sample: MW-32</b> <b>Lab ID: 92492413008</b> Collected: 08/26/20 13:10      Received: 08/27/20 08:56      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |   |       |                |            |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Radium-226   | EPA 9315                 | <b>0.281 ± 0.176 (0.244)</b><br><b>C:89% T:NA</b>   | pCi/L | 09/14/20 08:24 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Radium-228   | EPA 9320                 | <b>-0.0335 ± 0.466 (1.08)</b><br><b>C:65% T:82%</b> | pCi/L | 09/16/20 11:39 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Total Radium   | Total Radium Calculation | <b>0.281 ± 0.642 (1.32)</b>                         | pCi/L | 09/17/20 11:28 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: MW-39**      **Lab ID: 92492413009**      Collected: 08/26/20 10:23      Received: 08/27/20 08:56      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.500 ± 0.240 (0.304)</b><br><b>C:91% T:NA</b>  | pCi/L | 09/14/20 08:24 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.883 ± 0.510 (0.913)</b><br><b>C:59% T:79%</b> | pCi/L | 09/16/20 14:42 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.38 ± 0.750 (1.22)</b>                         | pCi/L | 09/17/20 14:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: MW-41**      **Lab ID: 92492413010**      Collected: 08/26/20 11:37      Received: 08/27/20 08:56      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.313 ± 0.197 (0.304)</b><br><b>C:89% T:NA</b> | pCi/L | 09/14/20 08:24 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>1.22 ± 0.594 (1.01)</b><br><b>C:59% T:78%</b>  | pCi/L | 09/16/20 14:42 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.53 ± 0.791 (1.31)</b>                        | pCi/L | 09/17/20 14:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-120</b> <b>Lab ID: 92492413011</b> Collected: 08/26/20 16:50      Received: 08/27/20 08:56      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.357 ± 0.217 (0.331)</b><br><b>C:83% T:NA</b>  | pCi/L | 09/14/20 08:24 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>-0.169 ± 0.477 (1.17)</b><br><b>C:57% T:67%</b> | pCi/L | 09/16/20 14:42 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.357 ± 0.694 (1.50)</b>                        | pCi/L | 09/17/20 14:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: FD-01**      **Lab ID: 92492413012**      Collected: 08/26/20 00:00      Received: 08/27/20 08:56      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.102 ± 0.145 (0.312)</b><br><b>C:89% T:NA</b> | pCi/L | 09/14/20 09:00 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>1.05 ± 0.508 (0.849)</b><br><b>C:63% T:79%</b> | pCi/L | 09/16/20 14:42 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.15 ± 0.653 (1.16)</b>                        | pCi/L | 09/17/20 14:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: HGWC-124**      **Lab ID: 92492413013**      Collected: 08/27/20 11:17      Received: 08/28/20 11:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0465 ± 0.0876 (0.174)</b><br><b>C:76% T:NA</b> | pCi/L | 09/10/20 19:37 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.447 ± 0.478 (0.997)</b><br><b>C:66% T:77%</b>  | pCi/L | 09/15/20 15:05 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.494 ± 0.566 (1.17)</b>                         | pCi/L | 09/16/20 11:24 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

**Sample: HGWA-1**      **Lab ID: 92492413014**      Collected: 08/28/20 09:26      Received: 08/31/20 12:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>-0.0409 ± 0.114 (0.247)</b><br><b>C:91% T:NA</b> | pCi/L | 09/11/20 18:15 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>-0.622 ± 0.521 (1.31)</b><br><b>C:60% T:80%</b>  | pCi/L | 09/16/20 12:46 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.000 ± 0.635 (1.56)</b>                         | pCi/L | 09/17/20 14:16 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 412347   | Analysis Method:      | EPA 9320                              |
| QC Batch Method: | EPA 9320 | Analysis Description: | 9320 Radium 228                       |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92492413009, 92492413010, 92492413011, 92492413012

|               |         |         |       |
|---------------|---------|---------|-------|
| METHOD BLANK: | 1994502 | Matrix: | Water |
|---------------|---------|---------|-------|

Associated Lab Samples: 92492413009, 92492413010, 92492413011, 92492413012

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-228 | 0.314 ± 0.487 (1.05) C:61% T:69% | pCi/L | 09/16/20 14:42 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412653

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413014

METHOD BLANK: 1995813

Matrix: Water

Associated Lab Samples: 92492413014

| Parameter  | Act ± Unc (MDC) Carr Trac           | Units | Analyzed       | Qualifiers |
|------------|-------------------------------------|-------|----------------|------------|
| Radium-228 | -0.0793 ± 0.359 (0.855) C:71% T:76% | pCi/L | 09/16/20 11:15 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412851

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413014

METHOD BLANK: 1996985

Matrix: Water

Associated Lab Samples: 92492413014

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.205 ± 0.164 (0.296) C:93% T:NA | pCi/L | 09/11/20 17:15 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412345

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413013

METHOD BLANK: 1994499

Matrix: Water

Associated Lab Samples: 92492413013

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.357 ± 0.355 (0.727) C:71% T:84% | pCi/L | 09/15/20 15:02 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412352

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413013

METHOD BLANK: 1994514

Matrix: Water

Associated Lab Samples: 92492413013

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.206 ± 0.102 (0.149) C:95% T:NA | pCi/L | 09/10/20 19:37 |            |

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## QUALIFIERS

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SCAN/BKG 03 RADS  
Pace Project No.: 92492413

| Lab ID      | Sample ID | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|--------------------------|----------|-------------------|------------------|
| 92492413001 | HGWA-122  | EPA 9315                 | 412356   |                   |                  |
| 92492413002 | HGWA-2    | EPA 9315                 | 412356   |                   |                  |
| 92492413003 | HGWA-3    | EPA 9315                 | 412356   |                   |                  |
| 92492413004 | HGWC-125  | EPA 9315                 | 412356   |                   |                  |
| 92492413005 | HGWC-126  | EPA 9315                 | 412356   |                   |                  |
| 92492413006 | FB-01     | EPA 9315                 | 412356   |                   |                  |
| 92492413007 | HGWC-121A | EPA 9315                 | 412356   |                   |                  |
| 92492413008 | MW-32     | EPA 9315                 | 412356   |                   |                  |
| 92492413009 | MW-39     | EPA 9315                 | 412358   |                   |                  |
| 92492413010 | MW-41     | EPA 9315                 | 412358   |                   |                  |
| 92492413011 | HGWC-120  | EPA 9315                 | 412358   |                   |                  |
| 92492413012 | FD-01     | EPA 9315                 | 412358   |                   |                  |
| 92492413013 | HGWC-124  | EPA 9315                 | 412352   |                   |                  |
| 92492413014 | HGWA-1    | EPA 9315                 | 412851   |                   |                  |
| 92492413001 | HGWA-122  | EPA 9320                 | 412346   |                   |                  |
| 92492413002 | HGWA-2    | EPA 9320                 | 412346   |                   |                  |
| 92492413003 | HGWA-3    | EPA 9320                 | 412346   |                   |                  |
| 92492413004 | HGWC-125  | EPA 9320                 | 412346   |                   |                  |
| 92492413005 | HGWC-126  | EPA 9320                 | 412346   |                   |                  |
| 92492413006 | FB-01     | EPA 9320                 | 412346   |                   |                  |
| 92492413007 | HGWC-121A | EPA 9320                 | 412346   |                   |                  |
| 92492413008 | MW-32     | EPA 9320                 | 412346   |                   |                  |
| 92492413009 | MW-39     | EPA 9320                 | 412347   |                   |                  |
| 92492413010 | MW-41     | EPA 9320                 | 412347   |                   |                  |
| 92492413011 | HGWC-120  | EPA 9320                 | 412347   |                   |                  |
| 92492413012 | FD-01     | EPA 9320                 | 412347   |                   |                  |
| 92492413013 | HGWC-124  | EPA 9320                 | 412345   |                   |                  |
| 92492413014 | HGWA-1    | EPA 9320                 | 412653   |                   |                  |
| 92492413001 | HGWA-122  | Total Radium Calculation | 414382   |                   |                  |
| 92492413002 | HGWA-2    | Total Radium Calculation | 414382   |                   |                  |
| 92492413003 | HGWA-3    | Total Radium Calculation | 414382   |                   |                  |
| 92492413004 | HGWC-125  | Total Radium Calculation | 414382   |                   |                  |
| 92492413005 | HGWC-126  | Total Radium Calculation | 414382   |                   |                  |
| 92492413006 | FB-01     | Total Radium Calculation | 414382   |                   |                  |
| 92492413007 | HGWC-121A | Total Radium Calculation | 414382   |                   |                  |
| 92492413008 | MW-32     | Total Radium Calculation | 414382   |                   |                  |
| 92492413009 | MW-39     | Total Radium Calculation | 414421   |                   |                  |
| 92492413010 | MW-41     | Total Radium Calculation | 414421   |                   |                  |
| 92492413011 | HGWC-120  | Total Radium Calculation | 414421   |                   |                  |
| 92492413012 | FD-01     | Total Radium Calculation | 414421   |                   |                  |
| 92492413013 | HGWC-124  | Total Radium Calculation | 414119   |                   |                  |
| 92492413014 | HGWA-1    | Total Radium Calculation | 414421   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: G. Alwood

WO#: 92492413



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Proj. Name: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 214

Type of Ice:  Wet  Blue  None

Samples on ice, cooling process has begun

Cooler Temperature 5.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/25/2004

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

|  |  |                             |
|--|--|-----------------------------|
| Chain of Custody Present:  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.                          |
| Chain of Custody Filled Out:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.                          |
| Chain of Custody Relinquished:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 3.                          |
| Sampler Name & Signature on COC:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 4.                          |
| Samples Arrived within Hold Time:  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.                          |
| Short Hold Time Analysis (<72hr):  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 6.                          |
| Rush Turn Around Time Requested:   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 7.                          |
| Sufficient Volume:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 8.                          |
| Correct Containers Used:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.                          |
| -Pace Containers Used:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |                             |
| Containers Intact:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 10.                         |
| Filtered volume received for Dissolved tests   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11.                         |
| Sample Labels match COC:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 12.                         |
| -Includes date/time/ID/Analysis Matrix:  | <u>SW</u>  |                             |
| All containers needing preservation have been checked.                                     | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 13.                         |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |                             |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Initial when completed      |
|  |  | Lot # of added preservative |
| Samples checked for dechlorination:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 14.                         |
| Headspace in VOA Vials (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 15.                         |
| Trip Blank Present:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 16.                         |
| Trip Blank Custody Seals Present   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |                             |
| Pace Trip Blank Lot # (if purchased):  |  |                             |

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



# CHAIN-OF-CUSTODY / Analytical Request Document

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

|  |  |   |  |  |  |
|--|--|---|--|--|--|
| Section A<br>Required Client Information<br>Company: GA Power<br>Address: Atlanta, GA  |  | Section B<br>Required Project Information<br>Report To: SCS Contacts<br>Copy To: Geosyntec Contacts |  | Section C<br>Invoice Information<br>Attention: Southern Co.<br>Company Name:<br>Address:<br>City/State:<br>Project Name:<br>Plant Hammond AP-3 SCS/BKG 03<br>Project Number: GW6581                      |  |
| Email To: SCS Contacts<br>Phone:<br>Requested Due Date/TAT: 30 Day   |  | Purchase Order No.:<br>Project Name:<br>Requested Due Date/TAT: 30 Day                              |  | Address:<br>City/State:<br>Project Name:<br>Plant Hammond AP-3 SCS/BKG 03<br>Project Number: GW6581  |  |
| Valid Matrix Codes<br>MATRIX CODE (see valid codes to left)  |  | COLLECTED<br>DATE TIME DATE TIME  |  | Preservatives<br>Unpreserved<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other                                  |  |
| Sample ID<br>(A-Z, 0-9, /)<br>Sample IDs MUST BE UNIQUE  |  | SAMPLE TYPE (G=GRAB C=COMP)   |  | Analysis Test<br>Fluoride<br>App IV Metals 6020/7470*<br>RAD 226/228   |  |
| Requested Analysis Filtered (Y/N)  |  | DATE  |  | Residual Chlorine (Y/N)  |  |
| REGULATORY AGENCY<br>NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/><br>UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCR <input type="checkbox"/> |  | DATE  |  | SAMPLER NAME AND SIGNATURE<br>PRINT Name of SAMPLER:<br>SIGNATURE of SAMPLER:<br>DATE Signed (MM/DD/YYYY):<br>Temp in °C<br>Received on Ice (Y/N)<br>Custody Sealed Cooler (Y/N)<br>Samples Intact (Y/N) |  |

| ITEM # | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |       | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |             |                                |                  |     | Analysis Test |   |          | Residual Chlorine (Y/N) | SAMPLER NAME AND SIGNATURE<br>PRINT Name of SAMPLER:<br>SIGNATURE of SAMPLER:<br>DATE Signed (MM/DD/YYYY): | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|--------|---|-----------------------------|-----------|-------|---------------------------|-----------------|---------------|------|-------------|--------------------------------|------------------|-----|---------------|---|----------|-------------------------|--|------------|-----------------------|-----------------------------|----------------------|
|        |   |                             | DATE      | TIME  |                           |                 | DATE          | TIME | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH          | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol |                         |  |            |                       |                             |                      |
| 1      | HGWA-1  | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 2      | HGWA-2  | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 3      | HGWA-3  | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 4      | HGWA-122  | WT G                        | 8/24      | 16:52 |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 5      | HGWA-120  | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 6      | HGWA-124  | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 7      | HGWA-124  | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 8      | HGWA-92   | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 9      | HGWA-99   | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 10     | HGWA-41   | WT G                        |           |       |                           | 4               |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 11     |   |                             |           |       |                           |                 |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |
| 12     |   |                             |           |       |                           |                 |               |      |             |                                |                  |     |               |   |          |                         |  |            |                       |                             |                      |

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any amounts not paid within 30 days.

FALL-0-020rev07, 15-Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>Section A</b><br>Required Client Information<br>Company: GA Power<br>Address: Atlanta, GA<br>Email To: SCS Contacts<br>Phone: Fax<br>Requested Due Date/TAT: 10 Day   |  | <b>Section B</b><br>Required Project Information<br>Report To: SCS Contacts<br>Copy To: Geosynthetic Contacts<br>Purchase Order No.:<br>Project Name: Plant Hammond AP-3 ScarvBKG 03<br>Project Number: GW6581 |  | <b>Section C</b><br>Invoice Information<br>Attention: Southern Co.<br>Company Name:<br>Address:<br>POC Name:<br>Reference:<br>Project Manager:<br>Price Provide #: |  |
| REGULATORY AGENCY<br><input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCR |  | Requested Analyte Filtered (Y/N)<br>Fluoride: N N N<br>App IV Metals 6020/7470*: N N N<br>RAD 225/228: N N N   |  | Site Location<br>STATE: GA   |  |

| ITEM # | Section D<br>Required Client Information<br>SAMPLE ID<br>(A-Z, 0-9 / - / )<br>Sample IDs MUST BE UNIQUE | Valid Matrix Codes<br>MATRIX CODE<br>DOMESTIC WATER<br>WASTE WATER<br>PRODUCT<br>SOLID/DUST<br>SLURRY<br>OTHER<br>Tissue | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other | Analysis Test | Requested Analyte Filtered (Y/N) | Residual Chlorine (Y/N) | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples In tact (Y/N) |      |
|--------|---|--|---------------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|--|---------------|----------------------------------|-------------------------|------------|-----------------------|-----------------------------|-----------------------|------|
|        |   |  |                                       |                             | DATE      | TIME |                           |                 |  |               |                                  |                         |            |                       |                             |                       | DATE |
| 1      | HGWA-1  |  | WT G                                  |                             | 8/25      | 1038 | 60                        | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 2      | HGWA-2  |  | WT G                                  |                             | 8/25      | 0925 | 60                        | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 3      | HGWA-3  |  | WT G                                  |                             | 8/25      | 0925 | 60                        | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 4      | HQWA-122  |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 5      | HQWA-120  |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 6      | HQWA-121  |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 7      | HQWA-124  |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 8      | HQWA-99   |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 9      | HQWA-98   |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 10     | HQWA-44   |  | WT G                                  |                             |           |      |                           | 4               | 1  | 3             | X                                | X                       | X          | X                     | X                           | X                     |      |
| 11     |   |  |                                       |                             |           |      |                           |                 |  |               |                                  |                         |            |                       |                             |                       |      |
| 12     |   |  |                                       |                             |           |      |                           |                 |  |               |                                  |                         |            |                       |                             |                       |      |

|  |  |  |  |
|--|--|--|--|
| ADDITIONAL COMMENTS<br>REINQUISHED BY / AFFILIATION<br>DATE<br>TIME<br>ACCEPTED BY / AFFILIATION<br>DATE<br>TIME<br>SAMPLER NAME AND SIGNATURE<br>PRINT Name of SAMPLER: Chad Russo<br>SIGNATURE of SAMPLER: Chad Russo<br>DATE Signed (MM/DD/YY): 8/25/2020 |  | ADDITIONAL COMMENTS<br>REINQUISHED BY / AFFILIATION<br>DATE<br>TIME<br>ACCEPTED BY / AFFILIATION<br>DATE<br>TIME<br>SAMPLER NAME AND SIGNATURE<br>PRINT Name of SAMPLER: Chad Russo<br>SIGNATURE of SAMPLER: Chad Russo<br>DATE Signed (MM/DD/YY): 8/25/2020 |  |
|--|--|--|--|

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F-ALL-Q-020REV.07, 15-F-06-2007











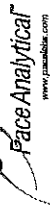








# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: LAL  
Date: 9/11/2020  
Worklist: 55960  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1904515 |
| MB Concentration:                   | 0.060   |
| M/B Counting Uncertainty:           | 0.133   |
| MB MDC:                             | 0.265   |
| MB Numerical Performance Indicator: | 0.88    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| LCSID (Y or N)?                               | N         |
| LCS55960                                      | LCS55960  |
| Count Date:                                   | 9/14/2020 |
| Spike I.D.:                                   | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044    |
| Volume Used (mL):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.505     |
| Target Conc. (pCi/L, g, F):                   | 4.759     |
| Uncertainty (Calculated):                     | 0.057     |
| Result (pCi/L, g, F):                         | 5.322     |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.689     |
| Numerical Performance Indicator:              | 1.60      |
| Percent Recovery:                             | 111.84%   |
| Status vs Numerical Indicator:                | N/A       |
| Status vs Recovery:                           | Pass      |
| Upper % Recovery Limits:                      | 125%      |
| Lower % Recovery Limits:                      | 75%       |

| Duplicate Sample Assessment                                 |                |
|---|----------------|
| Sample I.D.:  | 92493016012    |
| Duplicate Sample I.D.:                                      | 92493016012DUP |
| Sample Result (pCi/L, g, F):                                | 4.731          |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.626          |
| Sample Duplicate Result (pCi/L, g, F):                      | 5.414          |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.692          |
| Are sample and/or duplicate results below RL?               | See Below #    |
| Duplicate Numerical Performance Indicator:                  | -1.435         |
| Duplicate RPD:  | 13.47%         |
| Duplicate Status vs Numerical Indicator:                    | N/A            |
| Duplicate Status vs RPD:                                    | Pass           |
| % RPD Limit:  | 25%            |

| Sample Matrix Spike Control Assessment                      |  |
|---|--|
| Sample Collection Date:                                     |  |
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Spike I.D.:   |  |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):        |  |
| Spike Volume Used in MS (mL):                               |  |
| Spike Volume Used in MSD (mL):                              |  |
| MS Aliquot (L, g, F):                                       |  |
| MS Target Conc. (pCi/L, g, F):                              |  |
| MSD Aliquot (L, g, F):                                      |  |
| MSD Target Conc. (pCi/L, g, F):                             |  |
| MS Spike Uncertainty (calculated):                          |  |
| MSD Spike Uncertainty (calculated):                         |  |
| Sample Result:  |  |
| Sample Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Result:                                 |  |
| Sample Spike Result Counting Uncertainty (pCi/L, g, F):     |  |
| Sample Matrix Spike Duplicate Result:                       |  |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |
| MS Numerical Performance Indicator:                         |  |
| MSD Numerical Performance Indicator:                        |  |
| MS Percent Recovery:  |  |
| MSD Percent Recovery:                                       |  |
| MS Status vs Numerical Indicator:                           |  |
| MSD Status vs Numerical Indicator:                          |  |
| MS Status vs Recovery:                                      |  |
| MSD Status vs Recovery:                                     |  |
| MS/MSD Upper % Recovery Limits:                             |  |
| MS/MSD Lower % Recovery Limits:                             |  |

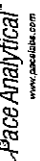
| Matrix Spike/Matrix Spike Duplicate Sample Assessment                        |  |
|--|--|
| Sample I.D.:   |  |
| Sample MS I.D.:  |  |
| Sample MSD I.D.:   |  |
| Sample Matrix Spike Result:  |  |
| Sample Matrix Spike Duplicate Result:  |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):                      |  |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):            |  |
| Duplicate Numerical Performance Indicator:                                   |  |
| Duplicate Numerical Performance Indicator (Based on the Percent Recoveries): |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                              |  |
| MS/MSD Duplicate Status vs RPD:  |  |
| % RPD Limit:   |  |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*DMW 9/11/2020*  
*WAM 9/14/2020*

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 9/11/2020  
Worklist: 55960  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1994515 |
| MB concentration:                   | 0.060   |
| M/B Counting Uncertainty:           | 0.133   |
| MB MDC:                             | 0.265   |
| MB Numerical Performance Indicator: | 0.88    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           | LCSID (Y or N)? | N        |
|---|-----------|-----------------|----------|
|   |           | LCS55960        | LCS55960 |
| Count Date:                                   | 9/14/2020 |                 |          |
| Spike I.D.:                                   | 19-033    |                 |          |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044    |                 |          |
| Volume Used (mL):                             | 0.10      |                 |          |
| Aliquot Volume (L, g, F):                     | 0.505     |                 |          |
| Target Conc. (pCi/L, g, F):                   | 4.759     |                 |          |
| Uncertainty (Calculated):                     | 0.057     |                 |          |
| Result (pCi/L, g, F):                         | 5.322     |                 |          |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.669     |                 |          |
| Numerical Performance Indicator:              | 1.60      |                 |          |
| Percent Recovery:                             | 111.84%   |                 |          |
| Status vs Numerical Indicator:                | N/A       |                 |          |
| Status vs Recovery:                           | Pass      |                 |          |
| Upper % Recovery Limits:                      | 125%      |                 |          |
| Lower % Recovery Limits:                      | 75%       |                 |          |

| Duplicate Sample Assessment                                 |                          | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |  |
|---|--------------------------|---|--|
| Sample I.D.:  | 92493016013              | 92493016013   |  |
| Duplicate Sample I.D.:                                      | 92493016013DUP           | 6.412   |  |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.759                    | 5.852   |  |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.718                    | See Below ##  |  |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 1.050                    | 9.13%   |  |
| Are sample and/or duplicate results below RL?               | Duplicate RPD:           | N/A   |  |
| Duplicate Numerical Performance Indicator:                  | Duplicate Status vs RPD: | Pass  |  |
| Duplicate Status vs Numerical Indicator:                    | % RPD Limit:             | 25%   |  |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment                            |  | MS/MSD 1 | MS/MSD 2 |
|---|--|----------|----------|
| Sample Collection Date:   |  |          |          |
| Sample I.D.:  |  |          |          |
| Sample MS I.D.:   |  |          |          |
| Sample MSD I.D.:  |  |          |          |
| Spike I.D.:   |  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |  |          |          |
| Spike Volume Used in MS (mL):                                     |  |          |          |
| MS Aliquot (L, g, F):   |  |          |          |
| MS Target Conc. (pCi/L, g, F):                                    |  |          |          |
| MSD Aliquot (L, g, F):  |  |          |          |
| MSD Target Conc. (pCi/L, g, F):                                   |  |          |          |
| MS Spike Uncertainty (calculated):                                |  |          |          |
| MSD Spike Uncertainty (calculated):                               |  |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |  |          |          |
| Sample Matrix Spike Result:                                       |  |          |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |          |          |
| Sample Matrix Spike Duplicate Result:                             |  |          |          |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |          |          |
| MS Numerical Performance Indicator:                               |  |          |          |
| MSD Numerical Performance Indicator:                              |  |          |          |
| MS Percent Recovery:  |  |          |          |
| MSD Percent Recovery:   |  |          |          |
| MS Status vs Numerical Indicator:                                 |  |          |          |
| MSD Status vs Numerical Indicator:                                |  |          |          |
| MS Status vs Recovery:  |  |          |          |
| MSD Status vs Recovery:   |  |          |          |
| MS/MSD Upper % Recovery Limits:                                   |  |          |          |
| MS/MSD Lower % Recovery Limits:                                   |  |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |  |
|---|--|
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Duplicate Result:                             |  |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |
| Duplicate Numerical Performance Indicator:                        |  |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                   |  |
| MS/MSD Duplicate Status vs RPD:                                   |  |
| % RPD Limit:  |  |

*09/11/2020*  
*mmg/14/2020*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 9/11/2020  
Worklist: 56031  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1996985 |
| MB concentration:                   | 0.205   |
| M/B Counting Uncertainty:           | 0.162   |
| MB MDC:                             | 0.296   |
| MB Numerical Performance Indicator: | 2.48    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs MDC:                   | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| LCSID (Y or N)?                               | Y         |
| LCS56031                                      | 9/11/2020 |
| Count Date:                                   | 9/11/2020 |
| Spike I.D.:                                   | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): | 24.045    |
| Volume Used (mL):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.505     |
| Target Conc. (pCi/L, g, F):                   | 4.759     |
| Uncertainty (Calculated):                     | 0.057     |
| Result (pCi/L, g, F):                         | 4.231     |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.361     |
| Numerical Performance Indicator:              | -2.39     |
| Percent Recovery:                             | 90.65%    |
| Status vs Numerical Indicator:                | N/A       |
| Upper % Recovery Limits:                      | 125%      |
| Lower % Recovery Limits:                      | 75%       |

| Duplicate Sample Assessment   |          |
|---|----------|
| Sample I.D.:  | LCS56031 |
| Duplicate Sample I.D.:  | LCS56031 |
| Sample Result (pCi/L, g, F):  | 4.314    |
| Sample Duplicate Result (pCi/L, g, F):                              | 0.361    |
| Sample Duplicate Counting Uncertainty (pCi/L, g, F):                | 4.231    |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):         | 0.346    |
| Are sample and/or duplicate results below RL?                       | NO       |
| Duplicate Numerical Performance Indicator:                          | 0.325    |
| Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 2.94%    |
| Duplicate Status vs Numerical Indicator:                            | N/A      |
| Duplicate Status vs RPD:  | Pass     |
| % RPD Limit:  | 25%      |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*Handwritten:* Omit 9/11/2020  
LAM 9/14/2020

| Sample Matrix Spike Control Assessment                            |          |
|---|----------|
| Sample Collection Date:   | MS/MSD 1 |
| Sample I.D.:  | MS/MSD 2 |
| Sample MS I.D.:   |          |
| Sample MSD I.D.:  |          |
| Spike I.D.:   |          |
| M/MSD Decay Corrected Spike Concentration (pCi/mL):               |          |
| Spike Volume Used in MS (mL):                                     |          |
| Spike Volume Used in MSD (mL):                                    |          |
| MS Aliquot (L, g, F):   |          |
| MS Target Conc. (pCi/L, g, F):                                    |          |
| MSD Aliquot (L, g, F):  |          |
| MSD Target Conc. (pCi/L, g, F):                                   |          |
| MS Spike Uncertainty (calculated):                                |          |
| MSD Spike Uncertainty (calculated):                               |          |
| Sample Result:  |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |          |
| Sample Matrix Spike Result:                                       |          |
| Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):           |          |
| Sample Matrix Spike Duplicate Result:                             |          |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |          |
| MS Numerical Performance Indicator:                               |          |
| MSD Numerical Performance Indicator:                              |          |
| MS Percent Recovery:  |          |
| MSD Percent Recovery:   |          |
| MS Status vs Numerical Indicator:                                 |          |
| MSD Status vs Numerical Indicator:                                |          |
| MS Status vs Recovery:  |          |
| MSD Status vs Recovery:   |          |
| MS/MSD Upper % Recovery Limits:                                   |          |
| MS/MSD Lower % Recovery Limits:                                   |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |   |
|---|---|
| Sample I.D.:  | Sample I.D.   |
| Sample MS I.D.:   | Sample MS I.D.  |
| Sample MSD I.D.:  | Sample MSD I.D.   |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | Sample Matrix Spike Result:                                       |
| Sample Matrix Spike Duplicate Result:                             | Sample Matrix Spike Duplicate Result:                             |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): | Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |
| Duplicate Numerical Performance Indicator:                        | Duplicate Numerical Performance Indicator:                        |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           | (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |
| M/MSD Duplicate Status vs Numerical Indicator:                    | M/MSD Duplicate Status vs Numerical Indicator:                    |
| MS/MSD Duplicate Status vs RPD:                                   | MS/MSD Duplicate Status vs RPD:                                   |
| % RPD Limit:  | % RPD Limit:  |

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: LAL  
Date: 9/11/2020  
Worklist: 55961  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1994517 |
| MB concentration:                   | 0.056   |
| M/B Counting Uncertainty:           | 0.118   |
| MB MDC:                             | 0.278   |
| MB Numerical Performance Indicator: | 0.92    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? | N         |
|---|----------------|-----------|
|   |                | LCSD55961 |
| Count Date:                                   | 9/14/2020      |           |
| Spike I.D.:                                   | 19-033         |           |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044         |           |
| Volume Used (mL):                             | 0.10           |           |
| Aliquot Volume (L, g, F):                     | 0.522          |           |
| Target Conc. (pCi/L, g, F):                   | 4.609          |           |
| Uncertainty (Calculated):                     | 0.055          |           |
| Result (pCi/L, g, F):                         | 4.395          |           |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.589          |           |
| Numerical Performance Indicator:              | -0.71          |           |
| Percent Recovery:                             | 95.35%         |           |
| Status vs Numerical Indicator:                | N/A            |           |
| Status vs Recovery:                           | Pass           |           |
| Upper % Recovery Limits:                      | 125%           |           |
| Lower % Recovery Limits:                      | 75%            |           |

| Duplicate Sample Assessment                                 | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
|---|---|
| Sample I.D.:  | 92492413011   |
| Duplicate Sample I.D.:                                      | 92492413011DUP  |
| Sample Result (pCi/L, g, F):                                | 0.357   |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.211   |
| Sample Duplicate Counting Uncertainty (pCi/L, g, F):        | 0.265   |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.184   |
| Are sample and/or duplicate results below RL?               | See below ##  |
| Duplicate Numerical Performance Indicator:                  | 0.647   |
| Duplicate RPD:  | 29.70%  |
| Duplicate Status vs Numerical Indicator:                    | N/A   |
| Duplicate Status vs RPD:                                    | Fail***   |
| % RPD Limit:  | 25%   |

\*\*\* Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

\*\*\*Batch must be re-prepared due to unacceptable precision: N/A  
LAM 9/14/2020

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated): |          |          |
| Sample Result:<br>Sample Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Sample Matrix Spike Duplicate Result:<br>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:                              |          |          |
| MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits:  |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

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LAM 9/14/2020



# Quality Control Sample Performance Assessment



**Analyst. Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: LAL  
Date: 9/11/2020  
Worklist: 55961  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1994517 |
| MB concentration:                   | 0.056   |
| M/B Counting Uncertainty:           | 0.118   |
| MB MDC:                             | 0.278   |
| MB Numerical Performance Indicator: | 0.92    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCS# (Y or N)? |          | N |
|---|----------------|----------|---|
|   | LCS55961       | LCS55961 |   |
| Count Date:                                   | 9/14/2020      |          |   |
| Spike I.D.:                                   | 19-033         |          |   |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044         |          |   |
| Volume Used (mL):                             | 0.10           |          |   |
| Aliquot Volume (L, g, F):                     | 0.522          |          |   |
| Target Conc. (pCi/L, g, F):                   | 4.609          |          |   |
| Uncertainty (Calculated):                     | 0.055          |          |   |
| Result (pCi/L, g, F):                         | 4.385          |          |   |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.589          |          |   |
| Numerical Performance Indicator:              | -0.71          |          |   |
| Percent Recovery:                             | 95.35%         |          |   |
| Status vs Numerical Indicator:                | N/A            |          |   |
| Status vs Recovery:                           | Pass           |          |   |
| Upper % Recovery Limits:                      | 125%           |          |   |
| Lower % Recovery Limits:                      | 75%            |          |   |

| Duplicate Sample Assessment                                 | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
|---|---|
| Sample I.D.:  | 92492413010   |
| Duplicate Sample I.D.:                                      | 92492413010DUP  |
| Sample Result (pCi/L, g, F):                                | 0.313   |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.192   |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.186   |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.181   |
| Are sample and/or duplicate results below RL?               | See Below #   |
| Duplicate Numerical Performance Indicator:                  | 0.939   |
| Duplicate RPD:  | 50.74%  |
| Duplicate Status vs Numerical Indicator:                    | N/A   |
| Duplicate Status vs RPD:                                    | Fail***   |
| % RPD Limit:  | 25%   |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

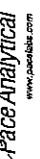
\*\*\*Spike must be re-prepped due to unacceptable precision. N/A

| Sample Matrix Spike Control Assessment                            | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:   |          |          |
| Sample I.D.:  |          |          |
| Sample MS I.D.:   |          |          |
| Sample MSD I.D.:  |          |          |
| Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |          |          |
| Spike Volume Used in MS (mL):                                     |          |          |
| Spike Volume Used in MSD (mL):                                    |          |          |
| MS Aliquot (L, g, F):   |          |          |
| MS Target Conc. (pCi/L, g, F):                                    |          |          |
| MSD Aliquot (L, g, F):  |          |          |
| MSD Target Conc. (pCi/L, g, F):                                   |          |          |
| MS Spike Uncertainty (calculated):                                |          |          |
| MSD Spike Uncertainty (calculated):                               |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |          |          |
| Sample Matrix Spike Result:                                       |          |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |          |          |
| Sample Matrix Spike Duplicate Result:                             |          |          |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |          |          |
| MS Numerical Performance Indicator:                               |          |          |
| MSD Numerical Performance Indicator:                              |          |          |
| MS Percent Recovery:  |          |          |
| MSD Percent Recovery:   |          |          |
| MS Status vs Numerical Indicator:                                 |          |          |
| MSD Status vs Numerical Indicator:                                |          |          |
| MS Status vs Recovery:  |          |          |
| MSD Status vs Recovery:   |          |          |
| MS/MSD Upper % Recovery Limits:                                   |          |          |
| MS/MSD Lower % Recovery Limits:                                   |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment                    |
|--|
| Sample I.D.:   |
| Sample MS I.D.:  |
| Sample MSD I.D.:   |
| Sample Matrix Spike Result:  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):                  |
| Sample Matrix Spike Duplicate Result:                                    |
| Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):        |
| Duplicate Numerical Performance Indicator:                               |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:                  |
| MS/MSD Duplicate Status vs Numerical Indicator:                          |
| MS/MSD Duplicate Status vs RPD:  |
| % RPD Limit:   |

*over 11/19/2020*  
*9/14/2020*

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 9/10/2020  
Worklist: 55959  
Matrix: DW

| Method Blank Assessment             |              |
|-------------------------------------|--------------|
| MB Sample ID                        | 1994514      |
| MB Concentration:                   | 0.206        |
| M/B Counting Uncertainty:           | 0.098        |
| MB MDC:                             | 0.149        |
| MB Numerical Performance Indicator: | 4.13         |
| MB Status vs Numerical Indicator:   | N/A          |
| MB Status vs. MDC:                  | See Comment* |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? | N         |
|---|----------------|-----------|
|   | LCSS5959       | LCSD55959 |
| Count Date:                                   | 9/11/2020      |           |
| Spike I.D.:                                   | 19-033         |           |
| Decay Corrected Spike Concentration (pCi/mL): | 24.045         |           |
| Volume Used (mL):                             | 0.10           |           |
| Aliquot Volume (L, g, F):                     | 0.507          |           |
| Target Conc. (pCi/L, g, F):                   | 4.740          |           |
| Uncertainty (Calculated):                     | 0.057          |           |
| Result (pCi/L, g, F):                         | 4.372          |           |
| LCSD Counting Uncertainty (pCi/L, g, F):      | 0.792          |           |
| Numerical Performance Indicator:              | -0.91          |           |
| Percent Recovery:                             | 92.23%         |           |
| Status vs Numerical Indicator:                | N/A            |           |
| Status vs Recovery:                           | Pass           |           |
| Upper % Recovery Limits:                      | 125%           |           |
| Lower % Recovery Limits:                      | 75%            |           |

| Duplicate Sample Assessment                                 | Enter Duplicate sample IDs if other than LCSD/LCSD in the space below. |
|---|--|
| Sample I.D.:  | 92492559006  |
| Duplicate Sample I.D.:                                      | 92492559006DUP   |
| Sample Result (pCi/L, g, F):                                | 0.288  |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.138  |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.063  |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.153  |
| Are sample and/or duplicate results below RL?               | See Below ##   |
| Duplicate Numerical Performance Indicator:                  | 2.147  |
| Duplicate RPD:  | 128.44%  |
| Duplicate Status vs Numerical Indicator:                    | N/A  |
| Duplicate Status vs RPD:                                    | Fail   |
| % RPD Limit:  | 25%  |

## - Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

This method blank result is below the reporting limit for this analysis and is acceptable.

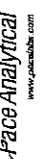
\*\*\*Batch must be re-prepped due to unacceptable precision: N/A Wm 9/11/2020

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| <p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p> |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>Duplicate Numerical Performance Indicator (Based on the Percent Recoveries):</p> <p>MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p> |

Wm 9/11/2020

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 9/10/2020  
Worklist: 55959  
Matrix: DW

| Method Blank Assessment             |              |
|-------------------------------------|--------------|
| MB Sample ID                        | 1994514      |
| MB concentration:                   | 0.206        |
| M/B Counting Uncertainty:           | 0.098        |
| MB MDC:                             | 0.149        |
| MB Numerical Performance Indicator: | 4.13         |
| MB Status vs Numerical Indicator:   | N/A          |
| MB Status vs. MDC:                  | See Comment* |

| Laboratory Control Sample Assessment          | LCS# (Y or N)? |            |
|---|----------------|------------|
|   | LCS#55959      | N          |
| Count Date:                                   | 9/11/2020      | LCS#056959 |
| Spike I.D.:                                   | 19-033         |            |
| Decay Corrected Spike Concentration (pCi/mL): | 24.045         |            |
| Volume Used (mL):                             | 0.10           |            |
| Aliquot Volume (L, g, F):                     | 0.507          |            |
| Target Conc. (pCi/L, g, F):                   | 4.740          |            |
| Uncertainty (Calculated):                     | 0.057          |            |
| Result (pCi/L, g, F):                         | 4.372          |            |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.792          |            |
| Numerical Performance Indicator:              | -0.91          |            |
| Percent Recovery:                             | 92.23%         |            |
| Status vs Numerical Indicator:                | N/A            |            |
| Status vs Recovery:                           | Pass           |            |
| Upper % Recovery Limits:                      | 125%           |            |
| Lower % Recovery Limits:                      | 75%            |            |

| Duplicate Sample Assessment                          |                 |
|--|-----------------|
| Sample I.D.:   | 92492559007     |
| Duplicate Sample I.D.:                               | 92492559007/DUP |
| Sample Result (pCi/L, g, F):                         | 0.269           |
| Sample Result Counting Uncertainty (pCi/L, g, F):    | 0.118           |
| Sample Duplicate Result (pCi/L, g, F):               | 0.234           |
| Sample Duplicate Counting Uncertainty (pCi/L, g, F): | 0.201           |
| Are sample and/or duplicate results below RL?        | See Below ##    |
| Duplicate Numerical Performance Indicator:           | 0.291           |
| Duplicate RPD:                                       | 13.77%          |
| Duplicate Status vs Numerical Indicator:             | N/A             |
| Duplicate Status vs RPD:                             | Pass            |
| % RPD Limit:   | 25%             |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

**Comments:**

\*The method blank result is below the reporting limit for this analysis and is acceptable.

| Sample Matrix Spike Control Assessment                            | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:   |          |          |
| Sample I.D.:  |          |          |
| Sample MS I.D.:   |          |          |
| Sample MSD I.D.:  |          |          |
| Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |          |          |
| Spike Volume Used in MS (mL):                                     |          |          |
| Spike Volume Used in MSD (mL):                                    |          |          |
| MS Aliquot (L, g, F):   |          |          |
| MS Target Conc. (pCi/L, g, F):                                    |          |          |
| MSD Aliquot (L, g, F):  |          |          |
| MSD Target Conc. (pCi/L, g, F):                                   |          |          |
| MS Spike Uncertainty (calculated):                                |          |          |
| MSD Spike Uncertainty (calculated):                               |          |          |
| Sample Result:  |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |          |          |
| Sample Matrix Spike Result:                                       |          |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |          |          |
| Sample Matrix Spike Duplicate Result:                             |          |          |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |          |          |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |          |          |
| MS Numerical Performance Indicator:                               |          |          |
| MSD Numerical Performance Indicator:                              |          |          |
| MS Percent Recovery:  |          |          |
| MSD Percent Recovery:   |          |          |
| MS Status vs Numerical Indicator:                                 |          |          |
| MSD Status vs Numerical Indicator:                                |          |          |
| MS Status vs Recovery:  |          |          |
| MSD Status vs Recovery:   |          |          |
| MS/MSD Upper % Recovery Limits:                                   |          |          |
| MS/MSD Lower % Recovery Limits:                                   |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |  |
|---|--|
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Sample Matrix Spike Result:                                       |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Duplicate Result:                             |  |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |  |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |
| Duplicate Numerical Performance Indicator:                        |  |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                   |  |
| MS/MSD Duplicate Status vs RPD:                                   |  |
| % RPD Limit:  |  |

AM9/11/2020

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 9/10/2020  
Worklist: 55955  
Matrix: WT

| Method Blank Assessment             |              |
|-------------------------------------|--------------|
| MB Sample ID                        | 1994501      |
| MB concentration:                   | 0.749        |
| MB 2 Sigma CSU:                     | 0.397        |
| MB MDC:                             | 0.699        |
| MB Numerical Performance Indicator: | 3.70         |
| MB Status vs Numerical Indicator:   | Fail*        |
| MB Status vs. MDC:                  | See Comment* |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCSD55955      | LCSD55955 |
| Count Date:                                   | 9/16/2020      | 9/16/2020 |
| Spike I.D.:                                   | 20-030         | 20-030    |
| Decay Corrected Spike Concentration (pCi/mL): | 38.383         | 38.383    |
| Volume Used (mL):                             | 0.10           | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.800          | 0.800     |
| Target Conc. (pCi/L, g, F):                   | 4.730          | 4.730     |
| Uncertainty (calculated):                     | 0.235          | 0.235     |
| Result (pCi/L, g, F):                         | 5.530          | 6.376     |
| LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):          | 1.311          | 1.417     |
| Numerical Performance Indicator:              | 1.18           | 2.16      |
| Percent Recovery:                             | 116.90%        | 132.93%   |
| Status vs Numerical Indicator:                | N/A            | N/A       |
| Status vs Recovery:                           | Pass           | Pass      |
| Upper % Recovery Limits:                      | 135%           | 135%      |
| Lower % Recovery Limits:                      | 60%            | 60%       |

| Duplicate Sample Assessment   | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
|---|---|
| Sample I.D.:  | LCSD55955   |
| Duplicate Sample I.D.:  | LCSD55955   |
| Sample Result (pCi/L, g, F):  | 5.530   |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                            | 1.311   |
| Sample Duplicate Result (pCi/L, g, F):                              | 6.376   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):                  | 1.417   |
| Are sample and/or duplicate results below RL?                       | NO  |
| Duplicate Numerical Performance Indicator:                          | -0.860  |
| Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 12.84%  |
| Duplicate Status vs Numerical Indicator:                            | Pass  |
| Duplicate Status vs RPD:  | Pass  |
| % RPD Limit:  | 36%   |

| Sample Matrix Spike Control Assessment                   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:                                  |          |          |
| Sample I.D.:   |          |          |
| Sample MS I.D.:  |          |          |
| Sample MSD I.D.:   |          |          |
| Spike I.D.:  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):     |          |          |
| Spike Volume Used in MS (mL):                            |          |          |
| Spike Volume Used in MSD (mL):                           |          |          |
| MS Aliquot (L, g, F):                                    |          |          |
| MS Target Conc. (pCi/L, g, F):                           |          |          |
| MSD Aliquot (L, g, F):                                   |          |          |
| MSD Target Conc. (pCi/L, g, F):                          |          |          |
| MS Spike Uncertainty (calculated):                       |          |          |
| MSD Spike Uncertainty (calculated):                      |          |          |
| Sample Result:   |          |          |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                 |          |          |
| Sample Matrix Spike Result:                              |          |          |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           |          |          |
| Sample Matrix Spike Duplicate Result:                    |          |          |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |          |          |
| MS Numerical Performance Indicator:                      |          |          |
| MSD Numerical Performance Indicator:                     |          |          |
| MS Percent Recovery:                                     |          |          |
| MSD Percent Recovery:                                    |          |          |
| MS Status vs Numerical Indicator:                        |          |          |
| MSD Status vs Numerical Indicator:                       |          |          |
| MS Status vs Recovery:                                   |          |          |
| MSD Status vs Recovery:                                  |          |          |
| MS/MSD Upper % Recovery Limits:                          |          |          |
| MS/MSD Lower % Recovery Limits:                          |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment    |
|--|
| Sample I.D.:   |
| Sample MS I.D.:  |
| Sample MSD I.D.:   |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           |
| Sample Matrix Spike Duplicate Result:                    |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |
| Duplicate Numerical Performance Indicator:               |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:  |
| MS/MSD Duplicate Status vs Numerical Indicator:          |
| MS/MSD Duplicate Status vs RPD:                          |
| % RPD Limit:   |

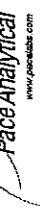
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

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# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 9/14/2020  
Worklist: 56010  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1995813 |
| MB Concentration:                   | -0.079  |
| MB 2 Sigma CSU:                     | 0.359   |
| MB MDC:                             | 0.855   |
| MB Numerical Performance Indicator: | -0.43   |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |          |
|---|----------------|----------|
|   | LCS56010       | Y        |
| Count Date:                                   | 9/16/2020      | LCS56010 |
| Spike I.D.:                                   | 20-030         | 20-030   |
| Decay Corrected Spike Concentration (pCi/mL): | 38.384         | 38.384   |
| Volume Used (mL):                             | 0.10           | 0.10     |
| Aliquot Volume (L, g, F):                     | 0.810          | 0.804    |
| Target Conc. (pCi/L, g, F):                   | 4.737          | 4.773    |
| Uncertainty (Calculated):                     | 0.232          | 0.234    |
| Result (pCi/L, g, F):                         | 5.219          | 5.008    |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.198          | 1.173    |
| Numerical Performance Indicator:              | 0.77           | 0.38     |
| Percent Recovery:                             | 110.18%        | 104.92%  |
| Status vs Numerical Indicator:                | N/A            | N/A      |
| Status vs Recovery:                           | Pass           | Pass     |
| Upper % Recovery Limits:                      | 135%           | 135%     |
| Lower % Recovery Limits:                      | 60%            | 60%      |

| Duplicate Sample Assessment                        | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
|--|---|
| Sample I.D.:                                       | LCS56010  |
| Duplicate Sample I.D.:                             | LCS56010  |
| Sample Result (pCi/L, g, F):                       | 5.219   |
| Sample Duplicate Result (pCi/L, g, F):             | 1.198   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 5.008   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 1.173   |
| Are sample and/or duplicate results below RL?      | NO  |
| Duplicate Numerical Performance Indicator:         | 0.247   |
| Duplicate Percent Recoveries:                      | 4.89%   |
| Duplicate Status vs Numerical Indicator:           | Pass  |
| Duplicate Status vs RPD:                           | Pass  |
| % RPD Limit:                                       | 36%   |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result:<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>Duplicate Percent Recoveries: MS/MSD Duplicate RPD:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

9-17-20

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# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 9/10/2020  
Worklist: 55956  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1994502 |
| MB concentration:                   | 0.314   |
| MB 2 Sigma CSU:                     | 0.487   |
| MB MDC:                             | 1.054   |
| MB Numerical Performance Indicator: | 1.26    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCS/D (Y or N)? |           |
|---|-----------------|-----------|
|   | LCS55956        | Y         |
| Count Date:                                   | 9/16/2020       | LCS55956  |
| Spike I.D.:                                   | 20-030          | 9/16/2020 |
| Decay Corrected Spike Concentration (pCi/mL): | 38.382          | 20-030    |
| Volume Used (mL):                             | 0.10            | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.813           | 0.814     |
| Target Conc. (pCi/L, g, F):                   | 4.719           | 4.715     |
| Uncertainty (Calculated):                     | 0.231           | 0.231     |
| Result (pCi/L, g, F):                         | 5.086           | 5.348     |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.251           | 1.293     |
| Numerical Performance Indicator:              | 0.57            | 0.94      |
| Percent Recovery:                             | 107.78%         | 113.43%   |
| Status vs Numerical Indicator:                | N/A             | N/A       |
| Status vs Recovery:                           | Pass            | Pass      |
| Upper % Recovery Limits:                      | 135%            | 135%      |
| Lower % Recovery Limits:                      | 60%             | 60%       |

| Duplicate Sample Assessment                               | LCS55956 | Enter Duplicate sample I.D.s if other than LCS/LCSD in the space below: |
|---|----------|---|
| Sample I.D.:  | LCS55956 |   |
| Duplicate Sample I.D.:                                    | LCS55956 |   |
| Sample Result (pCi/L, g, F):                              | 5.086    |   |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                  | 1.251    |   |
| Sample Duplicate Result (pCi/L, g, F):                    | 5.348    |   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 1.293    |   |
| Are sample and/or duplicate results below RL?             | NO       |   |
| Duplicate Numerical Performance Indicator:                | -0.285   |   |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 5.11%    |   |
| Duplicate Status vs Numerical Indicator:                  | Pass     |   |
| Duplicate Status vs RPD:                                  | Pass     |   |
| % RPD Limit:  | 36%      |   |

Analyst Must Manually Enter All Fields Highlighted in Yellow.

| Sample Matrix Spike Control Assessment                   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:                                  |          |          |
| Sample I.D.:   |          |          |
| Sample MS I.D.:  |          |          |
| Sample MSD I.D.:   |          |          |
| Spike I.D.:  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):     |          |          |
| Spike Volume Used in MS (mL):                            |          |          |
| Spike Volume Used in MSD (mL):                           |          |          |
| MS Aliquot (L, g, F):                                    |          |          |
| MS Target Conc. (pCi/L, g, F):                           |          |          |
| MSD Aliquot (L, g, F):                                   |          |          |
| MSD Target Conc. (pCi/L, g, F):                          |          |          |
| MS Spike Uncertainty (calculated):                       |          |          |
| MSD Spike Uncertainty (calculated):                      |          |          |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                 |          |          |
| Sample Matrix Spike Result:                              |          |          |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           |          |          |
| Sample Matrix Spike Duplicate Result:                    |          |          |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |          |          |
| MS Numerical Performance Indicator:                      |          |          |
| MSD Numerical Performance Indicator:                     |          |          |
| MS Percent Recovery:                                     |          |          |
| MSD Percent Recovery:                                    |          |          |
| MS Status vs Numerical Indicator:                        |          |          |
| MSD Status vs Numerical Indicator:                       |          |          |
| MS Status vs Recovery:                                   |          |          |
| MSD Status vs Recovery:                                  |          |          |
| MS/MSD Upper % Recovery Limits:                          |          |          |
| MS/MSD Lower % Recovery Limits:                          |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment    |
|--|
| Sample I.D.:   |
| Sample MS I.D.:  |
| Sample MSD I.D.:   |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           |
| Sample Matrix Spike Duplicate Result:                    |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |
| Duplicate Numerical Performance Indicator:               |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:  |
| MS/MSD Duplicate Status vs Numerical Indicator:          |
| MS/MSD Duplicate Status vs RPD:                          |
| % RPD Limit:   |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

9/17/20

*Signature*

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 9/15/2020  
Worklist: 55954  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 1994499 |
| MB concentration:                   | 0.357   |
| M/B 2 Sigma CSU:                    | 0.355   |
| MB MDC:                             | 0.727   |
| MB Numerical Performance Indicator: | 1.97    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| LCSD (Y or N)?                                | Y         |
| LCSD55954                                     | 9/15/2020 |
| Count Date:                                   | 9/15/2020 |
| Spike I.D.:                                   | 20-030    |
| Decay Corrected Spike Concentration (pCi/mL): | 38.394    |
| Volume Used (mL):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.808     |
| Target Conc. (pCi/L, g, F):                   | 4.752     |
| Uncertainty (Calculated):                     | 0.233     |
| Result (pCi/L, g, F):                         | 5.042     |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.200     |
| Numerical Performance Indicator:              | 0.46      |
| Percent Recovery:                             | 106.10%   |
| Status vs Numerical Indicator:                | N/A       |
| Status vs Recovery:                           | Pass      |
| Upper % Recovery Limits:                      | 135%      |
| Lower % Recovery Limits:                      | 80%       |

| Duplicate Sample Assessment                               |           |
|---|-----------|
| Sample I.D.:  | LCSD55954 |
| Duplicate Sample I.D.:                                    | LCSD55954 |
| Sample Result (pCi/L, g, F):                              | 5.042     |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                  | 1.200     |
| Sample Duplicate Result (pCi/L, g, F):                    | 4.838     |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 1.149     |
| Are sample and/or duplicate results below RL?             | NO        |
| Duplicate Numerical Performance Indicator:                | 0.241     |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 1.57%     |
| Duplicate Status vs Numerical Indicator:                  | Pass      |
| Duplicate Status vs RPD:                                  | Pass      |
| % RPD Limit:  | 36%       |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

| Sample Matrix Spike Control Assessment                          |  | MS/MSD 1 | MS/MSD 2 |
|---|--|----------|----------|
| Sample Collection Date:   |  |          |          |
| Sample I.D.:  |  |          |          |
| Sample MS I.D.:   |  |          |          |
| Sample MSD I.D.:  |  |          |          |
| Spike I.D.:   |  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):            |  |          |          |
| Spike Volume Used in MS (mL):                                   |  |          |          |
| Spike Volume Used in MSD (mL):                                  |  |          |          |
| MS Aliquot (L, g, F):   |  |          |          |
| MS Target Conc.(pCi/L, g, F):                                   |  |          |          |
| MSD Aliquot (L, g, F):  |  |          |          |
| MSD Target Conc. (pCi/L, g, F):                                 |  |          |          |
| MS Spike Uncertainty (calculated):                              |  |          |          |
| MSD Spike Uncertainty (calculated):                             |  |          |          |
| Sample Result:  |  |          |          |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                        |  |          |          |
| Sample Matrix Spike Result:                                     |  |          |          |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):                  |  |          |          |
| Sample Matrix Spike Duplicate Result:                           |  |          |          |
| Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |  |          |          |
| MS Numerical Performance Indicator:                             |  |          |          |
| MSD Numerical Performance Indicator:                            |  |          |          |
| MS Percent Recovery:  |  |          |          |
| MSD Percent Recovery:   |  |          |          |
| MS Status vs Numerical Indicator:                               |  |          |          |
| MSD Status vs Numerical Indicator:                              |  |          |          |
| MS Status vs Recovery:  |  |          |          |
| MSD Status vs Recovery:   |  |          |          |
| MS/MSD Upper % Recovery Limits:                                 |  |          |          |
| MS/MSD Lower % Recovery Limits:                                 |  |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment           |  |
|---|--|
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Sample Matrix Spike Result:                                     |  |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):                  |  |
| Sample Matrix Spike Duplicate Result:                           |  |
| Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |  |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):        |  |
| Duplicate Numerical Performance Indicator:                      |  |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:         |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                 |  |
| MS/MSD Duplicate Status vs RPD:                                 |  |
| % RPD Limit:  |  |

*D. G. Keane*

*D. G. Keane*

September 2020



November 02, 2020

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tyler Forney for  
Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812  
Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92495904001 | HGWA-1    | Water  | 09/15/20 14:01 | 09/16/20 11:14 |
| 92495904002 | HGWA-2    | Water  | 09/15/20 10:58 | 09/16/20 11:14 |
| 92495904003 | HGWA-3    | Water  | 09/15/20 11:45 | 09/16/20 11:14 |
| 92495904004 | HGWA-122  | Water  | 09/15/20 15:41 | 09/16/20 11:14 |
| 92495904005 | HGWA-43D  | Water  | 09/16/20 11:58 | 09/17/20 09:45 |
| 92495904006 | HGWA-44D  | Water  | 09/16/20 15:18 | 09/17/20 09:45 |
| 92495904007 | HGWC-126  | Water  | 09/18/20 15:39 | 09/21/20 09:25 |
| 92495904008 | FB-03     | Water  | 09/18/20 16:50 | 09/21/20 09:25 |
| 92495904009 | HGWC-120  | Water  | 09/21/20 13:48 | 09/22/20 09:25 |
| 92495904010 | FD-03     | Water  | 09/21/20 00:00 | 09/22/20 09:25 |
| 92495904011 | HGWC-125  | Water  | 09/21/20 12:07 | 09/22/20 09:25 |
| 92495904012 | HGWA-45D  | Water  | 09/25/20 13:50 | 09/28/20 09:40 |
| 92495904013 | MW-46D    | Water  | 09/25/20 11:10 | 09/28/20 09:40 |
| 92495904014 | HGWC-121A | Water  | 09/28/20 16:04 | 09/29/20 08:55 |
| 92495904015 | HGWC-124  | Water  | 09/28/20 18:00 | 09/29/20 08:55 |
| 92495904016 | MW-32     | Water  | 09/28/20 15:44 | 09/29/20 08:55 |
| 92495904017 | MW-39     | Water  | 09/28/20 17:27 | 09/29/20 08:55 |
| 92495904018 | MW-41     | Water  | 09/28/20 19:05 | 09/29/20 08:55 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Lab ID      | Sample ID        | Method                 | Analysts | Analytes Reported |
|-------------|------------------|------------------------|----------|-------------------|
| 92495904001 | HGWA-1           | EPA 6010D              | DRB      | 6                 |
|             |                  | EPA 6020B              | CW1      | 9                 |
|             |                  | SM 2450C-2011          | ALW      | 1                 |
|             |                  | SM 2320B-2011          | ECH      | 3                 |
|             |                  | SM 4500-S2D-2011       | NAL      | 1                 |
|             |                  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92495904002 | HGWA-2           | EPA 6010D              | DRB      | 6                 |
|             |                  | EPA 6020B              | CW1      | 9                 |
|             |                  | SM 2450C-2011          | ALW      | 1                 |
|             |                  | SM 2320B-2011          | ECH      | 3                 |
|             |                  | SM 4500-S2D-2011       | NAL      | 1                 |
|             |                  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92495904003 | HGWA-3           | EPA 6010D              | DRB      | 6                 |
|             |                  | EPA 6020B              | CW1      | 9                 |
|             |                  | SM 2450C-2011          | ALW      | 1                 |
|             |                  | SM 2320B-2011          | ECH      | 3                 |
|             |                  | SM 4500-S2D-2011       | NAL      | 1                 |
|             |                  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92495904004 | HGWA-122         | EPA 6010D              | DRB      | 6                 |
|             |                  | EPA 6020B              | CW1      | 9                 |
|             |                  | SM 2450C-2011          | AW1      | 1                 |
|             |                  | SM 2320B-2011          | ECH      | 3                 |
|             |                  | SM 4500-S2D-2011       | NAL      | 1                 |
|             |                  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92495904005 | HGWA-43D         | EPA 6010D              | DRB      | 6                 |
|             |                  | EPA 6020B              | CW1      | 13                |
|             |                  | EPA 7470A              | VB       | 1                 |
|             |                  | SM 2450C-2011          | ALW      | 1                 |
|             |                  | SM 2320B-2011          | ECH      | 3                 |
|             |                  | SM 4500-S2D-2011       | NAL      | 1                 |
| 92495904006 | HGWA-44D         | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |                  | EPA 6010D              | DRB      | 6                 |
|             |                  | EPA 6020B              | CW1      | 13                |
|             |                  | EPA 7470A              | VB       | 1                 |
|             |                  | SM 2450C-2011          | ALW      | 1                 |
|             |                  | SM 2320B-2011          | ECH      | 3                 |
|             | SM 4500-S2D-2011 | NAL                    | 1        |                   |

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported |
|-------------|-----------|------------------------|----------|-------------------|
| 92495904007 | HGWC-126  | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | KH       | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
| 92495904008 | FB-03     | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | KH       | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
| 92495904009 | HGWC-120  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
| 92495904010 | FD-03     | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
| 92495904011 | HGWC-125  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
| 92495904012 | HGWA-45D  | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | KH       | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported |
|-------------|-----------|------------------------|----------|-------------------|
| 92495904013 | MW-46D    | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | KH       | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
| 92495904014 | HGWC-121A | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
| 92495904015 | HGWC-124  | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
| 92495904016 | MW-32     | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
| 92495904017 | MW-39     | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
|             |           | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | SM 2320B-2011          | ECH      | 3                 |
|             |           | SM 4500-S2D-2011       | NAL      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |
| 92495904018 | MW-41     | EPA 6010D              | DRB      | 6                 |
|             |           | EPA 6020B              | CW1      | 9                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           |                        |          |                   |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab ID | Sample ID | Method                 | Analysts | Analytes Reported |
|--------|-----------|------------------------|----------|-------------------|
|        |           | SM 2320B-2011          | ECH      | 3                 |
|        |           | SM 4500-S2D-2011       | NAL      | 1                 |
|        |           | EPA 300.0 Rev 2.1 1993 | BRJ      | 3                 |

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92495904001</b>     | <b>HGWA-1</b>                  |           |            |              |                |            |
|                        | pH                             | 7.15      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 103       | mg/L       | 1.0          | 09/23/20 17:49 |            |
| EPA 6010D              | Iron                           | 0.087     | mg/L       | 0.040        | 09/23/20 17:49 |            |
| EPA 6010D              | Magnesium                      | 4.3       | mg/L       | 0.050        | 09/23/20 17:49 |            |
| EPA 6010D              | Manganese                      | 0.18      | mg/L       | 0.040        | 09/23/20 17:49 |            |
| EPA 6010D              | Potassium                      | 0.34      | mg/L       | 0.20         | 09/23/20 17:49 | B          |
| EPA 6010D              | Sodium                         | 21.1      | mg/L       | 1.0          | 09/23/20 17:49 |            |
| EPA 6020B              | Barium                         | 0.035     | mg/L       | 0.010        | 09/23/20 17:15 |            |
| EPA 6020B              | Boron                          | 0.017J    | mg/L       | 0.10         | 09/23/20 17:15 |            |
| EPA 6020B              | Lithium                        | 0.00087J  | mg/L       | 0.030        | 09/23/20 17:15 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 265       | mg/L       | 10.0         | 09/17/20 15:18 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 307       | mg/L       | 5.0          | 09/24/20 19:36 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 307       | mg/L       | 5.0          | 09/24/20 19:36 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 13.4      | mg/L       | 1.0          | 09/18/20 21:31 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.082J    | mg/L       | 0.10         | 09/18/20 21:31 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 47.3      | mg/L       | 1.0          | 09/18/20 21:31 |            |
| <b>92495904002</b>     | <b>HGWA-2</b>                  |           |            |              |                |            |
|                        | pH                             | 5.22      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 21.1      | mg/L       | 1.0          | 09/23/20 17:53 |            |
| EPA 6010D              | Iron                           | 0.78      | mg/L       | 0.040        | 09/23/20 17:53 |            |
| EPA 6010D              | Magnesium                      | 2.5       | mg/L       | 0.050        | 09/23/20 17:53 |            |
| EPA 6010D              | Manganese                      | 0.61      | mg/L       | 0.040        | 09/23/20 17:53 |            |
| EPA 6010D              | Potassium                      | 0.89      | mg/L       | 0.20         | 09/23/20 17:53 | B          |
| EPA 6010D              | Sodium                         | 7.4       | mg/L       | 1.0          | 09/23/20 17:53 |            |
| EPA 6020B              | Barium                         | 0.12      | mg/L       | 0.010        | 09/23/20 17:21 |            |
| EPA 6020B              | Beryllium                      | 0.00013J  | mg/L       | 0.0030       | 09/23/20 17:21 |            |
| EPA 6020B              | Boron                          | 0.044J    | mg/L       | 0.10         | 09/23/20 17:21 |            |
| EPA 6020B              | Cobalt                         | 0.021     | mg/L       | 0.0050       | 09/23/20 17:21 |            |
| EPA 6020B              | Lead                           | 0.000080J | mg/L       | 0.0050       | 09/23/20 17:21 |            |
| EPA 6020B              | Lithium                        | 0.0015J   | mg/L       | 0.030        | 09/23/20 17:21 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 124       | mg/L       | 10.0         | 09/17/20 15:18 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 26.1      | mg/L       | 5.0          | 09/24/20 13:36 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 26.1      | mg/L       | 5.0          | 09/24/20 13:36 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 5.0       | mg/L       | 1.0          | 09/18/20 21:46 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 51.5      | mg/L       | 1.0          | 09/18/20 21:46 |            |
| <b>92495904003</b>     | <b>HGWA-3</b>                  |           |            |              |                |            |
|                        | pH                             | 7.29      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 73.1      | mg/L       | 1.0          | 09/23/20 17:57 |            |
| EPA 6010D              | Iron                           | 0.26      | mg/L       | 0.040        | 09/23/20 17:57 |            |
| EPA 6010D              | Magnesium                      | 4.6       | mg/L       | 0.050        | 09/23/20 17:57 |            |
| EPA 6010D              | Manganese                      | 0.22      | mg/L       | 0.040        | 09/23/20 17:57 |            |
| EPA 6010D              | Potassium                      | 0.46      | mg/L       | 0.20         | 09/23/20 17:57 | B          |
| EPA 6010D              | Sodium                         | 4.9       | mg/L       | 1.0          | 09/23/20 17:57 |            |
| EPA 6020B              | Barium                         | 0.12      | mg/L       | 0.010        | 09/23/20 17:27 |            |
| EPA 6020B              | Boron                          | 0.0071J   | mg/L       | 0.10         | 09/23/20 17:27 |            |
| EPA 6020B              | Lead                           | 0.000042J | mg/L       | 0.0050       | 09/23/20 17:27 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92495904003</b>     | <b>HGWA-3</b>                  |           |            |              |                |            |
| EPA 6020B              | Lithium                        | 0.0026J   | mg/L       | 0.030        | 09/23/20 17:27 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 258       | mg/L       | 10.0         | 09/17/20 15:19 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 187       | mg/L       | 5.0          | 09/24/20 13:43 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 187       | mg/L       | 5.0          | 09/24/20 13:43 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 6.0       | mg/L       | 1.0          | 09/18/20 22:01 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 44.7      | mg/L       | 1.0          | 09/18/20 22:01 |            |
| <b>92495904004</b>     | <b>HGWA-122</b>                |           |            |              |                |            |
|                        | pH                             | 6.68      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 75.8      | mg/L       | 1.0          | 09/25/20 18:33 | M1         |
| EPA 6010D              | Iron                           | 0.031J    | mg/L       | 0.040        | 09/25/20 18:33 |            |
| EPA 6010D              | Magnesium                      | 5.6       | mg/L       | 0.050        | 09/25/20 18:33 |            |
| EPA 6010D              | Manganese                      | 0.0055J   | mg/L       | 0.040        | 09/25/20 18:33 |            |
| EPA 6010D              | Potassium                      | 0.90      | mg/L       | 0.20         | 09/25/20 18:33 |            |
| EPA 6010D              | Sodium                         | 7.1       | mg/L       | 1.0          | 09/25/20 18:33 |            |
| EPA 6020B              | Antimony                       | 0.0010J   | mg/L       | 0.0030       | 09/23/20 19:07 |            |
| EPA 6020B              | Barium                         | 0.039     | mg/L       | 0.010        | 09/23/20 19:07 |            |
| EPA 6020B              | Boron                          | 0.22      | mg/L       | 0.10         | 09/23/20 19:07 |            |
| EPA 6020B              | Chromium                       | 0.00067J  | mg/L       | 0.010        | 09/23/20 19:07 |            |
| EPA 6020B              | Lead                           | 0.000043J | mg/L       | 0.0050       | 09/23/20 19:07 |            |
| EPA 6020B              | Molybdenum                     | 0.0045J   | mg/L       | 0.010        | 09/23/20 19:07 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 267       | mg/L       | 10.0         | 09/17/20 15:19 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 202       | mg/L       | 5.0          | 09/24/20 14:52 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 202       | mg/L       | 5.0          | 09/24/20 14:52 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 3.6       | mg/L       | 1.0          | 09/18/20 23:45 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.096J    | mg/L       | 0.10         | 09/18/20 23:45 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 41.4      | mg/L       | 1.0          | 09/18/20 23:45 |            |
| <b>92495904005</b>     | <b>HGWA-43D</b>                |           |            |              |                |            |
|                        | pH                             | 7.52      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 56.0      | mg/L       | 1.0          | 09/23/20 18:49 |            |
| EPA 6010D              | Iron                           | 0.020J    | mg/L       | 0.040        | 09/23/20 18:49 |            |
| EPA 6010D              | Magnesium                      | 18.3      | mg/L       | 0.050        | 09/23/20 18:49 |            |
| EPA 6010D              | Manganese                      | 0.010J    | mg/L       | 0.040        | 09/23/20 18:49 |            |
| EPA 6010D              | Potassium                      | 0.97      | mg/L       | 0.20         | 09/23/20 18:49 | B          |
| EPA 6010D              | Sodium                         | 14.0      | mg/L       | 1.0          | 09/23/20 18:49 |            |
| EPA 6020B              | Antimony                       | 0.00051J  | mg/L       | 0.0030       | 09/23/20 18:54 |            |
| EPA 6020B              | Barium                         | 0.26      | mg/L       | 0.010        | 09/23/20 18:54 |            |
| EPA 6020B              | Boron                          | 0.061J    | mg/L       | 0.10         | 09/23/20 18:54 |            |
| EPA 6020B              | Lead                           | 0.000050J | mg/L       | 0.0050       | 09/23/20 18:54 |            |
| EPA 6020B              | Lithium                        | 0.0018J   | mg/L       | 0.030        | 09/23/20 18:54 |            |
| EPA 6020B              | Molybdenum                     | 0.0044J   | mg/L       | 0.010        | 09/23/20 18:54 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 272       | mg/L       | 10.0         | 09/17/20 15:18 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 251       | mg/L       | 5.0          | 09/28/20 15:11 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 251       | mg/L       | 5.0          | 09/28/20 15:11 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.1       | mg/L       | 1.0          | 09/19/20 21:36 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.22      | mg/L       | 0.10         | 09/19/20 21:36 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 43.0      | mg/L       | 1.0          | 09/19/20 21:36 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92495904006</b>     | <b>HGWA-44D</b>                |          |            |              |                |            |
|                        | pH                             | 7.83     | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 30.0     | mg/L       | 1.0          | 09/23/20 18:53 |            |
| EPA 6010D              | Iron                           | 0.42     | mg/L       | 0.040        | 09/23/20 18:53 |            |
| EPA 6010D              | Magnesium                      | 15.1     | mg/L       | 0.050        | 09/23/20 18:53 |            |
| EPA 6010D              | Manganese                      | 0.020J   | mg/L       | 0.040        | 09/23/20 18:53 |            |
| EPA 6010D              | Potassium                      | 3.2      | mg/L       | 0.20         | 09/23/20 18:53 |            |
| EPA 6010D              | Sodium                         | 50.3     | mg/L       | 1.0          | 09/23/20 18:53 |            |
| EPA 6020B              | Antimony                       | 0.00049J | mg/L       | 0.0030       | 09/23/20 19:00 |            |
| EPA 6020B              | Barium                         | 0.24     | mg/L       | 0.010        | 09/23/20 19:00 |            |
| EPA 6020B              | Boron                          | 0.23     | mg/L       | 0.10         | 09/23/20 19:00 |            |
| EPA 6020B              | Chromium                       | 0.0012J  | mg/L       | 0.010        | 09/23/20 19:00 |            |
| EPA 6020B              | Lead                           | 0.00021J | mg/L       | 0.0050       | 09/23/20 19:00 |            |
| EPA 6020B              | Lithium                        | 0.014J   | mg/L       | 0.030        | 09/23/20 19:00 |            |
| EPA 6020B              | Molybdenum                     | 0.0019J  | mg/L       | 0.010        | 09/23/20 19:00 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 270      | mg/L       | 10.0         | 09/17/20 15:18 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 294      | mg/L       | 5.0          | 09/28/20 15:19 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 294      | mg/L       | 5.0          | 09/28/20 15:19 |            |
| SM 4500-S2D-2011       | Sulfide                        | 0.11     | mg/L       | 0.10         | 09/22/20 14:17 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.1      | mg/L       | 1.0          | 09/19/20 21:36 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.22     | mg/L       | 0.10         | 09/19/20 21:36 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 43.0     | mg/L       | 1.0          | 09/19/20 21:36 |            |
| <b>92495904007</b>     | <b>HGWC-126</b>                |          |            |              |                |            |
|                        | pH                             | 6.97     | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 119      | mg/L       | 1.0          | 09/25/20 20:19 |            |
| EPA 6010D              | Iron                           | 1.4      | mg/L       | 0.040        | 09/25/20 20:19 |            |
| EPA 6010D              | Magnesium                      | 22.0     | mg/L       | 0.050        | 09/25/20 20:19 |            |
| EPA 6010D              | Manganese                      | 0.15     | mg/L       | 0.040        | 09/25/20 20:19 |            |
| EPA 6010D              | Potassium                      | 0.91     | mg/L       | 0.20         | 09/25/20 20:19 |            |
| EPA 6010D              | Sodium                         | 28.5     | mg/L       | 1.0          | 09/25/20 20:19 |            |
| EPA 6020B              | Barium                         | 0.21     | mg/L       | 0.010        | 09/25/20 19:45 |            |
| EPA 6020B              | Boron                          | 0.041J   | mg/L       | 0.10         | 09/25/20 19:45 |            |
| EPA 6020B              | Lithium                        | 0.0035J  | mg/L       | 0.030        | 09/25/20 19:45 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 452      | mg/L       | 20.0         | 09/23/20 13:16 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 451      | mg/L       | 5.0          | 09/30/20 20:45 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 451      | mg/L       | 5.0          | 09/30/20 20:45 |            |
| SM 4500-S2D-2011       | Sulfide                        | 0.068J   | mg/L       | 0.10         | 09/22/20 14:48 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 8.4      | mg/L       | 1.0          | 09/24/20 10:20 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.43     | mg/L       | 0.10         | 09/24/20 10:20 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 62.7     | mg/L       | 1.0          | 09/24/20 10:20 |            |
| <b>92495904008</b>     | <b>FB-03</b>                   |          |            |              |                |            |
| EPA 6010D              | Potassium                      | 0.062J   | mg/L       | 0.20         | 09/25/20 20:23 |            |
| EPA 6020B              | Boron                          | 0.011J   | mg/L       | 0.10         | 09/25/20 19:50 |            |
| <b>92495904009</b>     | <b>HGWC-120</b>                |          |            |              |                |            |
|                        | pH                             | 6.98     | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 152      | mg/L       | 1.0          | 09/25/20 21:50 |            |
| EPA 6010D              | Iron                           | 0.39     | mg/L       | 0.040        | 09/25/20 21:50 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92495904009</b>     | <b>HGWC-120</b>                |          |            |              |                |            |
| EPA 6010D              | Magnesium                      | 19.9     | mg/L       | 0.050        | 09/25/20 21:50 |            |
| EPA 6010D              | Manganese                      | 1.3      | mg/L       | 0.040        | 09/25/20 21:50 |            |
| EPA 6010D              | Potassium                      | 7.4      | mg/L       | 0.20         | 09/25/20 21:50 |            |
| EPA 6010D              | Sodium                         | 9.9      | mg/L       | 1.0          | 09/25/20 21:50 |            |
| EPA 6020B              | Barium                         | 0.046    | mg/L       | 0.010        | 09/30/20 18:57 |            |
| EPA 6020B              | Boron                          | 0.93     | mg/L       | 0.10         | 09/30/20 18:57 |            |
| EPA 6020B              | Chromium                       | 0.00065J | mg/L       | 0.010        | 09/30/20 18:57 |            |
| EPA 6020B              | Cobalt                         | 0.0041J  | mg/L       | 0.0050       | 09/30/20 18:57 |            |
| EPA 6020B              | Lithium                        | 0.023J   | mg/L       | 0.030        | 09/30/20 18:57 |            |
| EPA 6020B              | Molybdenum                     | 0.043    | mg/L       | 0.010        | 09/30/20 18:57 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 272      | mg/L       | 10.0         | 09/24/20 10:28 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 599      | mg/L       | 5.0          | 09/30/20 18:44 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 599      | mg/L       | 5.0          | 09/30/20 18:44 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.4      | mg/L       | 1.0          | 09/24/20 19:43 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.33     | mg/L       | 0.10         | 09/24/20 19:43 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 225      | mg/L       | 3.0          | 09/25/20 13:37 |            |
| <b>92495904010</b>     | <b>FD-03</b>                   |          |            |              |                |            |
| EPA 6010D              | Calcium                        | 156      | mg/L       | 1.0          | 09/25/20 21:55 |            |
| EPA 6010D              | Iron                           | 0.40     | mg/L       | 0.040        | 09/25/20 21:55 |            |
| EPA 6010D              | Magnesium                      | 20.4     | mg/L       | 0.050        | 09/25/20 21:55 |            |
| EPA 6010D              | Manganese                      | 1.4      | mg/L       | 0.040        | 09/25/20 21:55 |            |
| EPA 6010D              | Potassium                      | 7.6      | mg/L       | 0.20         | 09/25/20 21:55 |            |
| EPA 6010D              | Sodium                         | 10.2     | mg/L       | 1.0          | 09/25/20 21:55 |            |
| EPA 6020B              | Barium                         | 0.047    | mg/L       | 0.010        | 09/30/20 19:03 |            |
| EPA 6020B              | Boron                          | 0.92     | mg/L       | 0.10         | 09/30/20 19:03 |            |
| EPA 6020B              | Cobalt                         | 0.0041J  | mg/L       | 0.0050       | 09/30/20 19:03 |            |
| EPA 6020B              | Lithium                        | 0.023J   | mg/L       | 0.030        | 09/30/20 19:03 |            |
| EPA 6020B              | Molybdenum                     | 0.044    | mg/L       | 0.010        | 09/30/20 19:03 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 270      | mg/L       | 10.0         | 09/24/20 10:28 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 311      | mg/L       | 5.0          | 10/01/20 16:22 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 311      | mg/L       | 5.0          | 10/01/20 16:22 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.4      | mg/L       | 1.0          | 09/24/20 19:58 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.36     | mg/L       | 0.10         | 09/24/20 19:58 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 226      | mg/L       | 3.0          | 09/25/20 13:51 |            |
| <b>92495904011</b>     | <b>HGWC-125</b>                |          |            |              |                |            |
|                        | pH                             | 6.22     | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 155      | mg/L       | 1.0          | 09/25/20 21:59 |            |
| EPA 6010D              | Iron                           | 0.13     | mg/L       | 0.040        | 09/25/20 21:59 |            |
| EPA 6010D              | Magnesium                      | 24.3     | mg/L       | 0.050        | 09/25/20 21:59 |            |
| EPA 6010D              | Manganese                      | 2.3      | mg/L       | 0.040        | 09/25/20 21:59 |            |
| EPA 6010D              | Potassium                      | 3.8      | mg/L       | 0.20         | 09/25/20 21:59 |            |
| EPA 6010D              | Sodium                         | 22.0     | mg/L       | 1.0          | 09/25/20 21:59 |            |
| EPA 6020B              | Barium                         | 0.042    | mg/L       | 0.010        | 09/30/20 19:09 |            |
| EPA 6020B              | Boron                          | 1.4      | mg/L       | 0.10         | 09/30/20 19:09 |            |
| EPA 6020B              | Cobalt                         | 0.012    | mg/L       | 0.0050       | 09/30/20 19:09 |            |
| EPA 6020B              | Lithium                        | 0.0038J  | mg/L       | 0.030        | 09/30/20 19:09 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92495904011</b>     | <b>HGWC-125</b>                |           |            |              |                |            |
| SM 2450C-2011          | Total Dissolved Solids         | 956       | mg/L       | 20.0         | 09/24/20 10:28 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 205       | mg/L       | 5.0          | 09/30/20 19:13 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 205       | mg/L       | 5.0          | 09/30/20 19:13 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 12.1      | mg/L       | 1.0          | 09/24/20 20:12 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.11      | mg/L       | 0.10         | 09/24/20 20:12 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 352       | mg/L       | 5.0          | 09/25/20 14:05 |            |
| <b>92495904012</b>     | <b>HGWA-45D</b>                |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 09/29/20 14:01 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.57      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 56.8      | mg/L       | 1.0          | 10/05/20 19:27 |            |
| EPA 6010D              | Iron                           | 0.48      | mg/L       | 0.040        | 10/05/20 19:27 |            |
| EPA 6010D              | Magnesium                      | 19.4      | mg/L       | 0.050        | 10/05/20 19:27 |            |
| EPA 6010D              | Manganese                      | 0.053     | mg/L       | 0.040        | 10/05/20 19:27 |            |
| EPA 6010D              | Potassium                      | 2.1       | mg/L       | 0.20         | 10/05/20 19:27 |            |
| EPA 6010D              | Sodium                         | 19.0      | mg/L       | 1.0          | 10/05/20 19:27 |            |
| EPA 6020B              | Barium                         | 0.49      | mg/L       | 0.010        | 10/06/20 19:05 |            |
| EPA 6020B              | Boron                          | 0.16      | mg/L       | 0.10         | 10/06/20 19:05 |            |
| EPA 6020B              | Lithium                        | 0.0049J   | mg/L       | 0.030        | 10/06/20 19:05 |            |
| EPA 6020B              | Molybdenum                     | 0.0014J   | mg/L       | 0.010        | 10/06/20 19:05 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 263       | mg/L       | 10.0         | 10/01/20 15:25 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 272       | mg/L       | 5.0          | 10/08/20 22:15 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 272       | mg/L       | 5.0          | 10/08/20 22:15 |            |
| SM 4500-S2D-2011       | Sulfide                        | 0.68      | mg/L       | 0.10         | 09/29/20 13:52 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 3.6       | mg/L       | 1.0          | 10/01/20 09:40 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.21      | mg/L       | 0.10         | 10/01/20 09:40 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 6.8       | mg/L       | 1.0          | 10/01/20 09:40 |            |
| <b>92495904013</b>     | <b>MW-46D</b>                  |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 09/29/20 14:01 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.56      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 78.3      | mg/L       | 1.0          | 10/05/20 19:32 |            |
| EPA 6010D              | Iron                           | 0.42      | mg/L       | 0.040        | 10/05/20 19:32 |            |
| EPA 6010D              | Magnesium                      | 16.5      | mg/L       | 0.050        | 10/05/20 19:32 |            |
| EPA 6010D              | Manganese                      | 0.31      | mg/L       | 0.040        | 10/05/20 19:32 |            |
| EPA 6010D              | Potassium                      | 3.8       | mg/L       | 0.20         | 10/05/20 19:32 |            |
| EPA 6010D              | Sodium                         | 53.6      | mg/L       | 1.0          | 10/05/20 19:32 |            |
| EPA 6020B              | Barium                         | 0.040     | mg/L       | 0.010        | 10/06/20 19:11 |            |
| EPA 6020B              | Boron                          | 0.51      | mg/L       | 0.10         | 10/06/20 19:11 |            |
| EPA 6020B              | Chromium                       | 0.00075J  | mg/L       | 0.010        | 10/06/20 19:11 |            |
| EPA 6020B              | Cobalt                         | 0.00041J  | mg/L       | 0.0050       | 10/06/20 19:11 |            |
| EPA 6020B              | Lead                           | 0.000048J | mg/L       | 0.0050       | 10/06/20 19:11 |            |
| EPA 6020B              | Lithium                        | 0.015J    | mg/L       | 0.030        | 10/06/20 19:11 |            |
| EPA 6020B              | Molybdenum                     | 0.027     | mg/L       | 0.010        | 10/06/20 19:11 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 449       | mg/L       | 10.0         | 10/01/20 15:25 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 238       | mg/L       | 5.0          | 10/08/20 22:23 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 238       | mg/L       | 5.0          | 10/08/20 22:23 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92495904013</b>     | <b>MW-46D</b>                  |           |            |              |                |            |
| SM 4500-S2D-2011       | Sulfide                        | 0.30      | mg/L       | 0.10         | 09/29/20 13:53 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 3.7       | mg/L       | 1.0          | 10/01/20 09:55 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.68      | mg/L       | 0.10         | 10/01/20 09:55 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 149       | mg/L       | 3.0          | 10/01/20 18:07 |            |
| <b>92495904014</b>     | <b>HGWC-121A</b>               |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 09/29/20 14:01 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 6.93      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 167       | mg/L       | 1.0          | 10/05/20 20:03 |            |
| EPA 6010D              | Iron                           | 0.044     | mg/L       | 0.040        | 10/05/20 20:03 |            |
| EPA 6010D              | Magnesium                      | 23.6      | mg/L       | 0.050        | 10/05/20 20:03 |            |
| EPA 6010D              | Manganese                      | 0.68      | mg/L       | 0.040        | 10/05/20 20:03 |            |
| EPA 6010D              | Potassium                      | 1.2       | mg/L       | 0.20         | 10/05/20 20:03 |            |
| EPA 6010D              | Sodium                         | 35.3      | mg/L       | 1.0          | 10/05/20 20:03 |            |
| EPA 6020B              | Barium                         | 0.056     | mg/L       | 0.010        | 10/05/20 19:54 |            |
| EPA 6020B              | Boron                          | 2.3       | mg/L       | 0.50         | 10/07/20 11:12 |            |
| EPA 6020B              | Lithium                        | 0.0076J   | mg/L       | 0.030        | 10/05/20 19:54 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 376       | mg/L       | 5.0          | 10/09/20 11:39 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 376       | mg/L       | 5.0          | 10/09/20 11:39 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 23.2      | mg/L       | 1.0          | 10/01/20 10:10 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.15      | mg/L       | 0.10         | 10/01/20 10:10 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 182       | mg/L       | 4.0          | 10/01/20 18:22 |            |
| <b>92495904015</b>     | <b>HGWC-124</b>                |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 09/29/20 14:01 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.27      | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 107       | mg/L       | 1.0          | 10/05/20 20:07 |            |
| EPA 6010D              | Iron                           | 0.48      | mg/L       | 0.040        | 10/05/20 20:07 |            |
| EPA 6010D              | Magnesium                      | 9.6       | mg/L       | 0.050        | 10/05/20 20:07 |            |
| EPA 6010D              | Manganese                      | 0.24      | mg/L       | 0.040        | 10/05/20 20:07 |            |
| EPA 6010D              | Potassium                      | 0.94      | mg/L       | 0.20         | 10/05/20 20:07 |            |
| EPA 6010D              | Sodium                         | 5.6       | mg/L       | 1.0          | 10/05/20 20:07 |            |
| EPA 6020B              | Barium                         | 0.071     | mg/L       | 0.010        | 10/05/20 20:00 |            |
| EPA 6020B              | Boron                          | 0.43      | mg/L       | 0.10         | 10/07/20 11:17 |            |
| EPA 6020B              | Lead                           | 0.000075J | mg/L       | 0.0050       | 10/05/20 20:00 |            |
| EPA 6020B              | Lithium                        | 0.0011J   | mg/L       | 0.030        | 10/05/20 20:00 |            |
| EPA 6020B              | Molybdenum                     | 0.00090J  | mg/L       | 0.010        | 10/05/20 20:00 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 176       | mg/L       | 10.0         | 10/01/20 15:27 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 240       | mg/L       | 5.0          | 10/09/20 11:51 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 240       | mg/L       | 5.0          | 10/09/20 11:51 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.5       | mg/L       | 1.0          | 10/01/20 10:25 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 86.2      | mg/L       | 1.0          | 10/01/20 10:25 |            |
| <b>92495904016</b>     | <b>MW-32</b>                   |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 09/29/20 14:01 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 6.90      | Std. Units |              | 09/29/20 14:01 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92495904016</b>     | <b>MW-32</b>                   |          |            |              |                |            |
| EPA 6010D              | Calcium                        | 173      | mg/L       | 1.0          | 10/05/20 20:11 |            |
| EPA 6010D              | Iron                           | 0.021J   | mg/L       | 0.040        | 10/05/20 20:11 |            |
| EPA 6010D              | Magnesium                      | 20.8     | mg/L       | 0.050        | 10/05/20 20:11 |            |
| EPA 6010D              | Manganese                      | 1.6      | mg/L       | 0.040        | 10/05/20 20:11 |            |
| EPA 6010D              | Potassium                      | 7.7      | mg/L       | 0.20         | 10/05/20 20:11 |            |
| EPA 6010D              | Sodium                         | 8.0      | mg/L       | 1.0          | 10/05/20 20:11 |            |
| EPA 6020B              | Barium                         | 0.053    | mg/L       | 0.010        | 10/05/20 20:06 |            |
| EPA 6020B              | Boron                          | 1.3      | mg/L       | 0.50         | 10/07/20 11:23 |            |
| EPA 6020B              | Chromium                       | 0.00058J | mg/L       | 0.010        | 10/05/20 20:06 |            |
| EPA 6020B              | Cobalt                         | 0.0047J  | mg/L       | 0.0050       | 10/05/20 20:06 |            |
| EPA 6020B              | Lithium                        | 0.032    | mg/L       | 0.030        | 10/05/20 20:06 |            |
| EPA 6020B              | Molybdenum                     | 0.062    | mg/L       | 0.010        | 10/05/20 20:06 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 272      | mg/L       | 10.0         | 10/02/20 17:25 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 315      | mg/L       | 5.0          | 10/09/20 12:00 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 315      | mg/L       | 5.0          | 10/09/20 12:00 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.5      | mg/L       | 1.0          | 10/01/20 10:40 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.33     | mg/L       | 0.10         | 10/01/20 10:40 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 245      | mg/L       | 5.0          | 10/01/20 19:06 |            |
| <b>92495904017</b>     | <b>MW-39</b>                   |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 09/29/20 14:01 |            |
|                        | pH                             | 7.00     | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 185      | mg/L       | 1.0          | 10/05/20 20:16 |            |
| EPA 6010D              | Iron                           | 0.033J   | mg/L       | 0.040        | 10/05/20 20:16 |            |
| EPA 6010D              | Magnesium                      | 22.9     | mg/L       | 0.050        | 10/05/20 20:16 |            |
| EPA 6010D              | Manganese                      | 1.5      | mg/L       | 0.040        | 10/05/20 20:16 |            |
| EPA 6010D              | Potassium                      | 8.1      | mg/L       | 0.20         | 10/05/20 20:16 |            |
| EPA 6010D              | Sodium                         | 8.3      | mg/L       | 1.0          | 10/05/20 20:16 |            |
| EPA 6020B              | Barium                         | 0.058    | mg/L       | 0.010        | 10/05/20 20:12 |            |
| EPA 6020B              | Boron                          | 1.3      | mg/L       | 0.50         | 10/07/20 11:29 |            |
| EPA 6020B              | Cobalt                         | 0.0026J  | mg/L       | 0.0050       | 10/05/20 20:12 |            |
| EPA 6020B              | Lithium                        | 0.034    | mg/L       | 0.030        | 10/05/20 20:12 |            |
| EPA 6020B              | Molybdenum                     | 0.062    | mg/L       | 0.010        | 10/05/20 20:12 |            |
| SM 2450C-2011          | Total Dissolved Solids         | 272      | mg/L       | 10.0         | 10/02/20 17:25 |            |
| SM 2320B-2011          | Alkalinity,Bicarbonate (CaCO3) | 323      | mg/L       | 5.0          | 10/09/20 12:08 |            |
| SM 2320B-2011          | Alkalinity, Total as CaCO3     | 323      | mg/L       | 5.0          | 10/09/20 12:08 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.4      | mg/L       | 1.0          | 10/01/20 10:55 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.33     | mg/L       | 0.10         | 10/01/20 10:55 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 239      | mg/L       | 5.0          | 10/01/20 19:21 |            |
| <b>92495904018</b>     | <b>MW-41</b>                   |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 09/29/20 14:01 |            |
|                        | pH                             | 7.00     | Std. Units |              | 09/29/20 14:01 |            |
| EPA 6010D              | Calcium                        | 173      | mg/L       | 1.0          | 10/05/20 20:20 |            |
| EPA 6010D              | Iron                           | 0.16     | mg/L       | 0.040        | 10/05/20 20:20 |            |
| EPA 6010D              | Magnesium                      | 21.4     | mg/L       | 0.050        | 10/05/20 20:20 |            |
| EPA 6010D              | Manganese                      | 0.85     | mg/L       | 0.040        | 10/05/20 20:20 |            |

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab Sample ID<br>Method | Client Sample ID<br>Parameters | Result   | Units | Report Limit | Analyzed       | Qualifiers |
|-------------------------|--------------------------------|----------|-------|--------------|----------------|------------|
| <b>92495904018</b>      | <b>MW-41</b>                   |          |       |              |                |            |
| EPA 6010D               | Potassium                      | 6.7      | mg/L  | 0.20         | 10/05/20 20:20 |            |
| EPA 6010D               | Sodium                         | 8.1      | mg/L  | 1.0          | 10/05/20 20:20 |            |
| EPA 6020B               | Barium                         | 0.071    | mg/L  | 0.010        | 10/05/20 20:17 |            |
| EPA 6020B               | Boron                          | 1.2      | mg/L  | 0.50         | 10/07/20 11:46 |            |
| EPA 6020B               | Cobalt                         | 0.00066J | mg/L  | 0.0050       | 10/05/20 20:17 |            |
| EPA 6020B               | Lithium                        | 0.028J   | mg/L  | 0.030        | 10/05/20 20:17 |            |
| EPA 6020B               | Molybdenum                     | 0.036    | mg/L  | 0.010        | 10/05/20 20:17 |            |
| SM 2450C-2011           | Total Dissolved Solids         | 392      | mg/L  | 10.0         | 10/02/20 17:25 |            |
| SM 2320B-2011           | Alkalinity,Bicarbonate (CaCO3) | 313      | mg/L  | 5.0          | 10/08/20 20:19 |            |
| SM 2320B-2011           | Alkalinity, Total as CaCO3     | 313      | mg/L  | 5.0          | 10/08/20 20:19 | M1         |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 2.5      | mg/L  | 1.0          | 10/01/20 12:09 |            |
| EPA 300.0 Rev 2.1 1993  | Fluoride                       | 0.25     | mg/L  | 0.10         | 10/01/20 12:09 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 154      | mg/L  | 5.0          | 10/01/20 19:36 |            |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWA-1      Lab ID: 92495904001      Collected: 09/15/20 14:01      Received: 09/16/20 11:14      Matrix: Water |          |            |              |          |    |                |                |            |      |
|---|----------|------------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters  | Results  | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>Field Data</b>   |          |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |          |            |              |          |    |                |                |            |      |
| pH  | 7.15     | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |          |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA     |          |            |              |          |    |                |                |            |      |
| Calcium   | 103      | mg/L       | 1.0          | 0.070    | 1  | 09/22/20 20:12 | 09/23/20 17:49 | 7440-70-2  |      |
| Iron  | 0.087    | mg/L       | 0.040        | 0.016    | 1  | 09/22/20 20:12 | 09/23/20 17:49 | 7439-89-6  |      |
| Magnesium   | 4.3      | mg/L       | 0.050        | 0.0076   | 1  | 09/22/20 20:12 | 09/23/20 17:49 | 7439-95-4  |      |
| Manganese   | 0.18     | mg/L       | 0.040        | 0.0017   | 1  | 09/22/20 20:12 | 09/23/20 17:49 | 7439-96-5  |      |
| Potassium   | 0.34     | mg/L       | 0.20         | 0.056    | 1  | 09/22/20 20:12 | 09/23/20 17:49 | 7440-09-7  | B    |
| Sodium  | 21.1     | mg/L       | 1.0          | 0.26     | 1  | 09/22/20 20:12 | 09/23/20 17:49 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |          |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA     |          |            |              |          |    |                |                |            |      |
| Antimony  | ND       | mg/L       | 0.0030       | 0.00028  | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7440-36-0  |      |
| Barium  | 0.035    | mg/L       | 0.010        | 0.00071  | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7440-39-3  |      |
| Beryllium   | ND       | mg/L       | 0.0030       | 0.000046 | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7440-41-7  |      |
| Boron   | 0.017J   | mg/L       | 0.10         | 0.0052   | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7440-42-8  |      |
| Chromium  | ND       | mg/L       | 0.010        | 0.00055  | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7440-47-3  |      |
| Cobalt  | ND       | mg/L       | 0.0050       | 0.00038  | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7440-48-4  |      |
| Lead  | ND       | mg/L       | 0.0050       | 0.000036 | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7439-92-1  |      |
| Lithium   | 0.00087J | mg/L       | 0.030        | 0.00081  | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7439-93-2  |      |
| Molybdenum  | ND       | mg/L       | 0.010        | 0.00069  | 1  | 09/22/20 20:07 | 09/23/20 17:15 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>   |          |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                                    |          |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | 265      | mg/L       | 10.0         | 10.0     | 1  |                | 09/17/20 15:18 |            |      |
| <b>2320B Alkalinity</b>   |          |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |          |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | 307      | mg/L       | 5.0          | 5.0      | 1  |                | 09/24/20 19:36 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND       | mg/L       | 5.0          | 5.0      | 1  |                | 09/24/20 19:36 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | 307      | mg/L       | 5.0          | 5.0      | 1  |                | 09/24/20 19:36 |            |      |
| <b>4500S2D Sulfide Water</b>  |          |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville   |          |            |              |          |    |                |                |            |      |
| Sulfide   | ND       | mg/L       | 0.10         | 0.050    | 1  |                | 09/22/20 14:10 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>  |          |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                       |          |            |              |          |    |                |                |            |      |
| Chloride  | 13.4     | mg/L       | 1.0          | 0.60     | 1  |                | 09/18/20 21:31 | 16887-00-6 |      |
| Fluoride  | 0.082J   | mg/L       | 0.10         | 0.050    | 1  |                | 09/18/20 21:31 | 16984-48-8 |      |
| Sulfate   | 47.3     | mg/L       | 1.0          | 0.50     | 1  |                | 09/18/20 21:31 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: HGWA-2   |           | Lab ID: 92495904002 |              | Collected: 09/15/20 10:58 |    | Received: 09/16/20 11:14 |                | Matrix: Water |      |
|--|-----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results   | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |           |                     |              |                           |    |                          |                |               |      |
| pH   | 5.22      | Std. Units          |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| <b>6010D ATL ICP</b>                                       |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Calcium  | 21.1      | mg/L                | 1.0          | 0.070                     | 1  | 09/22/20 20:12           | 09/23/20 17:53 | 7440-70-2     |      |
| Iron   | 0.78      | mg/L                | 0.040        | 0.016                     | 1  | 09/22/20 20:12           | 09/23/20 17:53 | 7439-89-6     |      |
| Magnesium  | 2.5       | mg/L                | 0.050        | 0.0076                    | 1  | 09/22/20 20:12           | 09/23/20 17:53 | 7439-95-4     |      |
| Manganese  | 0.61      | mg/L                | 0.040        | 0.0017                    | 1  | 09/22/20 20:12           | 09/23/20 17:53 | 7439-96-5     |      |
| Potassium  | 0.89      | mg/L                | 0.20         | 0.056                     | 1  | 09/22/20 20:12           | 09/23/20 17:53 | 7440-09-7     | B    |
| Sodium   | 7.4       | mg/L                | 1.0          | 0.26                      | 1  | 09/22/20 20:12           | 09/23/20 17:53 | 7440-23-5     |      |
| <b>6020 MET ICPMS</b>                                      |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND        | mg/L                | 0.0030       | 0.00028                   | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7440-36-0     |      |
| Barium   | 0.12      | mg/L                | 0.010        | 0.00071                   | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7440-39-3     |      |
| Beryllium  | 0.00013J  | mg/L                | 0.0030       | 0.000046                  | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7440-41-7     |      |
| Boron  | 0.044J    | mg/L                | 0.10         | 0.0052                    | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7440-42-8     |      |
| Chromium   | ND        | mg/L                | 0.010        | 0.00055                   | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7440-47-3     |      |
| Cobalt   | 0.021     | mg/L                | 0.0050       | 0.00038                   | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7440-48-4     |      |
| Lead   | 0.000080J | mg/L                | 0.0050       | 0.000036                  | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7439-92-1     |      |
| Lithium  | 0.0015J   | mg/L                | 0.030        | 0.00081                   | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7439-93-2     |      |
| Molybdenum   | ND        | mg/L                | 0.010        | 0.00069                   | 1  | 09/22/20 20:07           | 09/23/20 17:21 | 7439-98-7     |      |
| <b>2540C Total Dissolved Solids</b>                        |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 124       | mg/L                | 10.0         | 10.0                      | 1  |                          | 09/17/20 15:18 |               |      |
| <b>2320B Alkalinity</b>                                    |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B-2011                           |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )               | 26.1      | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/24/20 13:36 |               |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )                 | ND        | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/24/20 13:36 |               |      |
| Alkalinity, Total as CaCO <sub>3</sub>                     | 26.1      | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/24/20 13:36 |               |      |
| <b>4500S2D Sulfide Water</b>                               |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 4500-S2D-2011                        |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Sulfide  | ND        | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/22/20 14:11 | 18496-25-8    |      |
| <b>300.0 IC Anions 28 Days</b>                             |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Chloride   | 5.0       | mg/L                | 1.0          | 0.60                      | 1  |                          | 09/18/20 21:46 | 16887-00-6    |      |
| Fluoride   | ND        | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/18/20 21:46 | 16984-48-8    |      |
| Sulfate  | 51.5      | mg/L                | 1.0          | 0.50                      | 1  |                          | 09/18/20 21:46 | 14808-79-8    |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWA-3   |           | Lab ID: 92495904003 |              | Collected: 09/15/20 11:45 |    | Received: 09/16/20 11:14 |                | Matrix: Water |      |
|--|-----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results   | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |           |                     |              |                           |    |                          |                |               |      |
| pH   | 7.29      | Std. Units          |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| <b>6010D ATL ICP</b>                                       |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Calcium  | 73.1      | mg/L                | 1.0          | 0.070                     | 1  | 09/22/20 20:12           | 09/23/20 17:57 | 7440-70-2     |      |
| Iron   | 0.26      | mg/L                | 0.040        | 0.016                     | 1  | 09/22/20 20:12           | 09/23/20 17:57 | 7439-89-6     |      |
| Magnesium  | 4.6       | mg/L                | 0.050        | 0.0076                    | 1  | 09/22/20 20:12           | 09/23/20 17:57 | 7439-95-4     |      |
| Manganese  | 0.22      | mg/L                | 0.040        | 0.0017                    | 1  | 09/22/20 20:12           | 09/23/20 17:57 | 7439-96-5     |      |
| Potassium  | 0.46      | mg/L                | 0.20         | 0.056                     | 1  | 09/22/20 20:12           | 09/23/20 17:57 | 7440-09-7     | B    |
| Sodium   | 4.9       | mg/L                | 1.0          | 0.26                      | 1  | 09/22/20 20:12           | 09/23/20 17:57 | 7440-23-5     |      |
| <b>6020 MET ICPMS</b>                                      |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND        | mg/L                | 0.0030       | 0.00028                   | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7440-36-0     |      |
| Barium   | 0.12      | mg/L                | 0.010        | 0.00071                   | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7440-39-3     |      |
| Beryllium  | ND        | mg/L                | 0.0030       | 0.000046                  | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7440-41-7     |      |
| Boron  | 0.0071J   | mg/L                | 0.10         | 0.0052                    | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7440-42-8     |      |
| Chromium   | ND        | mg/L                | 0.010        | 0.00055                   | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7440-47-3     |      |
| Cobalt   | ND        | mg/L                | 0.0050       | 0.00038                   | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7440-48-4     |      |
| Lead   | 0.000042J | mg/L                | 0.0050       | 0.000036                  | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7439-92-1     |      |
| Lithium  | 0.0026J   | mg/L                | 0.030        | 0.00081                   | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7439-93-2     |      |
| Molybdenum   | ND        | mg/L                | 0.010        | 0.00069                   | 1  | 09/22/20 20:07           | 09/23/20 17:27 | 7439-98-7     |      |
| <b>2540C Total Dissolved Solids</b>                        |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |           |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 258       | mg/L                | 10.0         | 10.0                      | 1  |                          | 09/17/20 15:19 |               |      |
| <b>2320B Alkalinity</b>                                    |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B-2011                           |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )               | 187       | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/24/20 13:43 |               |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )                 | ND        | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/24/20 13:43 |               |      |
| Alkalinity, Total as CaCO <sub>3</sub>                     | 187       | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/24/20 13:43 |               |      |
| <b>4500S2D Sulfide Water</b>                               |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 4500-S2D-2011                        |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Sulfide  | ND        | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/22/20 14:13 | 18496-25-8    |      |
| <b>300.0 IC Anions 28 Days</b>                             |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |           |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |           |                     |              |                           |    |                          |                |               |      |
| Chloride   | 6.0       | mg/L                | 1.0          | 0.60                      | 1  |                          | 09/18/20 22:01 | 16887-00-6    |      |
| Fluoride   | ND        | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/18/20 22:01 | 16984-48-8    |      |
| Sulfate  | 44.7      | mg/L                | 1.0          | 0.50                      | 1  |                          | 09/18/20 22:01 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: <b>HGWA-122</b> Lab ID: <b>92495904004</b> Collected: 09/15/20 15:41      Received: 09/16/20 11:14      Matrix: Water |                  |            |              |          |    |                |                |            |      |
|---|------------------|------------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters  | Results          | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>Field Data</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                  |            |              |          |    |                |                |            |      |
| pH  | <b>6.68</b>      | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA           |                  |            |              |          |    |                |                |            |      |
| Calcium   | <b>75.8</b>      | mg/L       | 1.0          | 0.070    | 1  | 09/24/20 14:17 | 09/25/20 18:33 | 7440-70-2  | M1   |
| Iron  | <b>0.031J</b>    | mg/L       | 0.040        | 0.016    | 1  | 09/24/20 14:17 | 09/25/20 18:33 | 7439-89-6  |      |
| Magnesium   | <b>5.6</b>       | mg/L       | 0.050        | 0.0076   | 1  | 09/24/20 14:17 | 09/25/20 18:33 | 7439-95-4  |      |
| Manganese   | <b>0.0055J</b>   | mg/L       | 0.040        | 0.0017   | 1  | 09/24/20 14:17 | 09/25/20 18:33 | 7439-96-5  |      |
| Potassium   | <b>0.90</b>      | mg/L       | 0.20         | 0.056    | 1  | 09/24/20 14:17 | 09/25/20 18:33 | 7440-09-7  |      |
| Sodium  | <b>7.1</b>       | mg/L       | 1.0          | 0.26     | 1  | 09/24/20 14:17 | 09/25/20 18:33 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA           |                  |            |              |          |    |                |                |            |      |
| Antimony  | <b>0.0010J</b>   | mg/L       | 0.0030       | 0.00028  | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7440-36-0  |      |
| Barium  | <b>0.039</b>     | mg/L       | 0.010        | 0.00071  | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7440-39-3  |      |
| Beryllium   | ND               | mg/L       | 0.0030       | 0.000046 | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7440-41-7  |      |
| Boron   | <b>0.22</b>      | mg/L       | 0.10         | 0.0052   | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7440-42-8  |      |
| Chromium  | <b>0.00067J</b>  | mg/L       | 0.010        | 0.00055  | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7440-47-3  |      |
| Cobalt  | ND               | mg/L       | 0.0050       | 0.00038  | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7440-48-4  |      |
| Lead  | <b>0.000043J</b> | mg/L       | 0.0050       | 0.000036 | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7439-92-1  |      |
| Lithium   | ND               | mg/L       | 0.030        | 0.00081  | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7439-93-2  |      |
| Molybdenum  | <b>0.0045J</b>   | mg/L       | 0.010        | 0.00069  | 1  | 09/23/20 13:53 | 09/23/20 19:07 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA  |                  |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>267</b>       | mg/L       | 10.0         | 10.0     | 1  |                | 09/17/20 15:19 |            |      |
| <b>2320B Alkalinity</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |                  |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | <b>202</b>       | mg/L       | 5.0          | 5.0      | 1  |                | 09/24/20 14:52 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND               | mg/L       | 5.0          | 5.0      | 1  |                | 09/24/20 14:52 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | <b>202</b>       | mg/L       | 5.0          | 5.0      | 1  |                | 09/24/20 14:52 |            |      |
| <b>4500S2D Sulfide Water</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville   |                  |            |              |          |    |                |                |            |      |
| Sulfide   | ND               | mg/L       | 0.10         | 0.050    | 1  |                | 09/22/20 14:16 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville   |                  |            |              |          |    |                |                |            |      |
| Chloride  | <b>3.6</b>       | mg/L       | 1.0          | 0.60     | 1  |                | 09/18/20 23:45 | 16887-00-6 |      |
| Fluoride  | <b>0.096J</b>    | mg/L       | 0.10         | 0.050    | 1  |                | 09/18/20 23:45 | 16984-48-8 |      |
| Sulfate   | <b>41.4</b>      | mg/L       | 1.0          | 0.50     | 1  |                | 09/18/20 23:45 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWA-43D      Lab ID: 92495904005      Collected: 09/16/20 11:58      Received: 09/17/20 09:45      Matrix: Water |           |            |              |          |    |                |                |            |      |
|---|-----------|------------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters  | Results   | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>Field Data</b>   |           |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |           |            |              |          |    |                |                |            |      |
| pH  | 7.52      | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |           |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA       |           |            |              |          |    |                |                |            |      |
| Calcium   | 56.0      | mg/L       | 1.0          | 0.070    | 1  | 09/22/20 20:12 | 09/23/20 18:49 | 7440-70-2  |      |
| Iron  | 0.020J    | mg/L       | 0.040        | 0.016    | 1  | 09/22/20 20:12 | 09/23/20 18:49 | 7439-89-6  |      |
| Magnesium   | 18.3      | mg/L       | 0.050        | 0.0076   | 1  | 09/22/20 20:12 | 09/23/20 18:49 | 7439-95-4  |      |
| Manganese   | 0.010J    | mg/L       | 0.040        | 0.0017   | 1  | 09/22/20 20:12 | 09/23/20 18:49 | 7439-96-5  |      |
| Potassium   | 0.97      | mg/L       | 0.20         | 0.056    | 1  | 09/22/20 20:12 | 09/23/20 18:49 | 7440-09-7  | B    |
| Sodium  | 14.0      | mg/L       | 1.0          | 0.26     | 1  | 09/22/20 20:12 | 09/23/20 18:49 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |           |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA       |           |            |              |          |    |                |                |            |      |
| Antimony  | 0.00051J  | mg/L       | 0.0030       | 0.00028  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-36-0  |      |
| Arsenic   | ND        | mg/L       | 0.0050       | 0.00078  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-38-2  |      |
| Barium  | 0.26      | mg/L       | 0.010        | 0.00071  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-39-3  |      |
| Beryllium   | ND        | mg/L       | 0.0030       | 0.000046 | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-41-7  |      |
| Boron   | 0.061J    | mg/L       | 0.10         | 0.0052   | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-42-8  |      |
| Cadmium   | ND        | mg/L       | 0.0025       | 0.00012  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-43-9  |      |
| Chromium  | ND        | mg/L       | 0.010        | 0.00055  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-47-3  |      |
| Cobalt  | ND        | mg/L       | 0.0050       | 0.00038  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-48-4  |      |
| Lead  | 0.000050J | mg/L       | 0.0050       | 0.000036 | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7439-92-1  |      |
| Lithium   | 0.0018J   | mg/L       | 0.030        | 0.00081  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7439-93-2  |      |
| Molybdenum  | 0.0044J   | mg/L       | 0.010        | 0.00069  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7439-98-7  |      |
| Selenium  | ND        | mg/L       | 0.010        | 0.0016   | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7782-49-2  |      |
| Thallium  | ND        | mg/L       | 0.0010       | 0.00014  | 1  | 09/22/20 20:07 | 09/23/20 18:54 | 7440-28-0  |      |
| <b>7470 Mercury</b>   |           |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA       |           |            |              |          |    |                |                |            |      |
| Mercury   | ND        | mg/L       | 0.00050      | 0.000078 | 1  | 10/13/20 08:00 | 10/13/20 13:02 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>   |           |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                                      |           |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | 272       | mg/L       | 10.0         | 10.0     | 1  |                | 09/17/20 15:18 |            |      |
| <b>2320B Alkalinity</b>   |           |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |           |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | 251       | mg/L       | 5.0          | 5.0      | 1  |                | 09/28/20 15:11 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND        | mg/L       | 5.0          | 5.0      | 1  |                | 09/28/20 15:11 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | 251       | mg/L       | 5.0          | 5.0      | 1  |                | 09/28/20 15:11 |            |      |
| <b>4500S2D Sulfide Water</b>  |           |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville   |           |            |              |          |    |                |                |            |      |
| Sulfide   | ND        | mg/L       | 0.10         | 0.050    | 1  |                | 09/22/20 14:17 | 18496-25-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: <b>HGWA-43D</b>        |             | Lab ID: <b>92495904005</b>  |                 | Collected: 09/16/20 11:58 | Received: 09/17/20 09:45 | Matrix: Water |                |            |      |
|--------------------------------|-------------|---|-----------------|---------------------------|--------------------------|---------------|----------------|------------|------|
| Parameters                     | Results     | Units   | Report<br>Limit | MDL                       | DF                       | Prepared      | Analyzed       | CAS No.    | Qual |
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville |                 |                           |                          |               |                |            |      |
| Chloride                       | <b>4.1</b>  | mg/L  | 1.0             | 0.60                      | 1                        |               | 09/19/20 21:36 | 16887-00-6 |      |
| Fluoride                       | <b>0.22</b> | mg/L  | 0.10            | 0.050                     | 1                        |               | 09/19/20 21:36 | 16984-48-8 |      |
| Sulfate                        | <b>43.0</b> | mg/L  | 1.0             | 0.50                      | 1                        |               | 09/19/20 21:36 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: <b>HGWA-44D</b> Lab ID: <b>92495904006</b> Collected: 09/16/20 15:18      Received: 09/17/20 09:45      Matrix: Water |                 |            |              |          |    |                |                |            |      |
|---|-----------------|------------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters  | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>Field Data</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |              |          |    |                |                |            |      |
| pH  | <b>7.83</b>     | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |            |      |
| Calcium   | <b>30.0</b>     | mg/L       | 1.0          | 0.070    | 1  | 09/22/20 20:12 | 09/23/20 18:53 | 7440-70-2  |      |
| Iron  | <b>0.42</b>     | mg/L       | 0.040        | 0.016    | 1  | 09/22/20 20:12 | 09/23/20 18:53 | 7439-89-6  |      |
| Magnesium   | <b>15.1</b>     | mg/L       | 0.050        | 0.0076   | 1  | 09/22/20 20:12 | 09/23/20 18:53 | 7439-95-4  |      |
| Manganese   | <b>0.020J</b>   | mg/L       | 0.040        | 0.0017   | 1  | 09/22/20 20:12 | 09/23/20 18:53 | 7439-96-5  |      |
| Potassium   | <b>3.2</b>      | mg/L       | 0.20         | 0.056    | 1  | 09/22/20 20:12 | 09/23/20 18:53 | 7440-09-7  |      |
| Sodium  | <b>50.3</b>     | mg/L       | 1.0          | 0.26     | 1  | 09/22/20 20:12 | 09/23/20 18:53 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |            |      |
| Antimony  | <b>0.00049J</b> | mg/L       | 0.0030       | 0.00028  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-36-0  |      |
| Arsenic   | ND              | mg/L       | 0.0050       | 0.00078  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-38-2  |      |
| Barium  | <b>0.24</b>     | mg/L       | 0.010        | 0.00071  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-39-3  |      |
| Beryllium   | ND              | mg/L       | 0.0030       | 0.000046 | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-41-7  |      |
| Boron   | <b>0.23</b>     | mg/L       | 0.10         | 0.0052   | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-42-8  |      |
| Cadmium   | ND              | mg/L       | 0.0025       | 0.00012  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-43-9  |      |
| Chromium  | <b>0.0012J</b>  | mg/L       | 0.010        | 0.00055  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-47-3  |      |
| Cobalt  | ND              | mg/L       | 0.0050       | 0.00038  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-48-4  |      |
| Lead  | <b>0.00021J</b> | mg/L       | 0.0050       | 0.000036 | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7439-92-1  |      |
| Lithium   | <b>0.014J</b>   | mg/L       | 0.030        | 0.00081  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7439-93-2  |      |
| Molybdenum  | <b>0.0019J</b>  | mg/L       | 0.010        | 0.00069  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7439-98-7  |      |
| Selenium  | ND              | mg/L       | 0.010        | 0.0016   | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7782-49-2  |      |
| Thallium  | ND              | mg/L       | 0.0010       | 0.00014  | 1  | 09/22/20 20:07 | 09/23/20 19:00 | 7440-28-0  |      |
| <b>7470 Mercury</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |            |      |
| Mercury   | ND              | mg/L       | 0.00050      | 0.000078 | 1  | 10/13/20 08:00 | 10/13/20 13:04 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA  |                 |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>270</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 09/17/20 15:18 |            |      |
| <b>2320B Alkalinity</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |                 |            |              |          |    |                |                |            |      |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> )   | <b>294</b>      | mg/L       | 5.0          | 5.0      | 1  |                | 09/28/20 15:19 |            |      |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | ND              | mg/L       | 5.0          | 5.0      | 1  |                | 09/28/20 15:19 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | <b>294</b>      | mg/L       | 5.0          | 5.0      | 1  |                | 09/28/20 15:19 |            |      |
| <b>4500S2D Sulfide Water</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville   |                 |            |              |          |    |                |                |            |      |
| Sulfide   | <b>0.11</b>     | mg/L       | 0.10         | 0.050    | 1  |                | 09/22/20 14:17 | 18496-25-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

**Sample: HGWA-44D**      **Lab ID: 92495904006**      Collected: 09/16/20 15:18      Received: 09/17/20 09:45      Matrix: Water

| Parameters                                | Results     | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|-------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |             |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |             |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |             |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |             |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>4.1</b>  | mg/L  | 1.0    | 0.60  | 1  |          | 09/19/20 21:36 | 16887-00-6 |      |
| Fluoride                                  | <b>0.22</b> | mg/L  | 0.10   | 0.050 | 1  |          | 09/19/20 21:36 | 16984-48-8 |      |
| Sulfate                                   | <b>43.0</b> | mg/L  | 1.0    | 0.50  | 1  |          | 09/19/20 21:36 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWC-126   |         | Lab ID: 92495904007 |              | Collected: 09/18/20 15:39 |    | Received: 09/21/20 09:25 |                | Matrix: Water |       |
|--|---------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|-------|
| Parameters   | Results | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual  |
| <b>Field Data</b>  |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: Pace Analytical Services - Charlotte    |         |                     |              |                           |    |                          |                |               |       |
| pH   | 6.97    | Std. Units          |              |                           | 1  |                          | 09/29/20 14:01 |               |       |
| <b>6010D ATL ICP</b>                                       |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |         |                     |              |                           |    |                          |                |               |       |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |       |
| Calcium  | 119     | mg/L                | 1.0          | 0.070                     | 1  | 09/24/20 14:17           | 09/25/20 20:19 | 7440-70-2     |       |
| Iron   | 1.4     | mg/L                | 0.040        | 0.016                     | 1  | 09/24/20 14:17           | 09/25/20 20:19 | 7439-89-6     |       |
| Magnesium  | 22.0    | mg/L                | 0.050        | 0.0076                    | 1  | 09/24/20 14:17           | 09/25/20 20:19 | 7439-95-4     |       |
| Manganese  | 0.15    | mg/L                | 0.040        | 0.0017                    | 1  | 09/24/20 14:17           | 09/25/20 20:19 | 7439-96-5     |       |
| Potassium  | 0.91    | mg/L                | 0.20         | 0.056                     | 1  | 09/24/20 14:17           | 09/25/20 20:19 | 7440-09-7     |       |
| Sodium   | 28.5    | mg/L                | 1.0          | 0.26                      | 1  | 09/24/20 14:17           | 09/25/20 20:19 | 7440-23-5     |       |
| <b>6020 MET ICPMS</b>                                      |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |         |                     |              |                           |    |                          |                |               |       |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |       |
| Antimony   | ND      | mg/L                | 0.0030       | 0.00028                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-36-0     |       |
| Arsenic  | ND      | mg/L                | 0.0050       | 0.00078                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-38-2     |       |
| Barium   | 0.21    | mg/L                | 0.010        | 0.00071                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-39-3     |       |
| Beryllium  | ND      | mg/L                | 0.0030       | 0.000046                  | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-41-7     |       |
| Boron  | 0.041J  | mg/L                | 0.10         | 0.0052                    | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-42-8     |       |
| Cadmium  | ND      | mg/L                | 0.0025       | 0.00012                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-43-9     |       |
| Chromium   | ND      | mg/L                | 0.010        | 0.00055                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-47-3     |       |
| Cobalt   | ND      | mg/L                | 0.0050       | 0.00038                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-48-4     |       |
| Lead   | ND      | mg/L                | 0.0050       | 0.000036                  | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7439-92-1     |       |
| Lithium  | 0.0035J | mg/L                | 0.030        | 0.00081                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7439-93-2     |       |
| Molybdenum   | ND      | mg/L                | 0.010        | 0.00069                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7439-98-7     |       |
| Selenium   | ND      | mg/L                | 0.010        | 0.0016                    | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7782-49-2     |       |
| Thallium   | ND      | mg/L                | 0.0010       | 0.00014                   | 1  | 09/24/20 14:23           | 09/25/20 19:45 | 7440-28-0     |       |
| <b>7470 Mercury</b>  |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |         |                     |              |                           |    |                          |                |               |       |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |       |
| Mercury  | ND      | mg/L                | 0.00050      | 0.000078                  | 1  | 10/28/20 07:30           | 10/28/20 12:27 | 7439-97-6     | H1,H2 |
| <b>2540C Total Dissolved Solids</b>                        |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: SM 2450C-2011                           |         |                     |              |                           |    |                          |                |               |       |
| Pace Analytical Services - Peachtree Corners, GA           |         |                     |              |                           |    |                          |                |               |       |
| Total Dissolved Solids                                     | 452     | mg/L                | 20.0         | 20.0                      | 1  |                          | 09/23/20 13:16 |               |       |
| <b>2320B Alkalinity</b>                                    |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: SM 2320B-2011                           |         |                     |              |                           |    |                          |                |               |       |
| Pace Analytical Services - Asheville                       |         |                     |              |                           |    |                          |                |               |       |
| Alkalinity,Bicarbonate (CaCO3)                             | 451     | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/30/20 20:45 |               |       |
| Alkalinity,Carbonate (CaCO3)                               | ND      | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/30/20 20:45 |               |       |
| Alkalinity, Total as CaCO3                                 | 451     | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/30/20 20:45 |               |       |
| <b>4500S2D Sulfide Water</b>                               |         |                     |              |                           |    |                          |                |               |       |
| Analytical Method: SM 4500-S2D-2011                        |         |                     |              |                           |    |                          |                |               |       |
| Pace Analytical Services - Asheville                       |         |                     |              |                           |    |                          |                |               |       |
| Sulfide  | 0.068J  | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/22/20 14:48 | 18496-25-8    |       |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

**Sample: HGWC-126**      **Lab ID: 92495904007**      Collected: 09/18/20 15:39      Received: 09/21/20 09:25      Matrix: Water

| Parameters                                | Results     | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|-------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |             |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |             |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |             |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |             |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>8.4</b>  | mg/L  | 1.0    | 0.60  | 1  |          | 09/24/20 10:20 | 16887-00-6 |      |
| Fluoride                                  | <b>0.43</b> | mg/L  | 0.10   | 0.050 | 1  |          | 09/24/20 10:20 | 16984-48-8 |      |
| Sulfate                                   | <b>62.7</b> | mg/L  | 1.0    | 0.50  | 1  |          | 09/24/20 10:20 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: FB-03                       |               | Lab ID: 92495904008  |         | Collected: 09/18/20 16:50 |    | Received: 09/21/20 09:25 |                | Matrix: Water |       |  |
|-------------------------------------|---------------|--|---------|---------------------------|----|--------------------------|----------------|---------------|-------|--|
| Parameters                          | Results       | Units  | Report  |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual  |  |
|                                     |               |  | Limit   | MDL                       | DF |                          |                |               |       |  |
| <b>6010D ATL ICP</b>                |               | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |       |  |
| Calcium                             | ND            | mg/L   | 1.0     | 0.070                     | 1  | 09/24/20 14:17           | 09/25/20 20:23 | 7440-70-2     |       |  |
| Iron                                | ND            | mg/L   | 0.040   | 0.016                     | 1  | 09/24/20 14:17           | 09/25/20 20:23 | 7439-89-6     |       |  |
| Magnesium                           | ND            | mg/L   | 0.050   | 0.0076                    | 1  | 09/24/20 14:17           | 09/25/20 20:23 | 7439-95-4     |       |  |
| Manganese                           | ND            | mg/L   | 0.040   | 0.0017                    | 1  | 09/24/20 14:17           | 09/25/20 20:23 | 7439-96-5     |       |  |
| Potassium                           | <b>0.062J</b> | mg/L   | 0.20    | 0.056                     | 1  | 09/24/20 14:17           | 09/25/20 20:23 | 7440-09-7     |       |  |
| Sodium                              | ND            | mg/L   | 1.0     | 0.26                      | 1  | 09/24/20 14:17           | 09/25/20 20:23 | 7440-23-5     |       |  |
| <b>6020 MET ICPMS</b>               |               | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |       |  |
| Antimony                            | ND            | mg/L   | 0.0030  | 0.00028                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-36-0     |       |  |
| Arsenic                             | ND            | mg/L   | 0.0050  | 0.00078                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-38-2     |       |  |
| Barium                              | ND            | mg/L   | 0.010   | 0.00071                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-39-3     |       |  |
| Beryllium                           | ND            | mg/L   | 0.0030  | 0.000046                  | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-41-7     |       |  |
| Boron                               | <b>0.011J</b> | mg/L   | 0.10    | 0.0052                    | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-42-8     |       |  |
| Cadmium                             | ND            | mg/L   | 0.0025  | 0.00012                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-43-9     |       |  |
| Chromium                            | ND            | mg/L   | 0.010   | 0.00055                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-47-3     |       |  |
| Cobalt                              | ND            | mg/L   | 0.0050  | 0.00038                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-48-4     |       |  |
| Lead                                | ND            | mg/L   | 0.0050  | 0.000036                  | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7439-92-1     |       |  |
| Lithium                             | ND            | mg/L   | 0.030   | 0.00081                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7439-93-2     |       |  |
| Molybdenum                          | ND            | mg/L   | 0.010   | 0.00069                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7439-98-7     |       |  |
| Selenium                            | ND            | mg/L   | 0.010   | 0.0016                    | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7782-49-2     |       |  |
| Thallium                            | ND            | mg/L   | 0.0010  | 0.00014                   | 1  | 09/24/20 14:23           | 09/25/20 19:50 | 7440-28-0     |       |  |
| <b>7470 Mercury</b>                 |               | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |       |  |
| Mercury                             | ND            | mg/L   | 0.00050 | 0.000078                  | 1  | 10/28/20 07:30           | 10/28/20 12:30 | 7439-97-6     | H1,H2 |  |
| <b>2540C Total Dissolved Solids</b> |               | Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |    |                          |                |               |       |  |
| Total Dissolved Solids              | ND            | mg/L   | 10.0    | 10.0                      | 1  |                          | 09/23/20 13:16 |               |       |  |
| <b>2320B Alkalinity</b>             |               | Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville                                       |         |                           |    |                          |                |               |       |  |
| Alkalinity,Bicarbonate (CaCO3)      | ND            | mg/L   | 5.0     | 5.0                       | 1  |                          | 09/30/20 14:46 |               |       |  |
| Alkalinity,Carbonate (CaCO3)        | ND            | mg/L   | 5.0     | 5.0                       | 1  |                          | 09/30/20 14:46 |               |       |  |
| Alkalinity, Total as CaCO3          | ND            | mg/L   | 5.0     | 5.0                       | 1  |                          | 09/30/20 14:46 |               |       |  |
| <b>4500S2D Sulfide Water</b>        |               | Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville                                    |         |                           |    |                          |                |               |       |  |
| Sulfide                             | ND            | mg/L   | 0.10    | 0.050                     | 1  |                          | 09/22/20 14:49 | 18496-25-8    |       |  |
| <b>300.0 IC Anions 28 Days</b>      |               | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |    |                          |                |               |       |  |
| Chloride                            | ND            | mg/L   | 1.0     | 0.60                      | 1  |                          | 09/24/20 10:35 | 16887-00-6    |       |  |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: FB-03                  |         | Lab ID: 92495904008   |              | Collected: 09/18/20 16:50 | Received: 09/21/20 09:25 | Matrix: Water |                |            |      |
|--------------------------------|---------|---|--------------|---------------------------|--------------------------|---------------|----------------|------------|------|
| Parameters                     | Results | Units   | Report Limit | MDL                       | DF                       | Prepared      | Analyzed       | CAS No.    | Qual |
| <b>300.0 IC Anions 28 Days</b> |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville |              |                           |                          |               |                |            |      |
| Fluoride                       | ND      | mg/L  | 0.10         | 0.050                     | 1                        |               | 09/24/20 10:35 | 16984-48-8 |      |
| Sulfate                        | ND      | mg/L  | 1.0          | 0.50                      | 1                        |               | 09/24/20 10:35 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWC-120   |          | Lab ID: 92495904009 |              | Collected: 09/21/20 13:48 |    | Received: 09/22/20 09:25 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| pH   | 6.98     | Std. Units          |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Calcium  | 152      | mg/L                | 1.0          | 0.070                     | 1  | 09/24/20 14:20           | 09/25/20 21:50 | 7440-70-2     |      |
| Iron   | 0.39     | mg/L                | 0.040        | 0.016                     | 1  | 09/24/20 14:20           | 09/25/20 21:50 | 7439-89-6     |      |
| Magnesium  | 19.9     | mg/L                | 0.050        | 0.0076                    | 1  | 09/24/20 14:20           | 09/25/20 21:50 | 7439-95-4     |      |
| Manganese  | 1.3      | mg/L                | 0.040        | 0.0017                    | 1  | 09/24/20 14:20           | 09/25/20 21:50 | 7439-96-5     |      |
| Potassium  | 7.4      | mg/L                | 0.20         | 0.056                     | 1  | 09/24/20 14:20           | 09/25/20 21:50 | 7440-09-7     |      |
| Sodium   | 9.9      | mg/L                | 1.0          | 0.26                      | 1  | 09/24/20 14:20           | 09/25/20 21:50 | 7440-23-5     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00028                   | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7440-36-0     |      |
| Barium   | 0.046    | mg/L                | 0.010        | 0.00071                   | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.0030       | 0.000046                  | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7440-41-7     |      |
| Boron  | 0.93     | mg/L                | 0.10         | 0.0052                    | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7440-42-8     |      |
| Chromium   | 0.00065J | mg/L                | 0.010        | 0.00055                   | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7440-47-3     |      |
| Cobalt   | 0.0041J  | mg/L                | 0.0050       | 0.00038                   | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7440-48-4     |      |
| Lead   | ND       | mg/L                | 0.0050       | 0.000036                  | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7439-92-1     |      |
| Lithium  | 0.023J   | mg/L                | 0.030        | 0.00081                   | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7439-93-2     |      |
| Molybdenum   | 0.043    | mg/L                | 0.010        | 0.00069                   | 1  | 09/29/20 14:13           | 09/30/20 18:57 | 7439-98-7     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 272      | mg/L                | 10.0         | 10.0                      | 1  |                          | 09/24/20 10:28 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B-2011                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 599      | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/30/20 18:44 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/30/20 18:44 |               |      |
| Alkalinity, Total as CaCO3                                 | 599      | mg/L                | 5.0          | 5.0                       | 1  |                          | 09/30/20 18:44 |               |      |
| <b>4500S2D Sulfide Water</b>                               |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 4500-S2D-2011                        |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |          |                     |              |                           |    |                          |                |               |      |
| Sulfide  | ND       | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/24/20 11:48 | 18496-25-8    |      |
| <b>300.0 IC Anions 28 Days</b>                             |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |          |                     |              |                           |    |                          |                |               |      |
| Chloride   | 2.4      | mg/L                | 1.0          | 0.60                      | 1  |                          | 09/24/20 19:43 | 16887-00-6    |      |
| Fluoride   | 0.33     | mg/L                | 0.10         | 0.050                     | 1  |                          | 09/24/20 19:43 | 16984-48-8    |      |
| Sulfate  | 225      | mg/L                | 3.0          | 1.5                       | 3  |                          | 09/25/20 13:37 | 14808-79-8    |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: FD-03                                |         | Lab ID: 92495904010  |        | Collected: 09/21/20 00:00 |    | Received: 09/22/20 09:25 |                | Matrix: Water |      |  |
|--|---------|--|--------|---------------------------|----|--------------------------|----------------|---------------|------|--|
| Parameters                                   | Results | Units  | Report |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual |  |
|  |         |  | Limit  | MDL                       | DF |                          |                |               |      |  |
| <b>6010D ATL ICP</b>                         |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |        |                           |    |                          |                |               |      |  |
| Calcium                                      | 156     | mg/L   | 1.0    | 0.070                     | 1  | 09/24/20 14:20           | 09/25/20 21:55 | 7440-70-2     |      |  |
| Iron   | 0.40    | mg/L   | 0.040  | 0.016                     | 1  | 09/24/20 14:20           | 09/25/20 21:55 | 7439-89-6     |      |  |
| Magnesium                                    | 20.4    | mg/L   | 0.050  | 0.0076                    | 1  | 09/24/20 14:20           | 09/25/20 21:55 | 7439-95-4     |      |  |
| Manganese                                    | 1.4     | mg/L   | 0.040  | 0.0017                    | 1  | 09/24/20 14:20           | 09/25/20 21:55 | 7439-96-5     |      |  |
| Potassium                                    | 7.6     | mg/L   | 0.20   | 0.056                     | 1  | 09/24/20 14:20           | 09/25/20 21:55 | 7440-09-7     |      |  |
| Sodium                                       | 10.2    | mg/L   | 1.0    | 0.26                      | 1  | 09/24/20 14:20           | 09/25/20 21:55 | 7440-23-5     |      |  |
| <b>6020 MET ICPMS</b>                        |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |        |                           |    |                          |                |               |      |  |
| Antimony                                     | ND      | mg/L   | 0.0030 | 0.00028                   | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7440-36-0     |      |  |
| Barium                                       | 0.047   | mg/L   | 0.010  | 0.00071                   | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7440-39-3     |      |  |
| Beryllium                                    | ND      | mg/L   | 0.0030 | 0.000046                  | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7440-41-7     |      |  |
| Boron  | 0.92    | mg/L   | 0.10   | 0.0052                    | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7440-42-8     |      |  |
| Chromium                                     | ND      | mg/L   | 0.010  | 0.00055                   | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7440-47-3     |      |  |
| Cobalt                                       | 0.0041J | mg/L   | 0.0050 | 0.00038                   | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7440-48-4     |      |  |
| Lead   | ND      | mg/L   | 0.0050 | 0.000036                  | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7439-92-1     |      |  |
| Lithium                                      | 0.023J  | mg/L   | 0.030  | 0.00081                   | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7439-93-2     |      |  |
| Molybdenum                                   | 0.044   | mg/L   | 0.010  | 0.00069                   | 1  | 09/29/20 14:13           | 09/30/20 19:03 | 7439-98-7     |      |  |
| <b>2540C Total Dissolved Solids</b>          |         | Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |        |                           |    |                          |                |               |      |  |
| Total Dissolved Solids                       | 270     | mg/L   | 10.0   | 10.0                      | 1  |                          | 09/24/20 10:28 |               |      |  |
| <b>2320B Alkalinity</b>                      |         | Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville                                       |        |                           |    |                          |                |               |      |  |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | 311     | mg/L   | 5.0    | 5.0                       | 1  |                          | 10/01/20 16:22 |               |      |  |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )   | ND      | mg/L   | 5.0    | 5.0                       | 1  |                          | 10/01/20 16:22 |               |      |  |
| Alkalinity, Total as CaCO <sub>3</sub>       | 311     | mg/L   | 5.0    | 5.0                       | 1  |                          | 10/01/20 16:22 |               |      |  |
| <b>4500S2D Sulfide Water</b>                 |         | Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville                                    |        |                           |    |                          |                |               |      |  |
| Sulfide                                      | ND      | mg/L   | 0.10   | 0.050                     | 1  |                          | 09/24/20 11:48 | 18496-25-8    |      |  |
| <b>300.0 IC Anions 28 Days</b>               |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |        |                           |    |                          |                |               |      |  |
| Chloride                                     | 2.4     | mg/L   | 1.0    | 0.60                      | 1  |                          | 09/24/20 19:58 | 16887-00-6    |      |  |
| Fluoride                                     | 0.36    | mg/L   | 0.10   | 0.050                     | 1  |                          | 09/24/20 19:58 | 16984-48-8    |      |  |
| Sulfate                                      | 226     | mg/L   | 3.0    | 1.5                       | 3  |                          | 09/25/20 13:51 | 14808-79-8    |      |  |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWC-125      Lab ID: 92495904011      Collected: 09/21/20 12:07      Received: 09/22/20 09:25      Matrix: Water |         |            |              |          |    |                |                |            |       |
|---|---------|------------|--------------|----------|----|----------------|----------------|------------|-------|
| Parameters  | Results | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual  |
| <b>Field Data</b>   |         |            |              |          |    |                |                |            |       |
| Analytical Method: Pace Analytical Services - Charlotte   |         |            |              |          |    |                |                |            |       |
| pH  | 6.22    | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |       |
| <b>6010D ATL ICP</b>  |         |            |              |          |    |                |                |            |       |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA       |         |            |              |          |    |                |                |            |       |
| Calcium   | 155     | mg/L       | 1.0          | 0.070    | 1  | 09/24/20 14:20 | 09/25/20 21:59 | 7440-70-2  |       |
| Iron  | 0.13    | mg/L       | 0.040        | 0.016    | 1  | 09/24/20 14:20 | 09/25/20 21:59 | 7439-89-6  |       |
| Magnesium   | 24.3    | mg/L       | 0.050        | 0.0076   | 1  | 09/24/20 14:20 | 09/25/20 21:59 | 7439-95-4  |       |
| Manganese   | 2.3     | mg/L       | 0.040        | 0.0017   | 1  | 09/24/20 14:20 | 09/25/20 21:59 | 7439-96-5  |       |
| Potassium   | 3.8     | mg/L       | 0.20         | 0.056    | 1  | 09/24/20 14:20 | 09/25/20 21:59 | 7440-09-7  |       |
| Sodium  | 22.0    | mg/L       | 1.0          | 0.26     | 1  | 09/24/20 14:20 | 09/25/20 21:59 | 7440-23-5  |       |
| <b>6020 MET ICPMS</b>   |         |            |              |          |    |                |                |            |       |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA       |         |            |              |          |    |                |                |            |       |
| Antimony  | ND      | mg/L       | 0.0030       | 0.00028  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-36-0  |       |
| Arsenic   | ND      | mg/L       | 0.0050       | 0.00078  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-38-2  |       |
| Barium  | 0.042   | mg/L       | 0.010        | 0.00071  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-39-3  |       |
| Beryllium   | ND      | mg/L       | 0.0030       | 0.000046 | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-41-7  |       |
| Boron   | 1.4     | mg/L       | 0.10         | 0.0052   | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-42-8  |       |
| Cadmium   | ND      | mg/L       | 0.0025       | 0.00012  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-43-9  |       |
| Chromium  | ND      | mg/L       | 0.010        | 0.00055  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-47-3  |       |
| Cobalt  | 0.012   | mg/L       | 0.0050       | 0.00038  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-48-4  |       |
| Lead  | ND      | mg/L       | 0.0050       | 0.000036 | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7439-92-1  |       |
| Lithium   | 0.0038J | mg/L       | 0.030        | 0.00081  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7439-93-2  |       |
| Molybdenum  | ND      | mg/L       | 0.010        | 0.00069  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7439-98-7  |       |
| Selenium  | ND      | mg/L       | 0.010        | 0.0016   | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7782-49-2  |       |
| Thallium  | ND      | mg/L       | 0.0010       | 0.00014  | 1  | 09/29/20 14:13 | 09/30/20 19:09 | 7440-28-0  |       |
| <b>7470 Mercury</b>   |         |            |              |          |    |                |                |            |       |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA       |         |            |              |          |    |                |                |            |       |
| Mercury   | ND      | mg/L       | 0.00050      | 0.000078 | 1  | 10/28/20 07:30 | 10/28/20 12:32 | 7439-97-6  | H1,H2 |
| <b>2540C Total Dissolved Solids</b>   |         |            |              |          |    |                |                |            |       |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                                      |         |            |              |          |    |                |                |            |       |
| Total Dissolved Solids  | 956     | mg/L       | 20.0         | 20.0     | 1  |                | 09/24/20 10:28 |            |       |
| <b>2320B Alkalinity</b>   |         |            |              |          |    |                |                |            |       |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |         |            |              |          |    |                |                |            |       |
| Alkalinity,Bicarbonate (CaCO3)  | 205     | mg/L       | 5.0          | 5.0      | 1  |                | 09/30/20 19:13 |            |       |
| Alkalinity,Carbonate (CaCO3)  | ND      | mg/L       | 5.0          | 5.0      | 1  |                | 09/30/20 19:13 |            |       |
| Alkalinity, Total as CaCO3  | 205     | mg/L       | 5.0          | 5.0      | 1  |                | 09/30/20 19:13 |            |       |
| <b>4500S2D Sulfide Water</b>  |         |            |              |          |    |                |                |            |       |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville   |         |            |              |          |    |                |                |            |       |
| Sulfide   | ND      | mg/L       | 0.10         | 0.050    | 1  |                | 09/24/20 11:48 | 18496-25-8 |       |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

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**Sample: HGWC-125**      **Lab ID: 92495904011**      Collected: 09/21/20 12:07      Received: 09/22/20 09:25      Matrix: Water

| Parameters | Results | Units | Report<br>Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|------------|---------|-------|-----------------|-----|----|----------|----------|---------|------|
|------------|---------|-------|-----------------|-----|----|----------|----------|---------|------|

**300.0 IC Anions 28 Days**

Analytical Method: EPA 300.0 Rev 2.1 1993  
Pace Analytical Services - Asheville

|          |             |      |      |       |   |  |                |            |  |
|----------|-------------|------|------|-------|---|--|----------------|------------|--|
| Chloride | <b>12.1</b> | mg/L | 1.0  | 0.60  | 1 |  | 09/24/20 20:12 | 16887-00-6 |  |
| Fluoride | <b>0.11</b> | mg/L | 0.10 | 0.050 | 1 |  | 09/24/20 20:12 | 16984-48-8 |  |
| Sulfate  | <b>352</b>  | mg/L | 5.0  | 2.5   | 5 |  | 09/25/20 14:05 | 14808-79-8 |  |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: HGWA-45D   |                 | Lab ID: 92495904012 |              | Collected: 09/25/20 13:50 |    | Received: 09/28/20 09:40 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| pH   | <b>7.57</b>     | Std. Units          |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>56.8</b>     | mg/L                | 1.0          | 0.070                     | 1  | 10/01/20 18:49           | 10/05/20 19:27 | 7440-70-2     |      |
| Iron   | <b>0.48</b>     | mg/L                | 0.040        | 0.016                     | 1  | 10/01/20 18:49           | 10/05/20 19:27 | 7439-89-6     |      |
| Magnesium  | <b>19.4</b>     | mg/L                | 0.050        | 0.0076                    | 1  | 10/01/20 18:49           | 10/05/20 19:27 | 7439-95-4     |      |
| Manganese  | <b>0.053</b>    | mg/L                | 0.040        | 0.0017                    | 1  | 10/01/20 18:49           | 10/05/20 19:27 | 7439-96-5     |      |
| Potassium  | <b>2.1</b>      | mg/L                | 0.20         | 0.056                     | 1  | 10/01/20 18:49           | 10/05/20 19:27 | 7440-09-7     |      |
| Sodium   | <b>19.0</b>     | mg/L                | 1.0          | 0.26                      | 1  | 10/01/20 18:49           | 10/05/20 19:27 | 7440-23-5     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00028                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.00078                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-38-2     |      |
| Barium   | <b>0.49</b>     | mg/L                | 0.010        | 0.00071                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.0030       | 0.000046                  | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-41-7     |      |
| Boron  | <b>0.16</b>     | mg/L                | 0.10         | 0.0052                    | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.0025       | 0.00012                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.010        | 0.00055                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00038                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-48-4     |      |
| Lead   | ND              | mg/L                | 0.0050       | 0.000036                  | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7439-92-1     |      |
| Lithium  | <b>0.0049J</b>  | mg/L                | 0.030        | 0.00081                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7439-93-2     |      |
| Molybdenum   | <b>0.0014J</b>  | mg/L                | 0.010        | 0.00069                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7439-98-7     |      |
| Selenium   | ND              | mg/L                | 0.010        | 0.0016                    | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7782-49-2     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00014                   | 1  | 10/02/20 15:00           | 10/06/20 19:05 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00050      | 0.000078                  | 1  | 10/13/20 08:00           | 10/13/20 13:07 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>263</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 10/01/20 15:25 |               |      |
| <b>2320B Alkalinity</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville                                       |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )   | <b>272</b>      | mg/L                | 5.0          | 5.0                       | 1  |                          | 10/08/20 22:15 |               |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )   | ND              | mg/L                | 5.0          | 5.0                       | 1  |                          | 10/08/20 22:15 |               |      |
| Alkalinity, Total as CaCO <sub>3</sub>   | <b>272</b>      | mg/L                | 5.0          | 5.0                       | 1  |                          | 10/08/20 22:15 |               |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: HGWA-45D               |             | Lab ID: 92495904012   |              | Collected: 09/25/20 13:50 | Received: 09/28/20 09:40 | Matrix: Water |                |            |      |
|--------------------------------|-------------|---|--------------|---------------------------|--------------------------|---------------|----------------|------------|------|
| Parameters                     | Results     | Units   | Report Limit | MDL                       | DF                       | Prepared      | Analyzed       | CAS No.    | Qual |
| <b>4500S2D Sulfide Water</b>   |             | Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville       |              |                           |                          |               |                |            |      |
| Sulfide                        | <b>0.68</b> | mg/L  | 0.10         | 0.050                     | 1                        |               | 09/29/20 13:52 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville |              |                           |                          |               |                |            |      |
| Chloride                       | <b>3.6</b>  | mg/L  | 1.0          | 0.60                      | 1                        |               | 10/01/20 09:40 | 16887-00-6 |      |
| Fluoride                       | <b>0.21</b> | mg/L  | 0.10         | 0.050                     | 1                        |               | 10/01/20 09:40 | 16984-48-8 |      |
| Sulfate                        | <b>6.8</b>  | mg/L  | 1.0          | 0.50                      | 1                        |               | 10/01/20 09:40 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

**Sample: MW-46D**      **Lab ID: 92495904013**      Collected: 09/25/20 11:10      Received: 09/28/20 09:40      Matrix: Water

| Parameters  | Results          | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|---|------------------|------------|--------------|----------|----|----------------|----------------|------------|------|
| <b>Field Data</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                  |            |              |          |    |                |                |            |      |
| Performed by  | <b>CUSTOMER</b>  |            |              |          | 1  |                | 09/29/20 14:01 |            |      |
| pH  | <b>7.56</b>      | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |            |              |          |    |                |                |            |      |
| Calcium   | <b>78.3</b>      | mg/L       | 1.0          | 0.070    | 1  | 10/01/20 18:49 | 10/05/20 19:32 | 7440-70-2  |      |
| Iron  | <b>0.42</b>      | mg/L       | 0.040        | 0.016    | 1  | 10/01/20 18:49 | 10/05/20 19:32 | 7439-89-6  |      |
| Magnesium   | <b>16.5</b>      | mg/L       | 0.050        | 0.0076   | 1  | 10/01/20 18:49 | 10/05/20 19:32 | 7439-95-4  |      |
| Manganese   | <b>0.31</b>      | mg/L       | 0.040        | 0.0017   | 1  | 10/01/20 18:49 | 10/05/20 19:32 | 7439-96-5  |      |
| Potassium   | <b>3.8</b>       | mg/L       | 0.20         | 0.056    | 1  | 10/01/20 18:49 | 10/05/20 19:32 | 7440-09-7  |      |
| Sodium  | <b>53.6</b>      | mg/L       | 1.0          | 0.26     | 1  | 10/01/20 18:49 | 10/05/20 19:32 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |            |              |          |    |                |                |            |      |
| Antimony  | ND               | mg/L       | 0.0030       | 0.00028  | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7440-36-0  |      |
| Barium  | <b>0.040</b>     | mg/L       | 0.010        | 0.00071  | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7440-39-3  |      |
| Beryllium   | ND               | mg/L       | 0.0030       | 0.000046 | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7440-41-7  |      |
| Boron   | <b>0.51</b>      | mg/L       | 0.10         | 0.0052   | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7440-42-8  |      |
| Chromium  | <b>0.00075J</b>  | mg/L       | 0.010        | 0.00055  | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7440-47-3  |      |
| Cobalt  | <b>0.00041J</b>  | mg/L       | 0.0050       | 0.00038  | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7440-48-4  |      |
| Lead  | <b>0.000048J</b> | mg/L       | 0.0050       | 0.000036 | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7439-92-1  |      |
| Lithium   | <b>0.015J</b>    | mg/L       | 0.030        | 0.00081  | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7439-93-2  |      |
| Molybdenum  | <b>0.027</b>     | mg/L       | 0.010        | 0.00069  | 1  | 10/02/20 15:00 | 10/06/20 19:11 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                              |                  |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>449</b>       | mg/L       | 10.0         | 10.0     | 1  |                | 10/01/20 15:25 |            |      |
| <b>2320B Alkalinity</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |                  |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | <b>238</b>       | mg/L       | 5.0          | 5.0      | 1  |                | 10/08/20 22:23 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND               | mg/L       | 5.0          | 5.0      | 1  |                | 10/08/20 22:23 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | <b>238</b>       | mg/L       | 5.0          | 5.0      | 1  |                | 10/08/20 22:23 |            |      |
| <b>4500S2D Sulfide Water</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville                                       |                  |            |              |          |    |                |                |            |      |
| Sulfide   | <b>0.30</b>      | mg/L       | 0.10         | 0.050    | 1  |                | 09/29/20 13:53 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                 |                  |            |              |          |    |                |                |            |      |
| Chloride  | <b>3.7</b>       | mg/L       | 1.0          | 0.60     | 1  |                | 10/01/20 09:55 | 16887-00-6 |      |
| Fluoride  | <b>0.68</b>      | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 09:55 | 16984-48-8 |      |
| Sulfate   | <b>149</b>       | mg/L       | 3.0          | 1.5      | 3  |                | 10/01/20 18:07 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: HGWC-121A  |                 | Lab ID: 92495904014 |              | Collected: 09/28/20 16:04 |    | Received: 09/29/20 08:55 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| pH   | <b>6.93</b>     | Std. Units          |              |                           | 1  |                          | 09/29/20 14:01 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>167</b>      | mg/L                | 1.0          | 0.070                     | 1  | 10/01/20 18:49           | 10/05/20 20:03 | 7440-70-2     |      |
| Iron   | <b>0.044</b>    | mg/L                | 0.040        | 0.016                     | 1  | 10/01/20 18:49           | 10/05/20 20:03 | 7439-89-6     |      |
| Magnesium  | <b>23.6</b>     | mg/L                | 0.050        | 0.0076                    | 1  | 10/01/20 18:49           | 10/05/20 20:03 | 7439-95-4     |      |
| Manganese  | <b>0.68</b>     | mg/L                | 0.040        | 0.0017                    | 1  | 10/01/20 18:49           | 10/05/20 20:03 | 7439-96-5     |      |
| Potassium  | <b>1.2</b>      | mg/L                | 0.20         | 0.056                     | 1  | 10/01/20 18:49           | 10/05/20 20:03 | 7440-09-7     |      |
| Sodium   | <b>35.3</b>     | mg/L                | 1.0          | 0.26                      | 1  | 10/01/20 18:49           | 10/05/20 20:03 | 7440-23-5     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00028                   | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7440-36-0     |      |
| Barium   | <b>0.056</b>    | mg/L                | 0.010        | 0.00071                   | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.0030       | 0.000046                  | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7440-41-7     |      |
| Boron  | <b>2.3</b>      | mg/L                | 0.50         | 0.026                     | 5  | 10/02/20 15:00           | 10/07/20 11:12 | 7440-42-8     |      |
| Chromium   | ND              | mg/L                | 0.010        | 0.00055                   | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00038                   | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7440-48-4     |      |
| Lead   | ND              | mg/L                | 0.0050       | 0.000036                  | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7439-92-1     |      |
| Lithium  | <b>0.0076J</b>  | mg/L                | 0.030        | 0.00081                   | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7439-93-2     |      |
| Molybdenum   | ND              | mg/L                | 0.010        | 0.00069                   | 1  | 10/02/20 15:00           | 10/05/20 19:54 | 7439-98-7     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | ND              | mg/L                | 10.0         | 10.0                      | 1  |                          | 10/01/20 15:27 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B-2011                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )               | <b>376</b>      | mg/L                | 5.0          | 5.0                       | 1  |                          | 10/09/20 11:39 |               |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )                 | ND              | mg/L                | 5.0          | 5.0                       | 1  |                          | 10/09/20 11:39 |               |      |
| Alkalinity, Total as CaCO <sub>3</sub>                     | <b>376</b>      | mg/L                | 5.0          | 5.0                       | 1  |                          | 10/09/20 11:39 |               |      |
| <b>4500S2D Sulfide Water</b>                               |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 4500-S2D-2011                        |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |                 |                     |              |                           |    |                          |                |               |      |
| Sulfide  | ND              | mg/L                | 0.10         | 0.050                     | 1  |                          | 10/01/20 12:53 | 18496-25-8    |      |
| <b>300.0 IC Anions 28 Days</b>                             |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |                 |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>23.2</b>     | mg/L                | 1.0          | 0.60                      | 1  |                          | 10/01/20 10:10 | 16887-00-6    |      |
| Fluoride   | <b>0.15</b>     | mg/L                | 0.10         | 0.050                     | 1  |                          | 10/01/20 10:10 | 16984-48-8    |      |
| Sulfate  | <b>182</b>      | mg/L                | 4.0          | 2.0                       | 4  |                          | 10/01/20 18:22 | 14808-79-8    |      |

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### ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Sample: HGWC-124      Lab ID: 92495904015      Collected: 09/28/20 18:00      Received: 09/29/20 08:55      Matrix: Water |                  |            |              |          |    |                |                |            |      |
|---|------------------|------------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters  | Results          | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>Field Data</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                  |            |              |          |    |                |                |            |      |
| Performed by  | <b>CUSTOMER</b>  |            |              |          | 1  |                | 09/29/20 14:01 |            |      |
| pH  | <b>7.27</b>      | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA       |                  |            |              |          |    |                |                |            |      |
| Calcium   | <b>107</b>       | mg/L       | 1.0          | 0.070    | 1  | 10/01/20 18:49 | 10/05/20 20:07 | 7440-70-2  |      |
| Iron  | <b>0.48</b>      | mg/L       | 0.040        | 0.016    | 1  | 10/01/20 18:49 | 10/05/20 20:07 | 7439-89-6  |      |
| Magnesium   | <b>9.6</b>       | mg/L       | 0.050        | 0.0076   | 1  | 10/01/20 18:49 | 10/05/20 20:07 | 7439-95-4  |      |
| Manganese   | <b>0.24</b>      | mg/L       | 0.040        | 0.0017   | 1  | 10/01/20 18:49 | 10/05/20 20:07 | 7439-96-5  |      |
| Potassium   | <b>0.94</b>      | mg/L       | 0.20         | 0.056    | 1  | 10/01/20 18:49 | 10/05/20 20:07 | 7440-09-7  |      |
| Sodium  | <b>5.6</b>       | mg/L       | 1.0          | 0.26     | 1  | 10/01/20 18:49 | 10/05/20 20:07 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA       |                  |            |              |          |    |                |                |            |      |
| Antimony  | ND               | mg/L       | 0.0030       | 0.00028  | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7440-36-0  |      |
| Barium  | <b>0.071</b>     | mg/L       | 0.010        | 0.00071  | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7440-39-3  |      |
| Beryllium   | ND               | mg/L       | 0.0030       | 0.000046 | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7440-41-7  |      |
| Boron   | <b>0.43</b>      | mg/L       | 0.10         | 0.0052   | 1  | 10/02/20 15:00 | 10/07/20 11:17 | 7440-42-8  |      |
| Chromium  | ND               | mg/L       | 0.010        | 0.00055  | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7440-47-3  |      |
| Cobalt  | ND               | mg/L       | 0.0050       | 0.00038  | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7440-48-4  |      |
| Lead  | <b>0.000075J</b> | mg/L       | 0.0050       | 0.000036 | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7439-92-1  |      |
| Lithium   | <b>0.0011J</b>   | mg/L       | 0.030        | 0.00081  | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7439-93-2  |      |
| Molybdenum  | <b>0.00090J</b>  | mg/L       | 0.010        | 0.00069  | 1  | 10/02/20 15:00 | 10/05/20 20:00 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                                      |                  |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>176</b>       | mg/L       | 10.0         | 10.0     | 1  |                | 10/01/20 15:27 |            |      |
| <b>2320B Alkalinity</b>   |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |                  |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | <b>240</b>       | mg/L       | 5.0          | 5.0      | 1  |                | 10/09/20 11:51 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND               | mg/L       | 5.0          | 5.0      | 1  |                | 10/09/20 11:51 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | <b>240</b>       | mg/L       | 5.0          | 5.0      | 1  |                | 10/09/20 11:51 |            |      |
| <b>4500S2D Sulfide Water</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville   |                  |            |              |          |    |                |                |            |      |
| Sulfide   | ND               | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 12:54 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>  |                  |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville   |                  |            |              |          |    |                |                |            |      |
| Chloride  | <b>2.5</b>       | mg/L       | 1.0          | 0.60     | 1  |                | 10/01/20 10:25 | 16887-00-6 |      |
| Fluoride  | ND               | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 10:25 | 16984-48-8 |      |
| Sulfate   | <b>86.2</b>      | mg/L       | 1.0          | 0.50     | 1  |                | 10/01/20 10:25 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

**Sample: MW-32**      **Lab ID: 92495904016**      Collected: 09/28/20 15:44      Received: 09/29/20 08:55      Matrix: Water

| Parameters  | Results         | Units      | Report |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|-----------------|------------|--------|----------|----|----------------|----------------|------------|------|
|   |                 |            | Limit  | MDL      | DF |                |                |            |      |
| <b>Field Data</b>   |                 |            |        |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |        |          |    |                |                |            |      |
| Performed by  | <b>CUSTOMER</b> |            |        |          | 1  |                | 09/29/20 14:01 |            |      |
| pH  | <b>6.90</b>     | Std. Units |        |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |                 |            |        |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |        |          |    |                |                |            |      |
| Calcium   | <b>173</b>      | mg/L       | 1.0    | 0.070    | 1  | 10/01/20 18:49 | 10/05/20 20:11 | 7440-70-2  |      |
| Iron  | <b>0.021J</b>   | mg/L       | 0.040  | 0.016    | 1  | 10/01/20 18:49 | 10/05/20 20:11 | 7439-89-6  |      |
| Magnesium   | <b>20.8</b>     | mg/L       | 0.050  | 0.0076   | 1  | 10/01/20 18:49 | 10/05/20 20:11 | 7439-95-4  |      |
| Manganese   | <b>1.6</b>      | mg/L       | 0.040  | 0.0017   | 1  | 10/01/20 18:49 | 10/05/20 20:11 | 7439-96-5  |      |
| Potassium   | <b>7.7</b>      | mg/L       | 0.20   | 0.056    | 1  | 10/01/20 18:49 | 10/05/20 20:11 | 7440-09-7  |      |
| Sodium  | <b>8.0</b>      | mg/L       | 1.0    | 0.26     | 1  | 10/01/20 18:49 | 10/05/20 20:11 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |                 |            |        |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |        |          |    |                |                |            |      |
| Antimony  | ND              | mg/L       | 0.0030 | 0.00028  | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7440-36-0  |      |
| Barium  | <b>0.053</b>    | mg/L       | 0.010  | 0.00071  | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7440-39-3  |      |
| Beryllium   | ND              | mg/L       | 0.0030 | 0.000046 | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7440-41-7  |      |
| Boron   | <b>1.3</b>      | mg/L       | 0.50   | 0.026    | 5  | 10/02/20 15:00 | 10/07/20 11:23 | 7440-42-8  |      |
| Chromium  | <b>0.00058J</b> | mg/L       | 0.010  | 0.00055  | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7440-47-3  |      |
| Cobalt  | <b>0.0047J</b>  | mg/L       | 0.0050 | 0.00038  | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7440-48-4  |      |
| Lead  | ND              | mg/L       | 0.0050 | 0.000036 | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7439-92-1  |      |
| Lithium   | <b>0.032</b>    | mg/L       | 0.030  | 0.00081  | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7439-93-2  |      |
| Molybdenum  | <b>0.062</b>    | mg/L       | 0.010  | 0.00069  | 1  | 10/02/20 15:00 | 10/05/20 20:06 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |        |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                              |                 |            |        |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>272</b>      | mg/L       | 10.0   | 10.0     | 1  |                | 10/02/20 17:25 |            |      |
| <b>2320B Alkalinity</b>   |                 |            |        |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |                 |            |        |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | <b>315</b>      | mg/L       | 5.0    | 5.0      | 1  |                | 10/09/20 12:00 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND              | mg/L       | 5.0    | 5.0      | 1  |                | 10/09/20 12:00 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | <b>315</b>      | mg/L       | 5.0    | 5.0      | 1  |                | 10/09/20 12:00 |            |      |
| <b>4500S2D Sulfide Water</b>  |                 |            |        |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville                                       |                 |            |        |          |    |                |                |            |      |
| Sulfide   | ND              | mg/L       | 0.10   | 0.050    | 1  |                | 10/01/20 12:54 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>  |                 |            |        |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                 |                 |            |        |          |    |                |                |            |      |
| Chloride  | <b>2.5</b>      | mg/L       | 1.0    | 0.60     | 1  |                | 10/01/20 10:40 | 16887-00-6 |      |
| Fluoride  | <b>0.33</b>     | mg/L       | 0.10   | 0.050    | 1  |                | 10/01/20 10:40 | 16984-48-8 |      |
| Sulfate   | <b>245</b>      | mg/L       | 5.0    | 2.5      | 5  |                | 10/01/20 19:06 | 14808-79-8 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

**Sample: MW-39**      **Lab ID: 92495904017**      Collected: 09/28/20 17:27      Received: 09/29/20 08:55      Matrix: Water

| Parameters  | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|---|-----------------|------------|--------------|----------|----|----------------|----------------|------------|------|
| <b>Field Data</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |              |          |    |                |                |            |      |
| Performed by  | <b>CUSTOMER</b> |            |              |          | 1  |                | 09/29/20 14:01 |            |      |
| pH  | <b>7.00</b>     | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |            |      |
| Calcium   | <b>185</b>      | mg/L       | 1.0          | 0.070    | 1  | 10/01/20 18:49 | 10/05/20 20:16 | 7440-70-2  |      |
| Iron  | <b>0.033J</b>   | mg/L       | 0.040        | 0.016    | 1  | 10/01/20 18:49 | 10/05/20 20:16 | 7439-89-6  |      |
| Magnesium   | <b>22.9</b>     | mg/L       | 0.050        | 0.0076   | 1  | 10/01/20 18:49 | 10/05/20 20:16 | 7439-95-4  |      |
| Manganese   | <b>1.5</b>      | mg/L       | 0.040        | 0.0017   | 1  | 10/01/20 18:49 | 10/05/20 20:16 | 7439-96-5  |      |
| Potassium   | <b>8.1</b>      | mg/L       | 0.20         | 0.056    | 1  | 10/01/20 18:49 | 10/05/20 20:16 | 7440-09-7  |      |
| Sodium  | <b>8.3</b>      | mg/L       | 1.0          | 0.26     | 1  | 10/01/20 18:49 | 10/05/20 20:16 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |            |      |
| Antimony  | ND              | mg/L       | 0.0030       | 0.00028  | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7440-36-0  |      |
| Barium  | <b>0.058</b>    | mg/L       | 0.010        | 0.00071  | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7440-39-3  |      |
| Beryllium   | ND              | mg/L       | 0.0030       | 0.000046 | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7440-41-7  |      |
| Boron   | <b>1.3</b>      | mg/L       | 0.50         | 0.026    | 5  | 10/02/20 15:00 | 10/07/20 11:29 | 7440-42-8  |      |
| Chromium  | ND              | mg/L       | 0.010        | 0.00055  | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7440-47-3  |      |
| Cobalt  | <b>0.0026J</b>  | mg/L       | 0.0050       | 0.00038  | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7440-48-4  |      |
| Lead  | ND              | mg/L       | 0.0050       | 0.000036 | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7439-92-1  |      |
| Lithium   | <b>0.034</b>    | mg/L       | 0.030        | 0.00081  | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7439-93-2  |      |
| Molybdenum  | <b>0.062</b>    | mg/L       | 0.010        | 0.00069  | 1  | 10/02/20 15:00 | 10/05/20 20:12 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                              |                 |            |              |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>272</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 10/02/20 17:25 |            |      |
| <b>2320B Alkalinity</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville  |                 |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )  | <b>323</b>      | mg/L       | 5.0          | 5.0      | 1  |                | 10/09/20 12:08 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )  | ND              | mg/L       | 5.0          | 5.0      | 1  |                | 10/09/20 12:08 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | <b>323</b>      | mg/L       | 5.0          | 5.0      | 1  |                | 10/09/20 12:08 |            |      |
| <b>4500S2D Sulfide Water</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville                                       |                 |            |              |          |    |                |                |            |      |
| Sulfide   | ND              | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 12:55 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                 |                 |            |              |          |    |                |                |            |      |
| Chloride  | <b>2.4</b>      | mg/L       | 1.0          | 0.60     | 1  |                | 10/01/20 10:55 | 16887-00-6 |      |
| Fluoride  | <b>0.33</b>     | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 10:55 | 16984-48-8 |      |
| Sulfate   | <b>239</b>      | mg/L       | 5.0          | 2.5      | 5  |                | 10/01/20 19:21 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Sample: MW-41      Lab ID: 92495904018      Collected: 09/28/20 19:05      Received: 09/29/20 08:55      Matrix: Water |                 |            |              |          |    |                |                |            |      |
|--|-----------------|------------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters   | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>Field Data</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |            |              |          |    |                |                |            |      |
| Performed by   | <b>CUSTOMER</b> |            |              |          | 1  |                | 09/29/20 14:01 |            |      |
| pH   | <b>7.00</b>     | Std. Units |              |          | 1  |                | 09/29/20 14:01 |            |      |
| <b>6010D ATL ICP</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA    |                 |            |              |          |    |                |                |            |      |
| Calcium  | <b>173</b>      | mg/L       | 1.0          | 0.070    | 1  | 10/01/20 18:49 | 10/05/20 20:20 | 7440-70-2  |      |
| Iron   | <b>0.16</b>     | mg/L       | 0.040        | 0.016    | 1  | 10/01/20 18:49 | 10/05/20 20:20 | 7439-89-6  |      |
| Magnesium  | <b>21.4</b>     | mg/L       | 0.050        | 0.0076   | 1  | 10/01/20 18:49 | 10/05/20 20:20 | 7439-95-4  |      |
| Manganese  | <b>0.85</b>     | mg/L       | 0.040        | 0.0017   | 1  | 10/01/20 18:49 | 10/05/20 20:20 | 7439-96-5  |      |
| Potassium  | <b>6.7</b>      | mg/L       | 0.20         | 0.056    | 1  | 10/01/20 18:49 | 10/05/20 20:20 | 7440-09-7  |      |
| Sodium   | <b>8.1</b>      | mg/L       | 1.0          | 0.26     | 1  | 10/01/20 18:49 | 10/05/20 20:20 | 7440-23-5  |      |
| <b>6020 MET ICPMS</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA    |                 |            |              |          |    |                |                |            |      |
| Antimony   | ND              | mg/L       | 0.0030       | 0.00028  | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7440-36-0  |      |
| Barium   | <b>0.071</b>    | mg/L       | 0.010        | 0.00071  | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7440-39-3  |      |
| Beryllium  | ND              | mg/L       | 0.0030       | 0.000046 | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7440-41-7  |      |
| Boron  | <b>1.2</b>      | mg/L       | 0.50         | 0.026    | 5  | 10/02/20 15:00 | 10/07/20 11:46 | 7440-42-8  |      |
| Chromium   | ND              | mg/L       | 0.010        | 0.00055  | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7440-47-3  |      |
| Cobalt   | <b>0.00066J</b> | mg/L       | 0.0050       | 0.00038  | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7440-48-4  |      |
| Lead   | ND              | mg/L       | 0.0050       | 0.000036 | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7439-92-1  |      |
| Lithium  | <b>0.028J</b>   | mg/L       | 0.030        | 0.00081  | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7439-93-2  |      |
| Molybdenum   | <b>0.036</b>    | mg/L       | 0.010        | 0.00069  | 1  | 10/02/20 15:00 | 10/05/20 20:17 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                                   |                 |            |              |          |    |                |                |            |      |
| Total Dissolved Solids   | <b>392</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 10/02/20 17:25 |            |      |
| <b>2320B Alkalinity</b>  |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville   |                 |            |              |          |    |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )   | <b>313</b>      | mg/L       | 5.0          | 5.0      | 1  |                | 10/08/20 20:19 |            |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )   | ND              | mg/L       | 5.0          | 5.0      | 1  |                | 10/08/20 20:19 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>   | <b>313</b>      | mg/L       | 5.0          | 5.0      | 1  |                | 10/08/20 20:19 |            | M1   |
| <b>4500S2D Sulfide Water</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: SM 4500-S2D-2011<br>Pace Analytical Services - Asheville  |                 |            |              |          |    |                |                |            |      |
| Sulfide  | ND              | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 12:55 | 18496-25-8 |      |
| <b>300.0 IC Anions 28 Days</b>   |                 |            |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                      |                 |            |              |          |    |                |                |            |      |
| Chloride   | <b>2.5</b>      | mg/L       | 1.0          | 0.60     | 1  |                | 10/01/20 12:09 | 16887-00-6 |      |
| Fluoride   | <b>0.25</b>     | mg/L       | 0.10         | 0.050    | 1  |                | 10/01/20 12:09 | 16984-48-8 |      |
| Sulfate  | <b>154</b>      | mg/L       | 5.0          | 2.5      | 5  |                | 10/01/20 19:36 | 14808-79-8 |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 568201    | Analysis Method:      | EPA 6010D  |
| QC Batch Method: | EPA 3010A | Analysis Description: | 6010D ATL  |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

METHOD BLANK: 3010803 Matrix: Water

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070  | 09/23/20 17:40 |            |
| Iron      | mg/L  | ND           | 0.040           | 0.016  | 09/23/20 17:40 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.0076 | 09/23/20 17:40 |            |
| Manganese | mg/L  | ND           | 0.040           | 0.0017 | 09/23/20 17:40 |            |
| Potassium | mg/L  | 0.14J        | 0.20            | 0.056  | 09/23/20 17:40 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.26   | 09/23/20 17:40 |            |

LABORATORY CONTROL SAMPLE: 3010804

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 0.96J      | 96        | 80-120       |            |
| Iron      | mg/L  | 1           | 0.97       | 97        | 80-120       |            |
| Magnesium | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Manganese | mg/L  | 1           | 0.98       | 98        | 80-120       |            |
| Potassium | mg/L  | 1           | 1.1        | 105       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 106       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010805 3010806

| Parameter | Units | 3010805        |                 | 3010806   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Calcium   | mg/L  | 20.4           | 1               | 21.1      | 21.9       | 69       | 147       | 75-125       | 4   | 20      | M1   |
| Iron      | mg/L  | 0.028J         | 1               | 0.96      | 0.97       | 93       | 95        | 75-125       | 2   | 20      |      |
| Magnesium | mg/L  | 0.88           | 1               | 1.8       | 1.8        | 94       | 97        | 75-125       | 2   | 20      |      |
| Manganese | mg/L  | 0.0083J        | 1               | 0.95      | 0.96       | 94       | 95        | 75-125       | 1   | 20      |      |
| Potassium | mg/L  | 0.28           | 1               | 1.2       | 1.2        | 92       | 94        | 75-125       | 2   | 20      |      |
| Sodium    | mg/L  | 7.7            | 1               | 8.5       | 8.9        | 83       | 118       | 75-125       | 4   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568747 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92495904004, 92495904007, 92495904008

METHOD BLANK: 3013294 Matrix: Water

Associated Lab Samples: 92495904004, 92495904007, 92495904008

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070  | 09/25/20 18:16 |            |
| Iron      | mg/L  | ND           | 0.040           | 0.016  | 09/25/20 18:16 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.0076 | 09/25/20 18:16 |            |
| Manganese | mg/L  | ND           | 0.040           | 0.0017 | 09/25/20 18:16 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.056  | 09/25/20 18:16 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.26   | 09/25/20 18:16 |            |

LABORATORY CONTROL SAMPLE: 3013295

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 0.98J      | 98        | 80-120       |            |
| Iron      | mg/L  | 1           | 0.97       | 97        | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.0        | 100       | 80-120       |            |
| Manganese | mg/L  | 1           | 1.0        | 101       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.0        | 105       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 107       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013296 3013297

| Parameter | Units | 3013296        |                 | 3013297   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Calcium   | mg/L  | 75.8           | 1               | 74.9      | 75.7       | -84      | -9        | 75-125       | 1   | 20      | M1   |
| Iron      | mg/L  | 0.031J         | 1               | 0.94      | 0.96       | 91       | 93        | 75-125       | 2   | 20      |      |
| Magnesium | mg/L  | 5.6            | 1               | 6.4       | 6.4        | 81       | 89        | 75-125       | 1   | 20      |      |
| Manganese | mg/L  | 0.0055J        | 1               | 0.95      | 0.97       | 94       | 97        | 75-125       | 3   | 20      |      |
| Potassium | mg/L  | 0.90           | 1               | 1.8       | 1.9        | 93       | 99        | 75-125       | 3   | 20      |      |
| Sodium    | mg/L  | 7.1            | 1               | 8.0       | 8.0        | 82       | 87        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 568748    | Analysis Method:      | EPA 6010D  |
| QC Batch Method: | EPA 3010A | Analysis Description: | 6010D ATL  |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3013298 Matrix: Water

Associated Lab Samples: 92495904009, 92495904010, 92495904011

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070  | 09/25/20 20:40 |            |
| Iron      | mg/L  | ND           | 0.040           | 0.016  | 09/25/20 20:40 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.0076 | 09/25/20 20:40 |            |
| Manganese | mg/L  | ND           | 0.040           | 0.0017 | 09/25/20 20:40 |            |
| Potassium | mg/L  | 0.12J        | 0.20            | 0.056  | 09/25/20 20:40 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.26   | 09/25/20 20:40 |            |

LABORATORY CONTROL SAMPLE: 3013299

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 0.95J      | 95        | 80-120       |            |
| Iron      | mg/L  | 1           | 0.93       | 93        | 80-120       |            |
| Magnesium | mg/L  | 1           | 0.95       | 95        | 80-120       |            |
| Manganese | mg/L  | 1           | 0.96       | 96        | 80-120       |            |
| Potassium | mg/L  | 1           | 1.1        | 107       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 107       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013300 3013301

| Parameter | Units | 3013300        |                 | 3013301   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 75.3           | 1               | 1         | 79.7       | 76.2     | 438       | 83           | 75-125 | 5       | 20 M1 |
| Iron      | mg/L  | ND             | 1               | 1         | 0.96       | 0.93     | 95        | 92           | 75-125 | 3       | 20    |
| Magnesium | mg/L  | 8.6            | 1               | 1         | 10         | 9.5      | 138       | 94           | 75-125 | 4       | 20 M1 |
| Manganese | mg/L  | 0.0077J        | 1               | 1         | 0.99       | 0.96     | 98        | 95           | 75-125 | 3       | 20    |
| Potassium | mg/L  | 0.91           | 1               | 1         | 2.0        | 2.0      | 110       | 110          | 75-125 | 0       | 20    |
| Sodium    | mg/L  | 8.4            | 1               | 1         | 9.8        | 9.4      | 137       | 92           | 75-125 | 5       | 20 M1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570395 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3021771

Matrix: Water

Associated Lab Samples: 92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070  | 10/05/20 18:52 |            |
| Iron      | mg/L  | ND           | 0.040           | 0.016  | 10/05/20 18:52 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.0076 | 10/05/20 18:52 |            |
| Manganese | mg/L  | ND           | 0.040           | 0.0017 | 10/05/20 18:52 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.056  | 10/05/20 18:52 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.26   | 10/05/20 18:52 |            |

LABORATORY CONTROL SAMPLE: 3021772

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 102       | 80-120       |            |
| Iron      | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.0        | 101       | 80-120       |            |
| Manganese | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Potassium | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 110       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021773 3021774

| Parameter | Units | 3021773        |                 | 3021774   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Calcium   | mg/L  | 72.8           | 1               | 73.5      | 75.1       | 70       | 232       | 75-125       | 2   | 20      | M1   |
| Iron      | mg/L  | 0.39           | 1               | 1.4       | 1.5        | 103      | 107       | 75-125       | 3   | 20      |      |
| Magnesium | mg/L  | 12.8           | 1               | 13.8      | 14.1       | 96       | 132       | 75-125       | 3   | 20      | M1   |
| Manganese | mg/L  | 8.6            | 1               | 9.5       | 9.7        | 86       | 110       | 75-125       | 2   | 20      |      |
| Potassium | mg/L  | 0.72           | 1               | 1.8       | 1.8        | 110      | 108       | 75-125       | 1   | 20      |      |
| Sodium    | mg/L  | 8.1            | 1               | 9.1       | 9.3        | 95       | 124       | 75-125       | 3   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568198 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

METHOD BLANK: 3010799 Matrix: Water  
 Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 09/23/20 17:04 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 09/23/20 17:04 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 09/23/20 17:04 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 09/23/20 17:04 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 09/23/20 17:04 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 09/23/20 17:04 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 09/23/20 17:04 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 09/23/20 17:04 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 09/23/20 17:04 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 09/23/20 17:04 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 09/23/20 17:04 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 09/23/20 17:04 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 09/23/20 17:04 |            |

LABORATORY CONTROL SAMPLE: 3010800

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Boron      | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.090      | 90        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010801 3010802

| Parameter | Units | 92495900004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Antimony  | mg/L  |                    |                |                 | 0.10      | 0.10       |          |           |              | 1   | 20      |      |
| Arsenic   | mg/L  | ND                 | 0.1            | 0.1             | 0.098     | 0.097      | 97       | 97        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Parameter  | Units | 3010801               |                      | 3010802               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | RPD | Max<br>RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
|            |       | 92495900004<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |     |            |      |
| Barium     | mg/L  | 0.024                 | 0.1                  | 0.1                   | 0.12         | 0.12         | 100           | 100         | 75-125       | 0               | 20  |            |      |
| Beryllium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.093        | 94            | 93          | 75-125       | 1               | 20  |            |      |
| Boron      | mg/L  | 0.013J                | 1                    | 1                     | 0.97         | 0.98         | 96            | 96          | 75-125       | 0               | 20  |            |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.095        | 96            | 95          | 75-125       | 0               | 20  |            |      |
| Chromium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.10         | 100           | 100         | 75-125       | 0               | 20  |            |      |
| Cobalt     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.098        | 0.098        | 98            | 97          | 75-125       | 0               | 20  |            |      |
| Lead       | mg/L  | 0.000049J             | 0.1                  | 0.1                   | 0.095        | 0.097        | 95            | 97          | 75-125       | 2               | 20  |            |      |
| Lithium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.092        | 0.092        | 91            | 92          | 75-125       | 0               | 20  |            |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.093        | 0.094        | 93            | 94          | 75-125       | 1               | 20  |            |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.095        | 94            | 95          | 75-125       | 1               | 20  |            |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.098        | 97            | 98          | 75-125       | 1               | 20  |            |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568417 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904004

METHOD BLANK: 3011604 Matrix: Water  
Associated Lab Samples: 92495904004

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 09/23/20 18:33 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 09/23/20 18:33 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 09/23/20 18:33 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 09/23/20 18:33 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 09/23/20 18:33 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 09/23/20 18:33 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 09/23/20 18:33 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 09/23/20 18:33 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 09/23/20 18:33 |            |

LABORATORY CONTROL SAMPLE: 3011605

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Boron      | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.11       | 106       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011606 3011607

| Parameter  | Units | MS                 |             | MSD         |        | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |        |
|------------|-------|--------------------|-------------|-------------|--------|----------|-----------|--------------|--------|---------|------|--------|
|            |       | 92495876001 Result | Spike Conc. | Spike Conc. | Result |          |           |              |        |         |      | Result |
| Antimony   | mg/L  | ND                 | 0.1         | 0.1         | 0.10   | 0.099    | 101       | 99           | 75-125 | 2       | 20   |        |
| Barium     | mg/L  | 0.030              | 0.1         | 0.1         | 0.13   | 0.13     | 96        | 95           | 75-125 | 1       | 20   |        |
| Beryllium  | mg/L  | 0.00012J           | 0.1         | 0.1         | 0.098  | 0.095    | 98        | 95           | 75-125 | 2       | 20   |        |
| Boron      | mg/L  | 0.0065J            | 1           | 1           | 1.0    | 0.98     | 100       | 97           | 75-125 | 3       | 20   |        |
| Chromium   | mg/L  | ND                 | 0.1         | 0.1         | 0.10   | 0.10     | 103       | 103          | 75-125 | 0       | 20   |        |
| Cobalt     | mg/L  | ND                 | 0.1         | 0.1         | 0.10   | 0.10     | 101       | 101          | 75-125 | 1       | 20   |        |
| Lead       | mg/L  | 0.00065J           | 0.1         | 0.1         | 0.098  | 0.099    | 97        | 99           | 75-125 | 2       | 20   |        |
| Lithium    | mg/L  | 0.0014J            | 0.1         | 0.1         | 0.10   | 0.10     | 101       | 100          | 75-125 | 0       | 20   |        |
| Molybdenum | mg/L  | ND                 | 0.1         | 0.1         | 0.10   | 0.10     | 101       | 100          | 75-125 | 1       | 20   |        |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568749

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3013302

Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 09/25/20 18:19 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 09/25/20 18:19 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 09/25/20 18:19 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 09/25/20 18:19 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 09/25/20 18:19 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 09/25/20 18:19 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 09/25/20 18:19 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 09/25/20 18:19 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 09/25/20 18:19 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 09/25/20 18:19 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 09/25/20 18:19 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 09/25/20 18:19 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 09/25/20 18:19 |            |

LABORATORY CONTROL SAMPLE: 3013303

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Boron      | mg/L  | 1           | 0.97       | 97        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013304

3013305

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92495894014 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Antimony  | mg/L  | ND          | 0.1    | 0.1         | 0.10        | 0.11      | 104        | 108      | 75-125    | 4            | 20  |         |      |
| Arsenic   | mg/L  | ND          | 0.1    | 0.1         | 0.10        | 0.11      | 101        | 106      | 75-125    | 5            | 20  |         |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Parameter  | Units | 3013304               |                      | 3013305               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | Max<br>RPD | RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
|            |       | 92495894014<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |            |     |      |
| Barium     | mg/L  | 0.099                 | 0.1                  | 0.1                   | 0.18         | 0.19         | 85            | 89          | 75-125       | 2               | 20         |     |      |
| Beryllium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.099        | 96            | 99          | 75-125       | 4               | 20         |     |      |
| Boron      | mg/L  | 2.0                   | 1                    | 1                     | 3.0          | 3.1          | 102           | 106         | 75-125       | 2               | 20         |     |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.10         | 97            | 104         | 75-125       | 7               | 20         |     |      |
| Chromium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.11         | 101           | 108         | 75-125       | 7               | 20         |     |      |
| Cobalt     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.098        | 0.10         | 98            | 101         | 75-125       | 4               | 20         |     |      |
| Lead       | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.10         | 97            | 101         | 75-125       | 4               | 20         |     |      |
| Lithium    | mg/L  | 0.0032J               | 0.1                  | 0.1                   | 0.095        | 0.099        | 92            | 96          | 75-125       | 4               | 20         |     |      |
| Molybdenum | mg/L  | 0.014                 | 0.1                  | 0.1                   | 0.12         | 0.12         | 105           | 109         | 75-125       | 4               | 20         |     |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.10         | 97            | 103         | 75-125       | 7               | 20         |     |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.099        | 94            | 99          | 75-125       | 5               | 20         |     |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 569670 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3017842 Matrix: Water  
Associated Lab Samples: 92495904009, 92495904010, 92495904011

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 09/30/20 17:26 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 09/30/20 17:26 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 09/30/20 17:26 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 09/30/20 17:26 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 09/30/20 17:26 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 09/30/20 17:26 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 09/30/20 17:26 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 09/30/20 17:26 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 09/30/20 17:26 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 09/30/20 17:26 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 09/30/20 17:26 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 09/30/20 17:26 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 09/30/20 17:26 |            |

LABORATORY CONTROL SAMPLE: 3017843

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Boron      | mg/L  | 1           | 0.98       | 98        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.093      | 93        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017844 3017845

| Parameter | Units | MS          |             | MSD         |        | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|-------------|-------------|-------------|--------|----------|-----------|--------------|--------|---------|------|
|           |       | 92495894020 | Spike Conc. | Spike Conc. | Result |          |           |              |        |         |      |
| Antimony  | mg/L  | 0.00029J    | 0.1         | 0.1         | 0.099  | 0.10     | 99        | 102          | 75-125 | 3       | 20   |
| Arsenic   | mg/L  | 0.39        | 0.1         | 0.1         | 0.48   | 0.48     | 88        | 90           | 75-125 | 1       | 20   |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Parameter  | Units | 3017844               |                      | 3017845               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | RPD | Max<br>RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
|            |       | 92495894020<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |     |            |      |
| Barium     | mg/L  | 0.052                 | 0.1                  | 0.1                   | 0.15         | 0.15         | 98            | 101         | 75-125       | 2               | 20  |            |      |
| Beryllium  | mg/L  | 0.00011J              | 0.1                  | 0.1                   | 0.087        | 0.090        | 87            | 90          | 75-125       | 4               | 20  |            |      |
| Boron      | mg/L  | 1.6                   | 1                    | 1                     | 2.4          | 2.5          | 79            | 89          | 75-125       | 4               | 20  |            |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.094        | 94            | 94          | 75-125       | 0               | 20  |            |      |
| Chromium   | mg/L  | 0.00056J              | 0.1                  | 0.1                   | 0.093        | 0.094        | 93            | 93          | 75-125       | 1               | 20  |            |      |
| Cobalt     | mg/L  | 0.0032J               | 0.1                  | 0.1                   | 0.094        | 0.096        | 91            | 92          | 75-125       | 2               | 20  |            |      |
| Lead       | mg/L  | 0.00015J              | 0.1                  | 0.1                   | 0.093        | 0.093        | 93            | 92          | 75-125       | 0               | 20  |            |      |
| Lithium    | mg/L  | 0.028J                | 0.1                  | 0.1                   | 0.12         | 0.12         | 87            | 89          | 75-125       | 2               | 20  |            |      |
| Molybdenum | mg/L  | 0.032                 | 0.1                  | 0.1                   | 0.13         | 0.13         | 95            | 99          | 75-125       | 3               | 20  |            |      |
| Selenium   | mg/L  | 0.0016J               | 0.1                  | 0.1                   | 0.094        | 0.10         | 92            | 98          | 75-125       | 6               | 20  |            |      |
| Thallium   | mg/L  | 0.00036J              | 0.1                  | 0.1                   | 0.095        | 0.096        | 94            | 95          | 75-125       | 1               | 20  |            |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 570626 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3022872 Matrix: Water  
Associated Lab Samples: 92495904012, 92495904013

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 10/06/20 17:21 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 10/06/20 17:21 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 10/06/20 17:21 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 10/06/20 17:21 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 10/06/20 17:21 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 10/06/20 17:21 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 10/06/20 17:21 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 10/06/20 17:21 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 10/06/20 17:21 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 10/06/20 17:21 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 10/06/20 17:21 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 10/06/20 17:21 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 10/06/20 17:21 |            |

LABORATORY CONTROL SAMPLE: 3022873

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.12       | 116       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Boron      | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022874 3022875

| Parameter | Units | 92496914020 Result | MS          |                | MSD             |           | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|-----|---------|------|
|           |       |                    | Spike Conc. | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |     |         |      |
| Antimony  | mg/L  | ND                 | 0.1         | 0.1            | 0.12            | 0.12      | 115      | 116       | 75-125       | 0   | 20      |      |
| Arsenic   | mg/L  | ND                 | 0.1         | 0.1            | 0.097           | 0.098     | 97       | 98        | 75-125       | 2   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Parameter  | Units | 3022874               |                      | 3022875               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | RPD | Max<br>RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
|            |       | 92496914020<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |     |            |      |
| Barium     | mg/L  | 0.15                  | 0.1                  | 0.1                   | 0.25         | 0.25         | 102           | 99          | 75-125       | 1               | 20  |            |      |
| Beryllium  | mg/L  | 0.00010J              | 0.1                  | 0.1                   | 0.095        | 0.096        | 95            | 96          | 75-125       | 1               | 20  |            |      |
| Boron      | mg/L  | 0.17                  | 1                    | 1                     | 1.1          | 1.1          | 94            | 95          | 75-125       | 1               | 20  |            |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.097        | 95            | 97          | 75-125       | 2               | 20  |            |      |
| Chromium   | mg/L  | 0.00063J              | 0.1                  | 0.1                   | 0.10         | 0.10         | 100           | 100         | 75-125       | 0               | 20  |            |      |
| Cobalt     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.099        | 97            | 98          | 75-125       | 1               | 20  |            |      |
| Lead       | mg/L  | 0.00014J              | 0.1                  | 0.1                   | 0.094        | 0.096        | 94            | 96          | 75-125       | 2               | 20  |            |      |
| Lithium    | mg/L  | 0.019J                | 0.1                  | 0.1                   | 0.11         | 0.11         | 92            | 96          | 75-125       | 3               | 20  |            |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.10         | 99            | 100         | 75-125       | 1               | 20  |            |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.093        | 0.095        | 93            | 95          | 75-125       | 3               | 20  |            |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.097        | 96            | 97          | 75-125       | 1               | 20  |            |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 570627 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3022878 Matrix: Water  
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 10/05/20 18:29 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 10/05/20 18:29 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 10/05/20 18:29 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 10/05/20 18:29 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 10/05/20 18:29 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 10/05/20 18:29 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 10/05/20 18:29 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 10/05/20 18:29 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 10/05/20 18:29 |            |

LABORATORY CONTROL SAMPLE: 3022879

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Boron      | mg/L  | 1           | 1.0        | 101       | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022880 3022881

| Parameter  | Units | MS          |             | MSD         |        | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |        |
|------------|-------|-------------|-------------|-------------|--------|----------|-----------|--------------|--------|---------|------|--------|
|            |       | 92498084008 | Spike Conc. | Spike Conc. | Result |          |           |              |        |         |      | Result |
| Antimony   | mg/L  | ND          | 0.1         | 0.1         | 0.10   | 0.095    | 102       | 95           | 75-125 | 7       | 20   |        |
| Barium     | mg/L  | 0.026       | 0.1         | 0.1         | 0.13   | 0.12     | 101       | 91           | 75-125 | 9       | 20   |        |
| Beryllium  | mg/L  | ND          | 0.1         | 0.1         | 0.099  | 0.096    | 99        | 96           | 75-125 | 4       | 20   |        |
| Boron      | mg/L  | 0.053       | 1           | 1           | 1.1    | 1.1      | 105       | 103          | 75-125 | 2       | 20   |        |
| Chromium   | mg/L  | ND          | 0.1         | 0.1         | 0.10   | 0.096    | 103       | 95           | 75-125 | 8       | 20   |        |
| Cobalt     | mg/L  | ND          | 0.1         | 0.1         | 0.10   | 0.093    | 100       | 93           | 75-125 | 7       | 20   |        |
| Lead       | mg/L  | ND          | 0.1         | 0.1         | 0.099  | 0.094    | 99        | 94           | 75-125 | 5       | 20   |        |
| Lithium    | mg/L  | ND          | 0.1         | 0.1         | 0.10   | 0.096    | 100       | 96           | 75-125 | 4       | 20   |        |
| Molybdenum | mg/L  | 0.0089J     | 0.1         | 0.1         | 0.11   | 0.10     | 100       | 93           | 75-125 | 7       | 20   |        |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 572608 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495904005, 92495904006, 92495904012

METHOD BLANK: 3032633 Matrix: Water  
Associated Lab Samples: 92495904005, 92495904006, 92495904012

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 10/13/20 12:38 |            |

LABORATORY CONTROL SAMPLE: 3032634

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0025     | 101       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032635 3032636

| Parameter | Units | 3032635        |                 | 3032636   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0025    | 0.0026     | 97       | 102       | 75-125       | 5   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 576048

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904007, 92495904008, 92495904011

METHOD BLANK: 3048763

Matrix: Water

Associated Lab Samples: 92495904007, 92495904008, 92495904011

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 10/28/20 12:22 |            |

LABORATORY CONTROL SAMPLE: 3048764

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0024     | 98        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3048765 3048766

| Parameter | Units | 3048765        |                 | 3048766   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0024    | 0.0024     | 97       | 97        | 75-125       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

|                                     |  |
|-------------------------------------|--|
| QC Batch: 567147                    | Analysis Method: SM 2450C-2011                               |
| QC Batch Method: SM 2450C-2011      | Analysis Description: 2540C Total Dissolved Solids           |
| Associated Lab Samples: 92495904004 | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

METHOD BLANK: 3005362 Matrix: Water  
Associated Lab Samples: 92495904004

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 09/17/20 15:18 |            |

LABORATORY CONTROL SAMPLE: 3005363

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 384        | 96        | 84-108       |            |

SAMPLE DUPLICATE: 3005364

| Parameter              | Units | 92495870005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | ND                 | ND         |     | 10      |            |

SAMPLE DUPLICATE: 3005365

| Parameter              | Units | 92495900007 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 1890               | 1860       | 2   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

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|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 567872        | Analysis Method:      | SM 2450C-2011                                    |
| QC Batch Method: | SM 2450C-2011 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

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METHOD BLANK: 3009209 Matrix: Water  
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 09/17/20 15:18 |            |

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LABORATORY CONTROL SAMPLE: 3009210

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 384        | 96        | 84-108       |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

|                                |  |
|--------------------------------|--|
| QC Batch: 568395               | Analysis Method: SM 2450C-2011                               |
| QC Batch Method: SM 2450C-2011 | Analysis Description: 2540C Total Dissolved Solids           |
|                                | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3011476 Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 09/23/20 13:15 |            |

LABORATORY CONTROL SAMPLE: 3011477

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 375        | 94        | 84-108       |            |

SAMPLE DUPLICATE: 3011478

| Parameter              | Units | 92495894018 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 382                | 404        | 6   | 10      |            |

SAMPLE DUPLICATE: 3011479

| Parameter              | Units | 92495870020 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 93.0               | 91.0       | 2   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 568648        | Analysis Method:      | SM 2450C-2011                                    |
| QC Batch Method: | SM 2450C-2011 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3012738 Matrix: Water

Associated Lab Samples: 92495904009, 92495904010, 92495904011

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 09/24/20 10:26 |            |

LABORATORY CONTROL SAMPLE: 3012739

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 390        | 98        | 84-108       |            |

SAMPLE DUPLICATE: 3012740

| Parameter              | Units | 92497007001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 207                | 204        | 1   | 10      |            |

SAMPLE DUPLICATE: 3012944

| Parameter              | Units | 92496771001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 158                | 157        | 1   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 570219 Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3020458 Matrix: Water  
Associated Lab Samples: 92495904012, 92495904013

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 10/01/20 15:22 |            |

LABORATORY CONTROL SAMPLE: 3020459

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 412        | 103       | 84-108       |            |

SAMPLE DUPLICATE: 3020460

| Parameter              | Units | 92497125005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 134                | 142        | 6   | 10      |            |

SAMPLE DUPLICATE: 3020461

| Parameter              | Units | 92497146006 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 878                | 918        | 4   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

|                                |  |
|--------------------------------|--|
| QC Batch: 570220               | Analysis Method: SM 2450C-2011                               |
| QC Batch Method: SM 2450C-2011 | Analysis Description: 2540C Total Dissolved Solids           |
|                                | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904014, 92495904015

METHOD BLANK: 3020462 Matrix: Water

Associated Lab Samples: 92495904014, 92495904015

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 10/01/20 15:26 |            |

LABORATORY CONTROL SAMPLE: 3020463

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 411        | 103       | 84-108       |            |

SAMPLE DUPLICATE: 3020464

| Parameter              | Units | 92496524014 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 188                | 205        | 9   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 570638        | Analysis Method:      | SM 2450C-2011                                    |
| QC Batch Method: | SM 2450C-2011 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92495904016, 92495904017, 92495904018

METHOD BLANK: 3022933 Matrix: Water

Associated Lab Samples: 92495904016, 92495904017, 92495904018

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 10/02/20 17:24 |            |

LABORATORY CONTROL SAMPLE: 3022934

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 419        | 105       | 84-108       |            |

SAMPLE DUPLICATE: 3022936

| Parameter              | Units | 92497532034 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | ND                 | ND         |     | 10      |            |

SAMPLE DUPLICATE: 3023295

| Parameter              | Units | 92497532027 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 243                | 245        | 1   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568673 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

METHOD BLANK: 3012830 Matrix: Water  
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 5.0 | 09/24/20 13:03 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 5.0 | 09/24/20 13:03 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 5.0 | 09/24/20 13:03 |            |

LABORATORY CONTROL SAMPLE: 3012831

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 51.0       | 102       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012832 3012833

| Parameter                              | Units | 92495900001 |                | 3012833   |                | % Rec | % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|-------------|----------------|-----------|----------------|-------|-------|--------------|-----|---------|------|
|  |       | MS Result   | MS Spike Conc. | MS Result | MS Spike Conc. |       |       |              |     |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 307         | 50             | 358       | 50             | 102   | 104   | 80-120       | 0   | 25      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012834 3012835

| Parameter                              | Units | 92495900007 |                | 3012835   |                | % Rec | % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|-------------|----------------|-----------|----------------|-------|-------|--------------|-----|---------|------|
|  |       | MS Result   | MS Spike Conc. | MS Result | MS Spike Conc. |       |       |              |     |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | ND          | 50             | 42.7      | 50             | 85    | 84    | 80-120       | 1   | 25      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568970

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3014490

Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 5.0 | 09/30/20 11:38 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 5.0 | 09/30/20 11:38 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 5.0 | 09/30/20 11:38 |            |

LABORATORY CONTROL SAMPLE: 3014491

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 52.5       | 105       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014492 3014493

| Parameter                              | Units | 92495894013 |                | 3014493         |           | % Rec | % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|-------------|----------------|-----------------|-----------|-------|-------|--------------|--------|---------|------|
|  |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |       |       |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 231         | 50             | 50              | 274       | 281   | 86    | 100          | 80-120 | 3       | 25   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014494 3014495

| Parameter                              | Units | 92495894018 |                | 3014495         |           | % Rec | % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|-------------|----------------|-----------------|-----------|-------|-------|--------------|--------|---------|------|
|  |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |       |       |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 288         | 50             | 50              | 343       | 338   | 111   | 100          | 80-120 | 2       | 25   |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 569912 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904009, 92495904011

METHOD BLANK: 3018962 Matrix: Water  
Associated Lab Samples: 92495904009, 92495904011

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 5.0 | 09/30/20 15:43 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 5.0 | 09/30/20 15:43 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 5.0 | 09/30/20 15:43 |            |

LABORATORY CONTROL SAMPLE: 3018963

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 50.4       | 101       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018964 3018965

| Parameter                              | Units | 92497388001    |                 | 3018965   |            | % Rec | % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|--|-------|----------------|-----------------|-----------|------------|-------|-------|--------------|--------|---------|-------|
|  |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |       |       |              |        |         |       |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 2670           | 50              | 50        | 2540       | 2630  | -256  | -85          | 80-120 | 3       | 25 M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018966 3018967

| Parameter                              | Units | 92496574002    |                 | 3018967   |            | % Rec | % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|----------------|-----------------|-----------|------------|-------|-------|--------------|--------|---------|------|
|  |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |       |       |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 66.3           | 50              | 50        | 117        | 119   | 101   | 105          | 80-120 | 2       | 25   |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570242

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904010

METHOD BLANK: 3020557

Matrix: Water

Associated Lab Samples: 92495904010

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 5.0 | 10/01/20 14:25 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 5.0 | 10/01/20 14:25 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 5.0 | 10/01/20 14:25 |            |

LABORATORY CONTROL SAMPLE: 3020558

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 48.2       | 96        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020559 3020560

| Parameter                              | Units | 92496574010 |                | 3020559   |                 | 3020560   |            | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|-------------|----------------|-----------|-----------------|-----------|------------|--------------|--------|---------|------|
|  |       | Result      | MS Spike Conc. | MS Result | MSD Spike Conc. | MS Result | MSD Result |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 20.2        | 50             | 70.4      | 50              | 71.4      | 100        | 102          | 80-120 | 1       | 25   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020561 3020562

| Parameter                              | Units | 92496574018 |                | 3020561   |                 | 3020562   |            | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|-------------|----------------|-----------|-----------------|-----------|------------|--------------|--------|---------|------|
|  |       | Result      | MS Spike Conc. | MS Result | MSD Spike Conc. | MS Result | MSD Result |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | ND          | 50             | 51.4      | 50              | 51.5      | 103        | 103          | 80-120 | 0       | 25   |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 571506 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3026929 Matrix: Water

Associated Lab Samples: 92495904012, 92495904013

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 5.0 | 10/08/20 14:21 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 5.0 | 10/08/20 14:21 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 5.0 | 10/08/20 14:21 |            |

LABORATORY CONTROL SAMPLE: 3026930

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 50.1       | 100       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026931 3026932

| Parameter                              | Units | 92497532022 |                | 3026932         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|  |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 231         | 50             | 50              | 288       | 286      | 114       | 110          | 80-120 | 1       | 25   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026933 3026934

| Parameter                              | Units | 92497532028 |                | 3026934         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|--|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|  |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 90.3        | 50             | 50              | 141       | 143      | 101       | 104          | 80-120 | 1       | 25   |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 571655 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3027877 Matrix: Water  
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 5.0 | 10/08/20 18:28 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 5.0 | 10/08/20 18:28 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 5.0 | 10/08/20 18:28 |            |

LABORATORY CONTROL SAMPLE: 3027878

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 50.0       | 100       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3027879 3027880

| Parameter                              | Units | 92497913003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 57.8               | 50             | 50              | 108       | 109        | 100      | 103       | 80-120       | 1   | 25      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029635 3029636

| Parameter                              | Units | 92495904018 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 313                | 50             | 50              | 353       | 358        | 79       | 90        | 80-120       | 2   | 25 M1   |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568020 Analysis Method: SM 4500-S2D-2011  
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

METHOD BLANK: 3009676 Matrix: Water  
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Sulfide   | mg/L  | ND           | 0.10            | 0.050 | 09/22/20 14:09 |            |

LABORATORY CONTROL SAMPLE: 3009677

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfide   | mg/L  | 0.5         | 0.52       | 104       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009678 3009679

| Parameter | Units | 92495900001 |                 | 3009679   |                 | % Rec | % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|-------|-------|--------------|-----|---------|------|
|           |       | MS Result   | MSD Spike Conc. | MS Result | MSD Spike Conc. |       |       |              |     |         |      |
| Sulfide   | mg/L  | ND          | 0.5             | 0.52      | 0.52            | 98    | 98    | 80-120       | 0   | 10      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009680 3009681

| Parameter | Units | 92495900002 |                 | 3009681   |                 | % Rec | % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|-------|-------|--------------|-----|---------|------|
|           |       | MS Result   | MSD Spike Conc. | MS Result | MSD Spike Conc. |       |       |              |     |         |      |
| Sulfide   | mg/L  | ND          | 0.5             | 0.39      | 0.39            | 77    | 77    | 80-120       | 0   | 10 M1   |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568022 Analysis Method: SM 4500-S2D-2011  
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3009689 Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Sulfide   | mg/L  | ND           | 0.10            | 0.050 | 09/22/20 14:40 |            |

LABORATORY CONTROL SAMPLE: 3009690

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfide   | mg/L  | 0.5         | 0.53       | 106       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009691 3009692

| Parameter | Units | 92495894013 |                | 3009692         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Sulfide   | mg/L  | ND          | 0.5            | 0.5             | 0.50      | 0.50     | 94        | 94           | 80-120 | 0       | 10   |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009693 3009694

| Parameter | Units | 92495894014 |                | 3009694         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Sulfide   | mg/L  | ND          | 0.5            | 0.5             | 0.51      | 0.51     | 98        | 98           | 80-120 | 0       | 10   |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568633 Analysis Method: SM 4500-S2D-2011  
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3012716 Matrix: Water  
Associated Lab Samples: 92495904009, 92495904010, 92495904011

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Sulfide   | mg/L  | ND           | 0.10            | 0.050 | 09/24/20 11:36 |            |

LABORATORY CONTROL SAMPLE: 3012717

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfide   | mg/L  | 0.5         | 0.51       | 102       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012718 3012719

| Parameter | Units | 92496675001 Result | MS          | MSD         | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       |                    | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Sulfide   | mg/L  | ND                 | 0.5         | 0.5         | 0.49      | 0.49       | 96       | 96        | 80-120       | 0   | 10      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012720 3012721

| Parameter | Units | 92496675002 Result | MS          | MSD         | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       |                    | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Sulfide   | mg/L  | ND                 | 0.5         | 0.5         | 0.45      | 0.45       | 83       | 83        | 80-120       | 0   | 10      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 569580

Analysis Method: SM 4500-S2D-2011

QC Batch Method: SM 4500-S2D-2011

Analysis Description: 4500S2D Sulfide Water

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3017581

Matrix: Water

Associated Lab Samples: 92495904012, 92495904013

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Sulfide   | mg/L  | ND           | 0.10            | 0.050 | 09/29/20 13:47 |            |

LABORATORY CONTROL SAMPLE: 3017582

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfide   | mg/L  | 0.5         | 0.53       | 106       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017583 3017584

| Parameter | Units | 3017583        |                 | 3017584   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Sulfide   | mg/L  | ND             | 0.5             | 0.5       | 0.18       | 0.19     | 31        | 32           | 80-120 | 2       | 10 M1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570214 Analysis Method: SM 4500-S2D-2011  
 QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water  
 Laboratory: Pace Analytical Services - Asheville  
 Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3020426 Matrix: Water  
 Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Sulfide   | mg/L  | ND           | 0.10            | 0.050 | 10/01/20 12:47 |            |

LABORATORY CONTROL SAMPLE: 3020427

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfide   | mg/L  | 0.5         | 0.55       | 109       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020428 3020429

| Parameter | Units | 3020428            |                | 3020429         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | 92497738004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Sulfide   | mg/L  | ND                 | 0.5            | 0.5             | 0.55      | 0.55     | 108       | 108          | 80-120 | 0       | 10   |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020430 3020431

| Parameter | Units | 3020430            |                | 3020431         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | 92497738003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Sulfide   | mg/L  | ND                 | 0.5            | 0.5             | 0.56      | 0.56     | 109       | 109          | 80-120 | 0       | 10   |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 567529 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville  
 Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004

METHOD BLANK: 3007534 Matrix: Water  
 Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 09/18/20 16:46 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 09/18/20 16:46 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 09/18/20 16:46 |            |

LABORATORY CONTROL SAMPLE: 3007535

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 52.2       | 104       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.7        | 106       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 52.4       | 105       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007536 3007537

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92496029001 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 13.6        | 50     | 50          | 68.1        | 69.2      | 109        | 111      | 90-110    | 2            | 10  | M1      |      |
| Fluoride  | mg/L  | 0.10        | 2.5    | 2.5         | 2.8         | 2.9       | 109        | 112      | 90-110    | 3            | 10  | M1      |      |
| Sulfate   | mg/L  | 7.4         | 50     | 50          | 62.2        | 63.3      | 110        | 112      | 90-110    | 2            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007538 3007539

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92495653005 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 5.5         | 50     | 50          | 58.5        | 62.8      | 106        | 115      | 90-110    | 7            | 10  | M1      |      |
| Fluoride  | mg/L  | 0.057J      | 2.5    | 2.5         | 2.8         | 3.0       | 108        | 116      | 90-110    | 7            | 10  | M1      |      |
| Sulfate   | mg/L  | 241         | 50     | 50          | 287         | 291       | 91         | 100      | 90-110    | 2            | 10  |         |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 567607 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904005, 92495904006

METHOD BLANK: 3008004 Matrix: Water

Associated Lab Samples: 92495904005, 92495904006

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 09/19/20 15:23 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 09/19/20 15:23 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 09/19/20 15:23 |            |

LABORATORY CONTROL SAMPLE: 3008005

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 52.3       | 105       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.7        | 106       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 52.5       | 105       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008006 3008007

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92495653007 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 4.4         | 50     | 50          | 57.4        | 58.2      | 106        | 108      | 90-110    | 1            | 10  |         |      |
| Fluoride  | mg/L  | 0.13        | 2.5    | 2.5         | 2.8         | 2.8       | 107        | 109      | 90-110    | 1            | 10  |         |      |
| Sulfate   | mg/L  | 334         | 50     | 50          | 389         | 385       | 111        | 103      | 90-110    | 1            | 10  | M6      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008008 3008009

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92495964005 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 7.9         | 50     | 50          | 61.3        | 62.0      | 107        | 108      | 90-110    | 1            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.7         | 2.7       | 107        | 108      | 90-110    | 1            | 10  |         |      |
| Sulfate   | mg/L  | 256         | 50     | 50          | 298         | 299       | 85         | 87       | 90-110    | 0            | 10  | M6      |      |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568377 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3011350 Matrix: Water  
Associated Lab Samples: 92495904007, 92495904008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 09/24/20 06:58 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 09/24/20 06:58 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 09/24/20 06:58 |            |

LABORATORY CONTROL SAMPLE: 3011351

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 50.7       | 101       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.6        | 102       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.1       | 100       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011352 3011353

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92495656005 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 1.9         | 50     | 50          | 55.8        | 56.2      | 108        | 109      | 90-110    | 1            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.8         | 2.8       | 109        | 110      | 90-110    | 1            | 10  |         |      |
| Sulfate   | mg/L  | 5.9         | 50     | 50          | 59.3        | 59.6      | 107        | 108      | 90-110    | 1            | 10  |         |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011354 3011355

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92496524001 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 2.6         | 50     | 50          | 56.8        | 57.6      | 108        | 110      | 90-110    | 1            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.7         | 2.8       | 108        | 110      | 90-110    | 2            | 10  |         |      |
| Sulfate   | mg/L  | 1.0         | 50     | 50          | 54.0        | 54.8      | 106        | 108      | 90-110    | 1            | 10  |         |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 568379 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3011360 Matrix: Water  
Associated Lab Samples: 92495904009, 92495904010, 92495904011

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 09/24/20 14:11 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 09/24/20 14:11 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 09/24/20 14:11 |            |

LABORATORY CONTROL SAMPLE: 3011361

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 51.6       | 103       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.7        | 109       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.7       | 101       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011362 3011363

| Parameter | Units | 92495870024 |       | MS          |             | MSD    |        | % Rec | % Rec  | % Rec | Limits | RPD | Max | Qual |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|-------|--------|-----|-----|------|
|           |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result |       |        |       |        |     |     |      |
| Chloride  | mg/L  | 0.64J       | 50    | 50          | 54.6        | 55.2   | 108    | 109   | 90-110 | 1     | 10     |     |     |      |
| Fluoride  | mg/L  | ND          | 2.5   | 2.5         | 2.8         | 2.8    | 110    | 110   | 90-110 | 0     | 10     |     |     |      |
| Sulfate   | mg/L  | 0.90J       | 50    | 50          | 53.7        | 54.3   | 106    | 107   | 90-110 | 1     | 10     |     |     |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011364 3011365

| Parameter | Units | 92495900019 |       | MS          |             | MSD    |        | % Rec | % Rec  | % Rec | Limits | RPD | Max | Qual |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|-------|--------|-----|-----|------|
|           |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result |       |        |       |        |     |     |      |
| Chloride  | mg/L  | 236         | 50    | 50          | 284         | 284    | 96     | 95    | 90-110 | 0     | 10     |     |     |      |
| Fluoride  | mg/L  | ND          | 2.5   | 2.5         | 2.4         | 2.5    | 96     | 100   | 90-110 | 4     | 10     |     |     |      |
| Sulfate   | mg/L  | 1010        | 50    | 50          | 1040        | 1040   | 78     | 68    | 90-110 | 1     | 10 M6  |     |     |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

QC Batch: 570137 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3020267 Matrix: Water  
Associated Lab Samples: 92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 10/01/20 07:56 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 10/01/20 07:56 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 10/01/20 07:56 |            |

LABORATORY CONTROL SAMPLE: 3020268

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 53.3       | 107       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.7        | 109       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 53.4       | 107       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020269 3020270

| Parameter | Units | 92495894028 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Chloride  | mg/L  | 542                | 50             | 50              | 583       | 587        | 82       | 89        | 90-110       | 1   | 10      | M6   |
| Fluoride  | mg/L  | 0.41               | 2.5            | 2.5             | 3.2       | 3.1        | 110      | 109       | 90-110       | 1   | 10      |      |
| Sulfate   | mg/L  | 3480               | 50             | 50              | 3520      | 3530       | 86       | 111       | 90-110       | 0   | 10      | M6   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020271 3020272

| Parameter | Units | 92496914018 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Chloride  | mg/L  | 1.6                | 50             | 50              | 56.0      | 56.5       | 109      | 110       | 90-110       | 1   | 10      |      |
| Fluoride  | mg/L  | 0.063J             | 2.5            | 2.5             | 2.8       | 2.8        | 109      | 111       | 90-110       | 2   | 10      | M1   |
| Sulfate   | mg/L  | 110                | 50             | 50              | 160       | 161        | 101      | 103       | 90-110       | 1   | 10      |      |

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## QUALIFIERS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

H1 Analysis conducted outside the EPA method holding time.

H2 Extraction or preparation conducted outside EPA method holding time.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92495904001 | HGWA-1    |                 |          |                   |                  |
| 92495904002 | HGWA-2    |                 |          |                   |                  |
| 92495904003 | HGWA-3    |                 |          |                   |                  |
| 92495904004 | HGWA-122  |                 |          |                   |                  |
| 92495904005 | HGWA-43D  |                 |          |                   |                  |
| 92495904006 | HGWA-44D  |                 |          |                   |                  |
| 92495904007 | HGWC-126  |                 |          |                   |                  |
| 92495904009 | HGWC-120  |                 |          |                   |                  |
| 92495904011 | HGWC-125  |                 |          |                   |                  |
| 92495904012 | HGWA-45D  |                 |          |                   |                  |
| 92495904013 | MW-46D    |                 |          |                   |                  |
| 92495904014 | HGWC-121A |                 |          |                   |                  |
| 92495904015 | HGWC-124  |                 |          |                   |                  |
| 92495904016 | MW-32     |                 |          |                   |                  |
| 92495904017 | MW-39     |                 |          |                   |                  |
| 92495904018 | MW-41     |                 |          |                   |                  |
| 92495904001 | HGWA-1    | EPA 3010A       | 568201   | EPA 6010D         | 568230           |
| 92495904002 | HGWA-2    | EPA 3010A       | 568201   | EPA 6010D         | 568230           |
| 92495904003 | HGWA-3    | EPA 3010A       | 568201   | EPA 6010D         | 568230           |
| 92495904004 | HGWA-122  | EPA 3010A       | 568747   | EPA 6010D         | 568813           |
| 92495904005 | HGWA-43D  | EPA 3010A       | 568201   | EPA 6010D         | 568230           |
| 92495904006 | HGWA-44D  | EPA 3010A       | 568201   | EPA 6010D         | 568230           |
| 92495904007 | HGWC-126  | EPA 3010A       | 568747   | EPA 6010D         | 568813           |
| 92495904008 | FB-03     | EPA 3010A       | 568747   | EPA 6010D         | 568813           |
| 92495904009 | HGWC-120  | EPA 3010A       | 568748   | EPA 6010D         | 568812           |
| 92495904010 | FD-03     | EPA 3010A       | 568748   | EPA 6010D         | 568812           |
| 92495904011 | HGWC-125  | EPA 3010A       | 568748   | EPA 6010D         | 568812           |
| 92495904012 | HGWA-45D  | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904013 | MW-46D    | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904014 | HGWC-121A | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904015 | HGWC-124  | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904016 | MW-32     | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904017 | MW-39     | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904018 | MW-41     | EPA 3010A       | 570395   | EPA 6010D         | 570414           |
| 92495904001 | HGWA-1    | EPA 3005A       | 568198   | EPA 6020B         | 568229           |
| 92495904002 | HGWA-2    | EPA 3005A       | 568198   | EPA 6020B         | 568229           |
| 92495904003 | HGWA-3    | EPA 3005A       | 568198   | EPA 6020B         | 568229           |
| 92495904004 | HGWA-122  | EPA 3005A       | 568417   | EPA 6020B         | 568454           |
| 92495904005 | HGWA-43D  | EPA 3005A       | 568198   | EPA 6020B         | 568229           |
| 92495904006 | HGWA-44D  | EPA 3005A       | 568198   | EPA 6020B         | 568229           |
| 92495904007 | HGWC-126  | EPA 3005A       | 568749   | EPA 6020B         | 568811           |
| 92495904008 | FB-03     | EPA 3005A       | 568749   | EPA 6020B         | 568811           |
| 92495904009 | HGWC-120  | EPA 3005A       | 569670   | EPA 6020B         | 569718           |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92495904010 | FD-03     | EPA 3005A       | 569670   | EPA 6020B         | 569718           |
| 92495904011 | HGWC-125  | EPA 3005A       | 569670   | EPA 6020B         | 569718           |
| 92495904012 | HGWA-45D  | EPA 3005A       | 570626   | EPA 6020B         | 570683           |
| 92495904013 | MW-46D    | EPA 3005A       | 570626   | EPA 6020B         | 570683           |
| 92495904014 | HGWC-121A | EPA 3005A       | 570627   | EPA 6020B         | 570682           |
| 92495904015 | HGWC-124  | EPA 3005A       | 570627   | EPA 6020B         | 570682           |
| 92495904016 | MW-32     | EPA 3005A       | 570627   | EPA 6020B         | 570682           |
| 92495904017 | MW-39     | EPA 3005A       | 570627   | EPA 6020B         | 570682           |
| 92495904018 | MW-41     | EPA 3005A       | 570627   | EPA 6020B         | 570682           |
| 92495904005 | HGWA-43D  | EPA 7470A       | 572608   | EPA 7470A         | 572822           |
| 92495904006 | HGWA-44D  | EPA 7470A       | 572608   | EPA 7470A         | 572822           |
| 92495904007 | HGWC-126  | EPA 7470A       | 576048   | EPA 7470A         | 576319           |
| 92495904008 | FB-03     | EPA 7470A       | 576048   | EPA 7470A         | 576319           |
| 92495904011 | HGWC-125  | EPA 7470A       | 576048   | EPA 7470A         | 576319           |
| 92495904012 | HGWA-45D  | EPA 7470A       | 572608   | EPA 7470A         | 572822           |
| 92495904001 | HGWA-1    | SM 2450C-2011   | 567872   |                   |                  |
| 92495904002 | HGWA-2    | SM 2450C-2011   | 567872   |                   |                  |
| 92495904003 | HGWA-3    | SM 2450C-2011   | 567872   |                   |                  |
| 92495904004 | HGWA-122  | SM 2450C-2011   | 567147   |                   |                  |
| 92495904005 | HGWA-43D  | SM 2450C-2011   | 567872   |                   |                  |
| 92495904006 | HGWA-44D  | SM 2450C-2011   | 567872   |                   |                  |
| 92495904007 | HGWC-126  | SM 2450C-2011   | 568395   |                   |                  |
| 92495904008 | FB-03     | SM 2450C-2011   | 568395   |                   |                  |
| 92495904009 | HGWC-120  | SM 2450C-2011   | 568648   |                   |                  |
| 92495904010 | FD-03     | SM 2450C-2011   | 568648   |                   |                  |
| 92495904011 | HGWC-125  | SM 2450C-2011   | 568648   |                   |                  |
| 92495904012 | HGWA-45D  | SM 2450C-2011   | 570219   |                   |                  |
| 92495904013 | MW-46D    | SM 2450C-2011   | 570219   |                   |                  |
| 92495904014 | HGWC-121A | SM 2450C-2011   | 570220   |                   |                  |
| 92495904015 | HGWC-124  | SM 2450C-2011   | 570220   |                   |                  |
| 92495904016 | MW-32     | SM 2450C-2011   | 570638   |                   |                  |
| 92495904017 | MW-39     | SM 2450C-2011   | 570638   |                   |                  |
| 92495904018 | MW-41     | SM 2450C-2011   | 570638   |                   |                  |
| 92495904001 | HGWA-1    | SM 2320B-2011   | 568673   |                   |                  |
| 92495904002 | HGWA-2    | SM 2320B-2011   | 568673   |                   |                  |
| 92495904003 | HGWA-3    | SM 2320B-2011   | 568673   |                   |                  |
| 92495904004 | HGWA-122  | SM 2320B-2011   | 568673   |                   |                  |
| 92495904005 | HGWA-43D  | SM 2320B-2011   | 568673   |                   |                  |
| 92495904006 | HGWA-44D  | SM 2320B-2011   | 568673   |                   |                  |
| 92495904007 | HGWC-126  | SM 2320B-2011   | 568970   |                   |                  |
| 92495904008 | FB-03     | SM 2320B-2011   | 568970   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL  
Pace Project No.: 92495904

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92495904009 | HGWC-120  | SM 2320B-2011          | 569912   |                   |                  |
| 92495904010 | FD-03     | SM 2320B-2011          | 570242   |                   |                  |
| 92495904011 | HGWC-125  | SM 2320B-2011          | 569912   |                   |                  |
| 92495904012 | HGWA-45D  | SM 2320B-2011          | 571506   |                   |                  |
| 92495904013 | MW-46D    | SM 2320B-2011          | 571506   |                   |                  |
| 92495904014 | HGWC-121A | SM 2320B-2011          | 571655   |                   |                  |
| 92495904015 | HGWC-124  | SM 2320B-2011          | 571655   |                   |                  |
| 92495904016 | MW-32     | SM 2320B-2011          | 571655   |                   |                  |
| 92495904017 | MW-39     | SM 2320B-2011          | 571655   |                   |                  |
| 92495904018 | MW-41     | SM 2320B-2011          | 571655   |                   |                  |
| 92495904001 | HGWA-1    | SM 4500-S2D-2011       | 568020   |                   |                  |
| 92495904002 | HGWA-2    | SM 4500-S2D-2011       | 568020   |                   |                  |
| 92495904003 | HGWA-3    | SM 4500-S2D-2011       | 568020   |                   |                  |
| 92495904004 | HGWA-122  | SM 4500-S2D-2011       | 568020   |                   |                  |
| 92495904005 | HGWA-43D  | SM 4500-S2D-2011       | 568020   |                   |                  |
| 92495904006 | HGWA-44D  | SM 4500-S2D-2011       | 568020   |                   |                  |
| 92495904007 | HGWC-126  | SM 4500-S2D-2011       | 568022   |                   |                  |
| 92495904008 | FB-03     | SM 4500-S2D-2011       | 568022   |                   |                  |
| 92495904009 | HGWC-120  | SM 4500-S2D-2011       | 568633   |                   |                  |
| 92495904010 | FD-03     | SM 4500-S2D-2011       | 568633   |                   |                  |
| 92495904011 | HGWC-125  | SM 4500-S2D-2011       | 568633   |                   |                  |
| 92495904012 | HGWA-45D  | SM 4500-S2D-2011       | 569580   |                   |                  |
| 92495904013 | MW-46D    | SM 4500-S2D-2011       | 569580   |                   |                  |
| 92495904014 | HGWC-121A | SM 4500-S2D-2011       | 570214   |                   |                  |
| 92495904015 | HGWC-124  | SM 4500-S2D-2011       | 570214   |                   |                  |
| 92495904016 | MW-32     | SM 4500-S2D-2011       | 570214   |                   |                  |
| 92495904017 | MW-39     | SM 4500-S2D-2011       | 570214   |                   |                  |
| 92495904018 | MW-41     | SM 4500-S2D-2011       | 570214   |                   |                  |
| 92495904001 | HGWA-1    | EPA 300.0 Rev 2.1 1993 | 567529   |                   |                  |
| 92495904002 | HGWA-2    | EPA 300.0 Rev 2.1 1993 | 567529   |                   |                  |
| 92495904003 | HGWA-3    | EPA 300.0 Rev 2.1 1993 | 567529   |                   |                  |
| 92495904004 | HGWA-122  | EPA 300.0 Rev 2.1 1993 | 567529   |                   |                  |
| 92495904005 | HGWA-43D  | EPA 300.0 Rev 2.1 1993 | 567607   |                   |                  |
| 92495904006 | HGWA-44D  | EPA 300.0 Rev 2.1 1993 | 567607   |                   |                  |
| 92495904007 | HGWC-126  | EPA 300.0 Rev 2.1 1993 | 568377   |                   |                  |
| 92495904008 | FB-03     | EPA 300.0 Rev 2.1 1993 | 568377   |                   |                  |
| 92495904009 | HGWC-120  | EPA 300.0 Rev 2.1 1993 | 568379   |                   |                  |
| 92495904010 | FD-03     | EPA 300.0 Rev 2.1 1993 | 568379   |                   |                  |
| 92495904011 | HGWC-125  | EPA 300.0 Rev 2.1 1993 | 568379   |                   |                  |
| 92495904012 | HGWA-45D  | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |
| 92495904013 | MW-46D    | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |
| 92495904014 | HGWC-121A | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92495904015 | HGWC-124  | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |
| 92495904016 | MW-32     | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |
| 92495904017 | MW-39     | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |
| 92495904018 | MW-41     | EPA 300.0 Rev 2.1 1993 | 570137   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92495904**



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  
Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 214    Type of Ice:  Wet  Blue  None     Samples on ice, cooling process has begun

Cooler Temperature 0.8    Biological Tissue is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and initials of person examining contents: 9/16/2004

|  |  |                             |
|--|--|-----------------------------|
| Chain of Custody Present:  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.                          |
| Chain of Custody Filled Out:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 2.                          |
| Chain of Custody Relinquished:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 3.                          |
| Sampler Name & Signature on COC:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 4.                          |
| Samples Arrived within Hold Time:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 5.                          |
| Short Hold Time Analysis (<72hr):  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 6.                          |
| Rush Turn Around Time Requested:   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 7.                          |
| Sufficient Volume:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 8.                          |
| Correct Containers Used:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.                          |
| -Pace Containers Used:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |                             |
| Containers Intact:   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 10.                         |
| Filtered volume received for Dissolved tests   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11.                         |
| Sample Labels match COC:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 12.                         |
| -Includes date/time/ID/Analysis Matrix:  | <u>W</u>   |                             |
| All containers needing preservation have been checked.                                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 13.                         |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |                             |
| exceptions: VOA, colform, TOC, O&G, WI-DRO (water)   | <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No                   | Initial when completed      |
|  |  | Lot # of added preservative |
| Samples checked for dechlorination:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 14.                         |
| Headspace in VOA Vials (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 15.                         |
| Trip Blank Present:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 16.                         |
| Trip Blank Custody Seals Present   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |                             |
| Pace Trip Blank Lot # (if purchased):  |  |                             |

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

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)















# CHAIN-OF-CUSTODY / Analytical Request Document

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

**Section A** Required Client Information:  
 Company: GA Power  
 Address: Atlanta, GA

**Section B** Required Project Information:  
 Report To: SCS Contacts  
 Copy To: Geosyntec Contacts

**Section C** Invoicing Information:  
 Attention: Southern Co.  
 Company Name:  
 Address:  
 P.O. Box:  
 Reference:  
 Project Name: Plant Hammond AP-3 Semianual/BKG 04  
 Project Number: GW6581  
 Requested Due Date/TAT: 15 Day  
 Project Number: GW6581

**Section D** Valid Matrix Codes  
 MATRIX CODE (see valid codes to left)  
 SAMPLE TYPE (G=GRAB C=COMP)  
 DATE TIME DATE TIME  
 SAMPLE TEMP AT COLLECTION  
 # OF CONTAINERS  
 Unpreserved  
 H<sub>2</sub>SO<sub>4</sub>  
 HNO<sub>3</sub>  
 HCl  
 NaOH  
 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
 Methanol  
 Other  
 Analysis Test Y/N  
 Chloride, Fluoride, Sulfate  
 TDS  
 App. III&IV Metals 6010/6020\*  
 RAD 226/228  
 Major ions\*\*  
 Requested Analysis Filtered (Y/N)

| ITEM # | MATRIX CODE | SAMPLE TYPE | DATE | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol | Other | Analysis Test | Y/N | Chloride, Fluoride, Sulfate | TDS | App. III&IV Metals 6010/6020* | RAD 226/228 | Major ions** | Requested Analysis Filtered (Y/N) |  |
|--------|-------------|-------------|------|------|------|------|---------------------------|-----------------|-------------|--------------------------------|------------------|-----|------|---|----------|-------|---------------|-----|-----------------------------|-----|-------------------------------|-------------|--------------|-----------------------------------|--|
| 1      | HGWVA-1     | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 2      | HGWVA-2     | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 3      | HGWVA-3     | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 4      | HGWVA-122   | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 5      | HGWVA-120   | WT G        | 9/21 | 1348 |      |      | 20                        | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 6      | HGWVA-121A  | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 7      | HGWVA-124   | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 8      | MW-32       | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 9      | MW-30       | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 10     | MW-41       | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 11     | MW-46D      | WT G        |      |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |
| 12     | FD-03       | WT G        | FD1  |      |      |      |                           | 7               |             |                                |                  |     |      |   |          |       |               |     | X                           | X   | X                             | X           | X            | X                                 |  |

**Section E** ADDITIONAL COMMENTS  
 Please note dry wells, status through any wells not sampled, and note when the last sample for this event has been taken.  
 Yrpp, B&V Metals- Sp, Ba, Br, C, Ca, Cr, Co, Pb, U, Mo  
 \*\*Major ions= Al, Bicarb Alk, Fe, Mg, Mn, K, Na, Sulfate  
 One sample set submitted for HGWVA-1, HGWVA-2, HGWVA-3 but results will be reported for AP-1/2/3 SDCs

**Section F** REMOURED BY / AFFILIATION  
 DATE TIME  
 ACCEPTED BY / AFFILIATION  
 DATE TIME

**Section G** SAMPLER NAME AND SIGNATURE  
 PRINT NAME OF SAMPLER: Chad Russo  
 SIGNATURE OF SAMPLER: *Chad Russo*  
 DATE SIGNED (MM/DD/YY): 9/21/2020

**Section H** REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER   
 UST  RCRA  OTHER CEM

Temp in °C  
 Received on Ice (Y/N)  
 Custody Sealed Cooler (Y/N)  
 Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

FALL-0-020REV07, 15-Feb-2007













October 21, 2020

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 SEMIANNUAL RADS  
Pace Project No.: 92495892

Dear Joju Abraham:

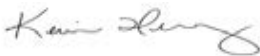
Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 SEMIANNUAL RAD5

Pace Project No.: 92495892

---

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: HAMMOND AP-3 SEMIANNUAL RADS  
Pace Project No.: 92495892

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92495892001 | HGWA-1    | Water  | 09/15/20 14:01 | 09/16/20 11:14 |
| 92495892002 | HGWA-2    | Water  | 09/15/20 10:58 | 09/16/20 11:14 |
| 92495892003 | HGWA-3    | Water  | 09/15/20 11:45 | 09/16/20 11:14 |
| 92495892004 | HGWA-122  | Water  | 09/15/20 15:41 | 09/16/20 11:14 |
| 92495892005 | HGWA-43D  | Water  | 09/16/20 11:58 | 09/17/20 09:45 |
| 92495892006 | HGWA-44D  | Water  | 09/16/20 15:18 | 09/17/20 09:45 |
| 92495892007 | HGWC-126  | Water  | 09/18/20 15:39 | 09/21/20 09:25 |
| 92495892008 | FB-03     | Water  | 09/18/20 16:50 | 09/21/20 09:25 |
| 92495892009 | HGWC-120  | Water  | 09/21/20 13:48 | 09/22/20 09:25 |
| 92495892010 | FD-03     | Water  | 09/21/20 00:00 | 09/22/20 09:25 |
| 92495892011 | HGWC-125  | Water  | 09/21/20 12:07 | 09/22/20 09:25 |
| 92495892012 | HGWA-45D  | Water  | 09/25/20 13:50 | 09/28/20 09:40 |
| 92495892013 | MW-46D    | Water  | 09/25/20 11:10 | 09/28/20 09:40 |
| 92495892014 | HGWC-121A | Water  | 09/28/20 16:04 | 09/29/20 08:55 |
| 92495892015 | HGWC-124  | Water  | 09/28/20 18:00 | 09/29/20 08:55 |
| 92495892016 | MW-32     | Water  | 09/28/20 15:44 | 09/29/20 08:55 |
| 92495892017 | MW-39     | Water  | 09/28/20 17:27 | 09/29/20 08:55 |
| 92495892018 | MW-41     | Water  | 09/28/20 19:05 | 09/29/20 08:55 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Lab ID      | Sample ID | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|--------------------------|----------|-------------------|------------|
| 92495892001 | HGWA-1    | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92495892002 | HGWA-2    | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92495892003 | HGWA-3    | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92495892004 | HGWA-122  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92495892005 | HGWA-43D  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892006 | HGWA-44D  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892007 | HGWC-126  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892008 | FB-03     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892009 | HGWC-120  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892010 | FD-03     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892011 | HGWC-125  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892012 | HGWA-45D  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892013 | MW-46D    | EPA 9315                 | LAL      | 1                 | PASI-PA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Lab ID      | Sample ID | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|--------------------------|----------|-------------------|------------|
| 92495892014 | HGWC-121A | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |           | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92495892015 | HGWC-124  | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |           | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92495892016 | MW-32     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |           | EPA 9315                 | LAL      | 1                 | PASI-PA    |
| 92495892017 | MW-39     | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |           | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92495892018 | MW-41     | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |           | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | JAL      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result   | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|--|-------|--------------|----------------|------------|
| <b>92495892001</b>       | <b>HGWA-1</b>                  |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0193 ±<br>0.226<br>(0.595)<br>C:83% T:NA     | pCi/L |              | 10/07/20 07:29 |            |
| EPA 9320                 | Radium-228                     | 0.729 ±<br>0.435<br>(0.807)<br>C:71%<br>T:83%  | pCi/L |              | 10/07/20 14:00 |            |
| Total Radium Calculation | Total Radium                   | 0.748 ±<br>0.661<br>(1.40)                     | pCi/L |              | 10/19/20 09:49 |            |
| <b>92495892002</b>       | <b>HGWA-2</b>                  |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.124 ±<br>0.339<br>(0.807)<br>C:88% T:NA      | pCi/L |              | 10/07/20 07:30 |            |
| EPA 9320                 | Radium-228                     | -0.233 ±<br>0.417<br>(1.01)<br>C:66%<br>T:81%  | pCi/L |              | 10/07/20 14:00 |            |
| Total Radium Calculation | Total Radium                   | 0.124 ±<br>0.756<br>(1.82)                     | pCi/L |              | 10/16/20 12:16 |            |
| <b>92495892003</b>       | <b>HGWA-3</b>                  |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.161 ±<br>0.215<br>(0.449)<br>C:89% T:NA      | pCi/L |              | 10/07/20 07:30 |            |
| EPA 9320                 | Radium-228                     | -0.305 ±<br>0.343<br>(0.865)<br>C:74%<br>T:83% | pCi/L |              | 10/07/20 14:00 |            |
| Total Radium Calculation | Total Radium                   | 0.161 ±<br>0.558<br>(1.31)                     | pCi/L |              | 10/16/20 12:16 |            |
| <b>92495892004</b>       | <b>HGWA-122</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.192 ±<br>0.240<br>(0.500)<br>C:88% T:NA      | pCi/L |              | 10/14/20 07:29 |            |
| EPA 9320                 | Radium-228                     | 0.183 ±<br>0.426<br>(0.945)<br>C:69%<br>T:80%  | pCi/L |              | 10/15/20 14:29 |            |
| Total Radium Calculation | Total Radium                   | 0.375 ±<br>0.666<br>(1.45)                     | pCi/L |              | 10/16/20 12:16 |            |

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS  
Pace Project No.: 92495892

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92495892005</b>       | <b>HGWA-43D</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.531 ±<br>0.341<br>(0.558)                   | pCi/L |              | 10/07/20 07:38 |            |
| EPA 9320                 | Radium-228                     | C:83% T:NA<br>-0.0158 ±<br>0.401<br>(0.931)   | pCi/L |              | 10/08/20 11:52 |            |
| Total Radium Calculation | Total Radium                   | C:73%<br>T:74%<br>0.531 ±<br>0.742<br>(1.49)  | pCi/L |              | 10/20/20 08:55 |            |
| <b>92495892006</b>       | <b>HGWA-44D</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.129 ±<br>0.179<br>(0.380)                   | pCi/L |              | 10/07/20 07:38 |            |
| EPA 9320                 | Radium-228                     | C:100%<br>T:NA<br>0.293 ±<br>0.412<br>(0.887) | pCi/L |              | 10/08/20 11:52 |            |
| Total Radium Calculation | Total Radium                   | C:76%<br>T:83%<br>0.422 ±<br>0.591<br>(1.27)  | pCi/L |              | 10/20/20 08:55 |            |
| <b>92495892007</b>       | <b>HGWC-126</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.369 ±<br>0.289<br>(0.513)                   | pCi/L |              | 10/14/20 06:28 |            |
| EPA 9320                 | Radium-228                     | C:85% T:NA<br>0.472 ±<br>0.423<br>(0.866)     | pCi/L |              | 10/15/20 11:08 |            |
| Total Radium Calculation | Total Radium                   | C:82%<br>T:80%<br>0.841 ±<br>0.712<br>(1.38)  | pCi/L |              | 10/20/20 08:55 |            |
| <b>92495892008</b>       | <b>FB-03</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0162 ±<br>0.159<br>(0.433)                  | pCi/L |              | 10/14/20 06:29 |            |
| EPA 9320                 | Radium-228                     | C:85% T:NA<br>-0.0349 ±<br>0.399<br>(0.926)   | pCi/L |              | 10/15/20 11:08 |            |
| Total Radium Calculation | Total Radium                   | C:77%<br>T:82%<br>0.0162 ±<br>0.558<br>(1.36) | pCi/L |              | 10/20/20 09:06 |            |

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result                                       | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|--|-------|--------------|----------------|------------|
| <b>92495892009</b>       | <b>HGWC-120</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0994 ±<br>0.201<br>(0.468)                 | pCi/L |              | 10/14/20 07:18 |            |
| EPA 9320                 | Radium-228                     | C:86% T:NA<br>0.454 ±<br>0.512<br>(1.08)     | pCi/L |              | 10/15/20 11:07 |            |
| Total Radium Calculation | Total Radium                   | C:75%<br>T:73%<br>0.553 ±<br>0.713<br>(1.55) | pCi/L |              | 10/20/20 09:06 |            |
| <b>92495892010</b>       | <b>FD-03</b>                   |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.213 ±<br>0.268<br>(0.569)                  | pCi/L |              | 10/14/20 07:19 |            |
| EPA 9320                 | Radium-228                     | C:92% T:NA<br>0.127 ±<br>0.309<br>(0.688)    | pCi/L |              | 10/15/20 11:06 |            |
| Total Radium Calculation | Total Radium                   | C:80%<br>T:81%<br>0.340 ±<br>0.577<br>(1.26) | pCi/L |              | 10/20/20 09:06 |            |
| <b>92495892011</b>       | <b>HGWC-125</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.621 ±<br>0.312<br>(0.353)                  | pCi/L |              | 10/14/20 06:29 |            |
| EPA 9320                 | Radium-228                     | C:87% T:NA<br>0.824 ±<br>0.389<br>(0.653)    | pCi/L |              | 10/15/20 11:06 |            |
| Total Radium Calculation | Total Radium                   | C:79%<br>T:86%<br>1.45 ±<br>0.701<br>(1.01)  | pCi/L |              | 10/20/20 09:06 |            |
| <b>92495892012</b>       | <b>HGWA-45D</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.444 ±<br>0.255<br>(0.298)                  | pCi/L |              | 10/14/20 06:37 |            |
| EPA 9320                 | Radium-228                     | C:90% T:NA<br>0.622 ±<br>0.414<br>(0.789)    | pCi/L |              | 10/15/20 11:07 |            |
| Total Radium Calculation | Total Radium                   | C:80%<br>T:76%<br>1.07 ±<br>0.669<br>(1.09)  | pCi/L |              | 10/20/20 09:06 |            |

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS  
Pace Project No.: 92495892

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92495892013</b>       | <b>MW-46D</b>                  |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.217 ±<br>0.191<br>(0.315)<br>C:90% T:NA     | pCi/L |              | 10/14/20 06:40 |            |
| EPA 9320                 | Radium-228                     | 0.377 ±<br>0.345<br>(0.702)<br>C:75%<br>T:89% | pCi/L |              | 10/15/20 11:07 |            |
| Total Radium Calculation | Total Radium                   | 0.594 ±<br>0.536<br>(1.02)                    | pCi/L |              | 10/20/20 09:06 |            |
| <b>92495892014</b>       | <b>HGWC-121A</b>               |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.417 ±<br>0.303<br>(0.513)<br>C:84% T:NA     | pCi/L |              | 10/15/20 07:07 |            |
| EPA 9320                 | Radium-228                     | 0.344 ±<br>0.470<br>(1.01)<br>C:68%<br>T:79%  | pCi/L |              | 10/15/20 11:14 |            |
| Total Radium Calculation | Total Radium                   | 0.761 ±<br>0.773<br>(1.52)                    | pCi/L |              | 10/20/20 10:07 |            |
| <b>92495892015</b>       | <b>HGWC-124</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.140 ±<br>0.201<br>(0.433)<br>C:93% T:NA     | pCi/L |              | 10/15/20 08:02 |            |
| EPA 9320                 | Radium-228                     | 0.337 ±<br>0.467<br>(1.00)<br>C:70%<br>T:80%  | pCi/L |              | 10/15/20 11:14 |            |
| Total Radium Calculation | Total Radium                   | 0.477 ±<br>0.668<br>(1.43)                    | pCi/L |              | 10/20/20 10:07 |            |
| <b>92495892016</b>       | <b>MW-32</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.220 ±<br>0.262<br>(0.549)<br>C:89% T:NA     | pCi/L |              | 10/15/20 08:02 |            |
| EPA 9320                 | Radium-228                     | 0.789 ±<br>0.444<br>(0.802)<br>C:73%<br>T:80% | pCi/L |              | 10/15/20 11:30 |            |
| Total Radium Calculation | Total Radium                   | 1.01 ±<br>0.706<br>(1.35)                     | pCi/L |              | 10/20/20 10:07 |            |

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92495892017</b>       | <b>MW-39</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.588 ±<br>0.326<br>(0.462)<br>C:86% T:NA     | pCi/L |              | 10/15/20 07:07 |            |
| EPA 9320                 | Radium-228                     | 0.428 ±<br>0.388<br>(0.778)<br>C:76%<br>T:68% | pCi/L |              | 10/15/20 11:30 |            |
| Total Radium Calculation | Total Radium                   | 1.02 ±<br>0.714<br>(1.24)                     | pCi/L |              | 10/20/20 10:07 |            |
| <b>92495892018</b>       | <b>MW-41</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.295 ±<br>0.248<br>(0.444)<br>C:88% T:NA     | pCi/L |              | 10/15/20 07:08 |            |
| EPA 9320                 | Radium-228                     | 0.114 ±<br>0.324<br>(0.729)<br>C:76%<br>T:82% | pCi/L |              | 10/15/20 11:30 |            |
| Total Radium Calculation | Total Radium                   | 0.409 ±<br>0.572<br>(1.17)                    | pCi/L |              | 10/20/20 10:07 |            |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: HGWA-1**      **Lab ID: 92495892001**      Collected: 09/15/20 14:01      Received: 09/16/20 11:14      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.0193 ± 0.226 (0.595)</b><br><b>C:83% T:NA</b> | pCi/L | 10/07/20 07:29 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.729 ± 0.435 (0.807)</b><br><b>C:71% T:83%</b> | pCi/L | 10/07/20 14:00 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.748 ± 0.661 (1.40)</b>                        | pCi/L | 10/19/20 09:49 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: HGWA-2**      **Lab ID: 92495892002**      Collected: 09/15/20 10:58      Received: 09/16/20 11:14      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.124 ± 0.339 (0.807)</b><br><b>C:88% T:NA</b>  | pCi/L | 10/07/20 07:30 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>-0.233 ± 0.417 (1.01)</b><br><b>C:66% T:81%</b> | pCi/L | 10/07/20 14:00 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.124 ± 0.756 (1.82)</b>                        | pCi/L | 10/16/20 12:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: HGWA-3**      **Lab ID: 92495892003**      Collected: 09/15/20 11:45      Received: 09/16/20 11:14      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.161 ± 0.215 (0.449)</b><br><b>C:89% T:NA</b>   | pCi/L | 10/07/20 07:30 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>-0.305 ± 0.343 (0.865)</b><br><b>C:74% T:83%</b> | pCi/L | 10/07/20 14:00 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.161 ± 0.558 (1.31)</b>                         | pCi/L | 10/16/20 12:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-122</b> <b>Lab ID: 92495892004</b> Collected: 09/15/20 15:41      Received: 09/16/20 11:14      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.192 ± 0.240 (0.500)</b><br><b>C:88% T:NA</b>  | pCi/L | 10/14/20 07:29 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.183 ± 0.426 (0.945)</b><br><b>C:69% T:80%</b> | pCi/L | 10/15/20 14:29 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.375 ± 0.666 (1.45)</b>                        | pCi/L | 10/16/20 12:16 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-43D</b> <b>Lab ID: 92495892005</b> Collected: 09/16/20 11:58      Received: 09/17/20 09:45      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.531 ± 0.341 (0.558)</b><br><b>C:83% T:NA</b>    | pCi/L | 10/07/20 07:38 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>-0.0158 ± 0.401 (0.931)</b><br><b>C:73% T:74%</b> | pCi/L | 10/08/20 11:52 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.531 ± 0.742 (1.49)</b>                          | pCi/L | 10/20/20 08:55 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters  | Method                      | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|-----------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-44D</b> <b>Lab ID: 92495892006</b> Collected: 09/16/20 15:18      Received: 09/17/20 09:45      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                             |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                             |  |       |                |            |      |
| Radium-226  | EPA 9315                    | <b>0.129 ± 0.179 (0.380)</b><br><b>C:100% T:NA</b> | pCi/L | 10/07/20 07:38 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                             |  |       |                |            |      |
| Radium-228  | EPA 9320                    | <b>0.293 ± 0.412 (0.887)</b><br><b>C:76% T:83%</b> | pCi/L | 10/08/20 11:52 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                             |  |       |                |            |      |
| Total Radium  | Total Radium<br>Calculation | <b>0.422 ± 0.591 (1.27)</b>                        | pCi/L | 10/20/20 08:55 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-126</b> <b>Lab ID: 92495892007</b> Collected: 09/18/20 15:39      Received: 09/21/20 09:25      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.369 ± 0.289 (0.513)</b><br><b>C:85% T:NA</b>  | pCi/L | 10/14/20 06:28 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.472 ± 0.423 (0.866)</b><br><b>C:82% T:80%</b> | pCi/L | 10/15/20 11:08 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.841 ± 0.712 (1.38)</b>                        | pCi/L | 10/20/20 08:55 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: FB-03**      **Lab ID: 92495892008**      Collected: 09/18/20 16:50      Received: 09/21/20 09:25      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0162 ± 0.159 (0.433)</b><br><b>C:85% T:NA</b>   | pCi/L | 10/14/20 06:29 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>-0.0349 ± 0.399 (0.926)</b><br><b>C:77% T:82%</b> | pCi/L | 10/15/20 11:08 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.0162 ± 0.558 (1.36)</b>                         | pCi/L | 10/20/20 09:06 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: HGWC-120**      **Lab ID: 92495892009**      Collected: 09/21/20 13:48      Received: 09/22/20 09:25      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0994 ± 0.201 (0.468)</b><br><b>C:86% T:NA</b> | pCi/L | 10/14/20 07:18 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.454 ± 0.512 (1.08)</b><br><b>C:75% T:73%</b>  | pCi/L | 10/15/20 11:07 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium<br>Calculation           | <b>0.553 ± 0.713 (1.55)</b>                        | pCi/L | 10/20/20 09:06 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: FD-03**      **Lab ID: 92495892010**      Collected: 09/21/20 00:00      Received: 09/22/20 09:25      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.213 ± 0.268 (0.569)</b><br><b>C:92% T:NA</b>  | pCi/L | 10/14/20 07:19 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.127 ± 0.309 (0.688)</b><br><b>C:80% T:81%</b> | pCi/L | 10/15/20 11:06 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.340 ± 0.577 (1.26)</b>                        | pCi/L | 10/20/20 09:06 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-125</b> <b>Lab ID: 92495892011</b> Collected: 09/21/20 12:07      Received: 09/22/20 09:25      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.621 ± 0.312 (0.353)</b><br><b>C:87% T:NA</b>  | pCi/L | 10/14/20 06:29 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.824 ± 0.389 (0.653)</b><br><b>C:79% T:86%</b> | pCi/L | 10/15/20 11:06 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>1.45 ± 0.701 (1.01)</b>                         | pCi/L | 10/20/20 09:06 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-45D</b> <b>Lab ID: 92495892012</b> Collected: 09/25/20 13:50      Received: 09/28/20 09:40      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.444 ± 0.255 (0.298)</b><br><b>C:90% T:NA</b>  | pCi/L | 10/14/20 06:37 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.622 ± 0.414 (0.789)</b><br><b>C:80% T:76%</b> | pCi/L | 10/15/20 11:07 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>1.07 ± 0.669 (1.09)</b>                         | pCi/L | 10/20/20 09:06 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: MW-46D**      **Lab ID: 92495892013**      Collected: 09/25/20 11:10      Received: 09/28/20 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.217 ± 0.191 (0.315)</b><br><b>C:90% T:NA</b>  | pCi/L | 10/14/20 06:40 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.377 ± 0.345 (0.702)</b><br><b>C:75% T:89%</b> | pCi/L | 10/15/20 11:07 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.594 ± 0.536 (1.02)</b>                        | pCi/L | 10/20/20 09:06 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--|--------------------------|---|-------|----------------|------------|------|
| <b>Sample: HGWC-121A</b> <b>Lab ID: 92495892014</b> Collected: 09/28/20 16:04      Received: 09/29/20 08:55      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |   |       |                |            |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Radium-226   | EPA 9315                 | <b>0.417 ± 0.303 (0.513)</b><br><b>C:84% T:NA</b> | pCi/L | 10/15/20 07:07 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Radium-228   | EPA 9320                 | <b>0.344 ± 0.470 (1.01)</b><br><b>C:68% T:79%</b> | pCi/L | 10/15/20 11:14 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Total Radium   | Total Radium Calculation | <b>0.761 ± 0.773 (1.52)</b>                       | pCi/L | 10/20/20 10:07 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: HGWC-124**      **Lab ID: 92495892015**      Collected: 09/28/20 18:00      Received: 09/29/20 08:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.140 ± 0.201 (0.433)</b><br><b>C:93% T:NA</b> | pCi/L | 10/15/20 08:02 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.337 ± 0.467 (1.00)</b><br><b>C:70% T:80%</b> | pCi/L | 10/15/20 11:14 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.477 ± 0.668 (1.43)</b>                       | pCi/L | 10/20/20 10:07 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.220 ± 0.262 (0.549)</b><br><b>C:89% T:NA</b>  | pCi/L | 10/15/20 08:02 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.789 ± 0.444 (0.802)</b><br><b>C:73% T:80%</b> | pCi/L | 10/15/20 11:30 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>1.01 ± 0.706 (1.35)</b>                         | pCi/L | 10/20/20 10:07 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: MW-39</b> <b>Lab ID: 92495892017</b> Collected: 09/28/20 17:27      Received: 09/29/20 08:55      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg  |                          |  |       |                |            |      |
| Radium-226   | EPA 9315                 | <b>0.588 ± 0.326 (0.462)</b><br><b>C:86% T:NA</b>  | pCi/L | 10/15/20 07:07 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg  |                          |  |       |                |            |      |
| Radium-228   | EPA 9320                 | <b>0.428 ± 0.388 (0.778)</b><br><b>C:76% T:68%</b> | pCi/L | 10/15/20 11:30 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg  |                          |  |       |                |            |      |
| Total Radium   | Total Radium Calculation | <b>1.02 ± 0.714 (1.24)</b>                         | pCi/L | 10/20/20 10:07 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

**Sample: MW-41**      **Lab ID: 92495892018**      Collected: 09/28/20 19:05      Received: 09/29/20 08:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.295 ± 0.248 (0.444)</b><br><b>C:88% T:NA</b>  | pCi/L | 10/15/20 07:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.114 ± 0.324 (0.729)</b><br><b>C:76% T:82%</b> | pCi/L | 10/15/20 11:30 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.409 ± 0.572 (1.17)</b>                        | pCi/L | 10/20/20 10:07 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch: 415616

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892002, 92495892003, 92495892005, 92495892006

METHOD BLANK: 2009756

Matrix: Water

Associated Lab Samples: 92495892002, 92495892003, 92495892005, 92495892006

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | 0.0920 ± 0.177 (0.408) C:91% T:NA | pCi/L | 10/07/20 07:30 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 417134   | Analysis Method:      | EPA 9315                              |
| QC Batch Method: | EPA 9315 | Analysis Description: | 9315 Total Radium                     |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92495892007, 92495892008, 92495892009, 92495892010, 92495892011, 92495892012, 92495892013

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METHOD BLANK: 2016817 Matrix: Water

Associated Lab Samples: 92495892007, 92495892008, 92495892009, 92495892010, 92495892011, 92495892012, 92495892013

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.280 ± 0.239 (0.418) C:85% T:NA | pCi/L | 10/14/20 06:41 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch: 417131

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892001, 92495892002, 92495892003, 92495892004

METHOD BLANK: 2016812

Matrix: Water

Associated Lab Samples: 92495892001, 92495892002, 92495892003, 92495892004

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.888 ± 0.380 (0.600) C:70% T:99% | pCi/L | 10/15/20 11:15 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 415615   | Analysis Method:      | EPA 9315                              |
| QC Batch Method: | EPA 9315 | Analysis Description: | 9315 Total Radium                     |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92495892001

|               |         |         |       |
|---------------|---------|---------|-------|
| METHOD BLANK: | 2009755 | Matrix: | Water |
|---------------|---------|---------|-------|

Associated Lab Samples: 92495892001

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.119 ± 0.160 (0.326) C:94% T:NA | pCi/L | 10/06/20 17:26 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch: 417130

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892004

METHOD BLANK: 2016810

Matrix: Water

Associated Lab Samples: 92495892004

| Parameter  | Act ± Unc (MDC) Carr Trac           | Units | Analyzed       | Qualifiers |
|------------|-------------------------------------|-------|----------------|------------|
| Radium-226 | -0.00529 ± 0.135 (0.392) C:94% T:NA | pCi/L | 10/14/20 07:09 |            |

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## QUALIFIERS

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL RADS  
Pace Project No.: 92495892

| Lab ID      | Sample ID | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|--------------------------|----------|-------------------|------------------|
| 92495892001 | HGWA-1    | EPA 9315                 | 415615   |                   |                  |
| 92495892002 | HGWA-2    | EPA 9315                 | 415616   |                   |                  |
| 92495892003 | HGWA-3    | EPA 9315                 | 415616   |                   |                  |
| 92495892004 | HGWA-122  | EPA 9315                 | 417130   |                   |                  |
| 92495892005 | HGWA-43D  | EPA 9315                 | 415616   |                   |                  |
| 92495892006 | HGWA-44D  | EPA 9315                 | 415616   |                   |                  |
| 92495892007 | HGWC-126  | EPA 9315                 | 417134   |                   |                  |
| 92495892008 | FB-03     | EPA 9315                 | 417134   |                   |                  |
| 92495892009 | HGWC-120  | EPA 9315                 | 417134   |                   |                  |
| 92495892010 | FD-03     | EPA 9315                 | 417134   |                   |                  |
| 92495892011 | HGWC-125  | EPA 9315                 | 417134   |                   |                  |
| 92495892012 | HGWA-45D  | EPA 9315                 | 417134   |                   |                  |
| 92495892013 | MW-46D    | EPA 9315                 | 417134   |                   |                  |
| 92495892014 | HGWC-121A | EPA 9315                 | 417136   |                   |                  |
| 92495892015 | HGWC-124  | EPA 9315                 | 417136   |                   |                  |
| 92495892016 | MW-32     | EPA 9315                 | 417136   |                   |                  |
| 92495892017 | MW-39     | EPA 9315                 | 417136   |                   |                  |
| 92495892018 | MW-41     | EPA 9315                 | 417136   |                   |                  |
| 92495892001 | HGWA-1    | EPA 9320                 | 417131   |                   |                  |
| 92495892002 | HGWA-2    | EPA 9320                 | 417131   |                   |                  |
| 92495892003 | HGWA-3    | EPA 9320                 | 417131   |                   |                  |
| 92495892004 | HGWA-122  | EPA 9320                 | 417131   |                   |                  |
| 92495892005 | HGWA-43D  | EPA 9320                 | 417135   |                   |                  |
| 92495892006 | HGWA-44D  | EPA 9320                 | 417135   |                   |                  |
| 92495892007 | HGWC-126  | EPA 9320                 | 417135   |                   |                  |
| 92495892008 | FB-03     | EPA 9320                 | 417135   |                   |                  |
| 92495892009 | HGWC-120  | EPA 9320                 | 417135   |                   |                  |
| 92495892010 | FD-03     | EPA 9320                 | 417135   |                   |                  |
| 92495892011 | HGWC-125  | EPA 9320                 | 417135   |                   |                  |
| 92495892012 | HGWA-45D  | EPA 9320                 | 417135   |                   |                  |
| 92495892013 | MW-46D    | EPA 9320                 | 417135   |                   |                  |
| 92495892014 | HGWC-121A | EPA 9320                 | 417137   |                   |                  |
| 92495892015 | HGWC-124  | EPA 9320                 | 417137   |                   |                  |
| 92495892016 | MW-32     | EPA 9320                 | 417137   |                   |                  |
| 92495892017 | MW-39     | EPA 9320                 | 417137   |                   |                  |
| 92495892018 | MW-41     | EPA 9320                 | 417137   |                   |                  |
| 92495892001 | HGWA-1    | Total Radium Calculation | 419126   |                   |                  |
| 92495892002 | HGWA-2    | Total Radium Calculation | 418910   |                   |                  |
| 92495892003 | HGWA-3    | Total Radium Calculation | 418910   |                   |                  |
| 92495892004 | HGWA-122  | Total Radium Calculation | 418910   |                   |                  |
| 92495892005 | HGWA-43D  | Total Radium Calculation | 419262   |                   |                  |
| 92495892006 | HGWA-44D  | Total Radium Calculation | 419262   |                   |                  |
| 92495892007 | HGWC-126  | Total Radium Calculation | 419262   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

| Lab ID      | Sample ID | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|--------------------------|----------|-------------------|------------------|
| 92495892008 | FB-03     | Total Radium Calculation | 419263   |                   |                  |
| 92495892009 | HGWC-120  | Total Radium Calculation | 419263   |                   |                  |
| 92495892010 | FD-03     | Total Radium Calculation | 419263   |                   |                  |
| 92495892011 | HGWC-125  | Total Radium Calculation | 419263   |                   |                  |
| 92495892012 | HGWA-45D  | Total Radium Calculation | 419263   |                   |                  |
| 92495892013 | MW-46D    | Total Radium Calculation | 419263   |                   |                  |
| 92495892014 | HGWC-121A | Total Radium Calculation | 419264   |                   |                  |
| 92495892015 | HGWC-124  | Total Radium Calculation | 419264   |                   |                  |
| 92495892016 | MW-32     | Total Radium Calculation | 419264   |                   |                  |
| 92495892017 | MW-39     | Total Radium Calculation | 419264   |                   |                  |
| 92495892018 | MW-41     | Total Radium Calculation | 419264   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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Client Name: GA Power

WO#: **92495892**



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  
 Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 214    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 0.8    Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/16/2004

| Item   | Yes                                 | No                                  | N/A                                 | Comments                    |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------|
| Chain of Custody Present:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 1.                          |
| Chain of Custody Filled Out:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 2.                          |
| Chain of Custody Relinquished:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 3.                          |
| Sampler Name & Signature on COC:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 4.                          |
| Samples Arrived within Hold Time:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 5.                          |
| Short Hold Time Analysis (<72hr):  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 6.                          |
| Rush Turn Around Time Requested:   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 7.                          |
| Sufficient Volume:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 8.                          |
| Correct Containers Used:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 9.                          |
| -Pace Containers Used:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                             |
| Containers Intact:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 10.                         |
| Filtered volume received for Dissolved tests   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 11.                         |
| Sample Labels match COC:   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 12.                         |
| -Includes date/time/ID/Analysis Matrix:  | <u>W</u>                            |                                     |                                     |                             |
| All containers needing preservation have been checked.                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 13.                         |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                             |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Initial when completed      |
|  |                                     |                                     |                                     | Lot # of added preservative |
| Samples checked for dechlorination:  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 14.                         |
| Headspace in VOA Vials (>6mm):   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 15.                         |
| Trip Blank Present:  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 16.                         |
| Trip Blank Custody Seals Present   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                             |
| Pace Trip Blank Lot # (if purchased):  |                                     |                                     |                                     |                             |

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)































# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: LAL  
Date: 10/6/2020  
Worklist: 56393  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2009755 |
| MB concentration:                   | 0.119   |
| M/B Counting Uncertainty:           | 0.159   |
| MB MDC:                             | 0.326   |
| MB Numerical Performance Indicator: | 1.46    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |                |
|---|----------------|----------------|
|   | LCSD56393      | N<br>LCSD56393 |
| Count Date:                                   | 10/7/2020      |                |
| Spike I.D.:                                   | 19-033         |                |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044         |                |
| Volume Used (mL):                             | 0.10           |                |
| Aliquot Volume (L, g, F):                     | 0.505          |                |
| Target Conc. (pCi/L, g, F):                   | 4.763          |                |
| Uncertainty (Calculated):                     | 0.057          |                |
| Result (pCi/L, g, F):                         | 4.553          |                |
| LCSD Counting Uncertainty (pCi/L, g, F):      | 0.770          |                |
| Numerical Performance Indicator:              | -0.53          |                |
| Percent Recovery:                             | 95.58%         |                |
| Status vs Numerical Indicator:                | N/A            |                |
| Upper % Recovery Limits:                      | 125%           |                |
| Lower % Recovery Limits:                      | 75%            |                |

| Duplicate Sample Assessment                                 | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |                |
|---|---|----------------|
|   | 92495649004   | 92495649004DUP |
| Sample I.D.:  | 92495649004   |                |
| Duplicate Sample I.D.:                                      | 92495649004DUP  |                |
| Sample Result (pCi/L, g, F):                                | 0.205   |                |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.210   |                |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.239   |                |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.276   |                |
| Are sample and/or duplicate results below RL?               | See Below ##  |                |
| Duplicate Numerical Performance Indicator:                  | -0.193  |                |
| Duplicate RPD:  | 15.40%  |                |
| Duplicate Status vs Numerical Indicator:                    | N/A   |                |
| Duplicate Status vs RPD:                                    | Pass  |                |
| % RPD Limit:  | 25%   |                |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| <p>Sample Collection Date:</p> <p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p> |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| <p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p> |

AM 10/17/2020

*On 10.17.20*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 10/6/2020  
Worklist: 56393  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2009755 |
| MB concentration:                   | 0.119   |
| M/B Counting Uncertainty:           | 0.159   |
| MB MDC:                             | 0.326   |
| MB Numerical Performance Indicator: | 1.46    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| LCSD (Y or N)?                                | Y         |
| LCS56393                                      | LCS56393  |
| Count Date:                                   | 10/7/2020 |
| Spike I.D.:                                   | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044    |
| Volume Used (mL):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.505     |
| Target Conc. (pCi/L, g, F):                   | 4.763     |
| Uncertainty (Calculated):                     | 0.057     |
| Result (pCi/L, g, F):                         | 4.553     |
| LCSD/LCSD Counting Uncertainty (pCi/L, g, F): | 0.770     |
| Numerical Performance Indicator:              | -0.53     |
| Percent Recovery:                             | 95.58%    |
| Status vs Numerical Indicator:                | N/A       |
| Upper % Recovery Limits:                      | 125%      |
| Lower % Recovery Limits:                      | 75%       |

| Duplicate Sample Assessment                                 |          |
|---|----------|
| Sample I.D.:  | LCS56393 |
| Duplicate Sample I.D.:                                      | LCS56393 |
| Sample Result (pCi/L, g, F):                                | 4.553    |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.770    |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 4.593    |
| Are sample and/or duplicate results below RL?               | NO       |
| Duplicate Numerical Performance Indicator:                  | -0.071   |
| Duplicate Percent Recoveries:                               | 1.83%    |
| Duplicate Status vs Numerical Indicator:                    | N/A      |
| Duplicate Status vs RPD:                                    | Pass     |
| % RPD Limit:  | 25%      |

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
92495649004  
92495649004UP

Comments:

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result:<br>Sample Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>Duplicate Percent Recoveries:<br>Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

LAM 10/17/2020

DW (501-20)

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 10/6/2020  
Worklist: 56394  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2009756 |
| MB Concentration:                   | 0.092   |
| MB Counting Uncertainty:            | 0.177   |
| MB MDC:                             | 0.408   |
| MB Numerical Performance Indicator: | 1.02    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           | LCSID (Y or N)? | Y         |
|---|-----------|-----------------|-----------|
| Count Date:                                   | 10/7/2020 | LCSID56394      | 10/6/2020 |
| Spike I.D.:                                   | 19-033    |                 | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044    |                 | 24.044    |
| Volume Used (mL):                             | 0.10      |                 | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.514     |                 | 0.512     |
| Target Conc. (pCi/L, g, F):                   | 4.675     |                 | 4.692     |
| Uncertainty (Calculated):                     | 0.056     |                 | 0.056     |
| Result (pCi/L, g, F):                         | 3.980     |                 | 4.462     |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.760     |                 | 0.322     |
| Numerical Performance Indicator:              | -1.79     |                 | -1.38     |
| Percent Recovery:                             | 85.14%    |                 | 95.08%    |
| Status vs Numerical Indicator:                | N/A       |                 | N/A       |
| Status vs Recovery:                           | Pass      |                 | Pass      |
| Upper % Recovery Limits:                      | 125%      |                 | 125%      |
| Lower % Recovery Limits:                      | 75%       |                 | 75%       |

| Duplicate Sample Assessment                                 |          | LCSID (Y or N)? | Y |
|---|----------|-----------------|---|
| Sample I.D.:  | LCS56394 |                 |   |
| Duplicate Sample I.D.:                                      | LCS56394 |                 |   |
| Sample Result (pCi/L, g, F):                                | 3.980    |                 |   |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.760    |                 |   |
| Sample Duplicate Result (pCi/L, g, F):                      | 4.462    |                 |   |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.322    |                 |   |
| Are sample and/or duplicate results below RL?               | NO       |                 |   |
| Duplicate Numerical Performance Indicator:                  | -1.143   |                 |   |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:   | 11.00%   |                 |   |
| Duplicate Status vs Numerical Indicator:                    | N/A      |                 |   |
| Duplicate Status vs RPD:                                    | Pass     |                 |   |
| % RPD Limit:  | 25%      |                 |   |

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

LAM 10/7/2020

DW 10.7.20

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 10/6/2020  
Worklist: 56394  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2009756 |
| MB concentration:                   | 0.092   |
| MB Counting Uncertainty:            | 0.177   |
| MB MDC:                             | 0.408   |
| MB Numerical Performance Indicator: | 1.02    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| LCSD (Y or N)?                                | N         |
| LCSD56394                                     | LCSD56394 |
| Count Date:                                   | 10/7/2020 |
| Spike I.D.:                                   | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044    |
| Volume Used (mL):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.514     |
| Target Conc. (pCi/L, g, F):                   | 4.675     |
| Uncertainty (Calculated):                     | 0.056     |
| Result (pCi/L, g, F):                         | 3.980     |
| LCSD/LCSD Counting Uncertainty (pCi/L, g, F): | 0.760     |
| Numerical Performance Indicator:              | -1.79     |
| Percent Recovery:                             | 85.14%    |
| Status vs Numerical Indicator:                | N/A       |
| Status vs Recovery:                           | Pass      |
| Upper % Recovery Limits:                      | 125%      |
| Lower % Recovery Limits:                      | 75%       |

| Duplicate Sample Assessment                                 |                |
|---|----------------|
| Sample I.D.:  | 92495887002    |
| Duplicate Sample I.D.:                                      | 92495887002DUP |
| Sample Result (pCi/L, g, F):                                | 0.124          |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.339          |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.304          |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.234          |
| Are sample and/or duplicate results below RL?               | See Below ##   |
| Duplicate Numerical Performance Indicator:                  | -0.859         |
| Duplicate RPD:  | 84.36%         |
| Duplicate Status vs Numerical Indicator:                    | N/A            |
| Duplicate Status vs RPD:                                    | Fail***        |
| % RPD Limit:  | 25%            |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

~~\*\*Duplicate results are reported due to unacceptable precision~~ N/A LAM 10/7/2020

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| <p>Sample Collection Date:</p> <p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p> |          |          |

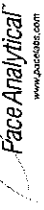
| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| <p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Sample Matrix Spike Result:</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:</p> <p>MS/ MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/ MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p> |

LAM 10/7/2020

TAR\_56394\_W.xls  
Total Alpha Radium (R104-3 11Feb2019).xls

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# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 10/13/2020  
Worklist: 56587  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2018610 |
| MB Concentration:                   | -0.005  |
| MB Counting Uncertainty:            | 0.135   |
| MB MDC:                             | 0.392   |
| MB Numerical Performance Indicator: | -0.08   |
| MB Status vs. Numerical Indicator:  | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |            | LCS/D (Y or N)? | Y          |
|---|------------|-----------------|------------|
| Count Date:                                   | 10/14/2020 | LCS/D56587      | 10/14/2020 |
| Spike I.D.:                                   | 19-033     |                 | 19-033     |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044     |                 | 24.044     |
| Volume Used (mL):                             | 0.10       |                 | 0.10       |
| Aliquot Volume (L, g, F):                     | 0.508      |                 | 0.512      |
| Target Conc. (pCi/L, g, F):                   | 4.732      |                 | 4.697      |
| Uncertainty (Calculated):                     | 0.057      |                 | 0.066      |
| Result (pCi/L, g, F):                         | 4.419      |                 | 4.459      |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.793      |                 | 0.781      |
| Numerical Performance Indicator:              | -0.77      |                 | -0.59      |
| Percent Recovery:                             | 93.40%     |                 | 94.94%     |
| Status vs Numerical Indicator:                | N/A        |                 | N/A        |
| Status vs Recovery:                           | Pass       |                 | Pass       |
| Upper % Recovery Limits:                      | 125%       |                 | 125%       |
| Lower % Recovery Limits:                      | 75%        |                 | 75%        |

| Duplicate Sample Assessment                               |           |
|---|-----------|
| Sample I.D.:  | LCS56587  |
| Duplicate Sample I.D.:                                    | LCSD56587 |
| Sample Result (pCi/L, g, F):                              | 4.419     |
| Sample Result Counting Uncertainty (pCi/L, g, F):         | 0.793     |
| Sample Duplicate Result (pCi/L, g, F):                    | 4.459     |
| Sample Duplicate Counting Uncertainty (pCi/L, g, F):      | 0.781     |
| Are sample and/or duplicate results below RL?             | NO        |
| Duplicate Numerical Performance Indicator:                | -0.071    |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 1.64%     |
| Duplicate Status vs Numerical Indicator:                  | N/A       |
| Duplicate Status vs RPD:                                  | Pass      |
| % RPD Limit:  | 25%       |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment                            |  | MS/MSD 1 | MS/MSD 2 |
|---|--|----------|----------|
| Sample Collection Date:   |  |          |          |
| Sample I.D.:  |  |          |          |
| Sample MS I.D.:   |  |          |          |
| Sample MSD I.D.:  |  |          |          |
| Spike I.D.:   |  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |  |          |          |
| Spike Volume Used in MS (mL):                                     |  |          |          |
| Spike Volume Used in MSD (mL):                                    |  |          |          |
| MS Aliquot (L, g, F):   |  |          |          |
| MS Target Conc. (pCi/L, g, F):                                    |  |          |          |
| MSD Aliquot (L, g, F):  |  |          |          |
| MSD Target Conc. (pCi/L, g, F):                                   |  |          |          |
| MS Spike Uncertainty (calculated):                                |  |          |          |
| MSD Spike Uncertainty (calculated):                               |  |          |          |
| Sample Result:  |  |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |  |          |          |
| Sample Matrix Spike Result:                                       |  |          |          |
| Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):           |  |          |          |
| Sample Matrix Spike Duplicate Result:                             |  |          |          |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |  |          |          |
| MS Numerical Performance Indicator:                               |  |          |          |
| MSD Numerical Performance Indicator:                              |  |          |          |
| MS Percent Recovery:  |  |          |          |
| MSD Percent Recovery:   |  |          |          |
| MS Status vs Numerical Indicator:                                 |  |          |          |
| MSD Status vs Numerical Indicator:                                |  |          |          |
| MS Status vs Recovery:  |  |          |          |
| MSD Status vs Recovery:   |  |          |          |
| MS/MSD Upper % Recovery Limits:                                   |  |          |          |
| MS/MSD Lower % Recovery Limits:                                   |  |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |  |
|---|--|
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Sample Matrix Spike Result:                                       |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Duplicate Result:                             |  |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |  |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |
| Duplicate Numerical Performance Indicator:                        |  |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                   |  |
| MS/MSD Duplicate Status vs RPD:                                   |  |
| % RPD Limit:  |  |

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10/14/2020

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**



Test: Ra-226  
Analyst: LAL  
Date: 10/13/2020  
Worklist: 56587  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2016810 |
| MB concentration:                   | -0.005  |
| M/B Counting Uncertainty:           | 0.135   |
| MB MDC:                             | 0.392   |
| MB Numerical Performance Indicator: | -0.08   |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           | N         |
|---|----------------|-----------|-----------|
|   | LCSD           | LCSD      |           |
| Count Date:                                   | 10/14/2020     | LCSD56587 | LCSD56587 |
| Spike I.D.:                                   | 19-033         |           |           |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044         |           |           |
| Volume Used (mL):                             | 0.10           |           |           |
| Aliquot Volume (L, g, F):                     | 0.508          |           |           |
| Target Conc. (pCi/L, g, F):                   | 4.732          |           |           |
| Uncertainty (Calculated):                     | 0.057          |           |           |
| Result (pCi/L, g, F):                         | 4.419          |           |           |
| LCSD/LCSD Counting Uncertainty (pCi/L, g, F): | 0.793          |           |           |
| Numerical Performance Indicator:              | -0.77          |           |           |
| Percent Recovery:                             | 93.40%         |           |           |
| Status vs Numerical Indicator:                | N/A            |           |           |
| Status vs Recovery:                           | Pass           |           |           |
| Upper % Recovery Limits:                      | 125%           |           |           |
| Lower % Recovery Limits:                      | 75%            |           |           |

| Duplicate Sample Assessment                                 | LCSD (Y or N)? | N |
|---|----------------|---|
| Sample I.D.:  | 92497113001    |   |
| Duplicate Sample I.D.:                                      | 92497113001DUP |   |
| Sample Result (pCi/L, g, F):                                | 0.393          |   |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.257          |   |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.393          |   |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.369          |   |
| Are sample and/or duplicate results below RL?               | See Below ##   |   |
| Duplicate Numerical Performance Indicator:                  | -0.003         |   |
| Duplicate RPD:  | 0.20%          |   |
| Duplicate Status vs Numerical Indicator:                    | N/A            |   |
| Duplicate Status vs RPD:                                    | Pass           |   |
| % RPD Limit:  | 25%            |   |

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):   |          |          |
| Sample Result:<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>Duplicate Numerical Performance Indicator:<br>Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

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## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

10/14/2020

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: LAL  
Date: 10/13/2020  
Worklist: 56591  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2016817 |
| MB concentration:                   | 0.280   |
| M/B Counting Uncertainty:           | 0.235   |
| MB MDC:                             | 0.418   |
| MB Numerical Performance Indicator: | 2.33    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |          |
|---|----------------|----------|
|   | LCS56591       | Y        |
| Count Date:                                   | 10/14/2020     | LCS56591 |
| Spike I.D.:                                   | 19-033         | 19-033   |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044         | 24.044   |
| Volume Used (mL):                             | 0.10           | 0.10     |
| Aliquot Volume (L, g, F):                     | 0.512          | 0.510    |
| Target Conc. (pCi/L, g, F):                   | 4.897          | 4.711    |
| Uncertainty (Calculated):                     | 0.056          | 0.057    |
| Result (pCi/L, g, F):                         | 4.666          | 4.350    |
| LCSD Counting Uncertainty (pCi/L, g, F):      | 0.761          | 0.758    |
| Numerical Performance Indicator:              | -0.08          | -0.93    |
| Percent Recovery:                             | 99.33%         | 92.35%   |
| Status vs Numerical Indicator:                | N/A            | Pass     |
| Upper % Recovery Limits:                      | 125%           | 125%     |
| Lower % Recovery Limits:                      | 75%            | 75%      |

| Duplicate Sample Assessment                                 | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
|---|---|
| Sample I.D.:  | LCS56591  |
| Duplicate Sample I.D.:                                      | LCS56591  |
| Sample Result (pCi/L, g, F):                                | 4.666   |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.761   |
| Sample Duplicate Result (pCi/L, g, F):                      | 4.350   |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.758   |
| Are sample and/or duplicate results below RL?               | NO  |
| Duplicate Numerical Performance Indicator:                  | 0.577   |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:   | 7.29%   |
| Duplicate Status vs Numerical Indicator:                    | N/A   |
| Duplicate Status vs RPD:                                    | Pass  |
| % RPD Limit:  | 25%   |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment                      | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:                                     |          |          |
| Sample I.D.:  |          |          |
| Sample MS I.D.:   |          |          |
| Sample MSD I.D.:  |          |          |
| Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):        |          |          |
| Spike Volume Used in MS (mL):                               |          |          |
| Spike Volume Used in MSD (mL):                              |          |          |
| MS Aliquot (L, g, F):                                       |          |          |
| MS Target Conc.(pCi/L, g, F):                               |          |          |
| MSD Aliquot (L, g, F):                                      |          |          |
| MSD Target Conc. (pCi/L, g, F):                             |          |          |
| MS Spike Uncertainty (calculated):                          |          |          |
| MSD Spike Uncertainty (calculated):                         |          |          |
| Sample Result:  |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):           |          |          |
| Sample Matrix Spike Result:                                 |          |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):     |          |          |
| Sample Matrix Spike Duplicate Result:                       |          |          |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): |          |          |
| MS Numerical Performance Indicator:                         |          |          |
| MSD Numerical Performance Indicator:                        |          |          |
| MS Percent Recovery:  |          |          |
| MSD Percent Recovery:                                       |          |          |
| MS Status vs Numerical Indicator:                           |          |          |
| MSD Status vs Numerical Indicator:                          |          |          |
| MS Status vs Recovery:                                      |          |          |
| MSD Status vs Recovery:                                     |          |          |
| MS/MSD Upper % Recovery Limits:                             |          |          |
| MS/MSD Lower % Recovery Limits:                             |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |
|---|
| Sample I.D.:  |
| Sample MS I.D.:   |
| Sample MSD I.D.:  |
| Sample Matrix Spike Result:                                       |
| Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):           |
| Sample Matrix Spike Duplicate Result:                             |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |
| Duplicate Numerical Performance Indicator:                        |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |
| MS/MSD Duplicate Status vs Numerical Indicator:                   |
| MS/MSD Duplicate Status vs RPD:                                   |
| % RPD Limit:  |

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# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 10/13/2020  
Worklist: 56591  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2016617 |
| MB Concentration:                   | 0.280   |
| MB Counting Uncertainty:            | 0.235   |
| MB MDC:                             | 0.418   |
| MB Numerical Performance Indicator: | 2.33    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCSD56591      | LCSD56591 |
| Count Date:                                   | 10/14/2020     |           |
| Spike I.D.:                                   | 19-033         |           |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044         |           |
| Volume Used (mL):                             | 0.10           |           |
| Aliquot Volume (L, g, F):                     | 0.512          |           |
| Target Conc. (pCi/L, g, F):                   | 4.697          |           |
| Uncertainty (Calculated):                     | 0.056          |           |
| Result (pCi/L, g, F):                         | 4.666          |           |
| LCSD Counting Uncertainty (pCi/L, g, F):      | 0.761          |           |
| Numerical Performance Indicator:              | -0.08          |           |
| Percent Recovery:                             | 99.33%         |           |
| Status vs Numerical Indicator:                | N/A            |           |
| Status vs Recovery:                           | Pass           |           |
| Upper % Recovery Limits:                      | 125%           |           |
| Lower % Recovery Limits:                      | 75%            |           |

| Duplicate Sample Assessment                                 |                |
|---|----------------|
| Sample I.D.:  | 92496904020    |
| Duplicate Sample I.D.:                                      | 92496904020DUP |
| Sample Result (pCi/L, g, F):                                | 0.317          |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.241          |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.374          |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.240          |
| Are sample and/or duplicate results below RL?               | See Below #    |
| Duplicate Numerical Performance Indicator:                  | -0.331         |
| Duplicate RPD:  | 16.61%         |
| Duplicate Status vs Numerical Indicator:                    | N/A            |
| Duplicate Status vs RPD:                                    | Pass           |
| % RPD Limit:  | 25%            |

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc.(pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:<br>MS/ MSD Duplicate Status vs Numerical Indicator:<br>MS/ MSD Duplicate Status vs RPD:<br>% RPD Limit: |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

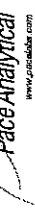
Comments:

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 92496904020  
 92496904020DUP  
 92496904020

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# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 10/14/2020  
Worklist: 56593  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2016820 |
| MB concentration:                   | -0.021  |
| M/B Counting Uncertainty:           | 0.127   |
| MB MDC:                             | 0.392   |
| MB Numerical Performance Indicator: | -0.32   |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |            |
|---|------------|
| LCSD (Y or N)?                                | N          |
| LCS#56593                                     | LCS#56593  |
| Count Date:                                   | 10/15/2020 |
| Spike I.D.:                                   | 19-033     |
| Decay Corrected Spike Concentration (pCi/mL): | 24.044     |
| Volume Used (mL):                             | 0.10       |
| Aliquot Volume (L, g, F):                     | 0.508      |
| Target Conc. (pCi/L, g, F):                   | 4.737      |
| Uncertainty (Calculated):                     | 0.057      |
| Result (pCi/L, g, F):                         | 4.134      |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.806      |
| Numerical Performance Indicator:              | -1.46      |
| Percent Recovery:                             | 87.27%     |
| Status vs Numerical Indicator:                | N/A        |
| Upper % Recovery Limits:                      | Pass       |
| Lower % Recovery Limits:                      | 125%       |
|   | 75%        |

| Duplicate Sample Assessment                                 |                |
|---|----------------|
| Sample I.D.:  | 92495887027    |
| Duplicate Sample I.D.:                                      | 92495887027DUP |
| Sample Result (pCi/L, g, F):                                | -0.019         |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.155          |
| Sample Duplicate Result (pCi/L, g, F):                      | -0.014         |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.204          |
| Are sample and/or duplicate results below RL?               | See Below ##   |
| Duplicate Numerical Performance Indicator:                  | -0.035         |
| Duplicate RPD:  | -27.96%        |
| Duplicate Status vs Numerical Indicator:                    | N/A            |
| Duplicate Status vs RPD:                                    | Pass           |
| % RPD Limit:  | 25%            |

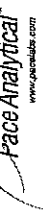
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment                            |  |
|---|--|
| Sample Collection Date:   |  |
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Spike I.D.:   |  |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |  |
| Spike Volume Used in MS (mL):                                     |  |
| Spike Volume Used in MSD (mL):                                    |  |
| MS Aliquot (L, g, F):   |  |
| MS Target Conc. (pCi/L, g, F):                                    |  |
| MSD Aliquot (L, g, F):  |  |
| MSD Target Conc. (pCi/L, g, F):                                   |  |
| MS Spike Uncertainty (calculated):                                |  |
| MSD Spike Uncertainty (calculated):                               |  |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |  |
| Sample Matrix Spike Result:                                       |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Duplicate Result:                             |  |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |  |
| MS Numerical Performance Indicator:                               |  |
| MSD Numerical Performance Indicator:                              |  |
| MS Percent Recovery:  |  |
| MSD Percent Recovery:   |  |
| MS Status vs Numerical Indicator:                                 |  |
| MSD Status vs Numerical Indicator:                                |  |
| MS Status vs Recovery:  |  |
| MSD Status vs Recovery:   |  |
| MS/MSD Upper % Recovery Limits:                                   |  |
| MS/MSD Lower % Recovery Limits:                                   |  |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |  |
|---|--|
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Sample Matrix Spike Result:                                       |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Duplicate Result:                             |  |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |  |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |
| Duplicate Numerical Performance Indicator:                        |  |
| Duplicate RPD:  |  |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                   |  |
| MS/MSD Duplicate Status vs RPD:                                   |  |
| % RPD Limit:  |  |

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 10/13/2020  
Worklist: 56588  
Matrix: WT

| Method Blank Assessment             |              |
|-------------------------------------|--------------|
| MB Sample ID                        | 2016812      |
| MB concentration:                   | 0.888        |
| MB 2 Sigma CSU:                     | 0.380        |
| MB MDC:                             | 0.600        |
| MB Numerical Performance Indicator: | 4.58         |
| MB Status vs Numerical Indicator:   | Fail*        |
| MB Status vs. MDC:                  | See Comment* |

| Laboratory Control Sample Assessment          | LCS# (Y or N)? |            |
|---|----------------|------------|
|   | LCS#56588      | Y          |
| Count Date:                                   | 10/15/2020     | LCS#56588  |
| Spike I.D.:                                   | 20-030         | 10/15/2020 |
| Decay Corrected Spike Concentration (pCi/mL): | 38.018         | 20-030     |
| Volume Used (mL):                             | 0.10           | 38.018     |
| Aliquot Volume (L, g, F):                     | 0.817          | 0.10       |
| Target Conc. (pCi/L, g, F):                   | 4.664          | 0.810      |
| Uncertainty (Calculated):                     | 0.228          | 4.695      |
| Result (pCi/L, g, F):                         | 5.189          | 0.230      |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.207          | 5.370      |
| Numerical Performance Indicator:              | 0.85           | 1.191      |
| Percent Recovery:                             | 111.49%        | 1.09       |
| Status vs Numerical Indicator:                | N/A            | 114.37%    |
| Status vs Recovery:                           | Pass           | N/A        |
| Upper % Recovery Limits:                      | 135%           | Pass       |
| Lower % Recovery Limits:                      | 60%            | 135%       |

| Duplicate Sample Assessment                        | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
|--|---|
| Sample I.D.:                                       | LCS#56588   |
| Duplicate Sample I.D.:                             | LCS#56588   |
| Sample Result (pCi/L, g, F):                       | 5.189   |
| Sample Result 2 Sigma CSU (pCi/L, g, F):           | 1.207   |
| Sample Duplicate Result (pCi/L, g, F):             | 5.370   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 1.191   |
| Are sample and/or duplicate results below RL?      | NO  |
| Duplicate Numerical Performance Indicator:         | -0.210  |
| Duplicate Percent Recoveries): Duplicate RPD:      | 2.55%   |
| Duplicate Status vs Numerical Indicator:           | Pass  |
| Duplicate Status vs RPD:                           | Pass  |
| % RPD Limit:                                       | 36%   |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc.(pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):   |          |          |
| Sample Result:<br>Sample Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MS Numerical Performance Indicator: |          |          |
| MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits:   |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

*Handwritten signature and date: 10/13/20*

*Handwritten signature: [Signature]*

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 10/16/2020  
Worklist: 56592  
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

**Method Blank Assessment**

MB Sample ID  
MB concentration:  
MB 2 Sigma CSU:  
MB MDC:  
MB Numerical Performance Indicator:  
MB Status vs Numerical Indicator:  
MB Status vs. MDC:

| Laboratory Control Sample Assessment          |            | LCS#      | (Y or N)? | Y          |
|---|------------|-----------|-----------|------------|
| Count Date:                                   | 10/19/2020 | LCS#56592 |           | LCS#56592  |
| Spike I.D.:                                   | 20-030     |           |           | 10/19/2020 |
| Decay Corrected Spike Concentration (pCi/mL): | 37.968     |           |           | 37.968     |
| Volume Used (mL):                             | 0.10       |           |           | 0.10       |
| Aliquot Volume (L, g, F):                     | 0.813      |           |           | 0.836      |
| Target Conc. (pCi/L, g, F):                   | 4.670      |           |           | 4.542      |
| Uncertainty (Calculated):                     | 0.229      |           |           | 0.223      |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 4.645      |           |           | 4.409      |
| Numerical Performance Indicator:              | 1.050      |           |           | 1.018      |
| Percent Recovery:                             | -0.04      |           |           | -0.25      |
| Status vs Numerical Indicator:                | 99.48%     |           |           | 97.08%     |
| Upper % Recovery Limits:                      | N/A        |           |           | N/A        |
| Lower % Recovery Limits:                      | Pass       |           |           | Pass       |
|   | 135%       |           |           | 135%       |
|   | 80%        |           |           | 80%        |

**Duplicate Sample Assessment**

Sample I.D.:  
Duplicate Sample I.D.:  
Sample Result (pCi/L, g, F):  
Sample Result 2 Sigma CSU (pCi/L, g, F):  
Sample Duplicate Result (pCi/L, g, F):  
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):  
Are sample and/or duplicate results below RL?  
Duplicate Numerical Performance Indicator:  
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:  
Duplicate Status vs Numerical Indicator:  
Duplicate Status vs RPD:  
% RPD Limit:

|           |   |
|-----------|---|
| LCS#56592 | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
| 4.645     |   |
| 1.050     |   |
| 4.409     |   |
| 1.018     |   |
| NO        |   |
| 0.317     |   |
| 2.46%     |   |
| Pass      |   |
| Pass      |   |
| 38%       |   |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*10/20/2020*

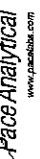
**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
MS Spike Uncertainty (calculated):  
MSD Spike Uncertainty (calculated):  
Sample Result 2 Sigma CSU (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:  
MS/MSD Upper % Recovery Limits:  
MS/MSD Lower % Recovery Limits:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:  
% RPD Limit:

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 10/13/2020  
Worklist: 56592  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2016818 |
| MB concentration:                   | 0.274   |
| MB 2 Sigma CSU:                     | 0.291   |
| MB MDC:                             | 0.602   |
| MB Numerical Performance Indicator: | 1.85    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCS/D (Y or N)? |            |
|---|-----------------|------------|
|   | LCS56592        | Y          |
| Count Date:                                   | 10/15/2020      | 10/15/2020 |
| Spike I.D.:                                   | 20-030          | 20-030     |
| Decay Corrected Spike Concentration (pCi/mL): | 38.018          | 38.018     |
| Volume Used (mL):                             | 0.10            | 0.10       |
| Aliquot Volume (L, g, F):                     | 0.836           | 0.836      |
| Target Conc. (pCi/L, g, F):                   | 4.576           | 4.548      |
| Uncertainty (Calculated):                     | 0.223           | 0.223      |
| Result (pCi/L, g, F):                         | 2.226           | 2.963      |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 0.629           | 0.764      |
| Numerical Performance Indicator:              | -7.18           | -3.91      |
| Percent Recovery:                             | 47.60%          | 65.14%     |
| Status vs Numerical Indicator:                | Fail**          | N/A        |
| Status vs Recovery:                           | Fail Low**      | Pass       |
| Upper % Recovery Limits:                      | 135%            | 135%       |
| Lower % Recovery Limits:                      | 60%             | 60%        |

| Duplicate Sample Assessment                               | LCS/D (Y or N)? | Y |
|---|-----------------|---|
| Sample I.D.:  | LCS56592        |   |
| Duplicate Sample I.D.:                                    | LCS56592        |   |
| Sample Result (pCi/L, g, F):                              | 2.226           |   |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                  | 0.529           |   |
| Sample Duplicate Result (pCi/L, g, F):                    | 2.963           |   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 0.764           |   |
| Are sample and/or duplicate results below RL?:            | NO              |   |
| Duplicate Numerical Performance Indicator:                | -1.460          |   |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 31.10%          |   |
| Duplicate Status vs Numerical Indicator:                  | Pass            |   |
| Duplicate Status vs RPD:                                  | Pass            |   |
| % RPD Limit:  | 36%             |   |

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):   |          |          |
| Sample Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

*Manual*

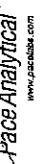
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

\*\*Batch must be re-prepped due to LCS failure.

*10/13/20*

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 10/13/2020  
Worklist: 56594  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2016821 |
| MB concentration:                   | 0.369   |
| MB 2 Sigma CSU:                     | 0.373   |
| MB MDC:                             | 0.768   |
| MB Numerical Performance Indicator: | 1.94    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |  | LCSID (Y or N)? | Y          |
|---|--|-----------------|------------|
| Count Date:                                   |  | LCS56594        | 10/15/2020 |
| Spike I.D.:                                   |  | 20-030          | 20-030     |
| Decay Corrected Spike Concentration (pCi/mL): |  | 38.018          | 38.018     |
| Aliquot Volume (L, g, F):                     |  | 0.10            | 0.815      |
| Target Conc. (pCi/L, g, F):                   |  | 4.674           | 4.667      |
| Uncertainty (Calculated):                     |  | 3.852           | 4.892      |
| Result (pCi/L, g, F):                         |  | 0.918           | 1.152      |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           |  | -1.49           | 0.38       |
| Numerical Performance Indicator:              |  | 94.57%          | 104.82%    |
| Status vs Numerical Indicator:                |  | N/A             | N/A        |
| Percent Recovery:                             |  | Pass            | Pass       |
| Upper % Recovery Limits:                      |  | 135%            | 135%       |
| Lower % Recovery Limits:                      |  | 60%             | 60%        |

| Sample Matrix Spike Control Assessment                   |  | MS/MSD 1 | MS/MSD 2 |
|--|--|----------|----------|
| Sample Collection Date:                                  |  |          |          |
| Sample I.D.:   |  |          |          |
| Sample MS I.D.:  |  |          |          |
| Sample MSD I.D.:   |  |          |          |
| Spike I.D.:  |  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):     |  |          |          |
| Spike Volume Used in MS (mL):                            |  |          |          |
| MS Aliquot (L, g, F):                                    |  |          |          |
| MS Target Conc. (pCi/L, g, F):                           |  |          |          |
| MSD Aliquot (L, g, F):                                   |  |          |          |
| MSD Target Conc. (pCi/L, g, F):                          |  |          |          |
| MS Spike Uncertainty (calculated):                       |  |          |          |
| MSD Spike Uncertainty (calculated):                      |  |          |          |
| Sample Result:   |  |          |          |
| Sample Matrix Spike Result:                              |  |          |          |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           |  |          |          |
| Sample Matrix Spike Duplicate Result:                    |  |          |          |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |  |          |          |
| MS Numerical Performance Indicator:                      |  |          |          |
| MSD Numerical Performance Indicator:                     |  |          |          |
| MS Percent Recovery:                                     |  |          |          |
| MSD Percent Recovery:                                    |  |          |          |
| MS Status vs Numerical Indicator:                        |  |          |          |
| MSD Status vs Numerical Indicator:                       |  |          |          |
| MS Status vs Recovery:                                   |  |          |          |
| MSD Status vs Recovery:                                  |  |          |          |
| MS/MSD Upper % Recovery Limits:                          |  |          |          |
| MS/MSD Lower % Recovery Limits:                          |  |          |          |

| Duplicate Sample Assessment                               |  | Matrix Spike/Matrix Spike Duplicate Sample Assessment |  |
|---|--|---|--|
| Sample I.D.:  |  | Sample I.D.:  |  |
| Duplicate Sample I.D.:                                    |  | Sample MS I.D.:                                       |  |
| Sample Result (pCi/L, g, F):                              |  | Sample MSD I.D.:                                      |  |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                  |  | Sample Matrix Spike Result:                           |  |
| Sample Duplicate Result (pCi/L, g, F):                    |  | Sample Matrix Spike Duplicate Result:                 |  |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        |  | Duplicate Numerical Performance Indicator:            |  |
| Are sample and/or duplicate results below RL?             |  | Duplicate Numerical Performance Indicator:            |  |
| Duplicate Numerical Performance Indicator:                |  | MS/MSD Duplicate RPD:                                 |  |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: |  | MS/MSD Duplicate Status vs Numerical Indicator:       |  |
| Duplicate Status vs Numerical Indicator:                  |  | MS/MSD Duplicate Status vs RPD:                       |  |
| Duplicate Status vs RPD:                                  |  | % RPD Limit:  |  |
| % RPD Limit:  |  |   |  |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*ONE*  
*10/14/2020*

*2/16/20*

November 2020

November 30, 2020

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

Dear Joju Abraham:

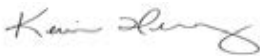
Enclosed are the analytical results for sample(s) received by the laboratory between November 11, 2020 and November 12, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812  
Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Lab ID      | Sample ID         | Matrix | Date Collected | Date Received  |
|-------------|-------------------|--------|----------------|----------------|
| 92505496001 | HGWA-43D          | Water  | 11/10/20 10:21 | 11/11/20 12:12 |
| 92505496002 | EB-01             | Water  | 11/10/20 16:10 | 11/11/20 12:12 |
| 92505496003 | HGWA-44D          | Water  | 11/10/20 15:55 | 11/11/20 12:12 |
| 92505496004 | HGWA-44D FILTERED | Water  | 11/10/20 16:30 | 11/11/20 12:12 |
| 92505496005 | HGWA-45D          | Water  | 11/11/20 15:50 | 11/12/20 16:47 |
| 92505496006 | HGWC-126          | Water  | 11/11/20 11:25 | 11/12/20 16:47 |
| 92505496007 | HGWC-125          | Water  | 11/12/20 09:26 | 11/12/20 16:47 |
| 92505496008 | MW-46D            | Water  | 11/11/20 12:50 | 11/12/20 16:47 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

| Lab ID      | Sample ID         | Method                 | Analysts | Analytes Reported |
|-------------|-------------------|------------------------|----------|-------------------|
| 92505496001 | HGWA-43D          | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496002 | EB-01             | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496003 | HGWA-44D          | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496004 | HGWA-44D FILTERED | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496005 | HGWA-45D          | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496006 | HGWC-126          | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496007 | HGWC-125          | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 13                |
|             |                   | EPA 7470A              | VB       | 1                 |
|             |                   | SM 2450C-2011          | AW1      | 1                 |
|             |                   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92505496008 | MW-46D            | EPA 6010D              | KH       | 1                 |
|             |                   | EPA 6020B              | CW1      | 2                 |

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**SAMPLE ANALYTE COUNT**

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

| Lab ID | Sample ID | Method                 | Analysts | Analytes Reported |
|--------|-----------|------------------------|----------|-------------------|
|        |           | SM 2450C-2011          | AW1      | 1                 |
|        |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Lab Sample ID          | Client Sample ID         | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters               |           |            |              |                |            |
| <b>92505496001</b>     | <b>HGWA-43D</b>          |           |            |              |                |            |
|                        | Performed by             | CUSTOMER  |            |              | 11/12/20 08:54 |            |
|                        | pH                       | 7.27      | Std. Units |              | 11/12/20 08:54 |            |
| EPA 6010D              | Calcium                  | 63.3      | mg/L       | 1.0          | 11/19/20 09:40 |            |
| EPA 6020B              | Antimony                 | 0.00043J  | mg/L       | 0.0030       | 11/19/20 18:47 | B          |
| EPA 6020B              | Arsenic                  | 0.0021J   | mg/L       | 0.0050       | 11/19/20 18:47 |            |
| EPA 6020B              | Barium                   | 0.25      | mg/L       | 0.010        | 11/19/20 18:47 |            |
| EPA 6020B              | Boron                    | 0.057J    | mg/L       | 0.10         | 11/19/20 18:47 |            |
| EPA 6020B              | Lead                     | 0.000069J | mg/L       | 0.0050       | 11/19/20 18:47 |            |
| EPA 6020B              | Lithium                  | 0.0013J   | mg/L       | 0.030        | 11/19/20 18:47 |            |
| EPA 6020B              | Molybdenum               | 0.0072J   | mg/L       | 0.010        | 11/19/20 18:47 |            |
| SM 2450C-2011          | Total Dissolved Solids   | 307       | mg/L       | 10.0         | 11/13/20 14:21 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                 | 4.4       | mg/L       | 1.0          | 11/14/20 16:04 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                 | 0.19      | mg/L       | 0.10         | 11/14/20 16:04 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                  | 39.0      | mg/L       | 1.0          | 11/14/20 16:04 |            |
| <b>92505496002</b>     | <b>EB-01</b>             |           |            |              |                |            |
| SM 2450C-2011          | Total Dissolved Solids   | 13.0      | mg/L       | 10.0         | 11/13/20 14:21 |            |
| <b>92505496003</b>     | <b>HGWA-44D</b>          |           |            |              |                |            |
|                        | Performed by             | CUSTOMER  |            |              | 11/12/20 08:54 |            |
|                        | pH                       | 7.84      | Std. Units |              | 11/12/20 08:54 |            |
| EPA 6010D              | Calcium                  | 33.6      | mg/L       | 1.0          | 11/19/20 10:28 |            |
| EPA 6020B              | Barium                   | 0.38      | mg/L       | 0.010        | 11/19/20 18:58 |            |
| EPA 6020B              | Boron                    | 0.29      | mg/L       | 0.10         | 11/19/20 18:58 |            |
| EPA 6020B              | Chromium                 | 0.00089J  | mg/L       | 0.010        | 11/19/20 18:58 |            |
| EPA 6020B              | Lead                     | 0.00020J  | mg/L       | 0.0050       | 11/19/20 18:58 |            |
| EPA 6020B              | Lithium                  | 0.025J    | mg/L       | 0.030        | 11/19/20 18:58 |            |
| EPA 6020B              | Molybdenum               | 0.0018J   | mg/L       | 0.010        | 11/19/20 18:58 |            |
| SM 2450C-2011          | Total Dissolved Solids   | 287       | mg/L       | 10.0         | 11/13/20 14:21 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                 | 7.8       | mg/L       | 1.0          | 11/14/20 16:33 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                 | 0.59      | mg/L       | 0.10         | 11/14/20 16:33 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                  | 6.3       | mg/L       | 1.0          | 11/14/20 16:33 |            |
| <b>92505496004</b>     | <b>HGWA-44D FILTERED</b> |           |            |              |                |            |
|                        | Performed by             | CUSTOMER  |            |              | 11/12/20 08:55 |            |
|                        | pH                       | 7.84      | Std. Units |              | 11/12/20 08:55 |            |
| EPA 6010D              | Calcium                  | 27.0      | mg/L       | 1.0          | 11/19/20 10:34 |            |
| EPA 6020B              | Barium                   | 0.39      | mg/L       | 0.010        | 11/19/20 19:04 |            |
| EPA 6020B              | Boron                    | 0.27      | mg/L       | 0.10         | 11/19/20 19:04 |            |
| EPA 6020B              | Lithium                  | 0.027J    | mg/L       | 0.030        | 11/19/20 19:04 |            |
| EPA 6020B              | Molybdenum               | 0.0015J   | mg/L       | 0.010        | 11/19/20 19:04 |            |
| SM 2450C-2011          | Total Dissolved Solids   | 301       | mg/L       | 10.0         | 11/13/20 14:22 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                 | 7.6       | mg/L       | 1.0          | 11/14/20 16:47 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                 | 0.58      | mg/L       | 0.10         | 11/14/20 16:47 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                  | 5.9       | mg/L       | 1.0          | 11/14/20 16:47 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Lab Sample ID          | Client Sample ID       | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters             |           |            |              |                |            |
| <b>92505496005</b>     | <b>HGWA-45D</b>        |           |            |              |                |            |
|                        | Performed by           | CUSTOME   |            |              | 11/13/20 10:47 |            |
|                        |                        | R         |            |              |                |            |
|                        | pH                     | 7.40      | Std. Units |              | 11/13/20 10:47 |            |
| EPA 6010D              | Calcium                | 54.9      | mg/L       | 1.0          | 11/19/20 02:38 |            |
| EPA 6020B              | Antimony               | 0.00057J  | mg/L       | 0.0030       | 11/19/20 19:44 | B          |
| EPA 6020B              | Arsenic                | 0.0011J   | mg/L       | 0.0050       | 11/19/20 19:44 |            |
| EPA 6020B              | Barium                 | 0.45      | mg/L       | 0.010        | 11/19/20 19:44 |            |
| EPA 6020B              | Boron                  | 0.17      | mg/L       | 0.10         | 11/19/20 19:44 |            |
| EPA 6020B              | Lead                   | 0.000040J | mg/L       | 0.0050       | 11/19/20 19:44 |            |
| EPA 6020B              | Lithium                | 0.0032J   | mg/L       | 0.030        | 11/19/20 19:44 |            |
| EPA 6020B              | Molybdenum             | 0.0049J   | mg/L       | 0.010        | 11/19/20 19:44 |            |
| SM 2450C-2011          | Total Dissolved Solids | 276       | mg/L       | 10.0         | 11/17/20 16:03 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 3.3       | mg/L       | 1.0          | 11/18/20 04:47 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.19      | mg/L       | 0.10         | 11/18/20 04:47 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 11.2      | mg/L       | 1.0          | 11/18/20 04:47 |            |
| <b>92505496006</b>     | <b>HGWC-126</b>        |           |            |              |                |            |
|                        | Performed by           | CUSTOME   |            |              | 11/13/20 10:47 |            |
|                        |                        | R         |            |              |                |            |
|                        | pH                     | 6.86      | Std. Units |              | 11/13/20 10:47 |            |
| EPA 6010D              | Calcium                | 133       | mg/L       | 1.0          | 11/19/20 02:43 | M1         |
| EPA 6020B              | Antimony               | 0.00040J  | mg/L       | 0.0030       | 11/19/20 19:50 | B          |
| EPA 6020B              | Barium                 | 0.23      | mg/L       | 0.010        | 11/19/20 19:50 |            |
| EPA 6020B              | Boron                  | 0.0090J   | mg/L       | 0.10         | 11/19/20 19:50 |            |
| EPA 6020B              | Lead                   | 0.000042J | mg/L       | 0.0050       | 11/19/20 19:50 |            |
| EPA 6020B              | Lithium                | 0.0032J   | mg/L       | 0.030        | 11/19/20 19:50 |            |
| SM 2450C-2011          | Total Dissolved Solids | 468       | mg/L       | 20.0         | 11/17/20 16:03 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 8.3       | mg/L       | 1.0          | 11/18/20 05:01 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.45      | mg/L       | 0.10         | 11/18/20 05:01 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 62.3      | mg/L       | 1.0          | 11/18/20 05:01 |            |
| <b>92505496007</b>     | <b>HGWC-125</b>        |           |            |              |                |            |
|                        | Performed by           | CUSTOME   |            |              | 11/13/20 10:47 |            |
|                        |                        | R         |            |              |                |            |
|                        | pH                     | 6.13      | Std. Units |              | 11/13/20 10:47 |            |
| EPA 6010D              | Calcium                | 165       | mg/L       | 1.0          | 11/19/20 03:15 |            |
| EPA 6020B              | Barium                 | 0.042     | mg/L       | 0.010        | 11/19/20 19:55 |            |
| EPA 6020B              | Boron                  | 1.4       | mg/L       | 0.10         | 11/19/20 19:55 |            |
| EPA 6020B              | Cobalt                 | 0.012     | mg/L       | 0.0050       | 11/19/20 19:55 |            |
| EPA 6020B              | Lead                   | 0.000047J | mg/L       | 0.0050       | 11/19/20 19:55 |            |
| EPA 6020B              | Lithium                | 0.0038J   | mg/L       | 0.030        | 11/19/20 19:55 |            |
| EPA 6020B              | Molybdenum             | 0.0017J   | mg/L       | 0.010        | 11/19/20 19:55 |            |
| SM 2450C-2011          | Total Dissolved Solids | 694       | mg/L       | 20.0         | 11/17/20 16:04 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 10.4      | mg/L       | 1.0          | 11/18/20 05:15 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.12      | mg/L       | 0.10         | 11/18/20 05:15 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 300       | mg/L       | 7.0          | 11/18/20 07:36 |            |
| <b>92505496008</b>     | <b>MW-46D</b>          |           |            |              |                |            |
|                        | Performed by           | CUSTOME   |            |              | 11/13/20 10:48 |            |
|                        |                        | R         |            |              |                |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Lab Sample ID          | Client Sample ID       | Result | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|------------------------|--------|------------|--------------|----------------|------------|
| Method                 | Parameters             |        |            |              |                |            |
| <b>92505496008</b>     | <b>MW-46D</b>          |        |            |              |                |            |
|                        | pH                     | 7.52   | Std. Units |              | 11/13/20 10:48 |            |
| EPA 6010D              | Calcium                | 69.3   | mg/L       | 1.0          | 11/19/20 03:20 |            |
| EPA 6020B              | Boron                  | 0.68   | mg/L       | 0.10         | 11/20/20 18:55 |            |
| EPA 6020B              | Molybdenum             | 0.015  | mg/L       | 0.010        | 11/20/20 18:55 |            |
| SM 2450C-2011          | Total Dissolved Solids | 472    | mg/L       | 20.0         | 11/17/20 16:04 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 3.5    | mg/L       | 1.0          | 11/18/20 05:29 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 1.0    | mg/L       | 0.10         | 11/18/20 05:29 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 167    | mg/L       | 4.0          | 11/18/20 07:50 |            |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

| Sample: HGWA-43D   |                  | Lab ID: 92505496001 |              | Collected: 11/10/20 10:21 |    | Received: 11/11/20 12:12 |                | Matrix: Water |      |
|--|------------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results          | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b>  |                     |              |                           | 1  |                          | 11/12/20 08:54 |               |      |
| pH   | <b>7.27</b>      | Std. Units          |              |                           | 1  |                          | 11/12/20 08:54 |               |      |
| <b>6010D ATL ICP</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>63.3</b>      | mg/L                | 1.0          | 0.070                     | 1  | 11/16/20 11:00           | 11/19/20 09:40 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.00043J</b>  | mg/L                | 0.0030       | 0.00028                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-36-0     | B    |
| Arsenic  | <b>0.0021J</b>   | mg/L                | 0.0050       | 0.00078                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-38-2     |      |
| Barium   | <b>0.25</b>      | mg/L                | 0.010        | 0.00071                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-39-3     |      |
| Beryllium  | ND               | mg/L                | 0.0030       | 0.000046                  | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-41-7     |      |
| Boron  | <b>0.057J</b>    | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-42-8     |      |
| Cadmium  | ND               | mg/L                | 0.0025       | 0.00012                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-43-9     |      |
| Chromium   | ND               | mg/L                | 0.010        | 0.00055                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-47-3     |      |
| Cobalt   | ND               | mg/L                | 0.0050       | 0.00038                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-48-4     |      |
| Lead   | <b>0.000069J</b> | mg/L                | 0.0050       | 0.000036                  | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7439-92-1     |      |
| Lithium  | <b>0.0013J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7439-93-2     |      |
| Molybdenum   | <b>0.0072J</b>   | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7439-98-7     |      |
| Selenium   | ND               | mg/L                | 0.010        | 0.0016                    | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7782-49-2     |      |
| Thallium   | ND               | mg/L                | 0.0010       | 0.00014                   | 1  | 11/19/20 08:40           | 11/19/20 18:47 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND               | mg/L                | 0.00050      | 0.000078                  | 1  | 11/16/20 08:00           | 11/18/20 13:55 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>307</b>       | mg/L                | 10.0         | 10.0                      | 1  |                          | 11/13/20 14:21 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                  |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>4.4</b>       | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/14/20 16:04 | 16887-00-6    |      |
| Fluoride   | <b>0.19</b>      | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/14/20 16:04 | 16984-48-8    |      |
| Sulfate  | <b>39.0</b>      | mg/L                | 1.0          | 0.50                      | 1  |                          | 11/14/20 16:04 | 14808-79-8    |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Sample: EB-01                       |             | Lab ID: 92505496002  |         | Collected: 11/10/20 16:10 | Received: 11/11/20 12:12 | Matrix: Water  |                |            |      |  |
|-------------------------------------|-------------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|--|
| Parameters                          | Results     | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |  |
|                                     |             |  | Limit   | MDL                       | DF                       |                |                |            |      |  |
| <b>6010D ATL ICP</b>                |             | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Calcium                             | ND          | mg/L   | 1.0     | 0.070                     | 1                        | 11/16/20 11:00 | 11/19/20 09:45 | 7440-70-2  |      |  |
| <b>6020 MET ICPMS</b>               |             | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Antimony                            | ND          | mg/L   | 0.0030  | 0.00028                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-36-0  |      |  |
| Arsenic                             | ND          | mg/L   | 0.0050  | 0.00078                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-38-2  |      |  |
| Barium                              | ND          | mg/L   | 0.010   | 0.00071                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-39-3  |      |  |
| Beryllium                           | ND          | mg/L   | 0.0030  | 0.000046                  | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-41-7  |      |  |
| Boron                               | ND          | mg/L   | 0.10    | 0.0052                    | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-42-8  |      |  |
| Cadmium                             | ND          | mg/L   | 0.0025  | 0.00012                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-43-9  |      |  |
| Chromium                            | ND          | mg/L   | 0.010   | 0.00055                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-47-3  |      |  |
| Cobalt                              | ND          | mg/L   | 0.0050  | 0.00038                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-48-4  |      |  |
| Lead                                | ND          | mg/L   | 0.0050  | 0.000036                  | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7439-92-1  |      |  |
| Lithium                             | ND          | mg/L   | 0.030   | 0.00081                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7439-93-2  |      |  |
| Molybdenum                          | ND          | mg/L   | 0.010   | 0.00069                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7439-98-7  |      |  |
| Selenium                            | ND          | mg/L   | 0.010   | 0.0016                    | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7782-49-2  |      |  |
| Thallium                            | ND          | mg/L   | 0.0010  | 0.00014                   | 1                        | 11/19/20 08:40 | 11/19/20 18:52 | 7440-28-0  |      |  |
| <b>7470 Mercury</b>                 |             | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Mercury                             | ND          | mg/L   | 0.00050 | 0.000078                  | 1                        | 11/16/20 08:00 | 11/18/20 13:57 | 7439-97-6  |      |  |
| <b>2540C Total Dissolved Solids</b> |             | Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |  |
| Total Dissolved Solids              | <b>13.0</b> | mg/L   | 10.0    | 10.0                      | 1                        |                | 11/13/20 14:21 |            |      |  |
| <b>300.0 IC Anions 28 Days</b>      |             | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |  |
| Chloride                            | ND          | mg/L   | 1.0     | 0.60                      | 1                        |                | 11/14/20 16:18 | 16887-00-6 |      |  |
| Fluoride                            | ND          | mg/L   | 0.10    | 0.050                     | 1                        |                | 11/14/20 16:18 | 16984-48-8 |      |  |
| Sulfate                             | ND          | mg/L   | 1.0     | 0.50                      | 1                        |                | 11/14/20 16:18 | 14808-79-8 |      |  |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Sample: HGWA-44D   |                 | Lab ID: 92505496003 |              | Collected: 11/10/20 15:55 |    | Received: 11/11/20 12:12 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 11/12/20 08:54 |               |      |
| pH   | <b>7.84</b>     | Std. Units          |              |                           | 1  |                          | 11/12/20 08:54 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>33.6</b>     | mg/L                | 1.0          | 0.070                     | 1  | 11/16/20 11:00           | 11/19/20 10:28 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00028                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-36-0     | B    |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.00078                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-38-2     |      |
| Barium   | <b>0.38</b>     | mg/L                | 0.010        | 0.00071                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.0030       | 0.000046                  | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-41-7     |      |
| Boron  | <b>0.29</b>     | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.0025       | 0.00012                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-43-9     |      |
| Chromium   | <b>0.00089J</b> | mg/L                | 0.010        | 0.00055                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00038                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-48-4     |      |
| Lead   | <b>0.00020J</b> | mg/L                | 0.0050       | 0.000036                  | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7439-92-1     |      |
| Lithium  | <b>0.025J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7439-93-2     |      |
| Molybdenum   | <b>0.0018J</b>  | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7439-98-7     |      |
| Selenium   | ND              | mg/L                | 0.010        | 0.0016                    | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7782-49-2     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00014                   | 1  | 11/19/20 08:40           | 11/19/20 18:58 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00050      | 0.000078                  | 1  | 11/16/20 08:00           | 11/18/20 14:00 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>287</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 11/13/20 14:21 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                 |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>7.8</b>      | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/14/20 16:33 | 16887-00-6    |      |
| Fluoride   | <b>0.59</b>     | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/14/20 16:33 | 16984-48-8    |      |
| Sulfate  | <b>6.3</b>      | mg/L                | 1.0          | 0.50                      | 1  |                          | 11/14/20 16:33 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Sample: HGWA-44D FILTERED                                  |                 | Lab ID: 92505496004 |              | Collected: 11/10/20 16:30 |    | Received: 11/11/20 12:12 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 11/12/20 08:55 |               |      |
| pH   | <b>7.84</b>     | Std. Units          |              |                           | 1  |                          | 11/12/20 08:55 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>27.0</b>     | mg/L                | 1.0          | 0.070                     | 1  | 11/16/20 11:00           | 11/19/20 10:34 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00028                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.00078                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-38-2     |      |
| Barium   | <b>0.39</b>     | mg/L                | 0.010        | 0.00071                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.0030       | 0.000046                  | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-41-7     |      |
| Boron  | <b>0.27</b>     | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.0025       | 0.00012                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.010        | 0.00055                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00038                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-48-4     |      |
| Lead   | ND              | mg/L                | 0.0050       | 0.000036                  | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7439-92-1     |      |
| Lithium  | <b>0.027J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7439-93-2     |      |
| Molybdenum   | <b>0.0015J</b>  | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7439-98-7     |      |
| Selenium   | ND              | mg/L                | 0.010        | 0.0016                    | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7782-49-2     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00014                   | 1  | 11/19/20 08:40           | 11/19/20 19:04 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00050      | 0.000078                  | 1  | 11/16/20 08:00           | 11/18/20 14:02 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>301</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 11/13/20 14:22 |               |      |
| <b>300.0 IC Anions 28 Days</b>                             |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Asheville                       |                 |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>7.6</b>      | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/14/20 16:47 | 16887-00-6    |      |
| Fluoride   | <b>0.58</b>     | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/14/20 16:47 | 16984-48-8    |      |
| Sulfate  | <b>5.9</b>      | mg/L                | 1.0          | 0.50                      | 1  |                          | 11/14/20 16:47 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

| Sample: HGWA-45D   |                  | Lab ID: 92505496005 |              | Collected: 11/11/20 15:50 |    | Received: 11/12/20 16:47 |                | Matrix: Water |      |
|--|------------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results          | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b>  |                     |              |                           | 1  |                          | 11/13/20 10:47 |               |      |
| pH   | <b>7.40</b>      | Std. Units          |              |                           | 1  |                          | 11/13/20 10:47 |               |      |
| <b>6010D ATL ICP</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>54.9</b>      | mg/L                | 1.0          | 0.070                     | 1  | 11/18/20 15:19           | 11/19/20 02:38 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.00057J</b>  | mg/L                | 0.0030       | 0.00028                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-36-0     | B    |
| Arsenic  | <b>0.0011J</b>   | mg/L                | 0.0050       | 0.00078                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-38-2     |      |
| Barium   | <b>0.45</b>      | mg/L                | 0.010        | 0.00071                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-39-3     |      |
| Beryllium  | ND               | mg/L                | 0.0030       | 0.000046                  | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-41-7     |      |
| Boron  | <b>0.17</b>      | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-42-8     |      |
| Cadmium  | ND               | mg/L                | 0.0025       | 0.00012                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-43-9     |      |
| Chromium   | ND               | mg/L                | 0.010        | 0.00055                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-47-3     |      |
| Cobalt   | ND               | mg/L                | 0.0050       | 0.00038                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-48-4     |      |
| Lead   | <b>0.000040J</b> | mg/L                | 0.0050       | 0.000036                  | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7439-92-1     |      |
| Lithium  | <b>0.0032J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7439-93-2     |      |
| Molybdenum   | <b>0.0049J</b>   | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7439-98-7     |      |
| Selenium   | ND               | mg/L                | 0.010        | 0.0016                    | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7782-49-2     |      |
| Thallium   | ND               | mg/L                | 0.0010       | 0.00014                   | 1  | 11/19/20 08:40           | 11/19/20 19:44 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND               | mg/L                | 0.00050      | 0.000078                  | 1  | 11/16/20 08:00           | 11/18/20 14:28 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>276</b>       | mg/L                | 10.0         | 10.0                      | 1  |                          | 11/17/20 16:03 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                  |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>3.3</b>       | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/18/20 04:47 | 16887-00-6    |      |
| Fluoride   | <b>0.19</b>      | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/18/20 04:47 | 16984-48-8    |      |
| Sulfate  | <b>11.2</b>      | mg/L                | 1.0          | 0.50                      | 1  |                          | 11/18/20 04:47 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

| Sample: HGWC-126   |                  | Lab ID: 92505496006 |              | Collected: 11/11/20 11:25 |    | Received: 11/12/20 16:47 |                | Matrix: Water |      |
|--|------------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results          | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b>  |                     |              |                           | 1  |                          | 11/13/20 10:47 |               |      |
| pH   | <b>6.86</b>      | Std. Units          |              |                           | 1  |                          | 11/13/20 10:47 |               |      |
| <b>6010D ATL ICP</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>133</b>       | mg/L                | 1.0          | 0.070                     | 1  | 11/18/20 15:19           | 11/19/20 02:43 | 7440-70-2     | M1   |
| <b>6020 MET ICPMS</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.00040J</b>  | mg/L                | 0.0030       | 0.00028                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-36-0     | B    |
| Arsenic  | ND               | mg/L                | 0.0050       | 0.00078                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-38-2     |      |
| Barium   | <b>0.23</b>      | mg/L                | 0.010        | 0.00071                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-39-3     |      |
| Beryllium  | ND               | mg/L                | 0.0030       | 0.000046                  | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-41-7     |      |
| Boron  | <b>0.0090J</b>   | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-42-8     |      |
| Cadmium  | ND               | mg/L                | 0.0025       | 0.00012                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-43-9     |      |
| Chromium   | ND               | mg/L                | 0.010        | 0.00055                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-47-3     |      |
| Cobalt   | ND               | mg/L                | 0.0050       | 0.00038                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-48-4     |      |
| Lead   | <b>0.000042J</b> | mg/L                | 0.0050       | 0.000036                  | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7439-92-1     |      |
| Lithium  | <b>0.0032J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7439-93-2     |      |
| Molybdenum   | ND               | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7439-98-7     |      |
| Selenium   | ND               | mg/L                | 0.010        | 0.0016                    | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7782-49-2     |      |
| Thallium   | ND               | mg/L                | 0.0010       | 0.00014                   | 1  | 11/19/20 08:40           | 11/19/20 19:50 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND               | mg/L                | 0.00050      | 0.000078                  | 1  | 11/16/20 08:00           | 11/18/20 14:30 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>468</b>       | mg/L                | 20.0         | 20.0                      | 1  |                          | 11/17/20 16:03 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                  |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>8.3</b>       | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/18/20 05:01 | 16887-00-6    |      |
| Fluoride   | <b>0.45</b>      | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/18/20 05:01 | 16984-48-8    |      |
| Sulfate  | <b>62.3</b>      | mg/L                | 1.0          | 0.50                      | 1  |                          | 11/18/20 05:01 | 14808-79-8    |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

| Sample: HGWC-125   |                  | Lab ID: 92505496007 |              | Collected: 11/12/20 09:26 |    | Received: 11/12/20 16:47 |                | Matrix: Water |      |
|--|------------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results          | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b>  |                     |              |                           | 1  |                          | 11/13/20 10:47 |               |      |
| pH   | <b>6.13</b>      | Std. Units          |              |                           | 1  |                          | 11/13/20 10:47 |               |      |
| <b>6010D ATL ICP</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>165</b>       | mg/L                | 1.0          | 0.070                     | 1  | 11/18/20 15:19           | 11/19/20 03:15 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND               | mg/L                | 0.0030       | 0.00028                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-36-0     |      |
| Arsenic  | ND               | mg/L                | 0.0050       | 0.00078                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-38-2     |      |
| Barium   | <b>0.042</b>     | mg/L                | 0.010        | 0.00071                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-39-3     |      |
| Beryllium  | ND               | mg/L                | 0.0030       | 0.000046                  | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-41-7     |      |
| Boron  | <b>1.4</b>       | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-42-8     |      |
| Cadmium  | ND               | mg/L                | 0.0025       | 0.00012                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-43-9     |      |
| Chromium   | ND               | mg/L                | 0.010        | 0.00055                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-47-3     |      |
| Cobalt   | <b>0.012</b>     | mg/L                | 0.0050       | 0.00038                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-48-4     |      |
| Lead   | <b>0.000047J</b> | mg/L                | 0.0050       | 0.000036                  | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7439-92-1     |      |
| Lithium  | <b>0.0038J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7439-93-2     |      |
| Molybdenum   | <b>0.0017J</b>   | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7439-98-7     |      |
| Selenium   | ND               | mg/L                | 0.010        | 0.0016                    | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7782-49-2     |      |
| Thallium   | ND               | mg/L                | 0.0010       | 0.00014                   | 1  | 11/19/20 08:40           | 11/19/20 19:55 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND               | mg/L                | 0.00050      | 0.000078                  | 1  | 11/23/20 08:20           | 11/23/20 13:43 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>694</b>       | mg/L                | 20.0         | 20.0                      | 1  |                          | 11/17/20 16:04 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                  |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>10.4</b>      | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/18/20 05:15 | 16887-00-6    |      |
| Fluoride   | <b>0.12</b>      | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/18/20 05:15 | 16984-48-8    |      |
| Sulfate  | <b>300</b>       | mg/L                | 7.0          | 3.5                       | 7  |                          | 11/18/20 07:36 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Sample: MW-46D   |                 | Lab ID: 92505496008 |              | Collected: 11/11/20 12:50 |    | Received: 11/12/20 16:47 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 11/13/20 10:48 |               |      |
| pH   | <b>7.52</b>     | Std. Units          |              |                           | 1  |                          | 11/13/20 10:48 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>69.3</b>     | mg/L                | 1.0          | 0.070                     | 1  | 11/18/20 15:19           | 11/19/20 03:20 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Boron  | <b>0.68</b>     | mg/L                | 0.10         | 0.0052                    | 1  | 11/19/20 08:40           | 11/20/20 18:55 | 7440-42-8     |      |
| Molybdenum   | <b>0.015</b>    | mg/L                | 0.010        | 0.00069                   | 1  | 11/19/20 08:40           | 11/20/20 18:55 | 7439-98-7     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>472</b>      | mg/L                | 20.0         | 20.0                      | 1  |                          | 11/17/20 16:04 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                 |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>3.5</b>      | mg/L                | 1.0          | 0.60                      | 1  |                          | 11/18/20 05:29 | 16887-00-6    |      |
| Fluoride   | <b>1.0</b>      | mg/L                | 0.10         | 0.050                     | 1  |                          | 11/18/20 05:29 | 16984-48-8    |      |
| Sulfate  | <b>167</b>      | mg/L                | 4.0          | 2.0                       | 4  |                          | 11/18/20 07:50 | 14808-79-8    |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580529

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

METHOD BLANK: 3070802

Matrix: Water

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070 | 11/19/20 06:54 |            |

LABORATORY CONTROL SAMPLE: 3070803

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.1        | 112       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070804 3070805

| Parameter | Units | 3070804        |                 | 3070805   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 9170 ug/L      | 1               | 1         | 173        | 169      | 16300     | 16000        | 75-125 | 2       | 20 M1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

QC Batch: 581313 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

METHOD BLANK: 3074651 Matrix: Water  
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070 | 11/19/20 02:12 |            |

LABORATORY CONTROL SAMPLE: 3074652

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 103       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3074653 3074654

| Parameter | Units | 3074653        |                 | 3074654   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 133            | 1               | 1         | 130        | 129      | -299      | -430         | 75-125 | 1       | 20 M1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

QC Batch: 581474 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006, 92505496007

METHOD BLANK: 3075459 Matrix: Water  
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006, 92505496007

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | 0.00037J     | 0.0030          | 0.00028  | 11/19/20 17:21 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 11/19/20 17:21 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 11/19/20 17:21 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 11/19/20 17:21 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 11/19/20 17:21 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 11/19/20 17:21 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 11/19/20 17:21 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 11/19/20 17:21 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 11/19/20 17:21 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 11/19/20 17:21 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 11/19/20 17:21 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 11/19/20 17:21 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 11/19/20 17:21 |            |

LABORATORY CONTROL SAMPLE: 3075460

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Boron      | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075461 3075462

| Parameter | Units | 92505482033 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Antimony  | mg/L  | ND                 | 0.1            | 0.1             | 0.095     | 0.099      | 95       | 99        | 75-125       | 4   | 20      |      |
| Arsenic   | mg/L  | ND                 | 0.1            | 0.1             | 0.095     | 0.096      | 95       | 96        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Parameter  | Units | 3075461               |                      | 3075462               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | RPD | Max<br>RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
|            |       | 92505482033<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |     |            |      |
| Barium     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.11         | 0.11         | 92            | 95          | 75-125       | 3               | 20  |            |      |
| Beryllium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.095        | 94            | 95          | 75-125       | 1               | 20  |            |      |
| Boron      | mg/L  | 46.1 ug/L             | 1                    | 1                     | 0.96         | 0.98         | 91            | 94          | 75-125       | 3               | 20  |            |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.098        | 96            | 98          | 75-125       | 2               | 20  |            |      |
| Chromium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.099        | 95            | 99          | 75-125       | 4               | 20  |            |      |
| Cobalt     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.096        | 94            | 96          | 75-125       | 1               | 20  |            |      |
| Lead       | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.097        | 96            | 97          | 75-125       | 1               | 20  |            |      |
| Lithium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.093        | 95            | 92          | 75-125       | 3               | 20  |            |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.099        | 96            | 99          | 75-125       | 3               | 20  |            |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.095        | 93            | 95          | 75-125       | 2               | 20  |            |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.096        | 95            | 96          | 75-125       | 1               | 20  |            |      |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

|                            |  |
|----------------------------|--|
| QC Batch: 581476           | Analysis Method: EPA 6020B                                   |
| QC Batch Method: EPA 3005A | Analysis Description: 6020 MET                               |
|                            | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92505496008

METHOD BLANK: 3075465 Matrix: Water

Associated Lab Samples: 92505496008

| Parameter  | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|---------|----------------|------------|
| Boron      | mg/L  | ND           | 0.10            | 0.0052  | 11/20/20 18:15 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069 | 11/20/20 18:15 |            |

LABORATORY CONTROL SAMPLE: 3075466

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Boron      | mg/L  | 1           | 1.1        | 106       | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075467 3075468

| Parameter  | Units | 92505843001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Boron      | mg/L  | 0.012J             | 1              | 1               | 0.97      | 0.99       | 96       | 98        | 75-125       | 2   | 20      |      |
| Molybdenum | mg/L  | ND                 | 0.1            | 0.1             | 0.10      | 0.10       | 100      | 102       | 75-125       | 2   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 580637    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006

METHOD BLANK: 3071454 Matrix: Water  
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 11/17/20 13:51 |            |

LABORATORY CONTROL SAMPLE: 3071455

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0024     | 96        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071456 3071457

| Parameter | Units | 92505989001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury   | mg/L  | 0.45 ug/L          | 0.0025         | 0.0025          | 0.0030    | 0.0029     | 101      | 97        | 75-125       | 3   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

|                            |  |
|----------------------------|--|
| QC Batch: 580803           | Analysis Method: EPA 7470A                                   |
| QC Batch Method: EPA 7470A | Analysis Description: 7470 Mercury                           |
|                            | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92505496007

METHOD BLANK: 3072015 Matrix: Water  
Associated Lab Samples: 92505496007

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 11/23/20 13:21 |            |

LABORATORY CONTROL SAMPLE: 3072016

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0025     | 98        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3072017 3072018

| Parameter | Units | 3072017        |                 | 3072018   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0025    | 0.0025     | 98       | 99        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 580910        | Analysis Method:      | SM 2450C-2011                                    |
| QC Batch Method: | SM 2450C-2011 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

METHOD BLANK: 3072613 Matrix: Water  
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 11/17/20 16:03 |            |

LABORATORY CONTROL SAMPLE: 3072614

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 411        | 103       | 84-108       |            |

SAMPLE DUPLICATE: 3072616

| Parameter              | Units | 92506106002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 62.0               | 64.0       | 3   | 10      |            |

SAMPLE DUPLICATE: 3072820

| Parameter              | Units | 92506187002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 196                | 209        | 6   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580949

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

METHOD BLANK: 3072818

Matrix: Water

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 11/13/20 14:19 |            |

LABORATORY CONTROL SAMPLE: 3072819

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 403        | 101       | 84-108       |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

QC Batch: 580375 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

METHOD BLANK: 3070250 Matrix: Water  
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 11/14/20 12:56 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 11/14/20 12:56 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 11/14/20 12:56 |            |

LABORATORY CONTROL SAMPLE: 3070251

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 50.0       | 100       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.7        | 108       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 49.9       | 100       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070252 3070253

| Parameter | Units | MS     |       | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual   |
|-----------|-------|--------|-------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|--------|
|           |       | Result | Conc. | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |        |
| Chloride  | mg/L  | 15.5   | 50    | 50          | 50          | 65.1      | 67.1       | 99       | 103       | 90-110       | 3   | 10      |        |
| Fluoride  | mg/L  | 9.9    | 2.5   | 2.5         | 2.5         | 1.5       | 11.3       | -333     | 58        | 90-110       | 152 | 10      | M6, R1 |
| Sulfate   | mg/L  | 635    | 50    | 50          | 50          | 275       | 677        | -721     | 83        | 90-110       | 85  | 10      | M6, R1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070254 3070255

| Parameter | Units | MS     |       | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------|-------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | Result | Conc. | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 2.7    | 50    | 50          | 50          | 53.8      | 54.8       | 102      | 104       | 90-110       | 2   | 10      |      |
| Fluoride  | mg/L  | 0.065J | 2.5   | 2.5         | 2.5         | 2.7       | 2.8        | 105      | 108       | 90-110       | 3   | 10      |      |
| Sulfate   | mg/L  | 2.3    | 50    | 50          | 50          | 52.6      | 53.9       | 101      | 103       | 90-110       | 2   | 10      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR  
Pace Project No.: 92505496

QC Batch: 580771 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

METHOD BLANK: 3071887 Matrix: Water  
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 11/17/20 22:58 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 11/17/20 22:58 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 11/17/20 22:58 |            |

LABORATORY CONTROL SAMPLE: 3071888

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 50.8       | 102       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.6        | 105       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.5       | 101       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071889 3071890

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92506020008 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | ND          | 50     | 50          | 50          | 52.0      | 52.2       | 104      | 104       | 90-110       | 0   | 10      |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.4         | 2.4       | 2.6        | 97       | 103       | 90-110       | 7   | 10      |      |
| Sulfate   | mg/L  | ND          | 50     | 50          | 51.4        | 51.4      | 51.5       | 103      | 103       | 90-110       | 0   | 10      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071891 3071892

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92506244005 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 2.2         | 2.2    | 50          | 50          | 54.1      | 54.4       | 104      | 104       | 90-110       | 0   | 10      |      |
| Fluoride  | mg/L  | ND          | ND     | 2.5         | 2.5         | 2.3       | 2.5        | 92       | 99        | 90-110       | 7   | 10      |      |
| Sulfate   | mg/L  | ND          | ND     | 50          | 50          | 51.3      | 51.5       | 102      | 102       | 90-110       | 0   | 10      |      |

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## QUALIFIERS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

| Lab ID      | Sample ID         | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|------------------------|----------|-------------------|------------------|
| 92505496001 | HGWA-43D          |                        |          |                   |                  |
| 92505496003 | HGWA-44D          |                        |          |                   |                  |
| 92505496004 | HGWA-44D FILTERED |                        |          |                   |                  |
| 92505496005 | HGWA-45D          |                        |          |                   |                  |
| 92505496006 | HGWC-126          |                        |          |                   |                  |
| 92505496007 | HGWC-125          |                        |          |                   |                  |
| 92505496008 | MW-46D            |                        |          |                   |                  |
| 92505496001 | HGWA-43D          | EPA 3010A              | 580529   | EPA 6010D         | 580567           |
| 92505496002 | EB-01             | EPA 3010A              | 580529   | EPA 6010D         | 580567           |
| 92505496003 | HGWA-44D          | EPA 3010A              | 580529   | EPA 6010D         | 580567           |
| 92505496004 | HGWA-44D FILTERED | EPA 3010A              | 580529   | EPA 6010D         | 580567           |
| 92505496005 | HGWA-45D          | EPA 3010A              | 581313   | EPA 6010D         | 581362           |
| 92505496006 | HGWC-126          | EPA 3010A              | 581313   | EPA 6010D         | 581362           |
| 92505496007 | HGWC-125          | EPA 3010A              | 581313   | EPA 6010D         | 581362           |
| 92505496008 | MW-46D            | EPA 3010A              | 581313   | EPA 6010D         | 581362           |
| 92505496001 | HGWA-43D          | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496002 | EB-01             | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496003 | HGWA-44D          | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496004 | HGWA-44D FILTERED | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496005 | HGWA-45D          | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496006 | HGWC-126          | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496007 | HGWC-125          | EPA 3005A              | 581474   | EPA 6020B         | 581563           |
| 92505496008 | MW-46D            | EPA 3005A              | 581476   | EPA 6020B         | 581564           |
| 92505496001 | HGWA-43D          | EPA 7470A              | 580637   | EPA 7470A         | 580829           |
| 92505496002 | EB-01             | EPA 7470A              | 580637   | EPA 7470A         | 580829           |
| 92505496003 | HGWA-44D          | EPA 7470A              | 580637   | EPA 7470A         | 580829           |
| 92505496004 | HGWA-44D FILTERED | EPA 7470A              | 580637   | EPA 7470A         | 580829           |
| 92505496005 | HGWA-45D          | EPA 7470A              | 580637   | EPA 7470A         | 580829           |
| 92505496006 | HGWC-126          | EPA 7470A              | 580637   | EPA 7470A         | 580829           |
| 92505496007 | HGWC-125          | EPA 7470A              | 580803   | EPA 7470A         | 582285           |
| 92505496001 | HGWA-43D          | SM 2450C-2011          | 580949   |                   |                  |
| 92505496002 | EB-01             | SM 2450C-2011          | 580949   |                   |                  |
| 92505496003 | HGWA-44D          | SM 2450C-2011          | 580949   |                   |                  |
| 92505496004 | HGWA-44D FILTERED | SM 2450C-2011          | 580949   |                   |                  |
| 92505496005 | HGWA-45D          | SM 2450C-2011          | 580910   |                   |                  |
| 92505496006 | HGWC-126          | SM 2450C-2011          | 580910   |                   |                  |
| 92505496007 | HGWC-125          | SM 2450C-2011          | 580910   |                   |                  |
| 92505496008 | MW-46D            | SM 2450C-2011          | 580910   |                   |                  |
| 92505496001 | HGWA-43D          | EPA 300.0 Rev 2.1 1993 | 580375   |                   |                  |
| 92505496002 | EB-01             | EPA 300.0 Rev 2.1 1993 | 580375   |                   |                  |
| 92505496003 | HGWA-44D          | EPA 300.0 Rev 2.1 1993 | 580375   |                   |                  |
| 92505496004 | HGWA-44D FILTERED | EPA 300.0 Rev 2.1 1993 | 580375   |                   |                  |
| 92505496005 | HGWA-45D          | EPA 300.0 Rev 2.1 1993 | 580771   |                   |                  |
| 92505496006 | HGWC-126          | EPA 300.0 Rev 2.1 1993 | 580771   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

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| <b>Lab ID</b> | <b>Sample ID</b> | <b>QC Batch Method</b> | <b>QC Batch</b> | <b>Analytical Method</b> | <b>Analytical Batch</b> |
|---------------|------------------|------------------------|-----------------|--------------------------|-------------------------|
| 92505496007   | HGWC-125         | EPA 300.0 Rev 2.1 1993 | 580771          |                          |                         |
| 92505496008   | MW-46D           | EPA 300.0 Rev 2.1 1993 | 580771          |                          |                         |

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Document Name:  
Sample Condition Upon Receipt(SCUR)

Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020

Page 1 of 2

Issuing Authority:

Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

G A Power

Project #:

WO#: **92505496**



Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 11/11/20

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:  Gun ID: 230 Type of Ice:  Wet  Blue  None

Cooler Temp: 3.6 C Correction Factor: 0  
Add/Subtract (°C)

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.6

USDA Regulated Soil  N/A, water sample

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

Yes  No

|  | Comments/Discrepancy:                                      |
|--|--|
| Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   | 1.   |
| Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A   | 2.   |
| Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A   | 3.   |
| Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A  | 4.   |
| Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A  | 5.   |
| Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A<br>-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.   |
| Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A  | 7.   |
| Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A   | 8.   |
| Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A<br><u>W</u>   | 9. <u>FB-01 is labeled EB-01</u><br><u>11/11/20 @ 1810</u> |
| -Includes Date/Time/ID/Analysis Matrix:  |  |
| Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A  | 10.  |
| Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A   | 11.  |
| Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A   |  |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_













# CHAIN-OF-CUSTODY / Analytical Request Document

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

|  |   |  |
|--|---|--|
| <b>Section A</b><br>Required Client Information: | <b>Section B</b><br>Required Project Information: | <b>Section C</b><br>Process Information: |
| Company: GA Power                                | Report to: SCS Contacts                           | Agency: Southern Co.                     |
| Address: Atlanta, GA                             | Copy to: Geosyntec Contacts                       | Company Name:                            |
| Project Name: SCS Contacts                       | Purchase Order No.:                               | Address:                                 |
| Project: [Blank]                                 | Project Name: Plant Hammond AP-3 BKG 02.05/NR     | Process Queue:                           |
| Requested Due Date/TAT: 30 Day                   | Project Number: GWS681                            | Reference: Kevin Henning                 |
|  |   | Process Manager: [Blank]                 |
|  |   | Process # 10B38-4                        |

|   |  |  |                                    |             |             |             |             |                                  |  |   |   |   |                          |
|---|--|--|------------------------------------|-------------|-------------|-------------|-------------|----------------------------------|--|---|---|---|--------------------------|
| <b>Section D</b><br>Required Client Information                 | <b>Valid Matrix Codes</b><br>MATERIAL CODE   | <b>MATRIX CODE</b> (see valid codes to left) | <b>SAMPLE TYPE</b> (G=GRAB C=COMP) | <b>DATE</b> | <b>TIME</b> | <b>DATE</b> | <b>TIME</b> | <b>SAMPLE TEMP AT COLLECTION</b> | <b># OF CONTAINERS</b>   | <b>Preservatives</b>  | <b>Analysis Test</b>  | <b>Requested Analyte Filtered (Y/N)</b> | <b>REGULATORY AGENCY</b> |
| <b>SAMPLE ID</b><br>(A-Z, 0-9 / -)<br>Sample IDs MUST BE UNIQUE | GROUNDWATER<br>WASTE WATER<br>PRODUCT<br>SOIL/SOLID<br>OIL<br>WIFE<br>AIR<br>OTHER<br>TISSUE |  |                                    |             |             |             |             |                                  | Unpreserved<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other | *Mo+App. III Metals<br>Chloride, Fluoride, Sulfate<br>TDS<br>**Full App. III&IV Metals<br>RAD 228/229 | <input type="checkbox"/> NPDES<br><input type="checkbox"/> UST<br><input type="checkbox"/> GROUND WATER<br><input type="checkbox"/> RCRA<br><input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> OTHER COM |   |                          |
|   | 1  | HGWA-42B                                     | WT                                 | G           |             |             |             |                                  | 5  | 2   |   |   |                          |
|   | 2  | HGWA-42D                                     | WT                                 | G           |             |             |             |                                  | 5  | 2   |   |   |                          |
|   | 3  | HGWA-43D                                     | WT                                 | G           |             |             |             |                                  | 5  | 2   |   |   |                          |
|   | 4  | HGWC-125                                     | WT                                 | G           | 11/12       | 0926        |             |                                  | 5  | 2   |   |   |                          |
|   | 5  | HGWC-126                                     | WT                                 | G           |             |             | 11/12       | 18                               | 5  | 2   |   |   |                          |
|   | 6  | HM-46B                                       | WT                                 | G           |             |             |             |                                  | 3  | 2   |   |   |                          |
|   | 7  | FB-01  | WT                                 | G           |             |             |             |                                  | 5  | 2   |   |   |                          |
|   | 8  |  |                                    |             |             |             |             |                                  |  |   |   |   |                          |
|   | 9  |  |                                    |             |             |             |             |                                  |  |   |   |   |                          |
|   | 10   |  |                                    |             |             |             |             |                                  |  |   |   |   |                          |
|   | 11   |  |                                    |             |             |             |             |                                  |  |   |   |   |                          |
| 12  |  |  |                                    |             |             |             |             |                                  |  |   |   |   |                          |

|  |                                      |             |             |                                  |             |             |  |
|--|--------------------------------------|-------------|-------------|----------------------------------|-------------|-------------|--|
| <b>ADDITIONAL COMMENTS</b>   | <b>RELINQUISHED BY / AFFILIATION</b> | <b>DATE</b> | <b>TIME</b> | <b>ACCEPTED BY / AFFILIATION</b> | <b>DATE</b> | <b>TIME</b> | <b>SAMPLE CONDITIONS</b>   |
| Please note dry wells, stake through any wells not sampled, and note when the last sample for the event has been taken.<br>*Mo+App. III Metals=B, Ca, Mo<br>*Full App. III & IV Metals=So, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Cu, Mg, Se, Ni<br>1 sample set for HGWA-43D and HGWA-44D, reported for A.P.<br>12/3, 1 sample set for FB-01, reported for AP-12/3A, SDCS | Thomas Kucala / Geosyntec            | 11/12       | 18:22       | Kevin Henning / Face Analytical  | 11/12       | 14:55       | Temp in °C<br>Received on Ice (Y/N)<br>Custody Sealed Cooler (Y/N)<br>Samples Intact (Y/N) |

|                                   |                               |                              |                                |
|-----------------------------------|-------------------------------|------------------------------|--------------------------------|
| <b>SAMPLER NAME AND SIGNATURE</b> | <b>PRINT Name of SAMPLER:</b> | <b>SIGNATURE of SAMPLER:</b> | <b>DATE Signed (MM/DD/YY):</b> |
|                                   | Thomas Kucala                 | [Signature]                  | 11/21/12                       |

\*Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to also charge a 1.5% per month fee for invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007

December 17, 2020

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 BKG 02,05/NR RADS  
Pace Project No.: 92505470

Dear Joju Abraham:

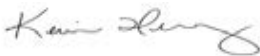
Enclosed are the analytical results for sample(s) received by the laboratory between November 11, 2020 and November 12, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 BKG 02,05/NR RADS  
Pace Project No.: 92505470

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Lab ID      | Sample ID         | Matrix | Date Collected | Date Received  |
|-------------|-------------------|--------|----------------|----------------|
| 92505470001 | HGWA-43D          | Water  | 11/10/20 10:21 | 11/11/20 12:12 |
| 92505470002 | EB-01             | Water  | 11/10/20 16:10 | 11/11/20 12:12 |
| 92505470003 | HGWA-44D          | Water  | 11/10/20 15:55 | 11/11/20 12:12 |
| 92505470004 | HGWA-44D FILTERED | Water  | 11/10/20 16:30 | 11/11/20 12:12 |
| 92505470005 | HGWA-45D          | Water  | 11/11/20 15:50 | 11/12/20 16:47 |
| 92505470006 | HGWC-126          | Water  | 11/11/20 11:25 | 11/12/20 16:47 |
| 92505470007 | HGWC-125          | Water  | 11/12/20 09:26 | 11/12/20 16:47 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 02,05/NR RADS  
Pace Project No.: 92505470

| Lab ID      | Sample ID         | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|--------------------------|----------|-------------------|------------|
| 92505470001 | HGWA-43D          | EPA 9315                 | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | CMC      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92505470002 | EB-01             | EPA 9315                 | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | CMC      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92505470003 | HGWA-44D          | EPA 9315                 | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | CMC      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92505470004 | HGWA-44D FILTERED | EPA 9315                 | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | CMC      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92505470005 | HGWA-45D          | EPA 9315                 | JJY      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92505470006 | HGWC-126          | EPA 9315                 | JJY      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92505470007 | HGWC-125          | EPA 9315                 | JJY      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result   | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|--|-------|--------------|----------------|------------|
| <b>92505470001</b>       | <b>HGWA-43D</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.150 ±<br>0.247<br>(0.551)<br>C:76% T:NA      | pCi/L |              | 12/14/20 15:38 |            |
| EPA 9320                 | Radium-228                     | 0.638 ±<br>0.432<br>(0.836)<br>C:78%<br>T:81%  | pCi/L |              | 12/03/20 11:11 |            |
| Total Radium Calculation | Total Radium                   | 0.788 ±<br>0.679<br>(1.39)                     | pCi/L |              | 12/17/20 15:41 |            |
| <b>92505470002</b>       | <b>EB-01</b>                   |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0159 ±<br>0.209<br>(0.560)<br>C:78% T:NA     | pCi/L |              | 12/01/20 07:46 |            |
| EPA 9320                 | Radium-228                     | -0.184 ±<br>0.389<br>(0.935)<br>C:74%<br>T:80% | pCi/L |              | 12/17/20 11:11 |            |
| Total Radium Calculation | Total Radium                   | 0.0159 ±<br>0.598<br>(1.50)                    | pCi/L |              | 12/17/20 15:41 |            |
| <b>92505470003</b>       | <b>HGWA-44D</b>                |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.244 ±<br>0.219<br>(0.389)<br>C:95% T:NA      | pCi/L |              | 12/01/20 07:46 |            |
| EPA 9320                 | Radium-228                     | 0.0487 ±<br>0.339<br>(0.777)<br>C:78%<br>T:90% | pCi/L |              | 12/03/20 11:12 |            |
| Total Radium Calculation | Total Radium                   | 0.293 ±<br>0.558<br>(1.17)                     | pCi/L |              | 12/17/20 15:41 |            |
| <b>92505470004</b>       | <b>HGWA-44D FILTERED</b>       |  |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0162 ±<br>0.234<br>(0.615)<br>C:84% T:NA     | pCi/L |              | 12/01/20 07:46 |            |
| EPA 9320                 | Radium-228                     | 0.0824 ±<br>0.364<br>(0.826)<br>C:76%<br>T:81% | pCi/L |              | 12/03/20 11:12 |            |
| Total Radium Calculation | Total Radium                   | 0.0986 ±<br>0.598<br>(1.44)                    | pCi/L |              | 12/17/20 15:41 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92505470005</b>       | <b>HGWA-45D</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.352 ±<br>0.215<br>(0.344)<br>C:92% T:NA     | pCi/L |              | 12/14/20 08:14 |            |
| EPA 9320                 | Radium-228                     | 0.138 ±<br>0.325<br>(0.722)<br>C:77%<br>T:94% | pCi/L |              | 12/09/20 11:12 |            |
| Total Radium Calculation | Total Radium                   | 0.490 ±<br>0.540<br>(1.07)                    | pCi/L |              | 12/14/20 15:54 |            |
| <b>92505470006</b>       | <b>HGWC-126</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.484 ±<br>0.285<br>(0.434)<br>C:90% T:NA     | pCi/L |              | 12/14/20 08:00 |            |
| EPA 9320                 | Radium-228                     | 0.353 ±<br>0.413<br>(0.872)<br>C:74%<br>T:87% | pCi/L |              | 12/09/20 11:12 |            |
| Total Radium Calculation | Total Radium                   | 0.837 ±<br>0.698<br>(1.31)                    | pCi/L |              | 12/14/20 15:54 |            |
| <b>92505470007</b>       | <b>HGWC-125</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.435 ±<br>0.224<br>(0.318)<br>C:95% T:NA     | pCi/L |              | 12/14/20 08:14 |            |
| EPA 9320                 | Radium-228                     | 0.198 ±<br>0.411<br>(0.905)<br>C:77%<br>T:87% | pCi/L |              | 12/09/20 11:12 |            |
| Total Radium Calculation | Total Radium                   | 0.633 ±<br>0.635<br>(1.22)                    | pCi/L |              | 12/14/20 15:54 |            |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-43D</b> <b>Lab ID: 92505470001</b> Collected: 11/10/20 10:21      Received: 11/11/20 12:12      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.150 ± 0.247 (0.551)</b><br><b>C:76% T:NA</b>  | pCi/L | 12/14/20 15:38 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.638 ± 0.432 (0.836)</b><br><b>C:78% T:81%</b> | pCi/L | 12/03/20 11:11 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.788 ± 0.679 (1.39)</b>                        | pCi/L | 12/17/20 15:41 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--|--------------------------|---|-------|----------------|------------|------|
| <b>Sample: EB-01</b> <b>Lab ID: 92505470002</b> Collected: 11/10/20 16:10      Received: 11/11/20 12:12      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |   |       |                |            |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Radium-226   | EPA 9315                 | <b>0.0159 ± 0.209 (0.560)</b><br><b>C:78% T:NA</b>  | pCi/L | 12/01/20 07:46 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Radium-228   | EPA 9320                 | <b>-0.184 ± 0.389 (0.935)</b><br><b>C:74% T:80%</b> | pCi/L | 12/17/20 11:11 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg  |                          |   |       |                |            |      |
| Total Radium   | Total Radium Calculation | <b>0.0159 ± 0.598 (1.50)</b>                        | pCi/L | 12/17/20 15:41 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|---|-------|----------------|------------|------|
| <b>Sample: HGWA-44D</b> <b>Lab ID: 92505470003</b> Collected: 11/10/20 15:55      Received: 11/11/20 12:12      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |   |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |   |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.244 ± 0.219 (0.389)</b><br><b>C:95% T:NA</b>   | pCi/L | 12/01/20 07:46 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |   |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.0487 ± 0.339 (0.777)</b><br><b>C:78% T:90%</b> | pCi/L | 12/03/20 11:12 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |   |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.293 ± 0.558 (1.17)</b>                         | pCi/L | 12/17/20 15:41 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

**Sample: HGWA-44D FILTERED**      **Lab ID: 92505470004**      Collected: 11/10/20 16:30      Received: 11/11/20 12:12      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0162 ± 0.234 (0.615)</b><br><b>C:84% T:NA</b>  | pCi/L | 12/01/20 07:46 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.0824 ± 0.364 (0.826)</b><br><b>C:76% T:81%</b> | pCi/L | 12/03/20 11:12 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.0986 ± 0.598 (1.44)</b>                        | pCi/L | 12/17/20 15:41 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-45D</b> <b>Lab ID: 92505470005</b> Collected: 11/11/20 15:50      Received: 11/12/20 16:47      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.352 ± 0.215 (0.344)</b><br><b>C:92% T:NA</b>  | pCi/L | 12/14/20 08:14 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.138 ± 0.325 (0.722)</b><br><b>C:77% T:94%</b> | pCi/L | 12/09/20 11:12 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.490 ± 0.540 (1.07)</b>                        | pCi/L | 12/14/20 15:54 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-126</b> <b>Lab ID: 92505470006</b> Collected: 11/11/20 11:25      Received: 11/12/20 16:47      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.484 ± 0.285 (0.434)</b><br><b>C:90% T:NA</b>  | pCi/L | 12/14/20 08:00 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.353 ± 0.413 (0.872)</b><br><b>C:74% T:87%</b> | pCi/L | 12/09/20 11:12 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.837 ± 0.698 (1.31)</b>                        | pCi/L | 12/14/20 15:54 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

| Parameters  | Method                      | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|-----------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-125</b> <b>Lab ID: 92505470007</b> Collected: 11/12/20 09:26      Received: 11/12/20 16:47      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                             |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                             |  |       |                |            |      |
| Radium-226  | EPA 9315                    | <b>0.435 ± 0.224 (0.318)</b><br><b>C:95% T:NA</b>  | pCi/L | 12/14/20 08:14 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                             |  |       |                |            |      |
| Radium-228  | EPA 9320                    | <b>0.198 ± 0.411 (0.905)</b><br><b>C:77% T:87%</b> | pCi/L | 12/09/20 11:12 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                             |  |       |                |            |      |
| Total Radium  | Total Radium<br>Calculation | <b>0.633 ± 0.635 (1.22)</b>                        | pCi/L | 12/14/20 15:54 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 425494   | Analysis Method:      | EPA 9320                              |
| QC Batch Method: | EPA 9320 | Analysis Description: | 9320 Radium 228                       |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92505470005, 92505470006, 92505470007

METHOD BLANK: 2056122 Matrix: Water

Associated Lab Samples: 92505470005, 92505470006, 92505470007

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.240 ± 0.389 (0.846) C:74% T:78% | pCi/L | 12/09/20 11:13 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 426455   | Analysis Method:      | EPA 9320                              |
| QC Batch Method: | EPA 9320 | Analysis Description: | 9320 Radium 228                       |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92505470001, 92505470002, 92505470003, 92505470004

METHOD BLANK: 2060998 Matrix: Water

Associated Lab Samples: 92505470001, 92505470002, 92505470003, 92505470004

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-228 | 0.623 ± 0.506 (1.00) C:63% T:69% | pCi/L | 12/03/20 11:13 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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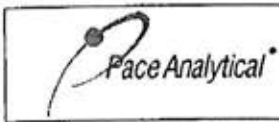
### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 02,05/NR RADS  
Pace Project No.: 92505470

| Lab ID      | Sample ID         | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|--------------------------|----------|-------------------|------------------|
| 92505470001 | HGWA-43D          | EPA 9315                 | 426374   |                   |                  |
| 92505470002 | EB-01             | EPA 9315                 | 426374   |                   |                  |
| 92505470003 | HGWA-44D          | EPA 9315                 | 426374   |                   |                  |
| 92505470004 | HGWA-44D FILTERED | EPA 9315                 | 426374   |                   |                  |
| 92505470005 | HGWA-45D          | EPA 9315                 | 426374   |                   |                  |
| 92505470006 | HGWC-126          | EPA 9315                 | 426374   |                   |                  |
| 92505470007 | HGWC-125          | EPA 9315                 | 426374   |                   |                  |
| 92505470001 | HGWA-43D          | EPA 9320                 | 426455   |                   |                  |
| 92505470002 | EB-01             | EPA 9320                 | 426455   |                   |                  |
| 92505470003 | HGWA-44D          | EPA 9320                 | 426455   |                   |                  |
| 92505470004 | HGWA-44D FILTERED | EPA 9320                 | 426455   |                   |                  |
| 92505470005 | HGWA-45D          | EPA 9320                 | 425494   |                   |                  |
| 92505470006 | HGWC-126          | EPA 9320                 | 425494   |                   |                  |
| 92505470007 | HGWC-125          | EPA 9320                 | 425494   |                   |                  |
| 92505470001 | HGWA-43D          | Total Radium Calculation | 427699   |                   |                  |
| 92505470002 | EB-01             | Total Radium Calculation | 427699   |                   |                  |
| 92505470003 | HGWA-44D          | Total Radium Calculation | 427699   |                   |                  |
| 92505470004 | HGWA-44D FILTERED | Total Radium Calculation | 427699   |                   |                  |
| 92505470005 | HGWA-45D          | Total Radium Calculation | 427136   |                   |                  |
| 92505470006 | HGWC-126          | Total Radium Calculation | 427136   |                   |                  |
| 92505470007 | HGWC-125          | Total Radium Calculation | 427136   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt(SCUR)  
Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

*G A Power*

Project #: **WO# : 92505470**

Courier:  Commercial  Fed Ex  Pace  UPS  USPS  Other:  Client



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: *11/11/20*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  Wet  Blue  None

Gun ID: *230*

Type of Ice:

Cooler Temp: *3.6 C* Correction Factor: Add/Subtract (°C) *0*

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *3.6*

USDA Regulated Soil  N/A, water sample

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|  | Comments/Discrepancy:                                |
|--|--|
| Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                   | 1.   |
| Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A           | 2.   |
| Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A         | 3.   |
| Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A            | 4.   |
| Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                          | 5.   |
| Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                    | 6.   |
| -Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                      |  |
| Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                          | 7.   |
| Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.   |
| Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A         | 9. <i>FB-01 is labeled EB-01<br/>11/11/20 @ 1610</i> |
| -Includes Date/Time/ID/Analysis Matrix: <i>W</i>   |  |
| Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A            | 10.  |
| Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                         | 11.  |
| Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A           |  |

COMMENTS/SAMPLE DISCREPANCY Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

Project #

**W0# : 92505470**

PH: KLH1

Due Date: 12/04/20

CLIENT: GA-GA Power

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic Zn Acetate & NaOH (>9) | BP4C-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFLU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unp (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (6 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG6U-100 mL Amber Unpreserved vials (N/A) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|--|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|--------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|--|
| 1     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 2     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 3     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 4     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 5     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 6     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 7     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 8     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 9     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 10    |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 11    |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 12    |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                          |                            |                                       |  |   |   |   |   |                                      |  |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, Incorrect preservative, out of temp, incorrect containers.







# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

|  |                                       |   |                                   |                                    |                              |
|--|---------------------------------------|---|-----------------------------------|------------------------------------|------------------------------|
| Section A<br>Required Client Information |                                       | Section B<br>Required Project Information   |                                   | Section C<br>Invoicing Information |                              |
| Company: GA Power                        | Address: Atlanta, GA                  | Report To: SCS Contacts                     | Copy To: Geosynthetic Contacts    | Attention: Southern Co.            | Company Name: Southern Co.   |
| Project Name: SCS Contacts               | Purchase Order No.:                   | Plant Name: Plant Hammond AP-3 BKG 02.05/NR | Project Number: GWS581            | Product Code:                      | Product Name: Kevin Hemming  |
| Requested Due Date/TAT: 15 Day           | Project Number: GWS581                | Product Reference:                          | Product Manager:                  | Product #:                         | 10839-4                      |
| REGULATORY AGENCY                        |                                       |   | Requested Analysis Filtered (Y/N) |                                    |                              |
| <input type="checkbox"/> NPDES           | <input type="checkbox"/> GROUND WATER | <input type="checkbox"/> DRINKING WATER     | <input type="checkbox"/> Y/N      | <input type="checkbox"/> Y/N       | <input type="checkbox"/> Y/N |
| <input type="checkbox"/> UST             | <input type="checkbox"/> RCRA         | <input type="checkbox"/> OTHER CCM          | <input type="checkbox"/> Y/N      | <input type="checkbox"/> Y/N       | <input type="checkbox"/> Y/N |
| Site Location: GA                        | STATE: GA                             | Analysis Test:                              | *Mo+App. III Metals               | N                                  | N                            |
|  |                                       |   | Chloride, Fluoride, Sulfate       | N                                  | N                            |
|  |                                       |   | TDS                               | N                                  | N                            |
|  |                                       |   | **Full App. III&IV Metals         | N                                  | N                            |
|  |                                       |   | RAD 226/228                       | N                                  | N                            |

| ITEM # | Section B<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |       | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives                  |                  |     |      |   |          |       | Analysis Test | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |                     |
|--------|--|-----------------------------------|-----------------------------|-----------|-------|---------------------------|-----------------|--------------------------------|------------------|-----|------|---|----------|-------|---------------|------------|-----------------------|-----------------------------|----------------------|---------------------|
|        |  |                                   |                             | DATE      | TIME  |                           |                 | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> | Methanol | Other |               |            |                       |                             |                      | *Mo+App. III Metals |
| 1      | HQWA-42B                                 | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 2      | HQWA-44D                                 | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 3      | HQWA-45D                                 | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 4      | HQWC-125                                 | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 5      | HQWC-126                                 | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 6      | MW-48D                                   | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 7      | FB-01                                    | WT G                              | G                           | 11/10/20  | 15:35 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 8      | HQWA-44B, Filtered                       | WT G                              | G                           | 11/10/20  | 16:30 | 19                        | 5               | 2                              | 3                |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 9      |  |                                   |                             |           |       |                           |                 |                                |                  |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 10     |  |                                   |                             |           |       |                           |                 |                                |                  |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 11     |  |                                   |                             |           |       |                           |                 |                                |                  |     |      |   |          |       |               |            |                       |                             |                      |                     |
| 12     |  |                                   |                             |           |       |                           |                 |                                |                  |     |      |   |          |       |               |            |                       |                             |                      |                     |

Additional Comments: SHAWN LIN / Geosynthetic

Relinquished By / Affiliation: Shawn Lin / Geosynthetic

Accepted By / Affiliation: Shawn Lin / Geosynthetic

Signature of Sampler: Shawn Lin

Date Signed: 11/10/2020

Temp in °C: 77C

Received on Ice (Y/N):

Custody Sealed Cooler (Y/N):

Samples Intact (Y/N):

Important Note: By signing this form you are accepting Pace's Mill 20 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 20 days.

FALL-0-020REV07, 15-Feb-2007



# Quality Control Sample Performance Assessment



Analyt Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: JJY  
Date: 12/11/2020  
Worklist: 57777  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2060743 |
| MB Concentration:                   | 0.034   |
| MB Counting Uncertainty:            | 0.131   |
| MB MDC:                             | 0.329   |
| MB Numerical Performance Indicator: | 0.50    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |            |
|---|----------------|------------|
|   | LCS57777       | LCSD57777  |
| Count Date:                                   | 12/14/2020     | 12/14/2020 |
| Spike I.D.:                                   | 19-033         | 19-033     |
| Decay Corrected Spike Concentration (pCi/mL): | 24.042         | 24.042     |
| Volume Used (mL):                             | 0.10           | 0.10       |
| Aliquot Volume (L, g, F):                     | 0.514          | 0.521      |
| Target Conc. (pCi/L, g, F):                   | 4.678          | 4.616      |
| Uncertainty (Calculated):                     | 0.056          | 0.055      |
| Result (pCi/L, g, F):                         | 4.983          | 4.027      |
| LCSD/LCSD Counting Uncertainty (pCi/L, g, F): | 0.652          | 0.584      |
| Numerical Performance Indicator:              | 0.91           | -1.97      |
| Percent Recovery:                             | 106.51%        | 87.23%     |
| Status vs Numerical Indicator:                | N/A            | N/A        |
| Status vs Recovery:                           | Pass           | Pass       |
| Upper % Recovery Limits:                      | 125%           | 125%       |
| Lower % Recovery Limits:                      | 75%            | 75%        |

| Duplicate Sample Assessment                                 | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCS57777       | LCSD57777 |
| Sample I.D.:  | 4.983          | 4.983     |
| Duplicate Sample I.D.:                                      | 0.652          | 0.652     |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 4.027          | 4.027     |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.584          | 0.584     |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | NO             | NO        |
| Are sample and/or duplicate results below RL?               | 2.139          | 2.139     |
| Duplicate Numerical Performance Indicator:                  | 19.90%         | 19.90%    |
| (Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:  | N/A            | N/A       |
| Duplicate Status vs Numerical Indicator:                    | Pass           | Pass      |
| Duplicate Status vs RPD:                                    | 25%            | 25%       |
| % RPD Limit:  |                |           |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

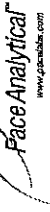
Comments:

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc.(pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result:<br>Sample Matrix Spike Result:<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

VAM 12/15/2020

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 12/7/2020  
Worklist: 57700  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2056122 |
| MB concentration:                   | 0.240   |
| M/B 2 Sigma CSU:                    | 0.389   |
| MB MDC:                             | 0.846   |
| MB Numerical Performance Indicator: | 1.21    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           | LCSID (Y or N)? | Y         |
|---|-----------|-----------------|-----------|
| Count Date:                                   | 12/9/2020 | LCS57700        | 12/9/2020 |
| Spike I.D.:                                   | 20-030    | LCS57700        | 20-030    |
| Decay Corrected Spike Concentration (pCi/mL): | 37.334    |                 | 37.334    |
| Volume Used (mL):                             | 0.10      |                 | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.826     |                 | 0.817     |
| Target Conc. (pCi/L, g, F):                   | 4.520     |                 | 4.572     |
| Uncertainty (Calculated):                     | 0.222     |                 | 0.224     |
| Result (pCi/L, g, F):                         | 3.467     |                 | 2.970     |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 0.898     |                 | 0.771     |
| Numerical Performance Indicator:              | -2.23     |                 | -3.91     |
| Percent Recovery:                             | 76.70%    |                 | 64.94%    |
| Status vs Numerical Indicator:                | N/A       |                 | N/A       |
| Upper % Recovery Limits:                      | Pass      |                 | Pass      |
| Lower % Recovery Limits:                      | 135%      |                 | 135%      |
|   | 60%       |                 | 60%       |

| Duplicate Sample Assessment                        |          | Matrix Spike/Matrix Spike Duplicate Sample Assessment |   |
|--|----------|---|---|
| Sample I.D.:                                       | LCS57700 | Sample I.D.:  | Sample I.D.   |
| Duplicate Sample I.D.:                             | LCS57700 | Sample MS I.D.:                                       | Sample MS I.D.  |
| Sample Result (pCi/L, g, F):                       | 3.467    | Sample MSD I.D.:                                      | Sample MSD I.D.   |
| Sample Duplicate Result (pCi/L, g, F):             | 0.898    | Sample Matrix Spike Result:                           | Sample Matrix Spike Result                              |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 2.970    | Sample Matrix Spike Duplicate Result:                 | Sample Matrix Spike Duplicate Result                    |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 0.771    | Sample Matrix Spike Duplicate Result:                 | Sample Matrix Spike Duplicate Result                    |
| Are sample and/or duplicate results below RL?      | NO       | Duplicate Numerical Performance Indicator:            | Duplicate Numerical Performance Indicator               |
| Duplicate Numerical Performance Indicator:         | 0.824    | (Based on the Percent Recoveries) Duplicate RPD:      | (Based on the Percent Recoveries) MS/MSD Duplicate RPD: |
| Duplicate Status vs Numerical Indicator:           | Pass     | MS/MSD Duplicate Status vs Numerical Indicator:       | MS/MSD Duplicate Status vs RPD:                         |
| Duplicate Status vs RPD:                           | Pass     | % RPD Limit:  | % RPD Limit:  |
| % RPD Limit:                                       | 36%      |   |   |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*Handwritten signature and date: 12/7/20*

# Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 11/25/2020  
Worklist: 57465  
Matrix: WT



| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2048526 |
| MB concentration:                   | 0.623   |
| M/B 2 Sigma CSU:                    | 0.506   |
| MB MDC:                             | 1.002   |
| MB Numerical Performance Indicator: | 2.42    |
| MB Status vs. Numerical Indicator:  | Warning |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           | LCSD (Y or N)? | Y |
|---|-----------|----------------|---|
| Count Date:                                   | 12/3/2020 | LCSD57465      |   |
| Spike I.D.:                                   | 20-030    | 12/3/2020      |   |
| Decay Corrected Spike Concentration (pCi/mL): | 37.408    | 37.408         |   |
| Volume Used (mL):                             | 0.10      | 0.10           |   |
| Aliquot Volume (L, g, F):                     | 0.805     | 0.826          |   |
| Target Conc. (pCi/L, g, F):                   | 4.546     | 4.527          |   |
| Uncertainty (Calculated):                     | 0.228     | 0.222          |   |
| Result (pCi/L, g, F):                         | 3.570     | 4.606          |   |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 0.962     | 1.105          |   |
| Numerical Performance Indicator:              | -2.37     | 0.14           |   |
| Percent Recovery:                             | 76.84%    | 101.73%        |   |
| Status vs Numerical Indicator:                | N/A       | N/A            |   |
| Status vs Recovery:                           | Pass      | Pass           |   |
| Upper % Recovery Limits:                      | 135%      | 135%           |   |
| Lower % Recovery Limits:                      | 60%       | 60%            |   |

| Duplicate Sample Assessment                               |           |
|---|-----------|
| Sample I.D.:  | LCSS7465  |
| Duplicate Sample I.D.:                                    | LCSD57465 |
| Sample Result (pCi/L, g, F):                              | 3.570     |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                  | 0.862     |
| Sample Duplicate Result (pCi/L, g, F):                    | 4.606     |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 1.105     |
| Are sample and/or duplicate results below RL?             | NO        |
| Duplicate Numerical Performance Indicator:                | -1.448    |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 27.88%    |
| Duplicate Status vs Numerical Indicator:                  | Pass      |
| Duplicate Status vs RPD:                                  | Pass      |
| % RPD Limit:  | 36%       |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*12-4-20*

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc.(pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MS Numerical Performance Indicator:<br>MSD Spike Uncertainty (calculated):<br>Sample Result:<br>Sample Result 2 Sigma CSU (pCi/L, g, F):<br>Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

December 2020

December 23, 2020

Kelley Sharpe  
ARCADIS - Atlanta  
2839 Paces Ferry Rd  
STE 900  
Atlanta, GA 30339

RE: Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

This replaces the December 21, 2020 final report. This report was revised to report Boron by EPA 6020B. No other changes were made to this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Maiya Parks  
maiya.parks@pacelabs.com  
(770)734-4200  
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power  
Warren Johnson, ARCADIS - Atlanta



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92511978001 | H-SCC NBR | Water  | 12/14/20 17:00 | 12/15/20 15:19 |
| 92511978002 | H-SCC E41 | Water  | 12/14/20 15:00 | 12/15/20 15:19 |
| 92511978003 | H-SCC     | Water  | 12/14/20 14:35 | 12/15/20 15:19 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92511978001 | H-SCC NBR | EPA 6010D              | DRB      | 4                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 2                 | PASI-GA    |
|             |           | SM 2450C-2011          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B-2011          | ECH      | 2                 | PASI-A     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92511978002 | H-SCC E41 | EPA 6010D              | DRB      | 4                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 2                 | PASI-GA    |
|             |           | SM 2450C-2011          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B-2011          | ECH      | 2                 | PASI-A     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92511978003 | H-SCC     | EPA 6010D              | DRB      | 4                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 2                 | PASI-GA    |
|             |           | SM 2450C-2011          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B-2011          | ECH      | 2                 | PASI-A     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

| Sample: H-SCC NBR  | Lab ID: 92511978001 | Collected: 12/14/20 17:00 | Received: 12/15/20 15:19 | Matrix: Water |                |                |            |      |
|--|---------------------|---------------------------|--------------------------|---------------|----------------|----------------|------------|------|
| Parameters   | Results             | Units                     | Report Limit             | DF            | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                                       |                     |                           |                          |               |                |                |            |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |                     |                           |                          |               |                |                |            |      |
| Potassium  | 1.5                 | mg/L                      | 0.20                     | 1             | 12/17/20 09:44 | 12/19/20 00:50 | 7440-09-7  |      |
| Sodium   | 1.2                 | mg/L                      | 1.0                      | 1             | 12/17/20 09:44 | 12/19/20 00:50 | 7440-23-5  |      |
| Calcium  | 8.3                 | mg/L                      | 1.0                      | 1             | 12/17/20 09:44 | 12/19/20 00:50 | 7440-70-2  |      |
| Magnesium  | 2.0                 | mg/L                      | 0.050                    | 1             | 12/17/20 09:44 | 12/19/20 00:50 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>                                      |                     |                           |                          |               |                |                |            |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |                     |                           |                          |               |                |                |            |      |
| Boron  | 0.041               | mg/L                      | 0.040                    | 1             | 12/16/20 12:36 | 12/22/20 15:44 | 7440-42-8  |      |
| Molybdenum   | ND                  | mg/L                      | 0.010                    | 1             | 12/16/20 12:36 | 12/17/20 18:43 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>                        |                     |                           |                          |               |                |                |            |      |
| Analytical Method: SM 2450C-2011                           |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |                     |                           |                          |               |                |                |            |      |
| Total Dissolved Solids                                     | 76.0                | mg/L                      | 10.0                     | 1             |                | 12/19/20 13:49 |            |      |
| <b>2320B Alkalinity</b>                                    |                     |                           |                          |               |                |                |            |      |
| Analytical Method: SM 2320B-2011                           |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Asheville                       |                     |                           |                          |               |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )               | 22.9                | mg/L                      | 5.0                      | 1             |                | 12/18/20 20:23 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>                     | 22.9                | mg/L                      | 5.0                      | 1             |                | 12/18/20 20:23 |            |      |
| <b>300.0 IC Anions 28 Days</b>                             |                     |                           |                          |               |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Asheville                       |                     |                           |                          |               |                |                |            |      |
| Chloride   | 1.3                 | mg/L                      | 1.0                      | 1             |                | 12/19/20 01:39 | 16887-00-6 |      |
| Fluoride   | ND                  | mg/L                      | 0.10                     | 1             |                | 12/19/20 01:39 | 16984-48-8 |      |
| Sulfate  | 9.1                 | mg/L                      | 1.0                      | 1             |                | 12/19/20 01:39 | 14808-79-8 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

| Sample: H-SCC E41                            |         | Lab ID: 92511978002  |              | Collected: 12/14/20 15:00 | Received: 12/15/20 15:19 | Matrix: Water  |            |      |
|--|---------|--|--------------|---------------------------|--------------------------|----------------|------------|------|
| Parameters                                   | Results | Units  | Report Limit | DF                        | Prepared                 | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                         |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |            |      |
| Potassium                                    | 1.7     | mg/L   | 0.20         | 1                         | 12/17/20 09:44           | 12/19/20 01:00 | 7440-09-7  |      |
| Sodium                                       | 1.3     | mg/L   | 1.0          | 1                         | 12/17/20 09:44           | 12/19/20 01:00 | 7440-23-5  |      |
| Calcium                                      | 9.0     | mg/L   | 1.0          | 1                         | 12/17/20 09:44           | 12/19/20 01:00 | 7440-70-2  |      |
| Magnesium                                    | 2.1     | mg/L   | 0.050        | 1                         | 12/17/20 09:44           | 12/19/20 01:00 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>                        |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |            |      |
| Boron  | ND      | mg/L   | 0.040        | 1                         | 12/16/20 12:36           | 12/22/20 15:49 | 7440-42-8  |      |
| Molybdenum                                   | ND      | mg/L   | 0.010        | 1                         | 12/16/20 12:36           | 12/17/20 18:49 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>          |         | Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |            |      |
| Total Dissolved Solids                       | 83.0    | mg/L   | 10.0         | 1                         |                          | 12/19/20 13:49 |            |      |
| <b>2320B Alkalinity</b>                      |         | Analytical Method: SM 2320B-2011<br>Pace Analytical Services - Asheville                                       |              |                           |                          |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | 21.8    | mg/L   | 5.0          | 1                         |                          | 12/18/20 20:29 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>       | 21.8    | mg/L   | 5.0          | 1                         |                          | 12/18/20 20:29 |            |      |
| <b>300.0 IC Anions 28 Days</b>               |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |            |      |
| Chloride                                     | 1.4     | mg/L   | 1.0          | 1                         |                          | 12/19/20 02:39 | 16887-00-6 |      |
| Fluoride                                     | ND      | mg/L   | 0.10         | 1                         |                          | 12/19/20 02:39 | 16984-48-8 |      |
| Sulfate                                      | 10.2    | mg/L   | 1.0          | 1                         |                          | 12/19/20 02:39 | 14808-79-8 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

| Sample: H-SCC  | Lab ID: 92511978003 | Collected: 12/14/20 14:35 | Received: 12/15/20 15:19 | Matrix: Water |                |                |            |      |
|--|---------------------|---------------------------|--------------------------|---------------|----------------|----------------|------------|------|
| Parameters   | Results             | Units                     | Report Limit             | DF            | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                                       |                     |                           |                          |               |                |                |            |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |                     |                           |                          |               |                |                |            |      |
| Potassium  | 2.3                 | mg/L                      | 0.20                     | 1             | 12/17/20 09:44 | 12/19/20 01:05 | 7440-09-7  |      |
| Sodium   | 1.3                 | mg/L                      | 1.0                      | 1             | 12/17/20 09:44 | 12/19/20 01:05 | 7440-23-5  |      |
| Calcium  | 9.9                 | mg/L                      | 1.0                      | 1             | 12/17/20 09:44 | 12/19/20 01:05 | 7440-70-2  |      |
| Magnesium  | 2.4                 | mg/L                      | 0.050                    | 1             | 12/17/20 09:44 | 12/19/20 01:05 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>                                      |                     |                           |                          |               |                |                |            |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |                     |                           |                          |               |                |                |            |      |
| Boron  | ND                  | mg/L                      | 0.040                    | 1             | 12/16/20 12:36 | 12/22/20 15:55 | 7440-42-8  |      |
| Molybdenum   | ND                  | mg/L                      | 0.010                    | 1             | 12/16/20 12:36 | 12/17/20 18:54 | 7439-98-7  |      |
| <b>2540C Total Dissolved Solids</b>                        |                     |                           |                          |               |                |                |            |      |
| Analytical Method: SM 2450C-2011                           |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA           |                     |                           |                          |               |                |                |            |      |
| Total Dissolved Solids                                     | 84.0                | mg/L                      | 10.0                     | 1             |                | 12/19/20 13:49 |            |      |
| <b>2320B Alkalinity</b>                                    |                     |                           |                          |               |                |                |            |      |
| Analytical Method: SM 2320B-2011                           |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Asheville                       |                     |                           |                          |               |                |                |            |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )               | 24.9                | mg/L                      | 5.0                      | 1             |                | 12/18/20 20:44 |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>                     | 24.9                | mg/L                      | 5.0                      | 1             |                | 12/18/20 20:44 |            |      |
| <b>300.0 IC Anions 28 Days</b>                             |                     |                           |                          |               |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                  |                     |                           |                          |               |                |                |            |      |
| Pace Analytical Services - Asheville                       |                     |                           |                          |               |                |                |            |      |
| Chloride   | 1.5                 | mg/L                      | 1.0                      | 1             |                | 12/19/20 03:24 | 16887-00-6 |      |
| Fluoride   | ND                  | mg/L                      | 0.10                     | 1             |                | 12/19/20 03:24 | 16984-48-8 |      |
| Sulfate  | 9.2                 | mg/L                      | 1.0                      | 1             |                | 12/19/20 03:24 | 14808-79-8 |      |

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 587738    | Analysis Method:      | EPA 6010D  |
| QC Batch Method: | EPA 3010A | Analysis Description: | 6010D ATL  |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3105916 Matrix: Water

Associated Lab Samples: 92511978001, 92511978002, 92511978003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 12/18/20 23:09 |            |
| Magnesium | mg/L  | ND           | 0.050           | 12/18/20 23:09 |            |
| Potassium | mg/L  | ND           | 0.20            | 12/18/20 23:09 |            |
| Sodium    | mg/L  | ND           | 1.0             | 12/18/20 23:09 |            |

LABORATORY CONTROL SAMPLE: 3105917

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 100       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 107       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3105918 3105919

| Parameter | Units | 92511758011 Result | MS          |           | MSD         |            | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|-------------|------------|----------|-----------|--------------|---------|------|
|           |       |                    | Spike Conc. | MS Result | Spike Conc. | MSD Result |          |           |              |         |      |
| Calcium   | mg/L  | ND                 | 1           | 1         | 1.6         | 1.5        | 114      | 108       | 75-125       | 4       | 20   |
| Magnesium | mg/L  | ND                 | 1           | 1         | 1.1         | 1.0        | 105      | 102       | 75-125       | 3       | 20   |
| Potassium | mg/L  | ND                 | 1           | 1         | 1.0         | 1.0        | 104      | 100       | 75-125       | 4       | 20   |
| Sodium    | mg/L  | ND                 | 1           | 1         | 1.1         | 1.0        | 110      | 105       | 75-125       | 5       | 20   |

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

QC Batch: 587446 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3104529 Matrix: Water  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

| Parameter  | Units | Blank Result | Reporting Limit | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------------|------------|
| Boron      | mg/L  | ND           | 0.040           | 12/17/20 17:22 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 12/17/20 17:22 |            |

LABORATORY CONTROL SAMPLE: 3104530

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Boron      | mg/L  | 1           | 0.85       | 85        | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3104531 3104532

| Parameter  | Units | 92511973001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Boron      | mg/L  | 0.041              | 1              | 1               | 0.94      | 0.93       | 90       | 89        | 75-125       | 0   | 20      |      |
| Molybdenum | mg/L  | ND                 | 0.1            | 0.1             | 0.10      | 0.11       | 104      | 105       | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

QC Batch: 587365 Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3104189 Matrix: Water  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

| Parameter              | Units | Blank Result | Reporting Limit | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 12/19/20 13:47 |            |

LABORATORY CONTROL SAMPLE: 3104190

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 413        | 103       | 84-108       |            |

SAMPLE DUPLICATE: 3104191

| Parameter              | Units | 92511963001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 71.0               | 81.0       | 13  | 10      | D6         |

SAMPLE DUPLICATE: 3104192

| Parameter              | Units | 92511973004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 69.0               | 73.0       | 6   | 10      |            |

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

QC Batch: 588167 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3107984 Matrix: Water  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

| Parameter                                    | Units | Blank Result | Reporting Limit | Analyzed       | Qualifiers |
|--|-------|--------------|-----------------|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>       | mg/L  | ND           | 5.0             | 12/18/20 18:47 |            |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 12/18/20 18:47 |            |

LABORATORY CONTROL SAMPLE: 3107985

| Parameter                              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 50          | 51.5       | 103       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3107986 3107987

| Parameter                              | Units | 92511312001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 264                | 50             | 50              | 318       | 318        | 109      | 108       | 80-120       | 0   | 25      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3107988 3107989

| Parameter                              | Units | 92511978003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 24.9               | 50             | 50              | 74.5      | 70.3       | 99       | 91        | 80-120       | 6   | 25      |      |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

QC Batch: 587786 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3106200 Matrix: Water  
Associated Lab Samples: 92511978001, 92511978002, 92511978003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 12/18/20 21:42 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 12/18/20 21:42 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 12/18/20 21:42 |            |

LABORATORY CONTROL SAMPLE: 3106201

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 51.4       | 103       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.6        | 103       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 52.0       | 104       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3106202 3106203

| Parameter | Units | 92511971001 |                | MSD             |           | MS         |          | MSD       |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-----------|--------|--------------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec |        |              |     |         |      |
| Chloride  | mg/L  | 5.3         | 50             | 50              | 56.1      | 57.6       | 102      | 105       | 90-110 | 2            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5            | 2.5             | 2.7       | 2.8        | 106      | 110       | 90-110 | 3            | 10  |         |      |
| Sulfate   | mg/L  | 12.2        | 50             | 50              | 66.9      | 68.4       | 109      | 112       | 90-110 | 2            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3106204 3106205

| Parameter | Units | 92511978002 |                | MSD             |           | MS         |          | MSD       |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-----------|--------|--------------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec |        |              |     |         |      |
| Chloride  | mg/L  | 1.4         | 50             | 50              | 56.1      | 55.5       | 109      | 108       | 90-110 | 1            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5            | 2.5             | 2.6       | 2.7        | 104      | 106       | 90-110 | 1            | 10  |         |      |
| Sulfate   | mg/L  | 10.2        | 50             | 50              | 63.8      | 64.2       | 107      | 108       | 90-110 | 1            | 10  |         |      |

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## QUALIFIERS

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond-CCR Ash Pond-Revised Report  
Pace Project No.: 92511978

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92511978001 | H-SCC NBR | EPA 3010A              | 587738   | EPA 6010D         | 587869           |
| 92511978002 | H-SCC E41 | EPA 3010A              | 587738   | EPA 6010D         | 587869           |
| 92511978003 | H-SCC     | EPA 3010A              | 587738   | EPA 6010D         | 587869           |
| 92511978001 | H-SCC NBR | EPA 3005A              | 587446   | EPA 6020B         | 587533           |
| 92511978002 | H-SCC E41 | EPA 3005A              | 587446   | EPA 6020B         | 587533           |
| 92511978003 | H-SCC     | EPA 3005A              | 587446   | EPA 6020B         | 587533           |
| 92511978001 | H-SCC NBR | SM 2450C-2011          | 587365   |                   |                  |
| 92511978002 | H-SCC E41 | SM 2450C-2011          | 587365   |                   |                  |
| 92511978003 | H-SCC     | SM 2450C-2011          | 587365   |                   |                  |
| 92511978001 | H-SCC NBR | SM 2320B-2011          | 588167   |                   |                  |
| 92511978002 | H-SCC E41 | SM 2320B-2011          | 588167   |                   |                  |
| 92511978003 | H-SCC     | SM 2320B-2011          | 588167   |                   |                  |
| 92511978001 | H-SCC NBR | EPA 300.0 Rev 2.1 1993 | 587786   |                   |                  |
| 92511978002 | H-SCC E41 | EPA 300.0 Rev 2.1 1993 | 587786   |                   |                  |
| 92511978003 | H-SCC     | EPA 300.0 Rev 2.1 1993 | 587786   |                   |                  |

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# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Section B Required Project Information: Section C Invoice Information: Page: 1 of 1

Company: ARCADIS Atlanta  
 Address: 2839 Paces Ferry Rd  
 Atlanta, GA 30339  
 Email: warren.johnson@arcadis.com  
 Phone: 678.485.5298  
 Fax: [ ]  
 Requested Due Date: 7 Day TAT

Report To: Ben Hodges, GPC  
 Copy To: [ ]  
 Purchase Order #: SCS10382775  
 Project Name: Plant Hammond AP-3  
 Project #: [ ]

Attention: Ben Hodges  
 Company Name: GPC  
 Address: [ ]  
 Pace Quote: [ ]  
 Pace Project Manager: Mayla Parks@pacelabs.com  
 Pace Profile #: 2239

Regulatory Agency: [ ]  
 State / Location: GA

| ITEM # | MATRIX    | CODE | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED  |          | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analyses Test | Requested Analyte Filtered (Y/N) | Residual Chlorine (Y/N) | TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|--------|-----------|------|---------------------------------------|-----------------------------|------------|----------|---------------------------|-----------------|---------------|---------------|----------------------------------|-------------------------|-----------|-----------------------|-----------------------------|----------------------|
|        |           |      |                                       |                             | START DATE | END DATE |                           |                 |               |               |                                  |                         |           |                       |                             |                      |
| 1      | H-SOC NBR | WT   | WT                                    | WT                          | 12-14      | 17:00    |                           | Unpreserved     |               | X             | X                                | X                       |           |                       |                             |                      |
| 2      | H-SOC E41 | WT   | WT                                    | WT                          | 12-14      | 15:00    |                           | H2SO4           |               | X             | X                                | X                       |           |                       |                             |                      |
| 3      | H-SOC     | WT   | WT                                    | WT                          | 12-14      | 14:35    |                           | HNO3            |               | X             | X                                | X                       |           |                       |                             |                      |
| 4      |           |      |                                       |                             |            |          |                           | HCl             |               |               |                                  |                         |           |                       |                             |                      |
| 5      |           |      |                                       |                             |            |          |                           | NaOH            |               |               |                                  |                         |           |                       |                             |                      |
| 6      |           |      |                                       |                             |            |          |                           | Na2S2O3         |               |               |                                  |                         |           |                       |                             |                      |
| 7      |           |      |                                       |                             |            |          |                           | Methanol        |               |               |                                  |                         |           |                       |                             |                      |
| 8      |           |      |                                       |                             |            |          |                           | Other           |               |               |                                  |                         |           |                       |                             |                      |
| 9      |           |      |                                       |                             |            |          |                           |                 |               |               |                                  |                         |           |                       |                             |                      |
| 10     |           |      |                                       |                             |            |          |                           |                 |               |               |                                  |                         |           |                       |                             |                      |
| 11     |           |      |                                       |                             |            |          |                           |                 |               |               |                                  |                         |           |                       |                             |                      |
| 12     |           |      |                                       |                             |            |          |                           |                 |               |               |                                  |                         |           |                       |                             |                      |

Major ions: Mg, Na, K, Total alkalinity, Bicarbonate alkalinity

REQUESTED BY / AFFILIATION: *Ben Hodges* DATE: 12/15/20  
 ACCEPTED BY / AFFILIATION: *Mayla Parks* DATE: 12/15/20

SAMPLER NAME AND SIGNATURE: *Ben Hodges* DATE Signed: 12-15-20

**MO# : 92511978**  
  
 92511978

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: Arcadis

Project #

**WO#: 92511978**

PM: MP Due Date: 12/22/20  
CLIENT: GR-ArcadAt1

Courier:  Commercial  Fed-Ex  UPS  USPS  Client  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 12/15/20  
CDH

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 0.87 230 Type of Ice:  Wet  Blue  None

Cooler Temp: 0.8 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 0.8

USDA Regulated Soil ( N/A, water sample)  
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|   |  |     | Comments/Discrepancy: |
|---|--|-----|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.  |                       |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.  | <u>PH rec 004</u>     |
| Short Hold Time Analysis (<72 hr.)?         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 3.  |                       |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4.  |                       |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.  |                       |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.  |                       |
| -Pace Containers Used?                      | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |     |                       |
| Containers Intact?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 7.  |                       |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.  |                       |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.  |                       |
| -Includes Date/Time/ID/Analysis Matrix:     | <u>W</u>   |     |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10. |                       |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11. |                       |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |     |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_

January 04, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92512580001 | HGWA-43D  | Water  | 12/15/20 12:25 | 12/17/20 08:48 |
| 92512580002 | HGWA-44D  | Water  | 12/15/20 16:18 | 12/17/20 08:48 |
| 92512580003 | EB-01     | Water  | 12/15/20 18:02 | 12/17/20 08:48 |
| 92512580004 | HGWA-45D  | Water  | 12/16/20 09:40 | 12/17/20 08:48 |
| 92512580005 | HGWC-125  | Water  | 12/16/20 12:01 | 12/17/20 08:48 |
| 92512580006 | HGWC-126  | Water  | 12/16/20 14:22 | 12/17/20 08:48 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported |
|-------------|-----------|------------------------|----------|-------------------|
| 92512580001 | HGWA-43D  | EPA 6010D              | KH       | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | ALW      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92512580002 | HGWA-44D  | EPA 6010D              | KH       | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | ALW      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92512580003 | EB-01     | EPA 6010D              | KH       | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | ALW      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92512580004 | HGWA-45D  | EPA 6010D              | KH       | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92512580005 | HGWC-125  | EPA 6010D              | KH       | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |
| 92512580006 | HGWC-126  | EPA 6010D              | KH       | 1                 |
|             |           | EPA 6020B              | CW1      | 13                |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | SM 2450C-2011          | AW1      | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 |

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

| Lab Sample ID          | Client Sample ID       | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters             |           |            |              |                |            |
| <b>92512580001</b>     | <b>HGWA-43D</b>        |           |            |              |                |            |
|                        | Performed by           | CUSTOMER  |            |              | 01/04/21 15:36 |            |
|                        | pH                     | 7.39      | Std. Units |              | 01/04/21 15:36 |            |
| EPA 6010D              | Calcium                | 62.6      | mg/L       | 1.0          | 12/24/20 23:57 |            |
| EPA 6020B              | Antimony               | 0.00031J  | mg/L       | 0.0030       | 12/28/20 17:38 |            |
| EPA 6020B              | Barium                 | 0.29      | mg/L       | 0.010        | 12/28/20 17:38 |            |
| EPA 6020B              | Boron                  | 0.052J    | mg/L       | 0.10         | 12/28/20 17:38 |            |
| EPA 6020B              | Lead                   | 0.000082J | mg/L       | 0.0050       | 12/28/20 17:38 |            |
| EPA 6020B              | Lithium                | 0.0019J   | mg/L       | 0.030        | 12/28/20 17:38 |            |
| EPA 6020B              | Molybdenum             | 0.0044J   | mg/L       | 0.010        | 12/28/20 17:38 |            |
| SM 2450C-2011          | Total Dissolved Solids | 289       | mg/L       | 10.0         | 12/19/20 12:22 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 4.7       | mg/L       | 1.0          | 12/23/20 19:30 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.21      | mg/L       | 0.10         | 12/23/20 19:30 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 38.8      | mg/L       | 1.0          | 12/23/20 19:30 |            |
| <b>92512580002</b>     | <b>HGWA-44D</b>        |           |            |              |                |            |
|                        | Performed by           | CUSTOMER  |            |              | 01/04/21 15:36 |            |
|                        | pH                     | 7.87      | Std. Units |              | 01/04/21 15:36 |            |
| EPA 6010D              | Calcium                | 28.7      | mg/L       | 1.0          | 12/25/20 00:03 |            |
| EPA 6020B              | Antimony               | 0.00047J  | mg/L       | 0.0030       | 12/28/20 17:43 |            |
| EPA 6020B              | Barium                 | 0.39      | mg/L       | 0.010        | 12/28/20 17:43 |            |
| EPA 6020B              | Boron                  | 0.31      | mg/L       | 0.10         | 12/28/20 17:43 |            |
| EPA 6020B              | Chromium               | 0.00072J  | mg/L       | 0.010        | 12/28/20 17:43 |            |
| EPA 6020B              | Lead                   | 0.00011J  | mg/L       | 0.0050       | 12/28/20 17:43 |            |
| EPA 6020B              | Lithium                | 0.028J    | mg/L       | 0.030        | 12/28/20 17:43 |            |
| EPA 6020B              | Molybdenum             | 0.0019J   | mg/L       | 0.010        | 12/28/20 17:43 |            |
| SM 2450C-2011          | Total Dissolved Solids | 295       | mg/L       | 10.0         | 12/19/20 12:22 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 9.4       | mg/L       | 1.0          | 12/23/20 19:45 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.67      | mg/L       | 0.10         | 12/23/20 19:45 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 6.7       | mg/L       | 1.0          | 12/23/20 19:45 |            |
| <b>92512580003</b>     | <b>EB-01</b>           |           |            |              |                |            |
| EPA 6010D              | Calcium                | 0.12J     | mg/L       | 1.0          | 12/25/20 00:28 |            |
| <b>92512580004</b>     | <b>HGWA-45D</b>        |           |            |              |                |            |
|                        | Performed by           | CUSTOMER  |            |              | 01/04/21 15:36 |            |
|                        | pH                     | 7.39      | Std. Units |              | 01/04/21 15:36 |            |
| EPA 6010D              | Calcium                | 56.4      | mg/L       | 1.0          | 12/25/20 00:52 |            |
| EPA 6020B              | Barium                 | 0.52      | mg/L       | 0.010        | 12/29/20 10:32 |            |
| EPA 6020B              | Boron                  | 0.16      | mg/L       | 0.10         | 12/29/20 10:32 |            |
| EPA 6020B              | Lead                   | 0.000058J | mg/L       | 0.0050       | 12/29/20 10:32 |            |
| EPA 6020B              | Lithium                | 0.0045J   | mg/L       | 0.030        | 12/29/20 10:32 |            |
| EPA 6020B              | Molybdenum             | 0.0024J   | mg/L       | 0.010        | 12/29/20 10:32 |            |
| SM 2450C-2011          | Total Dissolved Solids | 294       | mg/L       | 10.0         | 12/22/20 17:32 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 3.4       | mg/L       | 1.0          | 12/23/20 20:29 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.18      | mg/L       | 0.10         | 12/23/20 20:29 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 11.3      | mg/L       | 1.0          | 12/23/20 20:29 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Lab Sample ID          | Client Sample ID       | Result  | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|------------------------|---------|------------|--------------|----------------|------------|
| Method                 | Parameters             |         |            |              |                |            |
| <b>92512580005</b>     | <b>HGWC-125</b>        |         |            |              |                |            |
|                        | Performed by           | CUSTOME |            |              | 01/04/21 15:36 |            |
|                        |                        | R       |            |              |                |            |
|                        | pH                     | 6.61    | Std. Units |              | 01/04/21 15:36 |            |
| EPA 6010D              | Calcium                | 194     | mg/L       | 1.0          | 12/25/20 00:58 |            |
| EPA 6020B              | Barium                 | 0.041   | mg/L       | 0.010        | 12/29/20 10:38 |            |
| EPA 6020B              | Boron                  | 1.5     | mg/L       | 0.10         | 12/29/20 10:38 |            |
| EPA 6020B              | Cobalt                 | 0.0055  | mg/L       | 0.0050       | 12/29/20 10:38 |            |
| EPA 6020B              | Lithium                | 0.0055J | mg/L       | 0.030        | 12/29/20 10:38 |            |
| EPA 6020B              | Molybdenum             | 0.014   | mg/L       | 0.010        | 12/29/20 10:38 |            |
| SM 2450C-2011          | Total Dissolved Solids | 816     | mg/L       | 20.0         | 12/22/20 17:33 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 5.3     | mg/L       | 1.0          | 12/23/20 21:14 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.20    | mg/L       | 0.10         | 12/23/20 21:14 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 306     | mg/L       | 7.0          | 12/24/20 11:22 |            |
| <b>92512580006</b>     | <b>HGWC-126</b>        |         |            |              |                |            |
|                        | Performed by           | CUSTOME |            |              | 01/04/21 15:36 |            |
|                        |                        | R       |            |              |                |            |
|                        | pH                     | 6.93    | Std. Units |              | 01/04/21 15:36 |            |
| EPA 6010D              | Calcium                | 132     | mg/L       | 1.0          | 12/25/20 01:04 |            |
| EPA 6020B              | Barium                 | 0.24    | mg/L       | 0.010        | 12/29/20 10:44 |            |
| EPA 6020B              | Boron                  | 0.011J  | mg/L       | 0.10         | 12/29/20 10:44 |            |
| EPA 6020B              | Lithium                | 0.0029J | mg/L       | 0.030        | 12/29/20 10:44 |            |
| SM 2450C-2011          | Total Dissolved Solids | 536     | mg/L       | 20.0         | 12/22/20 17:33 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride               | 8.9     | mg/L       | 1.0          | 12/23/20 21:29 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride               | 0.49    | mg/L       | 0.10         | 12/23/20 21:29 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                | 68.1    | mg/L       | 1.0          | 12/23/20 21:29 |            |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Sample: <b>HGWA-43D</b>  |                  | Lab ID: <b>92512580001</b> |              | Collected: 12/15/20 12:25 |    | Received: 12/17/20 08:48 |                | Matrix: Water |      |
|--|------------------|----------------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results          | Units                      | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                  |                            |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                            |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b>  |                            |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| pH   | <b>7.39</b>      | Std. Units                 |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| <b>6010D ATL ICP</b>   |                  |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                            |              |                           |    |                          |                |               |      |
| Calcium  | <b>62.6</b>      | mg/L                       | 1.0          | 0.070                     | 1  | 12/24/20 13:26           | 12/24/20 23:57 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                  |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                            |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.00031J</b>  | mg/L                       | 0.0030       | 0.00028                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-36-0     |      |
| Arsenic  | ND               | mg/L                       | 0.0050       | 0.00078                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-38-2     |      |
| Barium   | <b>0.29</b>      | mg/L                       | 0.010        | 0.00071                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-39-3     |      |
| Beryllium  | ND               | mg/L                       | 0.0030       | 0.000046                  | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-41-7     |      |
| Boron  | <b>0.052J</b>    | mg/L                       | 0.10         | 0.0052                    | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-42-8     |      |
| Cadmium  | ND               | mg/L                       | 0.0025       | 0.00012                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-43-9     |      |
| Chromium   | ND               | mg/L                       | 0.010        | 0.00055                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-47-3     |      |
| Cobalt   | ND               | mg/L                       | 0.0050       | 0.00038                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-48-4     |      |
| Lead   | <b>0.000082J</b> | mg/L                       | 0.0050       | 0.000036                  | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7439-92-1     |      |
| Lithium  | <b>0.0019J</b>   | mg/L                       | 0.030        | 0.00081                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7439-93-2     |      |
| Molybdenum   | <b>0.0044J</b>   | mg/L                       | 0.010        | 0.00069                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7439-98-7     |      |
| Selenium   | ND               | mg/L                       | 0.010        | 0.0016                    | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7782-49-2     |      |
| Thallium   | ND               | mg/L                       | 0.0010       | 0.00014                   | 1  | 12/24/20 10:19           | 12/28/20 17:38 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                  |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                            |              |                           |    |                          |                |               |      |
| Mercury  | ND               | mg/L                       | 0.00050      | 0.000078                  | 1  | 12/22/20 07:10           | 12/22/20 12:57 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                            |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                            |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>289</b>       | mg/L                       | 10.0         | 10.0                      | 1  |                          | 12/19/20 12:22 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                  |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                  |                            |              |                           |    |                          |                |               |      |
| Chloride   | <b>4.7</b>       | mg/L                       | 1.0          | 0.60                      | 1  |                          | 12/23/20 19:30 | 16887-00-6    |      |
| Fluoride   | <b>0.21</b>      | mg/L                       | 0.10         | 0.050                     | 1  |                          | 12/23/20 19:30 | 16984-48-8    |      |
| Sulfate  | <b>38.8</b>      | mg/L                       | 1.0          | 0.50                      | 1  |                          | 12/23/20 19:30 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Sample: <b>HGWA-44D</b>  |                 | Lab ID: <b>92512580002</b> |              | Collected: 12/15/20 16:18 |    | Received: 12/17/20 08:48 |                | Matrix: Water |      |
|--|-----------------|----------------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units                      | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                            |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                            |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                            |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| pH   | <b>7.87</b>     | Std. Units                 |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| <b>6010D ATL ICP</b>   |                 |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |    |                          |                |               |      |
| Calcium  | <b>28.7</b>     | mg/L                       | 1.0          | 0.070                     | 1  | 12/24/20 13:26           | 12/25/20 00:03 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                 |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.00047J</b> | mg/L                       | 0.0030       | 0.00028                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                       | 0.0050       | 0.00078                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-38-2     |      |
| Barium   | <b>0.39</b>     | mg/L                       | 0.010        | 0.00071                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                       | 0.0030       | 0.000046                  | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-41-7     |      |
| Boron  | <b>0.31</b>     | mg/L                       | 0.10         | 0.0052                    | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                       | 0.0025       | 0.00012                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-43-9     |      |
| Chromium   | <b>0.00072J</b> | mg/L                       | 0.010        | 0.00055                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                       | 0.0050       | 0.00038                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-48-4     |      |
| Lead   | <b>0.00011J</b> | mg/L                       | 0.0050       | 0.000036                  | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7439-92-1     |      |
| Lithium  | <b>0.028J</b>   | mg/L                       | 0.030        | 0.00081                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7439-93-2     |      |
| Molybdenum   | <b>0.0019J</b>  | mg/L                       | 0.010        | 0.00069                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7439-98-7     |      |
| Selenium   | ND              | mg/L                       | 0.010        | 0.0016                    | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7782-49-2     |      |
| Thallium   | ND              | mg/L                       | 0.0010       | 0.00014                   | 1  | 12/24/20 10:19           | 12/28/20 17:43 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                 |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                       | 0.00050      | 0.000078                  | 1  | 12/22/20 07:10           | 12/22/20 13:00 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                            |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                            |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>295</b>      | mg/L                       | 10.0         | 10.0                      | 1  |                          | 12/19/20 12:22 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                 |                            |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                 |                            |              |                           |    |                          |                |               |      |
| Chloride   | <b>9.4</b>      | mg/L                       | 1.0          | 0.60                      | 1  |                          | 12/23/20 19:45 | 16887-00-6    |      |
| Fluoride   | <b>0.67</b>     | mg/L                       | 0.10         | 0.050                     | 1  |                          | 12/23/20 19:45 | 16984-48-8    |      |
| Sulfate  | <b>6.7</b>      | mg/L                       | 1.0          | 0.50                      | 1  |                          | 12/23/20 19:45 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

| Sample: EB-01                       |         | Lab ID: 92512580003  |         | Collected: 12/15/20 18:02 |    | Received: 12/17/20 08:48 |                | Matrix: Water |      |  |
|-------------------------------------|---------|--|---------|---------------------------|----|--------------------------|----------------|---------------|------|--|
| Parameters                          | Results | Units  | Report  |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual |  |
|                                     |         |  | Limit   | MDL                       | DF |                          |                |               |      |  |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Calcium                             | 0.12J   | mg/L   | 1.0     | 0.070                     | 1  | 12/24/20 13:26           | 12/25/20 00:28 | 7440-70-2     |      |  |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Antimony                            | ND      | mg/L   | 0.0030  | 0.00028                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-36-0     |      |  |
| Arsenic                             | ND      | mg/L   | 0.0050  | 0.00078                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-38-2     |      |  |
| Barium                              | ND      | mg/L   | 0.010   | 0.00071                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-39-3     |      |  |
| Beryllium                           | ND      | mg/L   | 0.0030  | 0.000046                  | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-41-7     |      |  |
| Boron                               | ND      | mg/L   | 0.10    | 0.0052                    | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-42-8     |      |  |
| Cadmium                             | ND      | mg/L   | 0.0025  | 0.00012                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-43-9     |      |  |
| Chromium                            | ND      | mg/L   | 0.010   | 0.00055                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-47-3     |      |  |
| Cobalt                              | ND      | mg/L   | 0.0050  | 0.00038                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-48-4     |      |  |
| Lead                                | ND      | mg/L   | 0.0050  | 0.000036                  | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7439-92-1     |      |  |
| Lithium                             | ND      | mg/L   | 0.030   | 0.00081                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7439-93-2     |      |  |
| Molybdenum                          | ND      | mg/L   | 0.010   | 0.00069                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7439-98-7     |      |  |
| Selenium                            | ND      | mg/L   | 0.010   | 0.0016                    | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7782-49-2     |      |  |
| Thallium                            | ND      | mg/L   | 0.0010  | 0.00014                   | 1  | 12/24/20 10:19           | 12/29/20 10:21 | 7440-28-0     |      |  |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Mercury                             | ND      | mg/L   | 0.00050 | 0.000078                  | 1  | 12/22/20 07:10           | 12/22/20 13:02 | 7439-97-6     |      |  |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |    |                          |                |               |      |  |
| Total Dissolved Solids              | ND      | mg/L   | 10.0    | 10.0                      | 1  |                          | 12/19/20 12:22 |               |      |  |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |    |                          |                |               |      |  |
| Chloride                            | ND      | mg/L   | 1.0     | 0.60                      | 1  |                          | 12/23/20 20:00 | 16887-00-6    |      |  |
| Fluoride                            | ND      | mg/L   | 0.10    | 0.050                     | 1  |                          | 12/23/20 20:00 | 16984-48-8    |      |  |
| Sulfate                             | ND      | mg/L   | 1.0     | 0.50                      | 1  |                          | 12/23/20 20:00 | 14808-79-8    |      |  |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Sample: HGWA-45D   |                  | Lab ID: 92512580004 |              | Collected: 12/16/20 09:40 |    | Received: 12/17/20 08:48 |                | Matrix: Water |      |
|--|------------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results          | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b>  |                     |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| pH   | <b>7.39</b>      | Std. Units          |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| <b>6010D ATL ICP</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>56.4</b>      | mg/L                | 1.0          | 0.070                     | 1  | 12/24/20 13:26           | 12/25/20 00:52 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND               | mg/L                | 0.0030       | 0.00028                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-36-0     |      |
| Arsenic  | ND               | mg/L                | 0.0050       | 0.00078                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-38-2     |      |
| Barium   | <b>0.52</b>      | mg/L                | 0.010        | 0.00071                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-39-3     |      |
| Beryllium  | ND               | mg/L                | 0.0030       | 0.000046                  | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-41-7     |      |
| Boron  | <b>0.16</b>      | mg/L                | 0.10         | 0.0052                    | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-42-8     |      |
| Cadmium  | ND               | mg/L                | 0.0025       | 0.00012                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-43-9     |      |
| Chromium   | ND               | mg/L                | 0.010        | 0.00055                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-47-3     |      |
| Cobalt   | ND               | mg/L                | 0.0050       | 0.00038                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-48-4     |      |
| Lead   | <b>0.000058J</b> | mg/L                | 0.0050       | 0.000036                  | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7439-92-1     |      |
| Lithium  | <b>0.0045J</b>   | mg/L                | 0.030        | 0.00081                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7439-93-2     |      |
| Molybdenum   | <b>0.0024J</b>   | mg/L                | 0.010        | 0.00069                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7439-98-7     |      |
| Selenium   | ND               | mg/L                | 0.010        | 0.0016                    | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7782-49-2     |      |
| Thallium   | ND               | mg/L                | 0.0010       | 0.00014                   | 1  | 12/24/20 10:19           | 12/29/20 10:32 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND               | mg/L                | 0.00050      | 0.000078                  | 1  | 12/22/20 07:10           | 12/22/20 13:19 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>294</b>       | mg/L                | 10.0         | 10.0                      | 1  |                          | 12/22/20 17:32 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                  |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                  |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>3.4</b>       | mg/L                | 1.0          | 0.60                      | 1  |                          | 12/23/20 20:29 | 16887-00-6    |      |
| Fluoride   | <b>0.18</b>      | mg/L                | 0.10         | 0.050                     | 1  |                          | 12/23/20 20:29 | 16984-48-8    |      |
| Sulfate  | <b>11.3</b>      | mg/L                | 1.0          | 0.50                      | 1  |                          | 12/23/20 20:29 | 14808-79-8    |      |

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Sample: HGWC-125   |                 | Lab ID: 92512580005 |              | Collected: 12/16/20 12:01 |    | Received: 12/17/20 08:48 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| pH   | <b>6.61</b>     | Std. Units          |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>194</b>      | mg/L                | 1.0          | 0.070                     | 1  | 12/24/20 13:26           | 12/25/20 00:58 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00028                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.00078                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-38-2     |      |
| Barium   | <b>0.041</b>    | mg/L                | 0.010        | 0.00071                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.0030       | 0.000046                  | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-41-7     |      |
| Boron  | <b>1.5</b>      | mg/L                | 0.10         | 0.0052                    | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.0025       | 0.00012                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.010        | 0.00055                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-47-3     |      |
| Cobalt   | <b>0.0055</b>   | mg/L                | 0.0050       | 0.00038                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-48-4     |      |
| Lead   | ND              | mg/L                | 0.0050       | 0.000036                  | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7439-92-1     |      |
| Lithium  | <b>0.0055J</b>  | mg/L                | 0.030        | 0.00081                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7439-93-2     |      |
| Molybdenum   | <b>0.014</b>    | mg/L                | 0.010        | 0.00069                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7439-98-7     |      |
| Selenium   | ND              | mg/L                | 0.010        | 0.0016                    | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7782-49-2     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00014                   | 1  | 12/24/20 10:19           | 12/29/20 10:38 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00050      | 0.000078                  | 1  | 12/22/20 07:10           | 12/22/20 13:21 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>816</b>      | mg/L                | 20.0         | 20.0                      | 1  |                          | 12/22/20 17:33 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                 |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>5.3</b>      | mg/L                | 1.0          | 0.60                      | 1  |                          | 12/23/20 21:14 | 16887-00-6    |      |
| Fluoride   | <b>0.20</b>     | mg/L                | 0.10         | 0.050                     | 1  |                          | 12/23/20 21:14 | 16984-48-8    |      |
| Sulfate  | <b>306</b>      | mg/L                | 7.0          | 3.5                       | 7  |                          | 12/24/20 11:22 | 14808-79-8    |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Sample: HGWC-126   |                 | Lab ID: 92512580006 |              | Collected: 12/16/20 14:22 |    | Received: 12/17/20 08:48 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| pH   | <b>6.93</b>     | Std. Units          |              |                           | 1  |                          | 01/04/21 15:36 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Calcium  | <b>132</b>      | mg/L                | 1.0          | 0.070                     | 1  | 12/24/20 13:26           | 12/25/20 01:04 | 7440-70-2     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00028                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.00078                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-38-2     |      |
| Barium   | <b>0.24</b>     | mg/L                | 0.010        | 0.00071                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.0030       | 0.000046                  | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-41-7     |      |
| Boron  | <b>0.011J</b>   | mg/L                | 0.10         | 0.0052                    | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.0025       | 0.00012                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.010        | 0.00055                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00038                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-48-4     |      |
| Lead   | ND              | mg/L                | 0.0050       | 0.000036                  | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7439-92-1     |      |
| Lithium  | <b>0.0029J</b>  | mg/L                | 0.030        | 0.00081                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7439-93-2     |      |
| Molybdenum   | ND              | mg/L                | 0.010        | 0.00069                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7439-98-7     |      |
| Selenium   | ND              | mg/L                | 0.010        | 0.0016                    | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7782-49-2     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00014                   | 1  | 12/24/20 10:19           | 12/29/20 10:44 | 7440-28-0     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00050      | 0.000078                  | 1  | 12/22/20 07:10           | 12/22/20 13:23 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2450C-2011<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>536</b>      | mg/L                | 20.0         | 20.0                      | 1  |                          | 12/22/20 17:33 |               |      |
| <b>300.0 IC Anions 28 Days</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |                 |                     |              |                           |    |                          |                |               |      |
| Chloride   | <b>8.9</b>      | mg/L                | 1.0          | 0.60                      | 1  |                          | 12/23/20 21:29 | 16887-00-6    |      |
| Fluoride   | <b>0.49</b>     | mg/L                | 0.10         | 0.050                     | 1  |                          | 12/23/20 21:29 | 16984-48-8    |      |
| Sulfate  | <b>68.1</b>     | mg/L                | 1.0          | 0.50                      | 1  |                          | 12/23/20 21:29 | 14808-79-8    |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

QC Batch: 589396 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3113409 Matrix: Water  
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.070 | 12/24/20 23:39 |            |

LABORATORY CONTROL SAMPLE: 3113410

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 104       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113411 3113412

| Parameter | Units | 3113411            |                | 3113412         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|-------|
|           |       | 92512572002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 28.7               | 1              | 1               | 30.4      | 29.3     | 173       | 61           | 75-125 | 4       | 20 M1 |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

QC Batch: 589337 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3113101

Matrix: Water

Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

| Parameter  | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|------------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony   | mg/L  | ND           | 0.0030          | 0.00028  | 12/28/20 16:52 |            |
| Arsenic    | mg/L  | ND           | 0.0050          | 0.00078  | 12/28/20 16:52 |            |
| Barium     | mg/L  | ND           | 0.010           | 0.00071  | 12/28/20 16:52 |            |
| Beryllium  | mg/L  | ND           | 0.0030          | 0.000046 | 12/28/20 16:52 |            |
| Boron      | mg/L  | ND           | 0.10            | 0.0052   | 12/28/20 16:52 |            |
| Cadmium    | mg/L  | ND           | 0.0025          | 0.00012  | 12/28/20 16:52 |            |
| Chromium   | mg/L  | ND           | 0.010           | 0.00055  | 12/28/20 16:52 |            |
| Cobalt     | mg/L  | ND           | 0.0050          | 0.00038  | 12/28/20 16:52 |            |
| Lead       | mg/L  | ND           | 0.0050          | 0.000036 | 12/28/20 16:52 |            |
| Lithium    | mg/L  | ND           | 0.030           | 0.00081  | 12/28/20 16:52 |            |
| Molybdenum | mg/L  | ND           | 0.010           | 0.00069  | 12/28/20 16:52 |            |
| Selenium   | mg/L  | ND           | 0.010           | 0.0016   | 12/28/20 16:52 |            |
| Thallium   | mg/L  | ND           | 0.0010          | 0.00014  | 12/28/20 16:52 |            |

LABORATORY CONTROL SAMPLE: 3113102

| Parameter  | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Antimony   | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Arsenic    | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Barium     | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Beryllium  | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Boron      | mg/L  | 1           | 0.91       | 91        | 80-120       |            |
| Cadmium    | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Chromium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Cobalt     | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Lead       | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Lithium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Molybdenum | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Selenium   | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Thallium   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103 3113104

| Parameter | Units | 92512103004 Result | MS          |                 | MSD       |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       |                    | Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Antimony  | mg/L  | ND                 | 0.1         | 0.1             | 0.099     | 0.099      | 99       | 99        | 75-125       | 0   | 20      |      |
| Arsenic   | mg/L  | ND                 | 0.1         | 0.1             | 0.092     | 0.092      | 92       | 92        | 75-125       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

| Parameter  | Units | 3113103               |                      | 3113104               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | RPD | Max<br>RPD | Qual |
|------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
|            |       | 92512103004<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |     |            |      |
| Barium     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.094        | 94            | 94          | 75-125       | 0               | 20  |            |      |
| Beryllium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.096        | 95            | 96          | 75-125       | 1               | 20  |            |      |
| Boron      | mg/L  | ND                    | 1                    | 1                     | 0.92         | 0.95         | 91            | 95          | 75-125       | 3               | 20  |            |      |
| Cadmium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.096        | 95            | 96          | 75-125       | 1               | 20  |            |      |
| Chromium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.093        | 0.096        | 93            | 96          | 75-125       | 3               | 20  |            |      |
| Cobalt     | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.093        | 94            | 93          | 75-125       | 1               | 20  |            |      |
| Lead       | mg/L  | ND                    | 0.1                  | 0.1                   | 0.092        | 0.095        | 92            | 95          | 75-125       | 3               | 20  |            |      |
| Lithium    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.099        | 94            | 99          | 75-125       | 4               | 20  |            |      |
| Molybdenum | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.096        | 97            | 96          | 75-125       | 1               | 20  |            |      |
| Selenium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.089        | 0.091        | 89            | 91          | 75-125       | 2               | 20  |            |      |
| Thallium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.091        | 0.094        | 91            | 94          | 75-125       | 3               | 20  |            |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 588542    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3109729 Matrix: Water  
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00050         | 0.000078 | 12/22/20 12:50 |            |

LABORATORY CONTROL SAMPLE: 3109730

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0025     | 100       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3109731 3109732

| Parameter | Units | 3109731        |                 | 3109732   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0022    | 0.0023     | 89       | 90        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

QC Batch: 588373 Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92512580001, 92512580002, 92512580003

METHOD BLANK: 3109057 Matrix: Water  
Associated Lab Samples: 92512580001, 92512580002, 92512580003

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 12/19/20 12:17 |            |

LABORATORY CONTROL SAMPLE: 3109058

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 408        | 102       | 84-108       |            |

SAMPLE DUPLICATE: 3109059

| Parameter              | Units | 92512397001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 65.0               | 70.0       | 7   | 10      |            |

SAMPLE DUPLICATE: 3109063

| Parameter              | Units | 92512574004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 193                | 183        | 5   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 588927        | Analysis Method:      | SM 2450C-2011                                    |
| QC Batch Method: | SM 2450C-2011 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92512580004, 92512580005, 92512580006

METHOD BLANK: 3111378 Matrix: Water

Associated Lab Samples: 92512580004, 92512580005, 92512580006

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 12/22/20 17:31 |            |

LABORATORY CONTROL SAMPLE: 3111379

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 386        | 96        | 84-108       |            |

SAMPLE DUPLICATE: 3111380

| Parameter              | Units | 92512580004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 294                | 295        | 0   | 10      |            |

SAMPLE DUPLICATE: 3111381

| Parameter              | Units | 92513185001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 339                | 340        | 0   | 10      |            |

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### QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

QC Batch: 589104 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville  
 Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3112052 Matrix: Water  
 Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 12/23/20 16:31 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 12/23/20 16:31 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 12/23/20 16:31 |            |

LABORATORY CONTROL SAMPLE: 3112053

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 51.6       | 103       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 102       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 52.0       | 104       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112054 3112055

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92513456002 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 409         | 50     | 50          | 471         | 456       | 125        | 94       | 90-110    | 3            | 10  | M6      |      |
| Fluoride  | mg/L  | 0.14        | 2.5    | 2.5         | 2.1         | 2.1       | 77         | 79       | 90-110    | 2            | 10  | M1      |      |
| Sulfate   | mg/L  | 403         | 50     | 50          | 466         | 450       | 126        | 93       | 90-110    | 4            | 10  | M6      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112056 3112057

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92512580004 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 3.4         | 50     | 50          | 57.4        | 57.5      | 108        | 108      | 90-110    | 0            | 10  |         |      |
| Fluoride  | mg/L  | 0.18        | 2.5    | 2.5         | 2.7         | 2.7       | 102        | 102      | 90-110    | 0            | 10  |         |      |
| Sulfate   | mg/L  | 11.3        | 50     | 50          | 65.5        | 65.6      | 108        | 109      | 90-110    | 0            | 10  |         |      |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 03, 06  
Pace Project No.: 92512580

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92512580001 | HGWA-43D  |                        |          |                   |                  |
| 92512580002 | HGWA-44D  |                        |          |                   |                  |
| 92512580004 | HGWA-45D  |                        |          |                   |                  |
| 92512580005 | HGWC-125  |                        |          |                   |                  |
| 92512580006 | HGWC-126  |                        |          |                   |                  |
| 92512580001 | HGWA-43D  | EPA 3010A              | 589396   | EPA 6010D         | 589429           |
| 92512580002 | HGWA-44D  | EPA 3010A              | 589396   | EPA 6010D         | 589429           |
| 92512580003 | EB-01     | EPA 3010A              | 589396   | EPA 6010D         | 589429           |
| 92512580004 | HGWA-45D  | EPA 3010A              | 589396   | EPA 6010D         | 589429           |
| 92512580005 | HGWC-125  | EPA 3010A              | 589396   | EPA 6010D         | 589429           |
| 92512580006 | HGWC-126  | EPA 3010A              | 589396   | EPA 6010D         | 589429           |
| 92512580001 | HGWA-43D  | EPA 3005A              | 589337   | EPA 6020B         | 589405           |
| 92512580002 | HGWA-44D  | EPA 3005A              | 589337   | EPA 6020B         | 589405           |
| 92512580003 | EB-01     | EPA 3005A              | 589337   | EPA 6020B         | 589405           |
| 92512580004 | HGWA-45D  | EPA 3005A              | 589337   | EPA 6020B         | 589405           |
| 92512580005 | HGWC-125  | EPA 3005A              | 589337   | EPA 6020B         | 589405           |
| 92512580006 | HGWC-126  | EPA 3005A              | 589337   | EPA 6020B         | 589405           |
| 92512580001 | HGWA-43D  | EPA 7470A              | 588542   | EPA 7470A         | 588758           |
| 92512580002 | HGWA-44D  | EPA 7470A              | 588542   | EPA 7470A         | 588758           |
| 92512580003 | EB-01     | EPA 7470A              | 588542   | EPA 7470A         | 588758           |
| 92512580004 | HGWA-45D  | EPA 7470A              | 588542   | EPA 7470A         | 588758           |
| 92512580005 | HGWC-125  | EPA 7470A              | 588542   | EPA 7470A         | 588758           |
| 92512580006 | HGWC-126  | EPA 7470A              | 588542   | EPA 7470A         | 588758           |
| 92512580001 | HGWA-43D  | SM 2450C-2011          | 588373   |                   |                  |
| 92512580002 | HGWA-44D  | SM 2450C-2011          | 588373   |                   |                  |
| 92512580003 | EB-01     | SM 2450C-2011          | 588373   |                   |                  |
| 92512580004 | HGWA-45D  | SM 2450C-2011          | 588927   |                   |                  |
| 92512580005 | HGWC-125  | SM 2450C-2011          | 588927   |                   |                  |
| 92512580006 | HGWC-126  | SM 2450C-2011          | 588927   |                   |                  |
| 92512580001 | HGWA-43D  | EPA 300.0 Rev 2.1 1993 | 589104   |                   |                  |
| 92512580002 | HGWA-44D  | EPA 300.0 Rev 2.1 1993 | 589104   |                   |                  |
| 92512580003 | EB-01     | EPA 300.0 Rev 2.1 1993 | 589104   |                   |                  |
| 92512580004 | HGWA-45D  | EPA 300.0 Rev 2.1 1993 | 589104   |                   |                  |
| 92512580005 | HGWC-125  | EPA 300.0 Rev 2.1 1993 | 589104   |                   |                  |
| 92512580006 | HGWC-126  | EPA 300.0 Rev 2.1 1993 | 589104   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 1 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
 Upon Receipt

Client Name:  
**GA Power**

Project #: **WO# : 92512580**



92512580

Date/Initials Person Examining Contents: **(2/17/15)**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer:  IR Gun ID: **214** Type of Ice:  Wet  Blue  None

Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: **4.2** Correction Factor: Add/Subtract (°C) **0.1**

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): **4.3**

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|   |  |     | Comments/Discrepancy: |
|---|--|-----|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.  |                       |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.  |                       |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 3.  |                       |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4.  |                       |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.  |                       |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.  |                       |
| -Pace Containers Used?                      | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |     |                       |
| Containers Intact?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 7.  |                       |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.  |                       |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.  |                       |
| -Includes Date/Time/ID/Analysis Matrix:     | <b>W</b>   |     |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10. |                       |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11. |                       |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |     |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



Document Name:  
 Sample Condition Upon Receipt(SCUR)  
 Document No.:  
 F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

Project #

**WO#: 92512580**

PM: KLH1

Due Date: 01/04/21

CLIENT: GA-GA Power

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic ZN Acetate & NaOH (>9) | BP4C-125 mL Plastic NaOH (pH > 12) (Cl-) | W6FU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unp (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (6 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | V5GU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |   |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|--------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|---|
| 1     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 2     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 3     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 4     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 5     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 6     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 7     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 8     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 9     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 10    | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 11    | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 12    | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.







January 11, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: HAMMOND AP-3 BKG 03, 06 RADS  
Pace Project No.: 92512547

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-3 BKG 03, 06 RADs  
Pace Project No.: 92512547

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92512547001 | HGWA-43D  | Water  | 12/15/20 12:25 | 12/17/20 08:48 |
| 92512547002 | HGWA-44D  | Water  | 12/15/20 16:18 | 12/17/20 08:48 |
| 92512547003 | EB-01     | Water  | 12/15/20 18:02 | 12/17/20 08:48 |
| 92512547004 | HGWA-45D  | Water  | 12/16/20 09:40 | 12/17/20 08:48 |
| 92512547005 | HGWC-125  | Water  | 12/16/20 12:01 | 12/17/20 08:48 |
| 92512547006 | HGWC-126  | Water  | 12/16/20 14:22 | 12/17/20 08:48 |

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**SAMPLE ANALYTE COUNT**

Project: HAMMOND AP-3 BKG 03, 06 RADS  
 Pace Project No.: 92512547

| Lab ID      | Sample ID | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|--------------------------|----------|-------------------|------------|
| 92512547001 | HGWA-43D  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92512547002 | HGWA-44D  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92512547003 | EB-01     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92512547004 | HGWA-45D  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92512547005 | HGWC-125  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92512547006 | HGWC-126  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |           | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |           | Total Radium Calculation | CMC      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

**REPORT OF LABORATORY ANALYSIS**

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92512547001</b>       | <b>HGWA-43D</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.162 ±<br>0.236<br>(0.511)<br>C:88% T:NA     | pCi/L |              | 01/06/21 07:00 |            |
| EPA 9320                 | Radium-228                     | 0.879 ±<br>0.484<br>(0.887)<br>C:69%<br>T:83% | pCi/L |              | 01/05/21 13:26 |            |
| Total Radium Calculation | Total Radium                   | 1.04 ±<br>0.720<br>(1.40)                     | pCi/L |              | 01/06/21 14:32 |            |
| <b>92512547002</b>       | <b>HGWA-44D</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.359 ±<br>0.268<br>(0.453)<br>C:92% T:NA     | pCi/L |              | 01/06/21 07:27 |            |
| EPA 9320                 | Radium-228                     | 0.341 ±<br>0.410<br>(0.868)<br>C:68%<br>T:86% | pCi/L |              | 01/05/21 13:26 |            |
| Total Radium Calculation | Total Radium                   | 0.700 ±<br>0.678<br>(1.32)                    | pCi/L |              | 01/06/21 14:32 |            |
| <b>92512547003</b>       | <b>EB-01</b>                   |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.0278 ±<br>0.302<br>(0.765)<br>C:89% T:NA    | pCi/L |              | 01/06/21 07:00 |            |
| EPA 9320                 | Radium-228                     | 0.226 ±<br>0.391<br>(0.853)<br>C:72%<br>T:88% | pCi/L |              | 01/05/21 13:26 |            |
| Total Radium Calculation | Total Radium                   | 0.254 ±<br>0.693<br>(1.62)                    | pCi/L |              | 01/06/21 14:34 |            |
| <b>92512547004</b>       | <b>HGWA-45D</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.460 ±<br>0.373<br>(0.719)<br>C:90% T:NA     | pCi/L |              | 01/06/21 06:58 |            |
| EPA 9320                 | Radium-228                     | 0.503 ±<br>0.434<br>(0.874)<br>C:63%<br>T:83% | pCi/L |              | 01/04/21 11:29 |            |
| Total Radium Calculation | Total Radium                   | 0.963 ±<br>0.807<br>(1.59)                    | pCi/L |              | 01/06/21 14:34 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Lab Sample ID<br>Method  | Client Sample ID<br>Parameters | Result  | Units | Report Limit | Analyzed       | Qualifiers |
|--------------------------|--------------------------------|---|-------|--------------|----------------|------------|
| <b>92512547005</b>       | <b>HGWC-125</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.472 ±<br>0.355<br>(0.637)<br>C:82% T:NA     | pCi/L |              | 01/06/21 06:59 |            |
| EPA 9320                 | Radium-228                     | 0.346 ±<br>0.402<br>(0.849)<br>C:75%<br>T:82% | pCi/L |              | 01/05/21 13:26 |            |
| Total Radium Calculation | Total Radium                   | 0.818 ±<br>0.757<br>(1.49)                    | pCi/L |              | 01/06/21 14:34 |            |
| <b>92512547006</b>       | <b>HGWC-126</b>                |   |       |              |                |            |
| EPA 9315                 | Radium-226                     | 0.535 ±<br>0.347<br>(0.577)<br>C:81% T:NA     | pCi/L |              | 01/06/21 07:27 |            |
| EPA 9320                 | Radium-228                     | 0.722 ±<br>0.446<br>(0.840)<br>C:73%<br>T:79% | pCi/L |              | 01/05/21 13:26 |            |
| Total Radium Calculation | Total Radium                   | 1.26 ±<br>0.793<br>(1.42)                     | pCi/L |              | 01/06/21 14:34 |            |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-43D</b> <b>Lab ID: 92512547001</b> Collected: 12/15/20 12:25      Received: 12/17/20 08:48      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.162 ± 0.236 (0.511)</b><br><b>C:88% T:NA</b>  | pCi/L | 01/06/21 07:00 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.879 ± 0.484 (0.887)</b><br><b>C:69% T:83%</b> | pCi/L | 01/05/21 13:26 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>1.04 ± 0.720 (1.40)</b>                         | pCi/L | 01/06/21 14:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-44D</b> <b>Lab ID: 92512547002</b> Collected: 12/15/20 16:18      Received: 12/17/20 08:48      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.359 ± 0.268 (0.453)</b><br><b>C:92% T:NA</b>  | pCi/L | 01/06/21 07:27 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.341 ± 0.410 (0.868)</b><br><b>C:68% T:86%</b> | pCi/L | 01/05/21 13:26 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.700 ± 0.678 (1.32)</b>                        | pCi/L | 01/06/21 14:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

**Sample: EB-01**      **Lab ID: 92512547003**      Collected: 12/15/20 18:02      Received: 12/17/20 08:48      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0278 ± 0.302 (0.765)</b><br><b>C:89% T:NA</b> | pCi/L | 01/06/21 07:00 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.226 ± 0.391 (0.853)</b><br><b>C:72% T:88%</b> | pCi/L | 01/05/21 13:26 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.254 ± 0.693 (1.62)</b>                        | pCi/L | 01/06/21 14:34 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWA-45D</b> <b>Lab ID: 92512547004</b> Collected: 12/16/20 09:40      Received: 12/17/20 08:48      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.460 ± 0.373 (0.719)</b><br><b>C:90% T:NA</b>  | pCi/L | 01/06/21 06:58 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.503 ± 0.434 (0.874)</b><br><b>C:63% T:83%</b> | pCi/L | 01/04/21 11:29 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.963 ± 0.807 (1.59)</b>                        | pCi/L | 01/06/21 14:34 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-125</b> <b>Lab ID: 92512547005</b> Collected: 12/16/20 12:01      Received: 12/17/20 08:48      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.472 ± 0.355 (0.637)</b><br><b>C:82% T:NA</b>  | pCi/L | 01/06/21 06:59 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.346 ± 0.402 (0.849)</b><br><b>C:75% T:82%</b> | pCi/L | 01/05/21 13:26 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>0.818 ± 0.757 (1.49)</b>                        | pCi/L | 01/06/21 14:34 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

| Parameters  | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---|--------------------------|--|-------|----------------|------------|------|
| <b>Sample: HGWC-126</b> <b>Lab ID: 92512547006</b> Collected: 12/16/20 14:22      Received: 12/17/20 08:48      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                          |  |       |                |            |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-226  | EPA 9315                 | <b>0.535 ± 0.347 (0.577)</b><br><b>C:81% T:NA</b>  | pCi/L | 01/06/21 07:27 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Radium-228  | EPA 9320                 | <b>0.722 ± 0.446 (0.840)</b><br><b>C:73% T:79%</b> | pCi/L | 01/05/21 13:26 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg   |                          |  |       |                |            |      |
| Total Radium  | Total Radium Calculation | <b>1.26 ± 0.793 (1.42)</b>                         | pCi/L | 01/06/21 14:34 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 428750   | Analysis Method:      | EPA 9320                              |
| QC Batch Method: | EPA 9320 | Analysis Description: | 9320 Radium 228                       |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92512547005, 92512547006

|               |         |         |       |
|---------------|---------|---------|-------|
| METHOD BLANK: | 2071922 | Matrix: | Water |
|---------------|---------|---------|-------|

Associated Lab Samples: 92512547005, 92512547006

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.694 ± 0.380 (0.676) C:79% T:80% | pCi/L | 01/05/21 13:26 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 428749   | Analysis Method:      | EPA 9320                              |
| QC Batch Method: | EPA 9320 | Analysis Description: | 9320 Radium 228                       |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004

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|               |         |         |       |
|---------------|---------|---------|-------|
| METHOD BLANK: | 2071921 | Matrix: | Water |
|---------------|---------|---------|-------|

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004

| Parameter  | Act ± Unc (MDC) Carr Trac          | Units | Analyzed       | Qualifiers |
|------------|------------------------------------|-------|----------------|------------|
| Radium-228 | -0.161 ± 0.312 (0.758) C:74% T:81% | pCi/L | 01/04/21 11:42 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 429175   | Analysis Method:      | EPA 9315                              |
| QC Batch Method: | EPA 9315 | Analysis Description: | 9315 Total Radium                     |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004, 92512547005, 92512547006

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METHOD BLANK: 2073293 Matrix: Water

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004, 92512547005, 92512547006

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.176 ± 0.138 (0.246) C:97% T:NA | pCi/L | 01/05/21 17:40 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 03, 06 RADS  
Pace Project No.: 92512547

| Lab ID      | Sample ID | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|--------------------------|----------|-------------------|------------------|
| 92512547001 | HGWA-43D  | EPA 9315                 | 429175   |                   |                  |
| 92512547002 | HGWA-44D  | EPA 9315                 | 429175   |                   |                  |
| 92512547003 | EB-01     | EPA 9315                 | 429175   |                   |                  |
| 92512547004 | HGWA-45D  | EPA 9315                 | 429175   |                   |                  |
| 92512547005 | HGWC-125  | EPA 9315                 | 429175   |                   |                  |
| 92512547006 | HGWC-126  | EPA 9315                 | 429175   |                   |                  |
| 92512547001 | HGWA-43D  | EPA 9320                 | 428749   |                   |                  |
| 92512547002 | HGWA-44D  | EPA 9320                 | 428749   |                   |                  |
| 92512547003 | EB-01     | EPA 9320                 | 428749   |                   |                  |
| 92512547004 | HGWA-45D  | EPA 9320                 | 428749   |                   |                  |
| 92512547005 | HGWC-125  | EPA 9320                 | 428750   |                   |                  |
| 92512547006 | HGWC-126  | EPA 9320                 | 428750   |                   |                  |
| 92512547001 | HGWA-43D  | Total Radium Calculation | 429860   |                   |                  |
| 92512547002 | HGWA-44D  | Total Radium Calculation | 429860   |                   |                  |
| 92512547003 | EB-01     | Total Radium Calculation | 429861   |                   |                  |
| 92512547004 | HGWA-45D  | Total Radium Calculation | 429861   |                   |                  |
| 92512547005 | HGWC-125  | Total Radium Calculation | 429861   |                   |                  |
| 92512547006 | HGWC-126  | Total Radium Calculation | 429861   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92512547**



92512547

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Date/Initials Person Examining Contents: (2/17/15)

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 214 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 4.2 Correction Factor: 0.1  
Add/Subtract (°C)

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil ( N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

Yes  No

|   |  | Comments/Discrepancy: |
|---|--|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.                    |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.                    |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 3.                    |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4.                    |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.                    |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.                    |
| -Pace Containers Used?                      | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |                       |
| Containers Intact?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 7.                    |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.                    |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.                    |
| -Includes Date/Time/ID/Analysis Matrix:     | <u>W</u>   |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10.                   |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11.                   |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLH

\*\*Bottom half of box is to list number of bottles

Project

**WO# : 92512547**

PM: KLH1

Due Date: 01/11/21

CLIENT: GA-GA Power

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic Zn Acetate & NaOH (>9) | BP4C-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unp (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (6 vials per kit)-S03S kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP9T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG6U-100 mL Amber Unpreserved vials (N/A) | V5GU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |   |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|--------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|---|
| 1     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 2     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 3     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 4     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 5     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 6     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 7     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 8     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 9     | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 10    | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 11    | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |
| 12    | /   | /                                     | /                                     | /                                      | /  | /                                 | /  | /  | /                                       | /  | /                               | /   | /                                 | /                                | /  | /                        | /                            | /                        | /                          | /                                     | /  | /                                       | /                                       | /                                       | /   | /                                    | /  | / |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.







# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 1/5/2021  
Worklist: 58138  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2073293 |
| MB Concentration:                   | 0.176   |
| M/B Counting Uncertainty:           | 0.135   |
| MB MDC:                             | 0.246   |
| MB Numerical Performance Indicator: | 2.55    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |  | LCSD (Y or N)? | N         |
|---|--|----------------|-----------|
|   |  | LCSD58138      | LCSD58138 |
| Count Date:                                   |  | 1/6/2021       |           |
| Spike I.D.:                                   |  | 19-033         |           |
| Decay Corrected Spike Concentration (pCi/mL): |  | 24.041         |           |
| Volume Used (mL):                             |  | 0.10           |           |
| Aliquot Volume (L, g, F):                     |  | 0.515          |           |
| Target Conc. (pCi/L, g, F):                   |  | 4.669          |           |
| Uncertainty (Calculated):                     |  | 0.056          |           |
| Result (pCi/L, g, F):                         |  | 4.726          |           |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  |  | 0.782          |           |
| Numerical Performance Indicator:              |  | 0.14           |           |
| Percent Recovery:                             |  | 101.21%        |           |
| Status vs Numerical Indicator:                |  | N/A            |           |
| Status vs Recovery:                           |  | Pass           |           |
| Upper % Recovery Limits:                      |  | 125%           |           |
| Lower % Recovery Limits:                      |  | 75%            |           |

| Duplicate Sample Assessment                                 |                |
|---|----------------|
| Sample I.D.:  | 92512557001    |
| Duplicate Sample I.D.:                                      | 92512557001DUP |
| Sample Result (pCi/L, g, F):                                | 0.259          |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.248          |
| Sample Duplicate Result (pCi/L, g, F):                      | 0.181          |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.219          |
| Are sample and/or duplicate results below RL?               | See Below ##   |
| Duplicate Numerical Performance Indicator:                  | 35.10%         |
| Duplicate RPD:  | 0.458          |
| Duplicate Status vs Numerical Indicator:                    | N/A            |
| Duplicate Status vs RPD:                                    | Fail***        |
| % RPD Limit:  | 25%            |

\*\*\* Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision. N/A

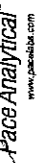
VAS  
1-6-2021  
VAM116121

| Sample Matrix Spike Control Assessment                            |  | MS/MSD 1 | MS/MSD 2 |
|---|--|----------|----------|
| Sample Collection Date:   |  |          |          |
| Sample I.D.:  |  |          |          |
| Sample MS I.D.:   |  |          |          |
| Sample MSD I.D.:  |  |          |          |
| Spike I.D.:   |  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |  |          |          |
| Spike Volume Used in MS (mL):                                     |  |          |          |
| MS Aliquot (L, g, F):   |  |          |          |
| MS Target Conc. (pCi/L, g, F):                                    |  |          |          |
| MSD Aliquot (L, g, F):  |  |          |          |
| MSD Target Conc. (pCi/L, g, F):                                   |  |          |          |
| MS Spike Uncertainty (calculated):                                |  |          |          |
| MSD Spike Uncertainty (calculated):                               |  |          |          |
| Sample Result:  |  |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |  |          |          |
| Sample Matrix Spike Result:                                       |  |          |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |          |          |
| Sample Matrix Spike Duplicate Result:                             |  |          |          |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |          |          |
| MS Numerical Performance Indicator:                               |  |          |          |
| MSD Numerical Performance Indicator:                              |  |          |          |
| MS Percent Recovery:  |  |          |          |
| MSD Percent Recovery:   |  |          |          |
| MS Status vs Numerical Indicator:                                 |  |          |          |
| MSD Status vs Numerical Indicator:                                |  |          |          |
| MS Status vs Recovery:  |  |          |          |
| MSD Status vs Recovery:   |  |          |          |
| MS/MSD Upper % Recovery Limits:                                   |  |          |          |
| MS/MSD Lower % Recovery Limits:                                   |  |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |  |
|---|--|
| Sample I.D.:  |  |
| Sample MS I.D.:   |  |
| Sample MSD I.D.:  |  |
| Sample Matrix Spike Result:                                       |  |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |  |
| Sample Matrix Spike Duplicate Result:                             |  |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |  |
| Duplicate Numerical Performance Indicator:                        |  |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           |  |
| MS/MSD Duplicate Status vs Numerical Indicator:                   |  |
| MS/MSD Duplicate Status vs RPD:                                   |  |
| % RPD Limit:  |  |

VAM116121

# Quality Control Sample Performance Assessment



Analyst: Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 1/5/2021  
Worklist: 58138  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2073293 |
| MB concentration:                   | 0.176   |
| MB Counting Uncertainty:            | 0.135   |
| MB MDC:                             | 0.246   |
| MB Numerical Performance Indicator: | 2.55    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |          | Y        |
|---|----------|----------|
| Count Date:                                   | 1/6/2021 | LCS58138 |
| Spike ID:                                     | 19.083   | 19.083   |
| Decay Corrected Spike Concentration (pCi/mL): | 24.041   | 24.041   |
| Volume Used (mL):                             | 0.10     | 0.10     |
| Aliquot Volume (L, g, F):                     | 0.507    | 0.507    |
| Target Conc. (pCi/L, g, F):                   | 4.869    | 4.743    |
| Uncertainty (Calculated):                     | 0.055    | 0.057    |
| Result (pCi/L, g, F):                         | 4.725    | 4.173    |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 0.782    | 0.736    |
| Numerical Performance Indicator:              | 0.14     | -1.51    |
| Percent Recovery:                             | 101.21%  | 87.98%   |
| Status vs Numerical Indicator:                | N/A      | N/A      |
| Status vs Recovery:                           | Pass     | Pass     |
| Upper % Recovery Limits:                      | 125%     | 125%     |
| Lower % Recovery Limits:                      | 75%      | 75%      |

| Duplicate Sample Assessment                                 |          | Y        |
|---|----------|----------|
| Sample I.D.:  | LCS58138 | LCS58138 |
| Duplicate Sample I.D.:                                      | LCS58138 | 19.083   |
| Sample Result (pCi/L, g, F):                                | 4.725    | 24.041   |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 0.782    | 0.10     |
| Sample Duplicate Result (pCi/L, g, F):                      | 4.173    | 0.507    |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 0.736    | 4.743    |
| Are sample and/or duplicate results below RL?               | NO       | 0.057    |
| Duplicate Numerical Performance Indicator:                  | 1.009    | 4.173    |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:   | 13.95%   | 0.736    |
| Duplicate Status vs Numerical Indicator:                    | N/A      | 0.057    |
| Duplicate Status vs RPD:                                    | Pass     | 4.173    |
| % RPD Limit:  | 25%      | 0.736    |

# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

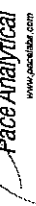
1-6-2021  
LCS  
58138

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:   |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>Spike Volume Used in MSD (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc. (pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):   |          |          |
| Sample Result:<br>Sample Result Counting Uncertainty (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment  |
|--|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

WAM 1/6/21

# Quality Control Sample Performance Assessment



**Analyt Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 12/30/2021  
Worklist: 58094  
Matrix: WT

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2071921 |
| MB concentration:                   | -0.161  |
| MB 2 Sigma CSU:                     | 0.312   |
| MB MDC:                             | 0.758   |
| MB Numerical Performance Indicator: | -1.01   |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCSD58094      | Y         |
| Count Date:                                   | 1/4/2021       | LCSD58094 |
| Spike I.D.:                                   | 20-030         | 20-030    |
| Decay Corrected Spike Concentration (pCi/mL): | 37.015         | 37.015    |
| Volume Used (mL):                             | 0.10           | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.825          | 0.825     |
| Target Conc. (pCi/L, g, F):                   | 4.496          | 4.488     |
| Uncertainty (Calculated):                     | 0.220          | 0.220     |
| LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):          | 5.637          | 5.675     |
| Numerical Performance Indicator:              | 1.278          | 1.293     |
| Percent Recovery:                             | 1.73           | 1.77      |
| Status vs Numerical Indicator:                | 125.39%        | 126.46%   |
| Status vs Recovery:                           | N/A            | N/A       |
| Upper % Recovery Limits:                      | Pass           | Pass      |
| Lower % Recovery Limits:                      | 135%           | 135%      |
| % RPD Limit:                                  | 60%            | 60%       |

| Duplicate Sample Assessment                                |           |
|--|-----------|
| Sample I.D.:   | LCSD58094 |
| Duplicate Sample I.D.:                                     | LCSD58094 |
| Sample Result (pCi/L, g, F):                               | 5.637     |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                   | 1.278     |
| Sample Duplicate Result (pCi/L, g, F):                     | 5.675     |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):         | 1.293     |
| Are sample and/or duplicate results below RL?              | NO        |
| Duplicate Numerical Performance Indicator:                 | -0.041    |
| (Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD: | 0.85%     |
| Duplicate Status vs Numerical Indicator:                   | Pass      |
| Duplicate Status vs RPD:                                   | Pass      |
| % RPD Limit:   | 36%       |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:<br>Sample I.D.:<br>Sample MS I.D.:<br>Sample MSD I.D.:<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc.(pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result:<br>Sample Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| Sample I.D.:<br>Sample MS I.D.:<br>Sample MSD I.D.:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 12/31/2020  
Worklist: 58095  
Matrix: WT

| Method Blank Assessment             |              |
|-------------------------------------|--------------|
| MB Sample ID                        | 2071922      |
| MB concentration:                   | 0.694        |
| MB 2 Sigma CSU:                     | 0.380        |
| MB MDC:                             | 0.676        |
| MB Numerical Performance Indicator: | 3.58         |
| MB Status vs Numerical Indicator:   | Fail*        |
| MB Status vs. MDC:                  | See Comment* |

| Laboratory Control Sample Assessment          |          |
|---|----------|
| LCSID (Y or N)?                               | Y        |
| LCS58095                                      | 1/5/2021 |
| LCS58095                                      | 20-030   |
| LCS58095                                      | 37.002   |
| Count Date:                                   | 1/5/2021 |
| Spike I.D.:                                   | 20-030   |
| Decay Corrected Spike Concentration (pCi/mL): | 37.002   |
| Volume Used (mL):                             | 0.10     |
| Aliquot Volume (L, g, F):                     | 0.801    |
| Target Conc. (pCi/L, g, F):                   | 4.617    |
| Uncertainty (Calculated):                     | 0.226    |
| Result (pCi/L, g, F):                         | 5.412    |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.220    |
| Numerical Performance Indicator:              | 1.25     |
| Percent Recovery:                             | 117.21%  |
| Status vs Numerical Indicator:                | N/A      |
| Status vs Recovery:                           | Pass     |
| Upper % Recovery Limits:                      | 135%     |
| Lower % Recovery Limits:                      | 60%      |

| Duplicate Sample Assessment                               |   |
|---|---|
| Sample I.D.:  | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
| Duplicate Sample I.D.:                                    |   |
| Sample Result (pCi/L, g, F):                              |   |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                  |   |
| Sample Duplicate Result (pCi/L, g, F):                    |   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        |   |
| Ave sample and/or duplicate results below RL?             | NO  |
| Duplicate Numerical Performance Indicator:                | 0.190   |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 3.25%   |
| Duplicate Status vs Numerical Indicator:                  | Pass  |
| Duplicate Status vs RPD:                                  | Pass  |
| % RPD Limit:  | 36%   |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

| Sample Matrix Spike Control Assessment  | MS/MSD 1 | MS/MSD 2 |
|---|----------|----------|
| Sample Collection Date:<br>Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Spike I.D.:<br>MS/MSD Decay Corrected Spike Concentration (pCi/mL):<br>Spike Volume Used in MS (mL):<br>MS Aliquot (L, g, F):<br>MS Target Conc.(pCi/L, g, F):<br>MSD Aliquot (L, g, F):<br>MSD Target Conc. (pCi/L, g, F):<br>MS Spike Uncertainty (calculated):<br>MSD Spike Uncertainty (calculated):<br>Sample Result:<br>Sample Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>MS Numerical Performance Indicator:<br>MSD Numerical Performance Indicator:<br>MS Percent Recovery:<br>MSD Percent Recovery:<br>MS Status vs Numerical Indicator:<br>MSD Status vs Numerical Indicator:<br>MS Status vs Recovery:<br>MSD Status vs Recovery:<br>MS/MSD Upper % Recovery Limits:<br>MS/MSD Lower % Recovery Limits: |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |
|---|
| Sample I.D.<br>Sample MS I.D.<br>Sample MSD I.D.<br>Sample Matrix Spike Result:<br>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):<br>Sample Matrix Spike Duplicate Result:<br>Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):<br>Duplicate Numerical Performance Indicator:<br>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:<br>MS/MSD Duplicate Status vs Numerical Indicator:<br>MS/MSD Duplicate Status vs RPD:<br>% RPD Limit: |

# VALIDATION REPORTS

August 2020



## Memorandum

Date: 9 December 2020  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92492413 and 92492418**

**SITE: Plant Hammond AP3**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twelve aqueous samples, one field duplicate and one field blank, collected 24-28 August 2020, as part of the Plant Hammond AP3 on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services, LLC, Asheville, North Carolina, for the following analytical test:

- Chloride, Fluoride and Sulfate by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

**EXECUTIVE SUMMARY**

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001); and,
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

| Laboratory ID | Client ID |
|---------------|-----------|
| 92492413001   | HGWA-122  |
| 92492413002   | HGWA-2    |
| 92492413003   | HGWA-3    |
| 92492413004   | HGWC-125  |
| 92492413005   | HGWC-126  |
| 92492413006   | FB-01     |
| 92492413007   | HGWC-121A |
| 92492413008   | MW-32     |
| 92492413009   | MW-39     |
| 92492413010   | MW-41     |
| 92492413011   | HGWC-120  |
| 92492413012   | FD-01     |
| 92492413013   | HGWC-124  |
| 92492413014   | HGWA-1    |

| Laboratory ID | Client ID |
|---------------|-----------|
| 92492418001   | HGWA-122  |
| 92492418002   | HGWA-2    |
| 92492418003   | HGWA-3    |
| 92492418004   | HGWC-125  |
| 92492418005   | HGWC-126  |
| 92492418006   | FB-01     |
| 92492418007   | HGWC-121A |
| 92492418008   | MW-32     |
| 92492418009   | MW-39     |
| 92492418010   | MW-41     |
| 92492418011   | HGWC-120  |
| 92492418012   | FD-01     |
| 92492418013   | HGWC-124  |
| 92492418014   | HGWA-1    |

The samples were received within 0-6°C. No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- 92492413 and 9242418: The year was not documented on the COC for the collection times. The collection times were logged in with the collection year on 2020.

- 92492413 and 9242418: There was a time discrepancy for the second sample transfer on page 1 of the COC. The *relinquished by* time was documented as 8/25/2020 1121 and the *received by* time was documented as 8/25/20 1125. The *relinquished by* signature, date and time were missing for the third sample transfer on page 1 of the COC.
- 92492413 and 9242418: There was a time discrepancy for the third sample transfer on pages 2 and 3 of the COC. The *relinquished by* time was documented as 8/26/2020 0949 and the *received by* time was documented as 8/26/20 0950. The *relinquished by* signatures, dates and times were missing for the fourth sample transfer on page 2 and 3 of the COC.
- 92492413 and 9242418: There was a time discrepancy for the second sample transfer on page 7 of the COC. The *relinquished by* time was documented as 8/28/2020 1105 and the *received by* time was documented as 8/28/20 1108. The *relinquished by* signature, date and time were missing for the third sample transfer on page 7 of the COC.
- 92492413 and 9242418: A collection time was not documented on the COC for the field duplicate. The field duplicate was logged in with the collection time of 00:00.

The field pH data included with the report were not validated.

## 1.0 METALS

The samples were analyzed for calcium by USEPA methods 3010A/6010D metals by USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverables Review

### 1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid

analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the data set is 100%.

## **1.2     Holding Time**

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

## **1.3     Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five method blanks were reported (batches 564973, 562831, 563747, 563754 and 567520). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 563754 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since antimony was not detected in the associated samples, no qualifications were applied to the data.

## **1.4     Matrix Spike/Matrix Spike Duplicate (MS/MSD)**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples HGWC-125 and HGWA-2. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MS recovery and RPD of antimony in the MS/MSD pair using sample HGWA-2 were high and outside the laboratory specified acceptance criteria. Since antimony was not detected in sample HGWA-2, no qualifications were applied to the data.

Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

The calcium concentration in sample HGWC-125 was greater than four times the spiked concentrations. Therefore, no qualifications were applied to the calcium data based on the MS/MSD pair results.

## **1.5     Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### **1.6 Equipment Blank**

Equipment blanks were not collected with the sample set.

### **1.7 Field Blank**

One field blank was collected with the sample set, FB-01. Metals were not detected in the field blank above the MDLs, with the following exception.

Barium was detected in the field blank at an estimated concentration greater than the MDL and less than the RL. Since barium was detected at concentrations greater than the RL in the associated samples, no qualifications were applied to the data.

### **1.8 Field Duplicate**

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, MW-32.

### **1.9 Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

### **1.10 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags M1 and R1 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

## **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the data set is 100%.

## **2.2 Holding Time**

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

## **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 562436, 563370, 563371 and 564593). Mercury was not detected in the method blanks above the MDL, with the following exception.

Mercury was detected in the method blank in batch 563370 at an estimated concentration greater than the MDL and less than the RL. Since mercury was not detected in the associated samples, no qualifications were applied to the data.

## **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

## **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

## **2.6 Equipment Blank**

Equipment blank was not collected with the sample set.

## **2.7 Field Blank**

One field blank was collected with the sample set, FB-01. Mercury was not detected in the field blank above the MDL.

## **2.8 Field Duplicate**

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RPD  $\leq 20\%$  or the difference between the concentrations  $< RL$ ) was demonstrated between the field duplicate and the original sample, MW-32.

## **2.9 Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

## **2.10 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **3.0 WET CHEMISTRY**

The samples were analyzed for TDS by Standard Method 2540C and chloride, fluoride and sulfate by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate

- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### 3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the data set is 100%.

### 3.2 Holding Times

The holding times for the analysis of a water sample for the wet chemistry parameters are listed below. The holding times were met for the sample analyses, with the following exception.

| Analyte                        | Holding Time                        |
|--------------------------------|-------------------------------------|
| TDS                            | 7 days from collection to analysis  |
| Chloride, Fluoride and Sulfate | 28 days from collection to analysis |

### 3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 563552) and five method blanks were reported for the anions (batches 562433, 562698, 563042, 563290 and 564239). The wet chemistry parameters were not detected in the method blanks above the MDLs.

### 3.4 Matrix Spike/Matrix Spike Duplicate

One sample set MS/MSD pair was reported for anions using sample MW-41. The RPD and recovery results were within the laboratory specified acceptance criteria.

Batch MS/MSD pairs were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### 3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). LCSs were reported for each analysis and batch as appropriate. The recovery results were within the laboratory specified acceptance criteria.



### **3.6 Laboratory Duplicate**

One sample set specific laboratory duplicate was reported for TDS using FB-01. The RPD result was within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.7 Equipment Blank**

Equipment blank were not collected with the sample set.

### **3.8 Field Blank**

One field blank was collected with the sample set, FB-01. The wet chemistry parameters were not detected in the field blank above the MDLs.

### **3.9 Field Duplicate**

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, MW-32.

### **3.10 Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

### **3.11 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by EPA method 9315, radium-228 by EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

#### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### **4.2 Holding Times**

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### 4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 412347, 412653, 412345 and 412346). Four method blanks were reported for the radium-226 data (batches 412356, 412358, 412851 and 412352). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-226 (0.206 pCi/L) was detected in the method blank in batch 412352 at a concentration greater than the MDC. Since radium-226 was not detected at a concentration greater than the MDC in the associated sample, no qualifications were applied to the data.

Radium-228 (0.749 pCi/L) was detected in the method blank in batch 412346 at a concentration greater than the MDC. Therefore, based on professional and technical judgment, the radium-228 and combined radium 226 + 228 concentrations in samples HGWC-125 and HGWC-121A were J+ qualified as estimated with high biases.

| Sample    | Analyte                   | Laboratory Result (pCi/L) | Laboratory Flag | Validation Result (pCi/L) | Validation Qualifier* | Reason Code** |
|-----------|---------------------------|---------------------------|-----------------|---------------------------|-----------------------|---------------|
| HGWC-125  | Radium-228                | 1.31                      | NA              | 1.31                      | J+                    | 3             |
| HGWC-125  | Combined Radium 226 + 228 | 1.65                      | NA              | 1.65                      | J+                    | 3             |
| HGWC-121A | Radium-228                | 1.81                      | NA              | 1.81                      | J+                    | 3             |
| HGWC-121A | Combined Radium 226 + 228 | 1.96                      | NA              | 1.96                      | J+                    | 3             |

pCi/L-picocuries per liter

NA-not applicable

\* Validation qualifiers are defined in Attachment 1 at the end of this report

\*\*Reason codes are defined in Attachment 2 at the end of this report

### 4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

### 4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs and one LCS/LCS duplicate (LCSD) pair were reported for radium-226. Four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma ( $2\sigma$ )] results were within the laboratory specified acceptance criteria.

#### **4.6 Laboratory Duplicate**

One sample set specific laboratory duplicate was reported using sample HGWC-120. The RER ( $2\sigma$ ) result was within the laboratory specified acceptance criteria.

Two batch laboratory duplicates were reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### **4.7 Tracers and Carriers**

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### **4.8 Equipment Blank**

Equipment blanks were not collected with the sample set.

#### **4.9 Field Blank**

One field blank was collected with the sample set, FB-01. Radium-226 and radium-228 were not detected in the field blank above the MDCs.

#### **4.10 Field Duplicate**

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RER ( $2\sigma$ ) < 3) was demonstrated between the field duplicate and the original sample, MW-32.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. Elevated nondetect results were not reported.

#### **4.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec’s Data Validation Team**

| <b>Valid Value</b> | <b>Description</b>   |
|--------------------|--|
| 1                  | Preservation requirement not met                                   |
| 2                  | Extraction or analysis holding time exceeded                       |
| 3                  | Blank contamination (i.e., method, trip, equipment, etc.)          |
| 4                  | Matrix spike/matrix spike duplicate recovery or RPD outside limits |
| 5                  | LCS recovery outside limits or RPD outside limits (LCS/LCSD)       |
| 6                  | Surrogate recovery outside limits                                  |
| 7                  | Field Duplicate RPD exceeded                                       |
| 8                  | Serial dilution percent difference exceeded                        |
| 9                  | Calibration criteria not met                                       |
| 10                 | Linear range exceeded  |
| 11                 | Internal standard criteria not met                                 |
| 12                 | Lab duplicates RPD exceeded  |
| 13                 | Other  |
| 14                 | Lab flag removed: no validation qualification required             |

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

September 2020

## Memorandum

Date: December 14, 2020  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92495892 and 92495904**

### **SITE: Plant Hammond AP-3**

### **INTRODUCTION**

This report summarizes the findings of the Stage 2A data validation of sixteen aqueous samples, one field duplicate and one field blank, collected 15-28 September 2020, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Alkalinity by Standard Method 2320B
- Sulfide by Standard Method 4500S2D
- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320



- Total Radium by Calculation

**EXECUTIVE SUMMARY**

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives, with the following exceptions.

The non-detect mercury results in samples HGWC-126, FB-03 and HGWC-125 were R qualified as rejected due to holding time exceedances.

Qualified data that were not rejected should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

| Laboratory ID | Client ID |
|---------------|-----------|
| 92495892001   | HGWA-1    |
| 92495892002   | HGWA-2    |
| 92495892003   | HGWA-3    |
| 92495892004   | HGWA-122  |
| 92495892005   | HGWA-43D  |
| 92495892006   | HGWA-44D  |
| 92495892007   | HGWC-126  |
| 92495892008   | FB-03     |
| 92495892009   | HGWC-120  |
| 92495892010   | FD-03     |
| 92495892011   | HGWC-125  |
| 92495892012   | HGWA-45D  |
| 92495892013   | MW-46D    |
| 92495892014   | HGWC-121A |
| 92495892015   | HGWC-124  |
| 92495892016   | MW-32     |
| 92495892017   | MW-39     |

| Laboratory ID | Client ID |
|---------------|-----------|
| 92495892018   | MW-41     |
| 92495904001   | HGWA-1    |
| 92495904002   | HGWA-2    |
| 92495904003   | HGWA-3    |
| 92495904004   | HGWA-122  |
| 92495904005   | HGWA-43D  |
| 92495904006   | HGWA-44D  |
| 92495904007   | HGWC-126  |
| 92495904008   | FB-03     |
| 92495904009   | HGWC-120  |
| 92495904010   | FD-03     |
| 92495904011   | HGWC-125  |
| 92495904012   | HGWA-45D  |
| 92495904013   | MW-46D    |
| 92495904014   | HGWC-121A |
| 92495904015   | HGWC-124  |
| 92495904016   | MW-32     |

| Laboratory ID | Client ID |
|---------------|-----------|
| 92495904017   | MW-39     |

| Laboratory ID | Client ID |
|---------------|-----------|
| 92495904018   | MW-41     |

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- The year was not documented for the collection times of samples HGWA-3, HGWA-122, MW-43D, MW-44D, HGWC-126, FB-03, HGWC-120, FD-03, HGWC-125, MW-32, MW-39 and MW-41. The samples were logged in with the collection year of 2020.
- There were time discrepancies for the third sample transfer on page 1 of the COC. The *relinquished by* time was documented as 9/16/20 1113 and the *received by* time was documented as 9/16/20 1114.
- There were time discrepancies for the second sample transfer on page 2 of the COC. The *relinquished by* time was documented as 9/16/20 1113 and the *received by* time was documented as 9/16/20 1114.
- The year was not documented for the *relinquished by* date for the first sample transfer on pages 3-4 of the COC.
- The *relinquished by* date was not documented for the third sample transfer on page 3 of the COC.
- The year was not documented for the *received by* date of the first transfer and the *relinquished by* date for the second transfer on pages 7-8 of the COC.
- The *received by* signature, date and time were not documented for the fourth sample transfer on pages 7-8 of the COC.
- A collection time was not documented on the COC for field duplicate, FD-03. FD-03 was logged in with the collection time of 00:00.

The field pH data included in the laboratory report were not validated.

## 1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ⊗ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverables Review

### **1.1 Overall Assessment**

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### **1.2 Holding Time**

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### **1.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Ten method blanks were reported (batches 568201, 568747, 568748, 570395, 568198, 568417, 568749, 569670, 570626 and 570627). Metals were not detected in the method blanks above the method detection limits (MDLs).

Potassium was detected in the method blanks in batches 568201 and 568748 at estimated concentrations greater than the MDL and less than the reporting limit (RL). Since potassium was detected above the RL in the associated samples, no qualifications were applied to the data.

### **1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported by USEPA method 6010D using sample HGWA-122. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The calcium recoveries in the MS/MSD pair using sample HGWA-4 were low and outside the laboratory specified acceptance criteria. Since the calcium concentration in sample HGWA-122 was greater than four times the spiked concentration, no qualifications were applied to the data.

Nine batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

**1.5 Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Ten LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

**1.6 Equipment Blank**

An equipment blank was not collected with the sample set.

**1.7 Field Blank**

One field blank was collected with the sample set, FB-02. Metals were not detected in the field blank above the MDLs, with the following exceptions.

Potassium and boron were detected in FB-03 at estimated concentrations greater than the MDLs and less than the RLs. Since potassium was detected above the RL in the associated samples, no qualifications were applied to the potassium data. However, the estimated boron concentrations in the associated samples were U qualified as not detected at the RL.

| Sample   | Analyte | Laboratory Result (mg/L) | Laboratory Flag | Validation Result (mg/L) | Validation Qualifier* | Reason Code** |
|----------|---------|--------------------------|-----------------|--------------------------|-----------------------|---------------|
| HGWA-1   | Boron   | 0.017                    | J               | 0.10                     | U                     | 3             |
| HGWA-2   | Boron   | 0.044                    | J               | 0.10                     | U                     | 3             |
| HGWA-3   | Boron   | 0.0071                   | J               | 0.10                     | U                     | 3             |
| HGWA-43D | Boron   | 0.061                    | J               | 0.10                     | U                     | 3             |
| HGWC-126 | Boron   | 0.041                    | J               | 0.10                     | U                     | 3             |

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

\* Validation qualifiers are defined in Attachment 1 at the end of this report

\*\*Reason codes are defined in Attachment 2 at the end of this report

### **1.8 Field Duplicate**

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision (RPD  $\leq 20\%$  or the difference between the concentrations  $< RL$ ) was demonstrated between the field duplicate and the original sample, HGWC-120.

### **1.9 Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

### **1.10 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags B and M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

## **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ⊗ Overall Assessment
- ⊗ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverables Review

### **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives, with the following exceptions. The non-detect mercury results in samples HGWC-126, FB-03 and HGWC-125 were R qualified as rejected due to holding time exceedances. Therefore, the analytical completeness defined as the ratio of the number of valid analytical results (valid

analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

## 2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses, with the following exceptions.

The mercury analysis for samples HGWC-126, FB-03 and HGWC-125 were performed outside the holding time. Therefore, the non-detect mercury results in samples HGWC-126, FB-03 and HGWC-125 were R qualified as rejected.

| Sample   | Analyte | Laboratory Result (mg/L) | Laboratory Flag | Validation Result (mg/L) | Validation Qualifier | Reason Code |
|----------|---------|--------------------------|-----------------|--------------------------|----------------------|-------------|
| HGWC-126 | Mercury | 0.000078                 | U H1 H2         | 0.000078                 | R                    | 2           |
| FB-03    | Mercury | 0.000078                 | U H1 H2         | 0.000078                 | R                    | 2           |
| HGWC-125 | Mercury | 0.000078                 | U H1 H2         | 0.000078                 | R                    | 2           |

mg/L-milligrams per liter

H1-laboratory flag indicating analysis was performed outside the holding time

H2-laboratory flag indicating preparation was performed outside the holding time

## 2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 572608 and 576048). Mercury was not detected in the method blanks above the MDL.

## 2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

## 2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery result was within the laboratory specified acceptance criteria.

## 2.6 Equipment Blank

An equipment blank was not collected with the sample set.

## 2.7 Field Blank

One field blank was collected with the sample set, FB-02. Mercury was not detected in the field blank above the MDL.

## 2.8 Field Duplicate

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, HGWC-120.

## 2.9 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

## 2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags H1 and H2 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

## 3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C, alkalinity by Standard Method 2320B, sulfide by Standard Method 4500-S2D and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverables Review

### **3.1 Overall Assessment**

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

### **3.2 Holding Times**

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding time for the sulfide analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven method blanks were reported for TDS (batches 567147, 567872, 568395, 568648, 570219, 570220 and 570638), five method blanks were reported for alkalinity (batches 568673, 568970, 569912, 570242, 571506 and 571655), five method blanks were reported for sulfide (batches 568020, 568022, 568633, 569580 and 570214) and five method blanks were reported for the anions (batches 567529, 567607, 568377, 568379 and 570137). The wet chemistry parameters were not detected in the method blanks above the MDLs.

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for alkalinity using sample MW-41. The recovery and RPD results were within the laboratory specified acceptance criteria.

Eleven batch MS/MSD pairs were reported for alkalinity, nine batch MS/MSD pairs were reported for sulfide and ten batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.



### 3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven LCSs were reported for TDS, five LCSs were reported for alkalinity, five LCSs were reported for sulfide and five LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

### 3.6 Laboratory Duplicate

Nine batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### 3.7 Equipment Blank

An equipment blank was not collected with the sample set.

### 3.8 Field Blank

One field blank was collected with the sample set, FB-02. The wet chemistry parameters were not detected in the field blank above the MDL.

### 3.9 Field Duplicate

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision (RPD  $\leq 20\%$  or the difference between the concentrations  $< RL$ ) was demonstrated between the field duplicate and the original sample, HGWC-120, with the following exceptions.

The RPDs of total alkalinity and bicarbonate alkalinity were greater than 20%; therefore, the total alkalinity and bicarbonate alkalinity concentrations in the field duplicate pair were J qualified as estimated.

| Sample   | Analyte                                      | Laboratory Result (mg/L) | Laboratory Flag | RPD | Validation Result (mg/L) | Validation Qualifier | Reason Code |
|----------|--|--------------------------|-----------------|-----|--------------------------|----------------------|-------------|
| HGWC-120 | Alkalinity, Total as CaCO <sub>3</sub>       | 599                      | NA              | 48  | 599                      | J                    | 7           |
| FD-03    | Alkalinity, Total as CaCO <sub>3</sub>       | 311                      | NA              |     | 311                      | J                    | 7           |
| HGWC-120 | Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | 599                      | NA              | 48  | 599                      | J                    | 7           |
| FD-03    | Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | 311                      | NA              |     | 311                      | J                    | 7           |

mg/L-milligrams per L

NA-not applicable

### **3.10 Sensitivity**

The samples were reported to the MDLs. No elevated nondetect results were reported.

### **3.11 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M1 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

## **4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ⊗ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### 4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

#### 4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-228 data (batches 417131, 417135 and 417137). Five method blanks were reported for the radium-226 data (batches 415616, 417134, 415615, 417130 and 417136). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 was detected above the MDC in the method blank in batch 415617 (1.55 pCi/L). Since radium-228 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

#### 4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

#### 4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma ( $2\sigma$ )] results were within the laboratory specified acceptance criteria, with the following exceptions.

The recovery of radium-228 in the LCS in batch 417135 was low and outside the laboratory specified acceptance criteria. Therefore, the non-detect radium-228 and combined radium results in the associated samples were UJ qualified as estimated less than the MDCs and the radium-228 and combined radium concentration in the associated sample greater than the MDCs were J-qualified as estimated with low biases.

| Sample   | Analyte                   | Laboratory Result (pCi/L) | Laboratory Flag | Validation Result (pCi/L) | Validation Qualifier | Reason Code |
|----------|---------------------------|---------------------------|-----------------|---------------------------|----------------------|-------------|
| HGWA-43D | Radium-228                | -0.0158                   | U               | -0.0158                   | UJ                   | 5           |
| HGWA-43D | Combined Radium 226 + 228 | 0.531                     | U               | 0.531                     | UJ                   | 5           |
| HGWA-44D | Radium-228                | 0.293                     | U               | 0.293                     | UJ                   | 5           |

| Sample   | Analyte                   | Laboratory Result (pCi/L) | Laboratory Flag | Validation Result (pCi/L) | Validation Qualifier | Reason Code |
|----------|---------------------------|---------------------------|-----------------|---------------------------|----------------------|-------------|
| HGWA-44D | Combined Radium 226 + 228 | 0.422                     | U               | 0.422                     | UJ                   | 5           |
| HGWC-126 | Radium-228                | 0.472                     | U               | 0.472                     | UJ                   | 5           |
| HGWC-126 | Combined Radium 226 + 228 | 0.841                     | U               | 0.841                     | UJ                   | 5           |
| FB-03    | Radium-228                | -0.0349                   | U               | -0.0349                   | UJ                   | 5           |
| FB-03    | Combined Radium 226 + 228 | 0.0162                    | U               | 0.0162                    | UJ                   | 5           |
| HGWC-120 | Radium-228                | 0.454                     | U               | 0.454                     | UJ                   | 5           |
| HGWC-120 | Combined Radium 226 + 228 | 0.553                     | U               | 0.553                     | UJ                   | 5           |
| FD-03    | Radium-228                | 0.127                     | U               | 0.127                     | UJ                   | 5           |
| FD-03    | Combined Radium 226 + 228 | 0.34                      | U               | 0.34                      | UJ                   | 5           |
| HGWC-125 | Radium-228                | 0.824                     | NA              | 0.824                     | J-                   | 5           |
| HGWC-125 | Combined Radium 226 + 228 | 1.45                      | NA              | 1.45                      | J-                   | 5           |
| HGWA-45D | Radium-228                | 0.622                     | U               | 0.622                     | UJ                   | 5           |
| HGWA-45D | Combined Radium 226 + 228 | 1.07                      | U               | 1.07                      | UJ                   | 5           |
| MW-46D   | Radium-228                | 0.377                     | U               | 0.377                     | UJ                   | 5           |
| MW-46D   | Combined Radium 226 + 228 | 0.594                     | U               | 0.594                     | UJ                   | 5           |

pCi/L-picocuries per liter

U-not detected at or above the MDC

NA-not applicable

#### 4.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample HGWA-42D. The RER ( $2\sigma$ ) result was within the laboratory specified acceptance criteria.

Four batch laboratory duplicates were also reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### 4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### 4.8 Equipment Blank

An equipment blank was not collected with the sample set.

#### **4.9 Field Blank**

One field blank was collected with the sample set, FB-02. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

#### **4.10 Field Duplicate**

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision ( $RER(2\sigma) < 3$ ) was demonstrated between the field duplicate and the original sample, HGWC-120.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. No elevated nondetect results were reported.

#### **4.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec’s Data Validation Team**

| <b>Valid Value</b> | <b>Description</b>   |
|--------------------|--|
| 1                  | Preservation requirement not met                                   |
| 2                  | Analysis holding time exceeded                                     |
| 3                  | Blank contamination (i.e., method, trip, equipment, etc.)          |
| 4                  | Matrix spike/matrix spike duplicate recovery or RPD outside limits |
| 5                  | LCS or RPD recovery outside limits (LCS/LCSD)                      |
| 6                  | Surrogate recovery outside limits                                  |
| 7                  | Field Duplicate RPD exceeded                                       |
| 8                  | Serial dilution percent difference exceeded                        |
| 9                  | Calibration criteria not met                                       |
| 10                 | Linear range exceeded  |
| 11                 | Internal standard criteria not met                                 |
| 12                 | Lab duplicates RPD exceeded  |
| 13                 | Other  |
| 14                 | Lab flag removed or modified: no validation qualification required |

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

November 2020



## Memorandum

Date: January 12, 2020  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92505470 and 92505496**

**SITE: Plant Hammond AP-3**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of six aqueous samples, one filtered aqueous sample and one equipment blank, collected 10-12 November 2020, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

## EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

| Laboratory ID | Client ID         |
|---------------|-------------------|
| 92505470001   | HGWA-43D          |
| 92505470002   | EB-01             |
| 92505470003   | HGWA-44D          |
| 92505470004   | HGWA-44D FILTERED |
| 92505470005   | HGWA-45D          |
| 92505470006   | HGWC-126          |
| 92505470007   | HGWC-125          |
| 92505496001   | HGWA-43D          |

| Laboratory ID | Client ID         |
|---------------|-------------------|
| 92505496002   | EB-01             |
| 92505496003   | HGWA-44D          |
| 92505496004   | HGWA-44D FILTERED |
| 92505496005   | HGWA-45D          |
| 92505496006   | HGWC-126          |
| 92505496007   | HGWC-125          |
| 92505496008   | MW-46D            |

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- EB-01 was listed as FB-01 on the COC and the containers were labeled EB-01. The sample was logged in per the sample label per the client's request.
- The year was not documented for the relinquished by date for the first sample transfers on pages one and three of the COC and for the second transfers on pages two and four of the COC.
- The *received by* signature, date and time were not documented for the second sample transfer on page one of the COC and for the third sample transfer on page two of the COC.

- The year was not documented for the *received by* date for the first sample transfers on page two, three and four of the COC and the second sample transfer on page four of the COC.
- The *relinquished by* signature, date and time were not documented for the second sample transfer on page three of the COC and the third sample transfer on page four of the COC.
- The year was not documented for the collection times of samples HGWA-43D, EB-01 HGWA-45D and HGWC-126. The samples were logged in with the collection year of 2020.

The field pH data included in the laboratory report were not validated.

## 1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Metals Assessment
- ⊗ Electronic Data Deliverables Review

### 1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

## 1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

## 1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 580529, 581313, 581474 and 581476). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 581474 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

| Sample   | Analyte  | Laboratory Result (mg/L) | Laboratory Flag | Validation Result | Validation Qualifier* | Reason Code** |
|----------|----------|--------------------------|-----------------|-------------------|-----------------------|---------------|
| HGWA-43D | Antimony | 0.00043                  | J B             | 0.0030            | U                     | 3             |
| HGWA-45D | Antimony | 0.00057                  | J B             | 0.0030            | U                     | 3             |
| HGWC-126 | Antimony | 0.00040                  | J B             | 0.0030            | U                     | 3             |

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

\* Validation qualifiers are defined in Attachment 1 at the end of this report

\*\*Reason codes are defined in Attachment 2 at the end of this report

## 1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for calcium using sample HGWC-126. The relative percent difference (RPD) result was within the laboratory specified acceptance criteria. The MS/MSD recoveries were low and outside the laboratory specified acceptance criteria. However, since the calcium concentration in sample HGWC-126 was greater than four times the spiked concentration, no qualification was applied to the data.

Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### 1.5 **Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### 1.6 **Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs.

### 1.7 **Field Blank**

A field blank was not collected with the sample set.

### 1.8 **Field Duplicate**

A field duplicate was not collected with the sample set.

### 1.9 **Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

### 1.10 **Total vs Dissolved Metals Assessment**

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved metals, respectively. The total metals concentrations were greater than or equal to the dissolved metals concentrations, with the following exception.

The dissolved barium concentration was greater than the associated total barium concentration. Since the RPD between the total and dissolved concentrations was less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

| Sample            | Analyte | Laboratory Result (mg/L) | Laboratory Flag | RPD |
|-------------------|---------|--------------------------|-----------------|-----|
| HGWC-44D          | Barium  | 0.38                     | NA              | 3   |
| HGWC-44D FILTERED | Barium  | 0.39                     | NA              |     |

mg/L-milligrams per liter

NA-not applicable

### **1.11 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags M1 and B used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

## **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Mercury Assessment
- ✓ Electronic Data Deliverables Review

### **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### **2.2 Holding Time**

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

### **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 580637 and 580803). Mercury was not detected in the method blanks above the MDL.

### **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### **2.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

### **2.7 Field Blank**

A field blank was not collected with the sample set.

### **2.8 Field Duplicate**

A field duplicate was not collected with the sample set.

### **2.9 Sensitivity**

The samples were reported to the MDL. No elevated nondetect results were reported.

### **2.10 Total vs Dissolved Mercury Assessment**

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved mercury, respectively. The total mercury concentration was greater than or equal to the dissolved mercury concentration.

### **2.11 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

### **3.0 WET CHEMISTRY**

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Wet Chemistry Assessment
- ✓ Electronic Data Deliverables Review

#### **3.1 Overall Assessment**

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

#### **3.2 Holding Times**

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.



### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 580910 and 580949) and two method blanks were reported for the anions (batches 580375 and 580771). The wet chemistry parameters were not detected in the method blanks above the MDLs.

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported for TDS and two LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

### **3.6 Laboratory Duplicate**

Two batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.7 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL, with the following exception.

TDS (13.0 mg/L) was detected in EB-01 at a concentration greater than the RL. Since TDS was detected in the associated samples at concentrations greater than ten times the equipment blank concentration, no qualifications were applied to the data based on technical and professional judgment.

### **3.8 Field Blank**

A field blank was not collected with the sample set.

### **3.9 Field Duplicate**

A field duplicate was not collected with the sample set.

**3.10 Sensitivity**

The samples were reported to the MDLs. No elevated nondetect results were reported.

**3.11 Total vs Dissolved Wet Chemistry Assessment**

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved wet chemistry, respectively. The total wet chemistry concentrations were greater than or equal to the dissolved wet chemistry concentrations, with the following exception.

The TDS concentration in HGWC-44D FILTERED was greater than the TDS concentration in HGWC-44D. Since the RPD between the TDS concentrations was less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

| Sample            | Analyte | Laboratory Result (mg/L) | Laboratory Flag | RPD |
|-------------------|---------|--------------------------|-----------------|-----|
| HGWC-44D          | TDS     | 287                      | NA              | 5   |
| HGWC-44D FILTERED | TDS     | 301                      | NA              |     |

mg/L-milligrams per liter

NA-not applicable

**3.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

**4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate

- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Radiochemistry Assessment
- ✓ Electronic Data Deliverables Review

#### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### **4.2 Holding Times**

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

#### **4.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-228 data (batches 425494 and 426455). One method blank was reported for the radium-226 data (batch 426374). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

#### **4.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported with the data.

#### **4.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. Two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma ( $2\sigma$ )] results were within the laboratory specified acceptance criteria.

#### **4.6 Laboratory Duplicate**

Laboratory duplicates were not reported with the data.

#### **4.7 Tracers and Carriers**

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### **4.8 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

#### **4.9 Field Blank**

A field blank was not collected with the sample set.

#### **4.10 Field Duplicate**

A field duplicate was not collected with the sample set.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. No elevated nondetect results were reported.

#### **4.12 Total vs Dissolved Radiochemistry Assessment**

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved radiochemistry, respectively. The total radiochemistry concentration was greater than or equal to the dissolved radiochemistry concentration.

#### **4.13 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

| <b>Valid Value</b> | <b>Description</b>   |
|--------------------|--|
| 1                  | Preservation requirement not met                                   |
| 2                  | Analysis holding time exceeded                                     |
| 3                  | Blank contamination (i.e., method, trip, equipment, etc.)          |
| 4                  | Matrix spike/matrix spike duplicate recovery or RPD outside limits |
| 5                  | LCS or RPD recovery outside limits (LCS/LCSD)                      |
| 6                  | Surrogate recovery outside limits                                  |
| 7                  | Field Duplicate RPD exceeded                                       |
| 8                  | Serial dilution percent difference exceeded                        |
| 9                  | Calibration criteria not met                                       |
| 10                 | Linear range exceeded  |
| 11                 | Internal standard criteria not met                                 |
| 12                 | Lab duplicates RPD exceeded  |
| 13                 | Other  |
| 14                 | Lab flag removed or modified: no validation qualification required |

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

December 2020

## Memorandum

Date: February 8, 2021  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92512547 and 92512580**

**SITE: Plant Hammond AP-3**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of five aqueous samples and one equipment blank, collected 15-16 December 2020, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation



## EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data are usable for meeting project objectives.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

| Laboratory ID | Client ID |
|---------------|-----------|
| 92512547001   | HGWA-43D  |
| 92512547002   | HGWA-44D  |
| 92512547003   | EB-01     |
| 92512547004   | HGWA-45D  |
| 92512547005   | HGWC-125  |
| 92512547006   | HGWC-126  |

| Laboratory ID | Client ID |
|---------------|-----------|
| 92512580001   | HGWA-43D  |
| 92512580002   | HGWA-44D  |
| 92512580003   | EB-01     |
| 92512580004   | HGWA-45D  |
| 92512580005   | HGWC-125  |
| 92512580006   | HGWC-126  |

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- The year was not documented for the *relinquished by* date for the first sample transfers on pages one and two of the COC.
- The year was not documented for the collection times of the samples. The samples were logged in with the collection year of 2020.

The field pH data included in the laboratory report were not validated.

### 1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **1.1 Overall Assessment**

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### **1.2 Holding Time**

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### **1.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 589396 and 589337). Metals were not detected in the method blanks above the method detection limits (MDLs).

### **1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **1.5 Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### **1.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Calcium was detected in EB-01 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since calcium was detected in the associated samples at concentrations greater than the RL, no qualifications were applied to the data.

### **1.7 Field Blank**

A field blank was not collected with the sample set.

### **1.8 Field Duplicate**

A field duplicate was not collected with the sample set.

### **1.9 Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

### **1.10 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment

- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

## **2.2 Holding Time**

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

## **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 588542). Mercury was not detected in the method blank above the MDL.

## **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One batch MS/MSD pair was reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

## **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

## **2.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

## **2.7 Field Blank**

A field blank was not collected with the sample set.

## **2.8 Field Duplicate**

A field duplicate was not collected with the sample set.

## **2.9 Sensitivity**

The samples were reported to the MDL. No elevated nondetect results were reported.

## **2.10 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **3.0 WET CHEMISTRY**

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity

- ✓ Electronic Data Deliverables Review

### **3.1 Overall Assessment**

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

### **3.2 Holding Times**

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 3109057 and 3111378) and one method blank was reported for the anions (batch 589104). The wet chemistry parameters were not detected in the method blanks above the MDLs.

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific laboratory duplicate was reported for the anions using sample HGWA-45D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported for TDS and two LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

### **3.6 Laboratory Duplicate**

One sample set specific laboratory duplicate was reported for TDS using sample HGWA-45D. The RPD result was within the laboratory specified acceptance criteria.

Three batch laboratory duplicates were also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.7 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL.

### **3.8 Field Blank**

A field blank was not collected with the sample set.

### **3.9 Field Duplicate**

A field duplicate was not collected with the sample set.

### **3.10 Sensitivity**

The samples were reported to the MDLs. No elevated nondetect results were reported.

### **3.11 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers

- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

#### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### **4.2 Holding Times**

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

#### **4.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-228 data (batches 428750 and 428749). One method blank was reported for the radium-226 data (batch 429175). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 was detected in the method blank in batch 428750 at a concentration greater than the MDC. Since radium-226 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

#### **4.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported with the data.

#### **4.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. Two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma ( $1\sigma$ )] results were within the laboratory specified acceptance criteria.



#### **4.6 Laboratory Duplicate**

One batch laboratory duplicate was reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### **4.7 Tracers and Carriers**

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### **4.8 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

#### **4.9 Field Blank**

A field blank was not collected with the sample set.

#### **4.10 Field Duplicate**

A field duplicate was not collected with the sample set.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. No elevated nondetect results were reported.

#### **4.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

| <b>Valid Value</b> | <b>Description</b>   |
|--------------------|--|
| 1                  | Preservation requirement not met                                   |
| 2                  | Analysis holding time exceeded                                     |
| 3                  | Blank contamination (i.e., method, trip, equipment, etc.)          |
| 4                  | Matrix spike/matrix spike duplicate recovery or RPD outside limits |
| 5                  | LCS or RPD recovery outside limits (LCS/LCSD)                      |
| 6                  | Surrogate recovery outside limits                                  |
| 7                  | Field Duplicate RPD exceeded                                       |
| 8                  | Serial dilution percent difference exceeded                        |
| 9                  | Calibration criteria not met                                       |
| 10                 | Linear range exceeded  |
| 11                 | Internal standard criteria not met                                 |
| 12                 | Lab duplicates RPD exceeded  |
| 13                 | Other  |
| 14                 | Lab flag removed or modified: no validation qualification required |

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

# FIELD SAMPLING REPORTS

August 2020

Product Name: Low-Flow System

Date: 2020-08-28 09:18:04

Project Information:

Operator Name Thomas Kessler  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 28 ft

Pump placement from TOC 27 ft

Well Information:

Well ID HGWA-1  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 19.10 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.60998 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 08:54:59 | 900.00  | 19.01   | 7.02    | 637.97            | 18.70    | 19.61  | 0.21     | 90.49  |
| Last 5        | 08:59:59 | 1199.99 | 18.93   | 7.03    | 641.93            | 12.60    | 19.61  | 0.16     | 87.99  |
| Last 5        | 09:04:59 | 1499.98 | 18.96   | 7.02    | 646.49            | 11.83    | 19.61  | 0.14     | 85.82  |
| Last 5        | 09:09:59 | 1799.97 | 18.91   | 7.02    | 651.14            | 6.29     | 19.62  | 0.13     | 84.06  |
| Last 5        | 09:14:59 | 2099.96 | 18.86   | 7.02    | 651.39            | 4.58     | 19.62  | 0.12     | 82.67  |
| Variance 0    |          |         | 0.03    | -0.00   | 4.56              |          |        | -0.02    | -2.17  |
| Variance 1    |          |         | -0.05   | 0.00    | 4.65              |          |        | -0.01    | -1.76  |
| Variance 2    |          |         | -0.05   | -0.00   | 0.25              |          |        | -0.01    | -1.39  |

Notes

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6020B/7470A). Final turbidity: 4.58 NTU, Final depth to water: 19.62ft. Total depth: 32.30ft.

Grab Samples

HGWA-1  
Grab

Product Name: Low-Flow System

Date: 2020-08-25 10:35:47

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 643819  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 24 ft

Pump placement from TOC 23 ft

Well Information:

Well ID HGWA-2  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 10.18 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.59212 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 10:13:45 | 600.02  | 19.86   | 5.24    | 195.41            | 7.11     | 10.25  | 0.31     | 65.79  |
| Last 5        | 10:18:45 | 900.02  | 19.82   | 5.21    | 194.66            | 4.62     | 10.25  | 0.26     | 66.95  |
| Last 5        | 10:23:45 | 1200.01 | 19.78   | 5.19    | 194.68            | 4.47     | 10.25  | 0.46     | 67.69  |
| Last 5        | 10:28:45 | 1500.00 | 19.85   | 5.19    | 194.27            | 2.69     | 10.25  | 0.28     | 68.84  |
| Last 5        | 10:33:45 | 1800.01 | 19.77   | 5.15    | 193.74            | 2.65     | 10.25  | 0.24     | 71.11  |
| Variance 0    |          |         | -0.03   | -0.01   | 0.02              |          |        | 0.20     | 0.74   |
| Variance 1    |          |         | 0.07    | -0.00   | -0.42             |          |        | -0.18    | 1.15   |
| Variance 2    |          |         | -0.08   | -0.04   | -0.52             |          |        | -0.04    | 2.28   |

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 28.50'

Grab Samples

HGWA-2  
Grab

Product Name: Low-Flow System

Date: 2020-08-25 09:27:32

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 643819  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 41 ft

Pump placement from TOC 40 ft

Well Information:

Well ID HGWA-3  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 10.1 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.668 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 09:03:45 | 1499.93 | 18.70   | 7.19    | 433.16            | 1.40     | 10.30  | 0.94     | 45.24  |
| Last 5        | 09:08:45 | 1799.93 | 18.70   | 7.18    | 304.92            | 1.18     | 10.30  | 1.17     | 43.66  |
| Last 5        | 09:13:45 | 2099.92 | 18.66   | 7.18    | 454.80            | 1.16     | 10.30  | 0.81     | 40.81  |
| Last 5        | 09:18:45 | 2399.92 | 18.70   | 7.16    | 438.95            | 1.05     | 10.30  | 0.70     | 38.11  |
| Last 5        | 09:23:45 | 2699.92 | 18.70   | 7.14    | 440.96            | 0.98     | 10.30  | 0.83     | 35.51  |
| Variance 0    |          |         | -0.05   | -0.01   | 149.88            |          |        | -0.36    | -2.85  |
| Variance 1    |          |         | 0.05    | -0.02   | -15.85            |          |        | -0.11    | -2.69  |
| Variance 2    |          |         | 0.00    | -0.02   | 2.01              |          |        | 0.13     | -2.60  |

Notes

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6020B/7470A). Total depth: 45.20'

Grab Samples

HGWA-3  
Grab



Product Name: Low-Flow System

Date: 2020-08-24 16:54:46

Project Information:

Operator Name Aaron Reeder  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 23 ft

Pump placement from TOC 22 ft

Well Information:

Well ID HGWA-122  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 14.20 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.58766 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 16:31:52 | 300.08  | 20.40   | 6.48    | 411.73            | 15.80    | 14.20  | 1.30     | 185.02 |
| Last 5        | 16:36:52 | 600.01  | 20.30   | 6.49    | 417.47            | 12.67    | 14.20  | 1.20     | 165.35 |
| Last 5        | 16:41:52 | 900.00  | 20.31   | 6.51    | 422.96            | 7.56     | 14.20  | 1.18     | 154.85 |
| Last 5        | 16:46:52 | 1199.99 | 20.26   | 6.53    | 426.10            | 5.23     | 14.20  | 1.11     | 152.29 |
| Last 5        | 16:51:52 | 1499.98 | 20.34   | 6.54    | 428.95            | 3.32     | 14.20  | 1.08     | 152.15 |
| Variance 0    |          |         | 0.00    | 0.02    | 5.49              |          |        | -0.02    | -10.50 |
| Variance 1    |          |         | -0.04   | 0.01    | 3.14              |          |        | -0.07    | -2.56  |
| Variance 2    |          |         | 0.08    | 0.01    | 2.85              |          |        | -0.03    | -0.14  |

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 27.80'

Grab Samples

HGWA-122  
Grab

Product Name: Low-Flow System

Date: 2020-08-26 16:48:31

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 643819  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 58 ft

Pump placement from TOC 57 ft

Well Information:

Well ID HGWC-120  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 40.4 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.74388 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 16:25:50 | 600.06  | 20.61   | 6.94    | 852.57            | 3.58     | 40.40  | 0.50     | 37.15  |
| Last 5        | 16:30:50 | 900.02  | 20.37   | 6.97    | 844.20            | 2.17     | 40.40  | 0.54     | 39.51  |
| Last 5        | 16:35:50 | 1200.02 | 20.27   | 6.97    | 842.43            | 1.63     | 40.40  | 0.44     | 41.91  |
| Last 5        | 16:40:50 | 1500.01 | 20.54   | 6.97    | 841.64            | 1.53     | 40.40  | 0.27     | 42.84  |
| Last 5        | 16:45:50 | 1800.01 | 20.59   | 6.96    | 838.95            | 1.07     | 40.40  | 0.41     | 42.85  |
| Variance 0    |          |         | -0.11   | 0.00    | -1.76             |          |        | -0.10    | 2.40   |
| Variance 1    |          |         | 0.28    | -0.00   | -0.80             |          |        | -0.18    | 0.93   |
| Variance 2    |          |         | 0.05    | -0.01   | -2.68             |          |        | 0.15     | 0.01   |

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 62.54'

Grab Samples

HGWC-120  
Grab

Product Name: Low-Flow System

Date: 2020-08-26 15:19:29

Project Information:

Operator Name Aaron Reeder  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 37.0 ft

Pump placement from TOC 36 ft

Well Information:

Well ID HGWC-121A  
Well diameter 2 in  
Well Total Depth 41.0 ft  
Screen Length 10 ft  
Depth to Water 17.73 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.65015 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 14:57:36 | 900.00  | 21.26   | 6.73    | 1071.34           | 8.25     | 17.82  | 0.32     | 97.57  |
| Last 5        | 15:02:36 | 1199.99 | 21.37   | 6.73    | 1067.49           | 7.50     | 17.83  | 0.38     | 97.77  |
| Last 5        | 15:07:36 | 1499.98 | 21.63   | 6.73    | 1066.87           | 6.25     | 17.83  | 0.35     | 98.32  |
| Last 5        | 15:12:36 | 1799.97 | 21.82   | 6.73    | 1063.37           | 5.20     | 17.84  | 0.37     | 101.09 |
| Last 5        | 15:17:36 | 2099.96 | 22.02   | 6.73    | 1059.91           | 4.82     | 17.84  | 0.28     | 106.21 |
| Variance 0    |          |         | 0.26    | -0.00   | -0.61             |          |        | -0.03    | 0.55   |
| Variance 1    |          |         | 0.19    | -0.00   | -3.51             |          |        | 0.02     | 2.77   |
| Variance 2    |          |         | 0.19    | 0.00    | -3.46             |          |        | -0.09    | 5.12   |

Notes

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-121A  
Grab

Product Name: Low-Flow System

Date: 2020-08-27 11:16:37

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 643819  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 31 ft

Pump placement from TOC 30 ft

Well Information:

Well ID HGWC-124  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 14.84 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6233661 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 10:52:52 | 2400.03 | 19.91   | 7.15    | 579.76            | 1.89     | 15.27  | 0.80     | 43.96  |
| Last 5        | 10:57:52 | 2700.02 | 19.87   | 7.15    | 580.34            | 1.60     | 15.27  | 0.69     | 40.84  |
| Last 5        | 11:02:52 | 3000.02 | 19.84   | 7.15    | 580.70            | 1.68     | 15.27  | 1.16     | 39.79  |
| Last 5        | 11:07:52 | 3300.01 | 19.91   | 7.15    | 577.85            | 1.71     | 15.27  | 1.15     | 39.70  |
| Last 5        | 11:12:52 | 3600.01 | 19.82   | 7.15    | 581.18            | 1.76     | 15.27  | 1.00     | 40.39  |
| Variance 0    |          |         | -0.02   | -0.00   | 0.36              |          |        | 0.47     | -1.04  |
| Variance 1    |          |         | 0.06    | 0.01    | -2.86             |          |        | -0.01    | -0.09  |
| Variance 2    |          |         | -0.09   | -0.00   | 3.33              |          |        | -0.15    | 0.69   |

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 35.30'

Grab Samples

HGWC-124  
Grab

Product Name: Low-Flow System

Date: 2020-08-25 14:48:30

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 643819  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 60 ft

Pump placement from TOC 59 ft

Well Information:

Well ID HGWC-125  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 43.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.75281 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 14:26:17 | 600.02  | 19.27   | 6.31    | 1038.97           | 0.89     | 43.76  | 0.85     | -3.32  |
| Last 5        | 14:31:17 | 900.02  | 19.19   | 6.35    | 1057.06           | 0.74     | 43.76  | 0.64     | 0.31   |
| Last 5        | 14:36:18 | 1201.02 | 19.16   | 6.36    | 1068.84           | 0.76     | 43.76  | 0.54     | 3.39   |
| Last 5        | 14:41:20 | 1503.02 | 19.19   | 6.36    | 1082.01           | 0.93     | 43.76  | 0.50     | 5.80   |
| Last 5        | 14:46:56 | 1839.01 | 19.15   | 6.36    | 1086.36           | 0.77     | 43.76  | 0.75     | 8.49   |
| Variance 0    |          |         | -0.04   | 0.00    | 11.78             |          |        | -0.10    | 3.08   |
| Variance 1    |          |         | 0.04    | 0.01    | 13.17             |          |        | -0.04    | 2.41   |
| Variance 2    |          |         | -0.05   | 0.00    | 4.35              |          |        | 0.25     | 2.69   |

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B/7470A). Total depth: 64.40'

Grab Samples

HGWC-125  
Grab

Product Name: Low-Flow System

Date: 2020-08-25 12:55:42

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 643819  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 65 ft

Pump placement from TOC 64 ft

Well Information:

Well ID HGWC-126  
Well diameter 2 in  
Well Total Depth ft  
Screen Length 10 ft  
Depth to Water 41.54 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7751225 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 12:25:22 | 1500.01 | 19.82   | 6.74    | 867.38            | 20.00    | 42.70  | 0.41     | 31.24  |
| Last 5        | 12:30:22 | 1800.01 | 19.82   | 6.75    | 866.83            | 14.80    | 42.80  | 0.54     | 26.42  |
| Last 5        | 12:35:22 | 2100.00 | 19.95   | 6.77    | 865.43            | 9.92     | 42.88  | 0.46     | 21.49  |
| Last 5        | 12:40:22 | 2400.00 | 19.95   | 6.78    | 866.23            | 7.24     | 42.90  | 0.57     | 17.03  |
| Last 5        | 12:50:22 | 3000.00 | 19.97   | 6.78    | 867.64            | 4.20     | 42.99  | 0.35     | 10.10  |
| Variance 0    |          |         | 0.13    | 0.02    | -1.40             |          |        | -0.08    | -4.93  |
| Variance 1    |          |         | 0.00    | 0.01    | 0.80              |          |        | 0.11     | -4.45  |
| Variance 2    |          |         | 0.02    | 0.00    | 1.41              |          |        | -0.22    | -6.94  |

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B/7470A). Total depth: 69.30'

Grab Samples

HGWC-126  
Grab

Product Name: Low-Flow System

Date: 2020-08-26 13:13:14

Project Information:

Operator Name Aaron Reeder  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 32.55 ft

Pump placement from TOC 31.55 ft

Well Information:

Well ID MW-32  
Well diameter 2 in  
Well Total Depth 36.55 ft  
Screen Length 10 ft  
Depth to Water 20.05 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.23529 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 12:50:04 | 900.00  | 20.62   | 7.39    | 981.29            | 3.95     | 20.05  | 0.85     | 119.66 |
| Last 5        | 12:55:04 | 1199.99 | 20.62   | 6.89    | 960.14            | 4.72     | 20.05  | 0.77     | 105.77 |
| Last 5        | 13:00:04 | 1499.98 | 20.62   | 6.79    | 959.89            | 5.42     | 20.05  | 0.75     | 102.86 |
| Last 5        | 13:05:04 | 1800.01 | 20.63   | 6.75    | 958.32            | 5.00     | 20.05  | 0.77     | 101.67 |
| Last 5        | 13:10:04 | 2099.99 | 20.66   | 6.74    | 956.00            | 4.75     | 20.05  | 0.76     | 101.36 |
| Variance 0    |          |         | 0.00    | -0.10   | -0.25             |          |        | -0.02    | -2.92  |
| Variance 1    |          |         | 0.01    | -0.03   | -1.57             |          |        | 0.01     | -1.18  |
| Variance 2    |          |         | 0.03    | -0.01   | -2.32             |          |        | -0.01    | -0.32  |

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-32  
Grab  
FD-01  
Grab

Product Name: Low-Flow System

Date: 2020-08-26 11:40:39

Project Information:

Operator Name Aaron Reeder  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 20.40 ft

Pump placement from TOC 19.40 ft

Well Information:

Well ID MW-41  
Well diameter 2 in  
Well Total Depth 24.40 ft  
Screen Length 10 ft  
Depth to Water 12.00 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.1810538 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 11:27:17 | 300.04  | 19.39   | 6.75    | 996.47            | 0.45     | 12.05  | 1.44     | 90.94  |
| Last 5        | 11:32:17 | 600.01  | 19.97   | 6.78    | 980.07            | 0.78     | 12.05  | 0.77     | 87.91  |
| Last 5        | 11:37:17 | 900.00  | 19.02   | 6.74    | 950.92            | 1.05     | 12.05  | 0.15     | 86.88  |
| Last 5        |          |         |         |         |                   |          |        |          |        |
| Variance 0    |          |         | nan     | nan     | nan               |          |        | nan      | nan    |
| Variance 1    |          |         | 0.58    | 0.03    | -16.39            |          |        | -0.66    | -3.03  |
| Variance 2    |          |         | -0.95   | -0.04   | -29.15            |          |        | -0.62    | -1.03  |

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-41  
Grab



September 2020

Product Name: Low-Flow System

Date: 2020-09-15 14:00:40

Project Information:

Operator Name Vashish Taukoor  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 512733  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 29 ft

Pump placement from TOC 28 ft

Well Information:

Well ID HGWA-1  
Well diameter 2 in  
Well Total Depth 32.30 ft  
Screen Length 10 ft  
Depth to Water 21.03 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6144392 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 13:35:42 | 1200.02 | 18.57   | 7.12    | 675.09            | 6.15     | 21.66  | 0.73     | 46.26  |
| Last 5        | 13:40:42 | 1500.02 | 18.61   | 7.14    | 640.84            | 3.75     | 21.68  | 0.74     | 45.86  |
| Last 5        | 13:45:42 | 1800.02 | 18.61   | 7.13    | 636.90            | 2.72     | 21.68  | 0.75     | 45.56  |
| Last 5        | 13:50:42 | 2100.02 | 18.59   | 7.13    | 642.42            | 1.99     | 21.68  | 0.84     | 43.99  |
| Last 5        | 13:55:42 | 2400.02 | 18.57   | 7.15    | 637.79            | 2.15     | 21.70  | 0.74     | 42.92  |
| Variance 0    |          |         | -0.00   | -0.01   | -3.93             |          |        | 0.01     | -0.30  |
| Variance 1    |          |         | -0.02   | 0.00    | 5.52              |          |        | 0.09     | -1.57  |
| Variance 2    |          |         | -0.02   | 0.02    | -4.63             |          |        | -0.10    | -1.07  |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-1  
Grab

Product Name: Low-Flow System

Date: 2020-09-15 11:00:31

Project Information:

Operator Name Thomas Kessler  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 512733  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 24 ft

Pump placement from TOC 23 ft

Well Information:

Well ID HGWA-2  
Well diameter 2 in  
Well Total Depth 28.44 ft  
Screen Length 10 ft  
Depth to Water 11.30 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5921222 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 10:32:10 | 899.92  | 20.15   | 5.32    | 195.68            | 11.60    | 11.41  | 0.42     | 169.65 |
| Last 5        | 10:37:10 | 1199.92 | 20.13   | 5.28    | 194.22            | 8.02     | 11.42  | 0.41     | 173.23 |
| Last 5        | 10:42:10 | 1499.91 | 20.17   | 5.24    | 193.95            | 5.33     | 11.42  | 0.40     | 175.76 |
| Last 5        | 10:47:10 | 1799.91 | 20.12   | 5.24    | 192.89            | 5.42     | 11.42  | 0.36     | 175.10 |
| Last 5        | 10:52:10 | 2099.88 | 20.26   | 5.22    | 193.35            | 3.45     | 11.42  | 0.30     | 177.98 |
| Variance 0    |          |         | 0.05    | -0.04   | -0.27             |          |        | -0.01    | 2.53   |
| Variance 1    |          |         | -0.05   | -0.00   | -1.06             |          |        | -0.04    | -0.65  |
| Variance 2    |          |         | 0.14    | -0.02   | 0.45              |          |        | -0.05    | 2.88   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-2  
Grab

Product Name: Low-Flow System

Date: 2020-09-15 11:44:46

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 41 ft

Pump placement from TOC 40 ft

Well Information:

Well ID HGWA-3  
Well diameter 2 in  
Well Total Depth 45.21 ft  
Screen Length 10 ft  
Depth to Water 11.14 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6680003 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 11:20:49 | 599.92  | 19.75   | 7.20    | 432.07            | 2.79     | 11.14  | 0.43     | 135.56 |
| Last 5        | 11:25:49 | 899.91  | 19.67   | 7.25    | 431.63            | 2.66     | 11.14  | 0.32     | 128.09 |
| Last 5        | 11:30:49 | 1199.91 | 19.68   | 7.26    | 431.82            | 1.91     | 11.14  | 0.26     | 123.92 |
| Last 5        | 11:35:49 | 1499.90 | 19.64   | 7.28    | 432.89            | 1.45     | 11.15  | 0.22     | 118.72 |
| Last 5        | 11:40:49 | 1799.89 | 19.73   | 7.29    | 433.82            | 1.39     | 11.15  | 0.19     | 117.44 |
| Variance 0    |          |         | 0.01    | 0.02    | 0.19              |          |        | -0.06    | -4.18  |
| Variance 1    |          |         | -0.04   | 0.02    | 1.07              |          |        | -0.04    | -5.20  |
| Variance 2    |          |         | 0.09    | 0.00    | 0.93              |          |        | -0.03    | -1.29  |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-3  
Grab

Product Name: Low-Flow System

Date: 2020-09-16 12:15:59

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 58 ft

Pump placement from TOC 57 ft

Well Information:

Well ID HGWA-43D  
Well diameter 2 in  
Well Total Depth 62.80 ft  
Screen Length 10 ft  
Depth to Water 20.86 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.3488785 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 11:53:12 | 5399.89 | 19.50   | 7.52    | 489.14            | 2.49     | 28.90  | 3.50     | 123.71 |
| Last 5        | 11:58:12 | 5699.88 | 19.55   | 7.52    | 489.23            | 3.04     | 29.04  | 3.51     | 124.17 |
| Last 5        | 12:03:12 | 5999.87 | 19.55   | 7.51    | 489.18            | 1.70     | 29.23  | 3.51     | 125.27 |
| Last 5        | 12:08:12 | 6299.85 | 19.59   | 7.51    | 490.42            | 4.39     | 29.34  | 3.52     | 127.61 |
| Last 5        | 12:13:12 | 6599.86 | 19.59   | 7.52    | 490.47            | 2.00     | 29.44  | 3.55     | 126.16 |
| Variance 0    |          |         | 0.00    | -0.00   | -0.05             |          |        | 0.00     | 1.09   |
| Variance 1    |          |         | 0.04    | -0.00   | 1.24              |          |        | 0.00     | 2.34   |
| Variance 2    |          |         | -0.00   | 0.00    | 0.05              |          |        | 0.04     | -1.45  |

Notes

Seven bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); one 250-mL plastic bottle with HNO<sub>3</sub> for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-43D

Grab

Product Name: Low-Flow System

Date: 2020-09-16 15:15:05

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 109 ft

Pump placement from TOC 108 ft

Well Information:

Well ID HGWA-44D  
Well diameter 2 in  
Well Total Depth 112.70 ft  
Screen Length 10 ft  
Depth to Water 19.78 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.9715132 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 14:52:53 | 1799.98 | 18.75   | 7.82    | 485.06            | 7.32     | 22.23  | 0.33     | 82.08  |
| Last 5        | 14:57:53 | 2099.97 | 18.75   | 7.83    | 484.75            | 6.23     | 22.41  | 0.31     | 80.84  |
| Last 5        | 15:02:53 | 2399.96 | 19.01   | 7.84    | 485.74            | 6.11     | 22.33  | 0.30     | 79.80  |
| Last 5        | 15:07:53 | 2699.96 | 19.13   | 7.84    | 485.10            | 4.90     | 22.25  | 0.31     | 80.08  |
| Last 5        | 15:12:53 | 2999.95 | 19.10   | 7.83    | 484.70            | 4.93     | 22.23  | 0.31     | 77.43  |
| Variance 0    |          |         | 0.26    | 0.01    | 0.99              |          |        | -0.01    | -1.04  |
| Variance 1    |          |         | 0.12    | 0.00    | -0.64             |          |        | 0.01     | 0.28   |
| Variance 2    |          |         | -0.02   | -0.01   | -0.40             |          |        | 0.00     | -2.65  |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-44D

Grab

Product Name: Low-Flow System

Date: 2020-09-25 13:49:01

Project Information:

Operator Name Vashish Taukoor  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 512733  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 62 ft

Pump placement from TOC 59.20 ft

Well Information:

Well ID HGWA-45D  
Well diameter 2 in  
Well Total Depth 63.80 ft  
Screen Length 10 ft  
Depth to Water 13.93 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7617322 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 6.5 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV  |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|---------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10  |
| Last 5        | 13:27:01 | 300.11  | 19.44   | 7.61    | 513.67            | 2.62     | 13.87  | 0.15     | -120.71 |
| Last 5        | 13:32:01 | 600.05  | 19.42   | 7.61    | 501.66            | 2.75     | 13.90  | 0.13     | -118.70 |
| Last 5        | 13:37:01 | 900.02  | 19.38   | 7.60    | 494.90            | 3.25     | 13.87  | 0.11     | -112.39 |
| Last 5        | 13:42:01 | 1200.02 | 19.45   | 7.59    | 492.63            | 3.32     | 13.90  | 0.09     | -108.93 |
| Last 5        | 13:47:01 | 1500.02 | 19.46   | 7.57    | 491.78            | 3.02     | 13.87  | 0.09     | -109.79 |
| Variance 0    |          |         | -0.04   | -0.01   | -6.76             |          |        | -0.02    | 6.31    |
| Variance 1    |          |         | 0.08    | -0.01   | -2.27             |          |        | -0.02    | 3.45    |
| Variance 2    |          |         | 0.01    | -0.01   | -0.86             |          |        | -0.00    | -0.86   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-45D  
Grab

Product Name: Low-Flow System

Date: 2020-09-15 15:40:23

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 25 ft

Pump placement from TOC 24 ft

Well Information:

Well ID HGWA-122  
Well diameter 2 in  
Well Total Depth 28.52 ft  
Screen Length 10 ft  
Depth to Water 15.24 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5965856 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 15:16:36 | 1799.98 | 20.72   | 6.67    | 446.60            | 3.05     | 15.24  | 1.53     | 152.33 |
| Last 5        | 15:21:36 | 2099.97 | 20.67   | 6.67    | 450.04            | 2.28     | 15.24  | 1.37     | 153.83 |
| Last 5        | 15:26:36 | 2399.96 | 20.67   | 6.67    | 451.24            | 1.64     | 15.24  | 1.26     | 156.78 |
| Last 5        | 15:31:36 | 2699.96 | 20.65   | 6.67    | 451.53            | 1.37     | 15.24  | 1.15     | 159.62 |
| Last 5        | 15:36:36 | 2999.95 | 20.59   | 6.68    | 453.72            | 1.39     | 15.24  | 1.07     | 161.41 |
| Variance 0    |          |         | -0.00   | 0.00    | 1.20              |          |        | -0.12    | 2.95   |
| Variance 1    |          |         | -0.02   | 0.00    | 0.30              |          |        | -0.11    | 2.85   |
| Variance 2    |          |         | -0.05   | 0.01    | 2.19              |          |        | -0.08    | 1.78   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); one 250-mL plastic bottle with HNO<sub>3</sub> for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-122  
Grab



Product Name: Low-Flow System

Date: 2020-09-21 13:46:00

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 64 ft

Pump placement from TOC 63 ft

Well Information:

Well ID HGWC-120  
Well diameter 2 in  
Well Total Depth 67.55 ft  
Screen Length 10 ft  
Depth to Water 41.16 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.770659 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 13:23:48 | 600.01  | 20.45   | 6.98    | 924.84            | 5.37     | 41.19  | 0.36     | 58.80  |
| Last 5        | 13:28:48 | 900.00  | 20.36   | 6.98    | 921.89            | 2.74     | 41.19  | 0.23     | 68.39  |
| Last 5        | 13:33:48 | 1200.00 | 20.31   | 6.97    | 920.72            | 1.83     | 41.19  | 0.19     | 73.06  |
| Last 5        | 13:38:48 | 1500.00 | 20.31   | 6.97    | 920.27            | 1.25     | 41.19  | 0.17     | 75.81  |
| Last 5        | 13:43:48 | 1799.98 | 20.37   | 6.98    | 919.61            | 1.02     | 41.19  | 0.16     | 78.73  |
| Variance 0    |          |         | -0.05   | -0.00   | -1.17             |          |        | -0.04    | 4.66   |
| Variance 1    |          |         | 0.01    | -0.00   | -0.45             |          |        | -0.02    | 2.75   |
| Variance 2    |          |         | 0.06    | 0.00    | -0.65             |          |        | -0.01    | 2.92   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-120

Grab

FD-03

Grab

Product Name: Low-Flow System

Date: 2020-09-28 16:08:12

Project Information:

Operator Name Thomas Kessler  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 512733  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 33.16 ft

Pump placement from TOC 33.16 ft

Well Information:

Well ID HGWC-121A  
Well diameter 2 in  
Well Total Depth 38.16 ft  
Screen Length 10 ft  
Depth to Water 18.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6330071 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 15:49:25 | 300.09  | 19.53   | 6.94    | 991.02            | 2.01     | 18.40  | 1.32     | 515.86 |
| Last 5        | 15:54:25 | 600.03  | 21.21   | 6.93    | 1027.43           | 1.50     | 18.34  | 1.14     | 520.23 |
| Last 5        | 15:59:25 | 900.02  | 20.17   | 6.94    | 1034.82           | 1.66     | 18.40  | 1.09     | 540.13 |
| Last 5        | 16:04:25 | 1200.02 | 20.12   | 6.93    | 1036.55           | 2.64     | 18.40  | 1.21     | 540.22 |
| Last 5        |          |         |         |         |                   |          |        |          |        |
| Variance 0    |          |         | 1.69    | -0.01   | 36.40             |          |        | -0.19    | 4.37   |
| Variance 1    |          |         | -1.04   | 0.01    | 7.39              |          |        | -0.04    | 19.90  |
| Variance 2    |          |         | -0.05   | -0.01   | 1.73              |          |        | 0.12     | 0.09   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-121A  
Grab

Product Name: Low-Flow System

Date: 2020-09-28 18:01:52

Project Information:

Operator Name Thomas Kessler  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 512733  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 30.52 ft

Pump placement from TOC 30.52 ft

Well Information:

Well ID HGWC-124  
Well diameter 2 in  
Well Total Depth 35.52 ft  
Screen Length 10 ft  
Depth to Water 15.70 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.6212237 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 17:40:18 | 1800.02 | 20.03   | 7.31    | 580.95            | 12.60    | 16.00  | 1.10     | 276.17 |
| Last 5        | 17:45:18 | 2100.02 | 20.04   | 7.30    | 578.20            | 11.52    | 15.95  | 1.09     | 272.50 |
| Last 5        | 17:50:18 | 2400.01 | 19.91   | 7.29    | 561.16            | 9.51     | 16.00  | 1.01     | 267.47 |
| Last 5        | 17:55:18 | 2700.01 | 19.79   | 7.28    | 581.78            | 7.79     | 16.00  | 1.03     | 260.26 |
| Last 5        | 18:00:18 | 3000.01 | 19.69   | 7.27    | 555.95            | 4.49     | 16.01  | 1.01     | 248.83 |
| Variance 0    |          |         | -0.13   | -0.01   | -17.04            |          |        | -0.08    | -5.03  |
| Variance 1    |          |         | -0.12   | -0.01   | 20.62             |          |        | 0.02     | -7.21  |
| Variance 2    |          |         | -0.09   | -0.01   | -25.83            |          |        | -0.02    | -11.43 |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-124

Grab

Product Name: Low-Flow System

Date: 2020-09-21 12:04:37

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 61 ft

Pump placement from TOC 60 ft

Well Information:

Well ID HGWC-125  
Well diameter 2 in  
Well Total Depth 64.80 ft  
Screen Length 10 ft  
Depth to Water 44.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7572688 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 11:42:13 | 600.01  | 20.34   | 6.31    | 920.53            | 1.24     | 44.50  | 0.23     | -70.37 |
| Last 5        | 11:47:13 | 900.00  | 21.43   | 6.25    | 932.68            | 0.99     | 44.48  | 0.39     | -56.54 |
| Last 5        | 11:52:13 | 1199.99 | 20.15   | 6.21    | 939.81            | 0.25     | 44.48  | 0.17     | -33.72 |
| Last 5        | 11:57:13 | 1499.99 | 20.26   | 6.21    | 970.31            | 0.27     | 44.48  | 0.19     | -21.16 |
| Last 5        | 12:02:13 | 1799.98 | 19.86   | 6.22    | 987.16            | 0.41     | 44.48  | 0.14     | -7.98  |
| Variance 0    |          |         | -1.28   | -0.04   | 7.13              |          |        | -0.22    | 22.82  |
| Variance 1    |          |         | 0.11    | 0.00    | 30.50             |          |        | 0.02     | 12.56  |
| Variance 2    |          |         | -0.40   | 0.01    | 16.85             |          |        | -0.05    | 13.18  |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-125

Grab

Product Name: Low-Flow System

Date: 2020-09-18 15:45:21

Project Information:

Operator Name Chad Russo  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 65 ft

Pump placement from TOC 64 ft

Well Information:

Well ID HGWC-126  
Well diameter 2 in  
Well Total Depth 69.65 ft  
Screen Length 10 ft  
Depth to Water 42.01 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.7751225 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 15:19:30 | 900.01  | 20.84   | 6.98    | 835.77            | 0.78     | 43.07  | 0.31     | -80.18 |
| Last 5        | 15:24:30 | 1200.00 | 20.78   | 6.98    | 838.10            | 0.46     | 43.15  | 0.22     | -81.36 |
| Last 5        | 15:29:30 | 1499.99 | 21.16   | 6.97    | 844.84            | 0.38     | 43.15  | 0.21     | -81.67 |
| Last 5        | 15:34:30 | 1799.98 | 21.15   | 6.97    | 845.10            | 0.39     | 43.20  | 0.18     | -80.14 |
| Last 5        | 15:39:30 | 2099.98 | 21.01   | 6.97    | 848.18            | --       | --     | 0.17     | -78.90 |
| Variance 0    |          |         | 0.38    | -0.01   | 6.74              |          |        | -0.02    | -0.31  |
| Variance 1    |          |         | -0.01   | -0.00   | 0.26              |          |        | -0.02    | 1.53   |
| Variance 2    |          |         | -0.15   | -0.00   | 3.08              |          |        | -0.01    | 1.24   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-126  
Grab

Product Name: Low-Flow System

Date: 2020-09-28 15:40:11

Project Information:

Operator Name Thomas Kessler  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 646773  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 36 ft

Pump placement from TOC 31 ft

Well Information:

Well ID MW-32  
Well diameter 2 in  
Well Total Depth 36.68 ft  
Screen Length 10 ft  
Depth to Water 20.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.2506832 L  
Calculated Sample Rate 300 sec 3.6  
Stabilization Drawdown in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 15:18:47 | 1200.03 | 22.27   | 6.89    | 957.14            | 2.74     | 20.49  | 0.13     | 56.11  |
| Last 5        | 15:23:47 | 1500.02 | 22.54   | 6.88    | 952.55            | 2.88     | 20.49  | 0.12     | 56.59  |
| Last 5        | 15:28:47 | 1800.02 | 22.28   | 6.89    | 946.34            | 3.41     | 20.49  | 0.12     | 57.31  |
| Last 5        | 15:33:47 | 2100.01 | 21.93   | 6.90    | 942.07            | 2.45     | 20.49  | 0.11     | 57.62  |
| Last 5        | 15:38:47 | 2400.02 | 22.00   | 6.90    | 941.52            | 2.43     | 20.49  | 0.10     | 57.73  |
| Variance 0    |          |         | -0.26   | 0.00    | -6.21             |          |        | -0.00    | 0.72   |
| Variance 1    |          |         | -0.35   | 0.01    | -4.27             |          |        | -0.01    | 0.31   |
| Variance 2    |          |         | 0.07    | -0.00   | -0.54             |          |        | -0.00    | 0.11   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-32  
Grab

Product Name: Low-Flow System

Date: 2020-09-28 19:01:08

Project Information:

Operator Name Thomas Kessler  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 646773  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 23 ft

Pump placement from TOC 19 ft

Well Information:

Well ID MW-41  
Well diameter 2 in  
Well Total Depth 24.40 ft  
Screen Length 10 ft  
Depth to Water 12.45 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.1926587 L  
Calculated Sample Rate 300 sec 3.6  
Stabilization Drawdown in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|--------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10 |
| Last 5        | 18:40:10 | 900.02  | 19.06   | 7.00    | 997.25            | 2.00     | 12.56  | 0.15     | 22.42  |
| Last 5        | 18:45:10 | 1200.01 | 18.96   | 7.00    | 997.70            | 1.87     | 12.56  | 0.15     | 23.39  |
| Last 5        | 18:50:10 | 1500.01 | 18.88   | 7.00    | 994.45            | 2.39     | 12.56  | 0.12     | 24.56  |
| Last 5        | 18:55:10 | 1800.01 | 19.02   | 7.00    | 994.29            | 3.18     | 12.56  | 0.13     | 25.41  |
| Last 5        | 19:00:10 | 2100.00 | 18.97   | 7.00    | 991.82            | 2.78     | 12.56  | 0.13     | 27.77  |
| Variance 0    |          |         | -0.08   | 0.00    | -3.26             |          |        | -0.03    | 1.17   |
| Variance 1    |          |         | 0.14    | -0.00   | -0.16             |          |        | 0.01     | 0.85   |
| Variance 2    |          |         | -0.05   | 0.00    | -2.47             |          |        | 0.00     | 2.36   |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-41  
Grab

Product Name: Low-Flow System

Date: 2020-09-25 11:11:38

Project Information:

Operator Name Vashish Taukoor  
Company Name Geosyntec Consultants  
Project Name GP-Plant Hammond  
Site Name Plant Hammond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 512733  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 101 ft

Pump placement from TOC 99.5 ft

Well Information:

Well ID MW-46D  
Well diameter 2 in  
Well Total Depth >100 ft  
Screen Length 10 ft  
Depth to Water 41.70 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.9358057 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

|               | Time     | Elapsed | Temp C  | pH      | SpCond $\mu$ S/cm | Turb NTU | DTW ft | RDO mg/L | ORP mV  |
|---------------|----------|---------|---------|---------|-------------------|----------|--------|----------|---------|
| Stabilization |          |         | +/- 0.5 | +/- 0.1 | +/- 5%            | +/- 10   |        | +/- 10%  | +/- 10  |
| Last 5        | 10:48:02 | 300.11  | 19.91   | 7.56    | 727.40            | 3.82     | 41.50  | 0.39     | -117.65 |
| Last 5        | 10:53:02 | 600.02  | 19.86   | 7.57    | 728.26            | 2.88     | 41.40  | 0.35     | -117.80 |
| Last 5        | 10:58:02 | 900.02  | 19.89   | 7.56    | 725.92            | 2.42     | 41.38  | 0.31     | -117.62 |
| Last 5        | 11:03:02 | 1200.02 | 19.95   | 7.56    | 728.82            | 2.53     | 41.33  | 0.27     | -117.53 |
| Last 5        | 11:08:02 | 1500.02 | 20.06   | 7.56    | 727.34            | 2.45     | 41.33  | 0.27     | -116.86 |
| Variance 0    |          |         | 0.03    | -0.00   | -2.34             |          |        | -0.04    | 0.18    |
| Variance 1    |          |         | 0.06    | -0.00   | 2.90              |          |        | -0.04    | 0.09    |
| Variance 2    |          |         | 0.11    | -0.00   | -1.48             |          |        | -0.00    | 0.66    |

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-46D  
Grab



November 2020

# Low-Flow Test Report:

**Test Date / Time:** 11/10/2020 9:26:05 AM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |  |  |
|---|--|--|
| <b>Location Name: HGWA-43D</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 51.25 ft</b><br><b>Initial Depth to Water: 17.63 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 56.25 ft</b><br><b>Estimated Total Volume Pumped: 5000 ml</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 100 ml/min</b><br><b>Final Draw Down: 2.52 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728550</b> |
|---|--|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 61.80 ft.

## Weather Conditions:

Cloudy, 70 degrees

## Low-Flow Readings:

| Date Time           | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP      | Depth To Water | Flow          |
|---------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|----------|----------------|---------------|
|                     |              | +/- 0.1 | +/- 0.5     | +/- 3 %               | +/- 0.3           | +/- 10    | +/- 10   | +/- 0.3        |               |
| 11/10/2020 9:26 AM  | 00:00        | 7.43 pH | 19.51 °C    | 519.66 µS/cm          | 2.23 mg/L         | 13.90 NTU | 66.7 mV  | 17.63 ft       | 100.00 ml/min |
| 11/10/2020 9:31 AM  | 05:00        | 7.31 pH | 18.97 °C    | 526.55 µS/cm          | 0.85 mg/L         | 13.90 NTU | 36.6 mV  | 18.00 ft       | 100.00 ml/min |
| 11/10/2020 9:36 AM  | 10:00        | 7.30 pH | 18.73 °C    | 526.05 µS/cm          | 0.47 mg/L         | 11.52 NTU | 27.9 mV  | 18.54 ft       | 100.00 ml/min |
| 11/10/2020 9:41 AM  | 15:00        | 7.30 pH | 18.70 °C    | 529.05 µS/cm          | 0.41 mg/L         | 8.72 NTU  | 21.7 mV  | 18.75 ft       | 100.00 ml/min |
| 11/10/2020 9:46 AM  | 20:00        | 7.29 pH | 18.70 °C    | 531.52 µS/cm          | 0.35 mg/L         | 6.87 NTU  | 15.7 mV  | 19.08 ft       | 100.00 ml/min |
| 11/10/2020 9:51 AM  | 25:00        | 7.28 pH | 18.66 °C    | 532.18 µS/cm          | 0.31 mg/L         | 6.52 NTU  | 10.3 mV  | 19.26 ft       | 100.00 ml/min |
| 11/10/2020 9:56 AM  | 30:00        | 7.28 pH | 18.61 °C    | 533.94 µS/cm          | 0.30 mg/L         | 3.33 NTU  | 4.6 mV   | 19.45 ft       | 100.00 ml/min |
| 11/10/2020 10:01 AM | 35:00        | 7.27 pH | 18.62 °C    | 533.72 µS/cm          | 0.26 mg/L         | 3.21 NTU  | -0.3 mV  | 19.55 ft       | 100.00 ml/min |
| 11/10/2020 10:06 AM | 40:00        | 7.27 pH | 18.55 °C    | 526.45 µS/cm          | 0.23 mg/L         | 3.37 NTU  | -6.1 mV  | 19.75 ft       | 100.00 ml/min |
| 11/10/2020 10:11 AM | 45:00        | 7.28 pH | 18.47 °C    | 524.76 µS/cm          | 0.20 mg/L         | 2.55 NTU  | -12.1 mV | 19.95 ft       | 100.00 ml/min |
| 11/10/2020 10:16 AM | 50:00        | 7.27 pH | 18.43 °C    | 522.45 µS/cm          | 0.18 mg/L         | 2.29 NTU  | -16.8 mV | 20.15 ft       | 100.00 ml/min |

**Samples**

| Sample ID: | Description: |
|------------|--------------|
| HGWA-43D   | Grab Sample  |

# Low-Flow Test Report:

**Test Date / Time:** 11/10/2020 1:01:59 PM

**Project:** GP-Plant Hammond

**Operator Name:** Shawn Lin

|   |  |  |
|---|--|--|
| <b>Location Name:</b> HGWA-44D<br><b>Well Diameter:</b> 2 in<br><b>Casing Type:</b> PVC Screen<br><b>Length:</b> 10 ft<br><b>Top of Screen:</b> 103.28 ft<br><b>Initial Depth to Water:</b> 16.81 | <b>Pump Type:</b> Bladder<br><b>Tubing Type:</b> Polyethylene<br><b>Pump Intake From TOC:</b> 108.28 m<br><b>Estimated Total Volume Pumped:</b> 23.7 liter<br><b>Flow Cell Volume:</b> 90 ml<br><b>Final Flow Rate:</b> 120 ml/min<br><b>Final Draw Down:</b> 19.75 ft | <b>Instrument Used:</b> Aqua TROLL 400<br><b>Serial Number:</b> 728634 |
|---|--|--|

## Test Notes:

AquaTroll battery died at 13:11, continued purge to lower turbidity while charging the AquaTroll. Restarted purge at 14:27.

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Measured total depth = 113.30 ft.

## Weather Conditions:

Cloudy, 70 degrees

## Low-Flow Readings:

| Date Time             | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP      | Depth To Water | Flow          |
|-----------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|----------|----------------|---------------|
|                       |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 10 %          | +/- 10    | +/- 10   | +/- 0.3        |               |
| 11/10/2020<br>1:01 PM | 00:00        | 7.82 pH | 18.48 °C    | 491.24 µS/cm          | 0.35 mg/L         |           | -85.8 mV |                | 200.00 ml/min |
| 11/10/2020<br>1:06 PM | 05:00        | 7.82 pH | 18.44 °C    | 496.57 µS/cm          | 0.28 mg/L         | 58.10 NTU | -88.6 mV | 18.72 ft       | 200.00 ml/min |
| 11/10/2020<br>1:11 PM | 10:00        | 7.83 pH | 18.42 °C    | 497.00 µS/cm          | 0.24 mg/L         |           | -80.0 mV | 18.72 ft       | 200.00 ml/min |
| 11/10/2020<br>1:14 PM | 12:41        | 7.83 pH | 18.40 °C    | 495.66 µS/cm          | 0.24 mg/L         |           | -94.2 mV | 18.72 ft       | 200.00 ml/min |
| 11/10/2020<br>2:27 PM | 01:25:08     | 7.82 pH | 18.71 °C    | 509.00 µS/cm          | 0.18 mg/L         | 39.00 NTU | -52.0 mV | 19.51 ft       | 120.00 ml/min |
| 11/10/2020<br>2:32 PM | 01:30:35     | 7.82 pH | 18.69 °C    | 507.62 µS/cm          | 0.17 mg/L         | 34.10 NTU | -83.2 mV | 19.51 ft       | 120.00 ml/min |
| 11/10/2020<br>2:37 PM | 01:35:35     | 7.83 pH | 18.68 °C    | 506.98 µS/cm          | 0.16 mg/L         | 28.00 NTU | -78.6 mV | 19.55 ft       | 120.00 ml/min |
| 11/10/2020<br>2:42 PM | 01:40:35     | 7.83 pH | 18.64 °C    | 507.98 µS/cm          | 0.15 mg/L         | 28.40 NTU | -78.0 mV | 19.55 ft       | 120.00 ml/min |
| 11/10/2020<br>2:47 PM | 01:45:35     | 7.83 pH | 18.60 °C    | 507.25 µS/cm          | 0.15 mg/L         | 26.80 NTU | -77.8 mV | 19.60 ft       | 120.00 ml/min |

|                       |          |         |          |              |           |           |          |          |               |
|-----------------------|----------|---------|----------|--------------|-----------|-----------|----------|----------|---------------|
| 11/10/2020<br>2:52 PM | 01:50:35 | 7.83 pH | 18.57 °C | 506.67 µS/cm | 0.15 mg/L | 26.90 NTU | -77.7 mV | 19.60 ft | 120.00 ml/min |
| 11/10/2020<br>2:57 PM | 01:55:35 | 7.83 pH | 18.60 °C | 505.33 µS/cm | 0.13 mg/L | 26.00 NTU | -78.2 mV | 19.63 ft | 120.00 ml/min |
| 11/10/2020<br>3:02 PM | 02:00:35 | 7.84 pH | 18.59 °C | 505.55 µS/cm | 0.13 mg/L | 26.30 NTU | -78.3 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:07 PM | 02:05:35 | 7.84 pH | 18.54 °C | 504.45 µS/cm | 0.13 mg/L | 25.80 NTU | -78.1 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:12 PM | 02:10:35 | 7.84 pH | 18.51 °C | 504.23 µS/cm | 0.12 mg/L | 24.40 NTU | -78.3 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:17 PM | 02:15:35 | 7.84 pH | 18.51 °C | 503.85 µS/cm | 0.12 mg/L | 22.90 NTU | -78.1 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:22 PM | 02:20:35 | 7.84 pH | 18.52 °C | 503.63 µS/cm | 0.12 mg/L | 22.20 NTU | -77.9 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:27 PM | 02:25:35 | 7.84 pH | 18.51 °C | 502.69 µS/cm | 0.13 mg/L | 20.60 NTU | -78.3 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:32 PM | 02:30:35 | 7.84 pH | 18.51 °C | 501.88 µS/cm | 0.12 mg/L | 22.00 NTU | -78.4 mV | 19.69 ft | 120.00 ml/min |
| 11/10/2020<br>3:37 PM | 02:35:35 | 7.84 pH | 18.51 °C | 501.99 µS/cm | 0.11 mg/L | 21.40 NTU | -78.3 mV | 19.71 ft | 120.00 ml/min |
| 11/10/2020<br>3:42 PM | 02:40:35 | 7.84 pH | 18.53 °C | 502.57 µS/cm | 0.12 mg/L | 20.40 NTU | -78.4 mV | 19.71 ft | 120.00 ml/min |
| 11/10/2020<br>3:47 PM | 02:45:35 | 7.84 pH | 18.51 °C | 501.78 µS/cm | 0.12 mg/L | 19.60 NTU | -78.7 mV | 19.71 ft | 120.00 ml/min |
| 11/10/2020<br>3:52 PM | 02:50:35 | 7.84 pH | 18.52 °C | 502.02 µS/cm | 0.12 mg/L | 19.80 NTU | -78.8 mV | 19.71 ft | 120.00 ml/min |

## Samples

| Sample ID:         | Description: |
|--------------------|--------------|
| HGWA-44D           | Grab Sample  |
| HGWA-44D, filtered | Grab Sample  |

# Low-Flow Test Report:

**Test Date / Time:** 11/11/2020 2:29:29 PM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |  |  |
|---|--|--|
| <b>Location Name: HGWA-45D</b><br><b>Well Diameter: 2 ft</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 52.87 ft</b><br><b>Initial Depth to Water: 11.47 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 57.87 ft</b><br><b>Estimated Total Volume Pumped: 7846.667 ml</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 100 ml/min</b><br><b>Final Draw Down: 0.14 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728550</b> |
|---|--|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 62.73 ft.

## Weather Conditions:

Sunny, 70 degrees

## Low-Flow Readings:

| Date Time          | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP       | Depth To Water | Flow          |
|--------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|-----------|----------------|---------------|
|                    |              | +/- 0.1 | +/- 0.5     | +/- 3 %               | +/- 0.3           | +/- 10    | +/- 10    | +/- 0.3        |               |
| 11/11/2020 2:29 PM | 00:00        | 7.52 pH | 24.60 °C    | 535.02 µS/cm          | 0.88 mg/L         | 17.20 NTU | -13.6 mV  | 11.51 ft       | 100.00 ml/min |
| 11/11/2020 2:34 PM | 05:00        | 7.45 pH | 24.45 °C    | 544.52 µS/cm          | 0.49 mg/L         | 21.60 NTU | -35.8 mV  | 11.45 ft       | 100.00 ml/min |
| 11/11/2020 2:39 PM | 10:00        | 7.45 pH | 26.38 °C    | 557.49 µS/cm          | 0.46 mg/L         | 18.80 NTU | -55.7 mV  | 11.45 ft       | 100.00 ml/min |
| 11/11/2020 2:44 PM | 15:00        | 7.43 pH | 22.53 °C    | 546.36 µS/cm          | 0.31 mg/L         | 14.30 NTU | -72.2 mV  | 11.55 ft       | 100.00 ml/min |
| 11/11/2020 2:49 PM | 20:00        | 7.44 pH | 23.48 °C    | 545.68 µS/cm          | 0.33 mg/L         | 14.20 NTU | -83.9 mV  | 11.50 ft       | 100.00 ml/min |
| 11/11/2020 2:54 PM | 25:00        | 7.45 pH | 23.93 °C    | 542.24 µS/cm          | 0.39 mg/L         | 13.10 NTU | -94.2 mV  | 11.50 ft       | 100.00 ml/min |
| 11/11/2020 2:59 PM | 30:00        | 7.42 pH | 21.87 °C    | 548.13 µS/cm          | 0.21 mg/L         | 11.90 NTU | -100.0 mV | 11.50 ft       | 100.00 ml/min |
| 11/11/2020 3:04 PM | 35:00        | 7.42 pH | 22.40 °C    | 543.19 µS/cm          | 0.24 mg/L         | 12.10 NTU | -106.2 mV | 11.55 ft       | 100.00 ml/min |
| 11/11/2020 3:07 PM | 38:28        | 7.43 pH | 21.96 °C    | 546.82 µS/cm          | 0.23 mg/L         | 11.80 NTU | -110.7 mV | 11.55 ft       | 100.00 ml/min |
| 11/11/2020 3:12 PM | 43:28        | 7.42 pH | 21.44 °C    | 544.16 µS/cm          | 0.19 mg/L         | 11.30 NTU | -119.4 mV | 11.61 ft       | 100.00 ml/min |
| 11/11/2020 3:17 PM | 48:28        | 7.44 pH | 21.33 °C    | 544.80 µS/cm          | 0.13 mg/L         | 12.86 NTU | -125.2 mV | 11.60 ft       | 100.00 ml/min |
| 11/11/2020 3:22 PM | 53:28        | 7.42 pH | 21.41 °C    | 537.50 µS/cm          | 0.19 mg/L         | 9.99 NTU  | -126.7 mV | 11.60 ft       | 100.00 ml/min |

|                       |          |         |          |              |           |          |           |          |               |
|-----------------------|----------|---------|----------|--------------|-----------|----------|-----------|----------|---------------|
| 11/11/2020<br>3:27 PM | 58:28    | 7.42 pH | 21.39 °C | 533.71 µS/cm | 0.18 mg/L | 9.82 NTU | -124.2 mV | 11.60 ft | 100.00 ml/min |
| 11/11/2020<br>3:32 PM | 01:03:28 | 7.41 pH | 21.55 °C | 529.45 µS/cm | 0.17 mg/L | 8.05 NTU | -125.5 mV | 11.61 ft | 100.00 ml/min |
| 11/11/2020<br>3:37 PM | 01:08:28 | 7.41 pH | 21.69 °C | 525.15 µS/cm | 0.16 mg/L | 6.41 NTU | -125.2 mV | 11.61 ft | 100.00 ml/min |
| 11/11/2020<br>3:42 PM | 01:13:28 | 7.40 pH | 21.29 °C | 520.46 µS/cm | 0.15 mg/L | 5.38 NTU | -125.4 mV | 11.61 ft | 100.00 ml/min |
| 11/11/2020<br>3:47 PM | 01:18:28 | 7.40 pH | 21.39 °C | 515.21 µS/cm | 0.14 mg/L | 4.57 NTU | -124.7 mV | 11.61 ft | 100.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| HGWA-45D   | Grab Sample  |

# Low-Flow Test Report:

**Test Date / Time:** 11/12/2020 8:45:24 AM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |   |  |
|---|---|--|
| <b>Location Name: HGWC-125</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 53.19 ft</b><br><b>Initial Depth to Water: 44.16 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Estimated Total Volume Pumped: 7000 ml</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 200 ml/min</b><br><b>Final Draw Down: 0.01 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728550</b> |
|---|---|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 63.90 ft.

## Low-Flow Readings:

| Date Time          | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP     | Depth To Water | Flow          |
|--------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|---------|----------------|---------------|
|                    |              | +/- 0.1 | +/- 0.5     | +/- 3 %               | +/- 0.3           | +/- 10    | +/- 10  | +/- 0.3        |               |
| 11/12/2020 8:45 AM | 00:00        | 6.08 pH | 18.50 °C    | 950.30 µS/cm          | 0.54 mg/L         | 29.60 NTU | 25.1 mV | 44.16 ft       | 200.00 ml/min |
| 11/12/2020 8:50 AM | 05:00        | 6.07 pH | 18.48 °C    | 961.41 µS/cm          | 0.29 mg/L         | 23.80 NTU | 33.0 mV | 44.16 ft       | 200.00 ml/min |
| 11/12/2020 8:55 AM | 10:00        | 6.08 pH | 18.45 °C    | 968.39 µS/cm          | 0.23 mg/L         | 19.40 NTU | 37.3 mV | 44.17 ft       | 200.00 ml/min |
| 11/12/2020 9:00 AM | 15:00        | 6.10 pH | 18.44 °C    | 974.07 µS/cm          | 0.19 mg/L         | 13.30 NTU | 40.7 mV | 44.17 ft       | 200.00 ml/min |
| 11/12/2020 9:05 AM | 20:00        | 6.11 pH | 18.44 °C    | 978.37 µS/cm          | 0.16 mg/L         | 11.02 NTU | 42.4 mV | 44.17 ft       | 200.00 ml/min |
| 11/12/2020 9:10 AM | 25:00        | 6.11 pH | 18.42 °C    | 980.56 µS/cm          | 0.15 mg/L         | 6.43 NTU  | 46.4 mV | 44.17 ft       | 200.00 ml/min |
| 11/12/2020 9:15 AM | 30:00        | 6.12 pH | 18.43 °C    | 981.33 µS/cm          | 0.14 mg/L         | 5.38 NTU  | 47.9 mV | 44.17 ft       | 200.00 ml/min |
| 11/12/2020 9:20 AM | 35:00        | 6.13 pH | 18.41 °C    | 985.07 µS/cm          | 0.13 mg/L         | 4.57 NTU  | 46.7 mV | 44.17 ft       | 200.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| HGWC-125   | Grab Sample  |



# Low-Flow Test Report:

**Test Date / Time:** 11/11/2020 10:17:07 AM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |  |  |
|---|--|--|
| <b>Location Name: HGWC-126</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 58.52 ft</b><br><b>Initial Depth to Water: 41.13 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 63.52 ft</b><br><b>Estimated Total Volume Pumped: 6365 ml</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 100 ml/min</b><br><b>Final Draw Down: 0.87 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728550</b> |
|---|--|--|

## Test Notes:

Bladder controller failure at 1045, controller fixed at 1055.

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 69.51 ft.

## Weather Conditions:

Overcast, 70 degrees

## Low-Flow Readings:

| Date Time              | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP      | Depth To Water | Flow          |
|------------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|----------|----------------|---------------|
|                        |              | +/- 0.1 | +/- 0.5     | +/- 3 %               | +/- 0.3           | +/- 10    | +/- 10   | +/- 0.3        |               |
| 11/11/2020<br>10:17 AM | 00:00        | 6.93 pH | 23.28 °C    | 805.11 µS/cm          | 1.84 mg/L         | 27.70 NTU | -49.2 mV | 41.13 ft       | 100.00 ml/min |
| 11/11/2020<br>10:22 AM | 05:00        | 6.77 pH | 21.28 °C    | 863.28 µS/cm          | 0.73 mg/L         | 26.30 NTU | -42.4 mV | 41.40 ft       | 100.00 ml/min |
| 11/11/2020<br>10:25 AM | 08:06        | 6.78 pH | 20.75 °C    | 869.95 µS/cm          | 0.49 mg/L         | 20.90 NTU | -42.6 mV | 41.50 ft       | 100.00 ml/min |
| 11/11/2020<br>10:30 AM | 13:06        | 6.80 pH | 20.52 °C    | 872.89 µS/cm          | 0.39 mg/L         | 17.90 NTU | -43.9 mV | 41.55 ft       | 100.00 ml/min |
| 11/11/2020<br>10:35 AM | 18:06        | 6.81 pH | 20.49 °C    | 873.42 µS/cm          | 0.36 mg/L         | 14.30 NTU | -45.6 mV | 41.62 ft       | 100.00 ml/min |
| 11/11/2020<br>10:40 AM | 23:06        | 6.82 pH | 20.22 °C    | 870.89 µS/cm          | 0.29 mg/L         | 12.60 NTU | -48.2 mV | 41.70 ft       | 100.00 ml/min |
| 11/11/2020<br>10:45 AM | 28:06        | 6.86 pH | 20.43 °C    | 872.46 µS/cm          | 0.25 mg/L         | 12.50 NTU | -49.6 mV | 41.70 ft       | 100.00 ml/min |
| 11/11/2020<br>10:50 AM | 33:06        | 6.87 pH | 21.34 °C    | 873.68 µS/cm          | 0.25 mg/L         | 12.80 NTU | -52.9 mV | 51.70 ft       | 100.00 ml/min |
| 11/11/2020<br>10:55 AM | 38:06        | 6.83 pH | 21.20 °C    | 861.97 µS/cm          | 0.58 mg/L         | 13.90 NTU | -52.6 mV | 41.70 ft       | 100.00 ml/min |
| 11/11/2020<br>11:00 AM | 43:06        | 6.84 pH | 19.42 °C    | 869.13 µS/cm          | 0.17 mg/L         | 10.52 NTU | -54.1 mV | 42.00 ft       | 100.00 ml/min |
| 11/11/2020<br>11:05 AM | 48:06        | 6.85 pH | 19.81 °C    | 874.58 µS/cm          | 0.18 mg/L         | 7.73 NTU  | -55.5 mV | 42.00 ft       | 100.00 ml/min |
| 11/11/2020<br>11:05 AM | 48:39        | 6.84 pH | 19.86 °C    | 874.47 µS/cm          | 0.19 mg/L         | 6.90 NTU  | -55.1 mV | 42.00 ft       | 100.00 ml/min |

|                        |          |         |          |              |           |          |          |          |               |
|------------------------|----------|---------|----------|--------------|-----------|----------|----------|----------|---------------|
| 11/11/2020<br>11:10 AM | 53:39    | 6.85 pH | 20.08 °C | 872.96 µS/cm | 0.19 mg/L | 6.07 NTU | -57.0 mV | 42.00 ft | 100.00 ml/min |
| 11/11/2020<br>11:15 AM | 58:39    | 6.86 pH | 20.04 °C | 872.55 µS/cm | 0.19 mg/L | 5.35 NTU | -59.3 mV | 42.00 ft | 100.00 ml/min |
| 11/11/2020<br>11:20 AM | 01:03:39 | 6.86 pH | 20.00 °C | 872.65 µS/cm | 0.19 mg/L | 4.54 NTU | -60.2 mV | 42.00 ft | 100.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| HGWC-126   | Grab Sample  |

# Low-Flow Test Report:

**Test Date / Time:** 11/11/2020 12:21:29 PM

**Project:** GP-Plant Hammond

**Operator Name:** Shawn Lin

|   |  |  |
|---|--|--|
| <b>Location Name: MW-46D</b><br><b>Well Diameter: 2 cm</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 92.5 ft</b><br><b>Total Depth: 102.5 ft</b><br><b>Initial Depth to Water: 41.00 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 97.5 m</b><br><b>Estimated Total Volume Pumped: 6.5 liter</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 160 ml/min</b><br><b>Final Draw Down: 0.91 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728634</b> |
|---|--|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Measured Total depth = 104.66 ft.

## Weather Conditions:

Overcast, 70 degrees

## Low-Flow Readings:

| Date Time              | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP       | Depth To Water | Flow          |
|------------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|-----------|----------------|---------------|
|                        |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 10 %          | +/- 10    | +/- 10    | +/- 0.3        |               |
| 11/11/2020<br>12:21 PM | 00:00        | 7.48 pH | 19.49 °C    | 843.51 µS/cm          | 0.29 mg/L         | 1.90 NTU  | -140.6 mV | 41.86 ft       | 160.00 ml/min |
| 11/11/2020<br>12:26 PM | 05:00        | 7.49 pH | 19.42 °C    | 847.82 µS/cm          | 0.26 mg/L         | 1.44 NTU  | -207.2 mV | 41.91 ft       | 160.00 ml/min |
| 11/11/2020<br>12:31 PM | 10:00        | 7.50 pH | 19.40 °C    | 847.45 µS/cm          | 0.24 mg/L         | 1.57 NTU  | -143.5 mV | 41.91 ft       | 160.00 ml/min |
| 11/11/2020<br>12:31 PM | 10:10        | 7.51 pH | 19.40 °C    | 847.31 µS/cm          | 0.24 mg/L         |           | -188.3 mV | 41.91 ft       | 160.00 ml/min |
| 11/11/2020<br>12:31 PM | 10:19        | 7.50 pH | 19.40 °C    | 847.29 µS/cm          | 0.24 mg/L         |           | -197.7 mV | 41.91 ft       | 160.00 ml/min |
| 11/11/2020<br>12:36 PM | 15:19        | 7.51 pH | 19.40 °C    | 847.90 µS/cm          | 0.22 mg/L         | 2.53 NTU  | -146.6 mV | 41.91 ft       | 160.00 ml/min |
| 11/11/2020<br>12:41 PM | 20:19        | 7.52 pH | 19.33 °C    | 847.90 µS/cm          | 0.21 mg/L         | 0.92 NTU  | -218.8 mV | 41.91 ft       | 160.00 ml/min |
| 11/11/2020<br>12:46 PM | 25:19        | 7.52 pH | 19.46 °C    | 849.51 µS/cm          | 0.19 mg/L         | 2.54 NTU  | -220.8 mV | 41.91 ft       | 160.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| MW-46D     | Grab Sample  |

December 2020

# Low-Flow Test Report:

**Test Date / Time:** 12/15/2020 9:50:43 AM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |  |  |
|---|--|--|
| <b>Location Name: HGWA-43D</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 52.55 ft</b><br><b>Initial Depth to Water: 14.51 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 57.55 ft</b><br><b>Estimated Total Volume Pumped: 9 liters</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 100 ml/min Final Draw Down: 1.6 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728634</b> |
|---|--|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 61.80 ft.

## Weather Conditions:

Sunny, cold

## Low-Flow Readings:

| Date Time           | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP       | Depth To Water | Flow          |
|---------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|-----------|----------------|---------------|
|                     |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 0.2           | +/- 5     | +/- 10    | +/- 0.3        |               |
| 12/15/2020 9:50 AM  | 00:00        | 7.34 pH | 14.21 °C    | 526.82 µS/cm          | 1.46 mg/L         | 29.90 NTU | -59.7 mV  | 14.51 ft       | 100.00 ml/min |
| 12/15/2020 9:55 AM  | 05:00        | 7.30 pH | 15.61 °C    | 517.14 µS/cm          | 0.70 mg/L         | 37.61 NTU | -60.6 mV  | 15.00 ft       | 100.00 ml/min |
| 12/15/2020 10:00 AM | 10:00        | 7.31 pH | 16.28 °C    | 515.08 µS/cm          | 0.96 mg/L         | 33.61 NTU | -108.1 mV | 15.34 ft       | 100.00 ml/min |
| 12/15/2020 10:05 AM | 15:00        | 7.32 pH | 16.55 °C    | 508.92 µS/cm          | 0.89 mg/L         | 24.82 NTU | -115.1 mV | 15.61 ft       | 100.00 ml/min |
| 12/15/2020 10:10 AM | 20:00        | 7.34 pH | 16.75 °C    | 498.96 µS/cm          | 0.60 mg/L         | 21.50 NTU | -69.4 mV  | 15.75 ft       | 100.00 ml/min |
| 12/15/2020 10:15 AM | 25:00        | 7.35 pH | 16.80 °C    | 484.29 µS/cm          | 0.48 mg/L         | 19.06 NTU | -67.3 mV  | 15.85 ft       | 100.00 ml/min |
| 12/15/2020 10:20 AM | 30:00        | 7.35 pH | 16.93 °C    | 475.04 µS/cm          | 0.57 mg/L         | 15.28 NTU | -65.8 mV  | 15.92 ft       | 100.00 ml/min |
| 12/15/2020 10:25 AM | 35:00        | 7.36 pH | 17.09 °C    | 465.50 µS/cm          | 0.45 mg/L         | 14.47 NTU | -110.0 mV | 15.97 ft       | 100.00 ml/min |
| 12/15/2020 10:30 AM | 40:00        | 7.36 pH | 17.08 °C    | 459.56 µS/cm          | 0.35 mg/L         | 14.03 NTU | -108.6 mV | 16.02 ft       | 100.00 ml/min |
| 12/15/2020 10:35 AM | 45:00        | 7.37 pH | 17.28 °C    | 453.06 µS/cm          | 0.42 mg/L         | 12.14 NTU | -110.5 mV | 16.05 ft       | 100.00 ml/min |
| 12/15/2020 10:40 AM | 50:00        | 7.37 pH | 17.31 °C    | 447.42 µS/cm          | 0.32 mg/L         | 11.04 NTU | -61.9 mV  | 16.08 ft       | 100.00 ml/min |

|                        |          |         |          |              |           |           |           |          |               |
|------------------------|----------|---------|----------|--------------|-----------|-----------|-----------|----------|---------------|
| 12/15/2020<br>10:45 AM | 55:00    | 7.37 pH | 17.26 °C | 447.49 µS/cm | 0.82 mg/L | 10.63 NTU | -60.8 mV  | 16.10 ft | 100.00 ml/min |
| 12/15/2020<br>10:50 AM | 01:00:00 | 7.38 pH | 17.18 °C | 447.76 µS/cm | 0.74 mg/L | 9.65 NTU  | -58.5 mV  | 16.11 ft | 100.00 ml/min |
| 12/15/2020<br>10:55 AM | 01:05:00 | 7.38 pH | 16.87 °C | 454.65 µS/cm | 0.71 mg/L | 8.89 NTU  | -104.5 mV | 16.11 ft | 100.00 ml/min |
| 12/15/2020<br>11:00 AM | 01:10:00 | 7.39 pH | 16.77 °C | 455.20 µS/cm | 0.44 mg/L | 7.34 NTU  | -101.8 mV | 16.11 ft | 100.00 ml/min |
| 12/15/2020<br>11:05 AM | 01:15:00 | 7.39 pH | 17.04 °C | 451.13 µS/cm | 0.31 mg/L | 6.63 NTU  | -58.6 mV  | 16.11 ft | 100.00 ml/min |
| 12/15/2020<br>11:10 AM | 01:20:00 | 7.40 pH | 17.26 °C | 448.17 µS/cm | 0.31 mg/L | 6.43 NTU  | -56.8 mV  | 16.11 ft | 100.00 ml/min |
| 12/15/2020<br>11:15 AM | 01:25:00 | 7.40 pH | 17.20 °C | 452.85 µS/cm | 0.27 mg/L | 5.33 NTU  | -56.6 mV  | 16.11 ft | 100.00 ml/min |
| 12/15/2020<br>11:20 AM | 01:30:00 | 7.39 pH | 17.11 °C | 453.03 µS/cm | 0.22 mg/L | 4.88 NTU  | -55.8 mV  | 16.11 ft | 100.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| HGWA-43D   | Grab Sample  |

# Low-Flow Test Report:

**Test Date / Time:** 12/15/2020 1:09:32 PM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |  |  |
|---|--|--|
| <b>Location Name: HGWA-44D</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 103.25 ft</b><br><b>Initial Depth to Water: 14.4 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 108 ft</b><br><b>Estimated Total Volume Pumped: 18.5 liters</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 100 ml/min</b><br><b>Final Draw Down: 2.33 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728634</b> |
|---|--|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 111.3 ft.

## Weather Conditions:

Sunny, cold

## Low-Flow Readings:

| Date Time             | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity  | ORP       | Depth To Water | Flow          |
|-----------------------|--------------|---------|-------------|-----------------------|-------------------|------------|-----------|----------------|---------------|
|                       |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 0.2           | +/- 5      | +/- 10    | +/- 0.3        |               |
| 12/15/2020<br>1:09 PM | 00:00        | 7.90 pH | 15.77 °C    | 484.96 µS/cm          | 1.80 mg/L         | 63.27 NTU  | -106.7 mV | 14.40 ft       | 100.00 ml/min |
| 12/15/2020<br>1:14 PM | 05:00        | 7.90 pH | 16.46 °C    | 498.20 µS/cm          | 1.07 mg/L         | 98.00 NTU  | -105.8 mV | 14.55 ft       | 100.00 ml/min |
| 12/15/2020<br>1:19 PM | 10:00        | 7.90 pH | 16.38 °C    | 499.17 µS/cm          | 0.74 mg/L         | 114.00 NTU | -182.1 mV | 14.70 ft       | 100.00 ml/min |
| 12/15/2020<br>1:24 PM | 15:00        | 7.90 pH | 16.30 °C    | 497.96 µS/cm          | 0.64 mg/L         | 112.00 NTU | -186.3 mV | 14.93 ft       | 100.00 ml/min |
| 12/15/2020<br>1:29 PM | 20:00        | 7.90 pH | 16.37 °C    | 496.40 µS/cm          | 0.57 mg/L         | 139.00 NTU | -114.7 mV | 15.13 ft       | 100.00 ml/min |
| 12/15/2020<br>1:34 PM | 25:00        | 7.90 pH | 16.26 °C    | 494.15 µS/cm          | 0.52 mg/L         | 128.00 NTU | -191.2 mV | 15.28 ft       | 100.00 ml/min |
| 12/15/2020<br>1:39 PM | 30:00        | 7.90 pH | 16.24 °C    | 491.16 µS/cm          | 0.48 mg/L         | 92.00 NTU  | -194.6 mV | 15.45 ft       | 100.00 ml/min |
| 12/15/2020<br>1:44 PM | 35:00        | 7.90 pH | 16.52 °C    | 488.12 µS/cm          | 0.43 mg/L         | 50.00 NTU  | -119.5 mV | 15.60 ft       | 100.00 ml/min |
| 12/15/2020<br>1:49 PM | 40:00        | 7.90 pH | 16.59 °C    | 483.68 µS/cm          | 0.40 mg/L         | 61.95 NTU  | -200.0 mV | 15.65 ft       | 100.00 ml/min |
| 12/15/2020<br>1:54 PM | 45:00        | 7.90 pH | 16.81 °C    | 479.85 µS/cm          | 0.37 mg/L         | 49.82 NTU  | -123.8 mV | 15.77 ft       | 100.00 ml/min |
| 12/15/2020<br>1:59 PM | 50:00        | 7.90 pH | 16.55 °C    | 493.05 µS/cm          | 0.35 mg/L         | 58.41 NTU  | -124.2 mV | 15.82 ft       | 100.00 ml/min |
| 12/15/2020<br>2:04 PM | 55:00        | 7.90 pH | 16.64 °C    | 494.17 µS/cm          | 0.35 mg/L         | 38.92 NTU  | -126.4 mV | 15.90 ft       | 100.00 ml/min |

|                       |          |         |          |              |           |           |           |          |               |
|-----------------------|----------|---------|----------|--------------|-----------|-----------|-----------|----------|---------------|
| 12/15/2020<br>2:09 PM | 01:00:00 | 7.90 pH | 16.69 °C | 492.65 µS/cm | 0.32 mg/L | 28.72 NTU | -207.7 mV | 15.90 ft | 100.00 ml/min |
| 12/15/2020<br>2:14 PM | 01:05:00 | 7.89 pH | 16.55 °C | 490.67 µS/cm | 0.30 mg/L | 23.69 NTU | -126.3 mV | 15.91 ft | 100.00 ml/min |
| 12/15/2020<br>2:19 PM | 01:10:00 | 7.88 pH | 16.37 °C | 492.49 µS/cm | 0.29 mg/L | 21.04 NTU | -124.5 mV | 15.95 ft | 100.00 ml/min |
| 12/15/2020<br>2:24 PM | 01:15:00 | 7.89 pH | 16.26 °C | 489.74 µS/cm | 0.28 mg/L | 18.27 NTU | -124.8 mV | 15.95 ft | 100.00 ml/min |
| 12/15/2020<br>2:29 PM | 01:20:00 | 7.88 pH | 16.10 °C | 488.48 µS/cm | 0.28 mg/L | 17.32 NTU | -207.2 mV | 16.00 ft | 100.00 ml/min |
| 12/15/2020<br>2:34 PM | 01:25:00 | 7.88 pH | 15.93 °C | 489.52 µS/cm | 0.27 mg/L | 15.96 NTU | -126.3 mV | 16.05 ft | 100.00 ml/min |
| 12/15/2020<br>2:39 PM | 01:30:00 | 7.88 pH | 15.96 °C | 489.65 µS/cm | 0.26 mg/L | 18.00 NTU | -126.0 mV | 16.00 ft | 100.00 ml/min |
| 12/15/2020<br>2:44 PM | 01:35:00 | 7.88 pH | 15.96 °C | 486.86 µS/cm | 0.26 mg/L | 16.95 NTU | -206.9 mV | 16.00 ft | 100.00 ml/min |
| 12/15/2020<br>2:49 PM | 01:40:00 | 7.88 pH | 16.15 °C | 485.86 µS/cm | 0.25 mg/L | 16.43 NTU | -207.8 mV | 16.05 ft | 100.00 ml/min |
| 12/15/2020<br>2:54 PM | 01:45:00 | 7.88 pH | 16.01 °C | 489.56 µS/cm | 0.24 mg/L | 16.22 NTU | -125.5 mV | 16.05 ft | 100.00 ml/min |
| 12/15/2020<br>2:59 PM | 01:50:00 | 7.88 pH | 15.89 °C | 489.90 µS/cm | 0.24 mg/L | 16.47 NTU | -124.1 mV | 16.05 ft | 100.00 ml/min |
| 12/15/2020<br>3:04 PM | 01:55:00 | 7.88 pH | 15.74 °C | 490.53 µS/cm | 0.25 mg/L | 13.59 NTU | -204.7 mV | 16.05 ft | 100.00 ml/min |
| 12/15/2020<br>3:09 PM | 02:00:00 | 7.87 pH | 15.83 °C | 489.04 µS/cm | 0.25 mg/L | 14.49 NTU | -206.8 mV | 16.05 ft | 100.00 ml/min |
| 12/15/2020<br>3:14 PM | 02:05:00 | 7.87 pH | 16.38 °C | 488.60 µS/cm | 0.22 mg/L | 14.19 NTU | -126.3 mV | 16.20 ft | 100.00 ml/min |
| 12/15/2020<br>3:19 PM | 02:10:00 | 7.87 pH | 16.44 °C | 486.41 µS/cm | 0.19 mg/L | 13.34 NTU | -209.6 mV | 16.30 ft | 100.00 ml/min |
| 12/15/2020<br>3:24 PM | 02:15:00 | 7.86 pH | 16.46 °C | 487.69 µS/cm | 0.17 mg/L | 13.09 NTU | -127.4 mV | 16.35 ft | 100.00 ml/min |
| 12/15/2020<br>3:29 PM | 02:20:00 | 7.88 pH | 16.38 °C | 491.48 µS/cm | 0.16 mg/L | 13.05 NTU | -126.5 mV | 16.43 ft | 100.00 ml/min |
| 12/15/2020<br>3:34 PM | 02:25:00 | 7.88 pH | 16.35 °C | 491.38 µS/cm | 0.15 mg/L | 12.11 NTU | -125.1 mV | 16.50 ft | 100.00 ml/min |
| 12/15/2020<br>3:39 PM | 02:30:00 | 7.88 pH | 16.30 °C | 489.46 µS/cm | 0.15 mg/L | 12.06 NTU | -207.6 mV | 16.50 ft | 100.00 ml/min |
| 12/15/2020<br>3:44 PM | 02:35:00 | 7.88 pH | 16.30 °C | 488.61 µS/cm | 0.14 mg/L | 11.87 NTU | -208.3 mV | 16.60 ft | 100.00 ml/min |
| 12/15/2020<br>3:49 PM | 02:40:00 | 7.87 pH | 16.28 °C | 488.02 µS/cm | 0.13 mg/L | 11.04 NTU | -124.4 mV | 16.62 ft | 100.00 ml/min |
| 12/15/2020<br>3:54 PM | 02:45:00 | 7.88 pH | 16.30 °C | 487.19 µS/cm | 0.13 mg/L | 11.03 NTU | -206.7 mV | 16.65 ft | 100.00 ml/min |
| 12/15/2020<br>3:59 PM | 02:50:00 | 7.88 pH | 16.30 °C | 487.66 µS/cm | 0.13 mg/L | 10.78 NTU | -122.7 mV | 16.67 ft | 100.00 ml/min |
| 12/15/2020<br>4:04 PM | 02:55:00 | 7.88 pH | 16.28 °C | 486.45 µS/cm | 0.12 mg/L | 8.75 NTU  | -204.0 mV | 16.70 ft | 100.00 ml/min |
| 12/15/2020<br>4:09 PM | 03:00:00 | 7.86 pH | 16.28 °C | 486.14 µS/cm | 0.12 mg/L | 9.69 NTU  | -203.7 mV | 16.69 ft | 100.00 ml/min |
| 12/15/2020<br>4:14 PM | 03:05:00 | 7.87 pH | 16.32 °C | 488.28 µS/cm | 0.12 mg/L | 9.00 NTU  | -203.5 mV | 16.73 ft | 100.00 ml/min |

## Samples

|                   |                     |
|-------------------|---------------------|
| <b>Sample ID:</b> | <b>Description:</b> |
|-------------------|---------------------|



|          |             |
|----------|-------------|
| HGWA-44D | Grab Sample |
|----------|-------------|

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

Test Date / Time: 12/16/2020 9:01:29 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

|   |   |  |
|---|---|--|
| <b>Location Name: HGWA-45D</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 52.87 ft</b><br><b>Initial Depth to Water: 7.1 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 57.87 ft</b><br><b>Estimated Total Volume Pumped: 7 liters</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 200 ml/min</b><br><b>Final Draw Down: 0.57 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728634</b> |
|---|---|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 62.70 ft.

## Weather Conditions:

Rainy, Cold

## Low-Flow Readings:

| Date Time          | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP       | Depth To Water | Flow          |
|--------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|-----------|----------------|---------------|
|                    |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 0.2           | +/- 5     | +/- 10    | +/- 0.3        |               |
| 12/16/2020 9:01 AM | 00:00        | 7.33 pH | 17.09 °C    | 522.40 µS/cm          | 0.39 mg/L         | 13.22 NTU | -84.5 mV  | 7.10 ft        | 200.00 ml/min |
| 12/16/2020 9:06 AM | 05:00        | 7.34 pH | 17.26 °C    | 511.79 µS/cm          | 0.28 mg/L         | 8.70 NTU  | -131.3 mV | 7.66 ft        | 200.00 ml/min |
| 12/16/2020 9:11 AM | 10:00        | 7.36 pH | 17.30 °C    | 508.69 µS/cm          | 0.23 mg/L         | 7.28 NTU  | -74.4 mV  | 7.66 ft        | 200.00 ml/min |
| 12/16/2020 9:16 AM | 15:00        | 7.37 pH | 17.35 °C    | 506.28 µS/cm          | 0.21 mg/L         | 5.75 NTU  | -128.9 mV | 7.66 ft        | 200.00 ml/min |
| 12/16/2020 9:21 AM | 20:00        | 7.38 pH | 17.36 °C    | 504.70 µS/cm          | 0.19 mg/L         | 4.50 NTU  | -75.9 mV  | 7.66 ft        | 200.00 ml/min |
| 12/16/2020 9:26 AM | 25:00        | 7.39 pH | 17.38 °C    | 503.96 µS/cm          | 0.17 mg/L         | 3.88 NTU  | -80.3 mV  | 7.66 ft        | 200.00 ml/min |
| 12/16/2020 9:31 AM | 30:00        | 7.39 pH | 17.43 °C    | 502.72 µS/cm          | 0.16 mg/L         | 3.59 NTU  | -83.9 mV  | 7.67 ft        | 200.00 ml/min |
| 12/16/2020 9:36 AM | 35:00        | 7.39 pH | 17.46 °C    | 501.40 µS/cm          | 0.14 mg/L         | 3.11 NTU  | -87.3 mV  | 7.67 ft        | 200.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| HGWA-45D   | Grab Sample  |



# Low-Flow Test Report:

Test Date / Time: 12/16/2020 11:07:11 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

|   |  |  |
|---|--|--|
| <b>Location Name: HGWC-125</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 53.19 ft</b><br><b>Initial Depth to Water: 42.42 ft</b> | <b>Pump Type: Bladder</b><br><b>Tubing Type: Polyethylene</b><br><b>Pump Intake From TOC: 57.87 ft</b><br><b>Estimated Total Volume Pumped: 10 liters</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 200 ml/min</b><br><b>Final Draw Down: 0.01 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 728634</b> |
|---|--|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth =63.90 ft.

## Weather Conditions:

Rainy, cold

## Low-Flow Readings:

| Date Time              | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP      | Depth To Water | Flow          |
|------------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|----------|----------------|---------------|
|                        |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 0.2           | +/- 5     | +/- 10   | +/- 0.3        |               |
| 12/16/2020<br>11:07 AM | 00:00        | 6.60 pH | 16.05 °C    | 1,078.2<br>µS/cm      | 0.45 mg/L         | 5.31 NTU  | -46.1 mV | 42.42 ft       | 200.00 ml/min |
| 12/16/2020<br>11:12 AM | 05:00        | 6.61 pH | 16.48 °C    | 1,081.7<br>µS/cm      | 0.30 mg/L         | 1.84 NTU  | -27.6 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:17 AM | 10:00        | 6.60 pH | 16.62 °C    | 1,077.7<br>µS/cm      | 0.25 mg/L         | 2.64 NTU  | -55.1 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:22 AM | 15:00        | 6.57 pH | 16.68 °C    | 1,070.9<br>µS/cm      | 0.23 mg/L         | 2.54 NTU  | -33.4 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:27 AM | 20:00        | 6.60 pH | 16.86 °C    | 1,078.3<br>µS/cm      | 0.20 mg/L         | 1.47 NTU  | -24.9 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:32 AM | 25:00        | 6.61 pH | 16.81 °C    | 1,075.0<br>µS/cm      | 0.24 mg/L         | 1.75 NTU  | -24.2 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:37 AM | 30:00        | 6.61 pH | 16.65 °C    | 1,085.2<br>µS/cm      | 0.43 mg/L         | 1.04 NTU  | -24.1 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:42 AM | 35:00        | 6.62 pH | 16.80 °C    | 1,020.8<br>µS/cm      | 0.55 mg/L         | 0.75 NTU  | -51.1 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:47 AM | 40:00        | 6.62 pH | 16.86 °C    | 1,090.3<br>µS/cm      | 0.42 mg/L         | 0.94 NTU  | -25.0 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:52 AM | 45:00        | 6.61 pH | 16.76 °C    | 1,090.2<br>µS/cm      | 0.47 mg/L         | 0.43 NTU  | -25.4 mV | 42.43 ft       | 200.00 ml/min |
| 12/16/2020<br>11:57 AM | 50:00        | 6.61 pH | 16.72 °C    | 1,086.4<br>µS/cm      | 0.42 mg/L         |           | -53.8 mV | 42.43 ft       | 200.00 ml/min |

**Samples**

| Sample ID: | Description: |
|------------|--------------|
| HGWC-125   | Grab Sample  |

# Low-Flow Test Report:

**Test Date / Time:** 12/16/2020 1:42:49 PM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

|   |   |  |
|---|---|--|
| <b>Location Name:</b> HGWC-126<br><b>Well Diameter:</b> 2 in<br><b>Casing Type:</b> PVC<br><b>Screen Length:</b> 10 ft<br><b>Top of Screen:</b> 58.52 ft<br><b>Initial Depth to Water:</b> 40.65 ft | <b>Pump Type:</b> Bladder<br><b>Tubing Type:</b> Polyethylene<br><b>Pump Intake From TOC:</b> 63.52 ft<br><b>Estimated Total Volume Pumped:</b> 7 liters<br><b>Flow Cell Volume:</b> 90 ml<br><b>Final Flow Rate:</b> 200 ml/min<br><b>Final Draw Down:</b> 1.35 ft | <b>Instrument Used:</b> Aqua TROLL 400<br><b>Serial Number:</b> 728634 |
|---|---|--|

## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 68.51 ft.

## Weather Conditions:

Cloudy, cold

## Low-Flow Readings:

| Date Time             | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP       | Depth To Water | Flow          |
|-----------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|-----------|----------------|---------------|
|                       |              | +/- 0.1 | +/- 0.5     | +/- 5 %               | +/- 0.2           | +/- 5     | +/- 10    | +/- 0.3        |               |
| 12/16/2020<br>1:42 PM | 00:00        | 6.90 pH | 16.96 °C    | 866.58 µS/cm          | 0.53 mg/L         | 7.28 NTU  | -99.9 mV  | 40.65 ft       | 200.00 ml/min |
| 12/16/2020<br>1:47 PM | 05:00        | 6.91 pH | 17.58 °C    | 863.26 µS/cm          | 0.33 mg/L         | 4.66 NTU  | -71.6 mV  | 41.23 ft       | 200.00 ml/min |
| 12/16/2020<br>1:52 PM | 10:00        | 6.92 pH | 17.69 °C    | 863.95 µS/cm          | 0.27 mg/L         | 3.45 NTU  | -66.9 mV  | 41.44 ft       | 200.00 ml/min |
| 12/16/2020<br>1:57 PM | 15:00        | 6.93 pH | 17.71 °C    | 865.67 µS/cm          | 0.24 mg/L         | 2.82 NTU  | -116.2 mV | 41.62 ft       | 200.00 ml/min |
| 12/16/2020<br>2:02 PM | 20:00        | 6.93 pH | 17.74 °C    | 864.75 µS/cm          | 0.21 mg/L         | 2.31 NTU  | -63.6 mV  | 41.74 ft       | 200.00 ml/min |
| 12/16/2020<br>2:07 PM | 25:00        | 6.92 pH | 17.75 °C    | 865.66 µS/cm          | 0.19 mg/L         | 1.75 NTU  | -62.6 mV  | 41.82 ft       | 200.00 ml/min |
| 12/16/2020<br>2:12 PM | 30:00        | 6.92 pH | 17.75 °C    | 864.32 µS/cm          | 0.17 mg/L         | 1.70 NTU  | -62.4 mV  | 41.98 ft       | 200.00 ml/min |
| 12/16/2020<br>2:17 PM | 35:00        | 6.93 pH | 17.75 °C    | 863.25 µS/cm          | 0.16 mg/L         | 1.65 NTU  | -114.1 mV | 42.00 ft       | 200.00 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
| HGWC-126   | Grab Sample  |



# CALIBRATION REPORTS



August 2020

EQUIPMENT CALIBRATION LOG

Field Technician: A. Reeder

Date: 08/24/2020

Time (start): 1437

Time (finish): 1520

smartTroll SN: 597519

Turbidity Meter Type: Lamotte 2020V2

SN: 2279

Weather Conditions: Partly cloudy

Facility and Unit: Plant Hammond

Project No: 6V6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 29.3                  | 4490              | 4383            | 4490             | +/- 5%            | <input checked="" type="radio"/> Yes No |          |
| pH (4)  | 08/2021                             |                       | 4.00              | 4.42            | 4.00             | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 08/2021<br>19340057                 | 29.0                  | 7.00              | 7.50            | 7.00             | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 08/2021<br>19320102                 | 28.2                  | 10.00             | 10.35           | 10.00            | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 08/2021<br>19460167                 | 28.3                  | +228              | 193             | +228             | +/- 20mV          | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 93.6            | 100              | +/- 6% saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.03            | 0.00             | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.94            | 1.00             | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 7.39            | 10.00            | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: A. Reeder

Date: 08/25/2020

Time (start): 0715

Time (finish): 0745

smartTroll SN: 597519

Turbidity Meter Type: Lamotte 2020v2

SN: 2279

Weather Conditions: Cloudy

Facility and Unit: Plant Hammond

Project No.: 6V6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range | Pass?  | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|------------------|--------|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/2021                 | 25.7                  | 4490              | 4451            | 4440             | ± 5 %            | Yes No |          |
| pH (4)  |                                     | 25.6                  | 4.00              | 4.53            | 4.00             | ± 0.1 SU         | Yes No |          |
| pH (7)  | 08/2021<br>19340057                 | 25.8                  | 7.00              | 7.54            | 7.00             | ± 0.1 SU         | Yes No |          |
| pH (10)                                       | 08/2021<br>19320102                 | 26.0                  | 10.00             | 10.42           | 10.00            | ± 0.1 SU         | Yes No |          |
| ORP (mV)                                      | 08/2021<br>19460167                 | 26.1                  | +228              | 190.8           | 228.0            | ± 20mV           | Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100 %             | 95.4            | 100%             | ± 6 % saturation | Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | ± 0.5 NTU        | Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.65            | 1.00             | ± 0.5 NTU        | Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.64            | 10.00            | ± 0.5 NTU        | Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 8/25/20 Time (start): 7:30 Time (finish): 0815  
 smartTroll SN: 643819 Turbidity Meter Type: LaMotte 2020w SN: 2009-1916  
 Weather Conditions: 75°F, overcast Facility and Unit: Plant Hammond Project No.: GWGS81

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard                 | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?  | Comments |
|---|-------------------------------------|-----------------------|-----------------------------------|-----------------|------------------|-----------------------|--------|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>6/2021                  | 24.4                  | <del>4.44</del><br>4.490<br>µS/cm | 4.444           | 4.474            | ±.5 %                 | Yes No |          |
| pH (4)  |                                     |                       | 4.00                              | 4.35            | 4.0              | +/- 0.1 SU            | Yes No |          |
| pH (7)  | 143410057<br>8/2021                 | 24.8                  | 7.00                              | 7.29            | 7.0              | +/- 0.1 SU            | Yes No |          |
| pH (10)                                       | 143201002<br>8/21                   | 24.7                  | 10.00                             | 10.14           | 10.21            | +/- 0.1 SU            | Yes No |          |
| ORP (mV)                                      | 14460167<br>8/21                    | 24.9                  | +228 mV                           | 209.6           | 209.4            | +/- 20mV              | Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%                              | 96.2            | 96.8             | +/- 6 %<br>saturation | Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                                 | -.03/0          | 0                | +/- 0.5 NTU           | Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                                 | .67             | 1                | +/- 0.5 NTU           | Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                                | 10.00           | 10               | +/- 0.5 NTU           | Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reizer

Date: 8-26-2020

Time (start): 0810

Time (finish): 0900

smarTroll SN: 597519

Turbidity Meter Type: Lamotte 2020v2  
2279

SN: 2279

Weather Conditions: C10627

Facility and Unit: Plant Hammond

Project No.: 6V6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                      | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|--|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/21                   | 24.2                  | 4490              | 4398            | 4490             | ± 5 %                 | <input checked="" type="checkbox"/> Yes No |          |
| pH (4)  |                                     |                       | 4.0               | 4.56            | 4.0              | +/- 0.1 SU            | <input checked="" type="checkbox"/> Yes No |          |
| pH (7)  | 08/2021<br>19340057                 | 24.3                  | 7.0               | 7.53            | 7.0              | +/- 0.1 SU            | <input checked="" type="checkbox"/> Yes No |          |
| pH (10)                                       | 08/2021<br>19320102                 | 24.4                  | 10.0              | 10.37           | 10.0             | +/- 0.1 SU            | <input checked="" type="checkbox"/> Yes No |          |
| ORP (mV)                                      | 08/2021<br>19460167                 | 24.6                  | +228              | 215             | 228              | ± 20mV                | <input checked="" type="checkbox"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 94.6%           | 100%             | +/- 6 %<br>saturation | <input checked="" type="checkbox"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU           | <input checked="" type="checkbox"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.25            | 1.0              | ± 0.5 NTU             | <input checked="" type="checkbox"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.58            | 10.00            | +/- 0.5 NTU           | <input checked="" type="checkbox"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 8/26/20

Time (start): 11:15

Time (finish): 11:50

smarTroll SN: 643819

Turbidity Meter Type: Lamotte

SN: 2009-1916

Weather Conditions: overcast, 80°F

Facility and Unit: Hammond

Project No.: GW0581

Calibration log

|   | Standard Lot # / Date of Expiration     | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|---|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                                | 25.2                  | 4490              | 440             | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  | 08/2021                                 |                       | 4.00              | 4.40            | 4.40<br>4.39     | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | <del>19340057</del><br>19340057<br>8/21 | 25.8                  | 7.0               | 7.29            | 7.30             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320102<br>8/21                        | 26.0                  | 10.00             | 10.19           | 10.26            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | R460167                                 | 26.1                  | +228              | 201.2           | 203.7            | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |   |                       | 100               | 97.5            | 98.2             | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |   |                       | 0                 | 0.47            | 0.47             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |   |                       | 1                 | 3.33            | 3.78             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |   |                       | 10                | 9.39            | 10.25            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 8/27/2020

Time (start): 8:12

Time (finish): 0900

smarTroll SN: 597519

Turbidity Meter Type: LaMotte 2020we

SN: 2279

Weather Conditions: clear, 80°F

Facility and Unit: Hammond

Project No.: GWGS81

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading         | Acceptable Range  | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|--------------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 24.1                  | 4490              | 4447            | 4418                     | +/- 5%            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  | 8/21                                |                       | 4.0               | 4.60            | <del>4.60</del><br>4.0   | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 14340057<br>8/21                    | 24.8                  | 7.0               | 7.52            | <del>7.52</del><br>7.0   | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 14320102<br>8/21                    | 25.1                  | 10.0              | 10.35           | <del>10.41</del><br>10.0 | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19460167<br>8/21                    | 25.1                  | 228               | 148.8           | 189.2                    | +/- 20mV          | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 83.4            | 100.1                    | +/- 6% saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                        | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.81            | 1.31                     | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 0                 | 7.8             | 10                       | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 8/27/2020 Time (start): 0830 Time (finish): 0845  
 smartTroll SN: 643819 Turbidity Meter Type: LAMotte 2020uc SN: 2009-1416  
 Weather Conditions: 75° sunny Facility and Unit: Hammond Project No: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|------------------|---|----------|
| Specific Conductance (µS/cm)                  | 26070025<br>8/2021                  | 25.8                  | 4440              | 4413            | 4404             | ± 5%             | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| pH (4)  |                                     |                       | 4                 | 4.39            | 4                | ± 0.1 SU         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| pH (7)  | 19340057<br>8/2021                  | 25.9                  | 7                 | 7.27            | 7                | ± 0.1 SU         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| pH (10)                                       | 11320102<br>8/2021                  | 26.1                  | 10                | 10.2            | 10               | ± 0.1 SU         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| ORP (mV)                                      | 19460167<br>8/2021                  | 26.1                  | 228               | 201.6           | 228              | ± 20mV           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 93.1            | 95.6             | ± 6% saturation  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.5             | 0.5              | ± 0.5 NTU        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.41            | 1.41             | ± 0.5 NTU        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.43           | 10.43            | ± 0.5 NTU        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |



September 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 9/14/20 Time (start): 1106 Time (finish): 1744  
 smartTroll SN: 646773 Turbidity Meter Type: LaMotte 2020we SN: 7009  
 Weather Conditions: Sunny Facility and Unit: Hammond GW Project No.: 2WGS81

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard        | Initial Reading | Post-Cal Reading        | Acceptable Range  | Pass?   | Comments |
|---|-------------------------------------|-----------------------|--------------------------|-----------------|-------------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/21                   | 26°                   | 4490                     | 4369            | <del>4351</del><br>4460 | +/- 5%            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  |                                     |                       | 4.00                     | 4.61            | <del>4.51</del><br>4.40 | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 14340057<br>08/21                   | 27.5                  | 7.00                     | 7.59            | 7.00                    | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 14320162<br>08/21                   | 26.9                  | 10.00                    | 10.42           | 10.00                   | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19460167<br>8/2021                  | 27.1                  | 228                      | 192.8           | 228                     | +/- 20mV          | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | <del>100%</del><br>47.8% | 97.8%           | 100%                    | +/- 6% saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                        | 0               | 0                       | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                        | 1.49            | 1.49                    | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                       | 10.33           | 10.33                   | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Heesle Date: 9/15/20 Time (start): 0855 Time (finish): 0930  
 smarTroll SN: 646773 Turbidity Meter Type: Lanette 2020w SN: 7009  
 Weather Conditions: overcast, 78° Facility and Unit: Hammond Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading         | Post-Cal Reading | Acceptable Range  | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-------------------------|------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 26616025<br>08/21                   | 23.6°                 | 4490              | 4371                    | 4490             | +/- 5%            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  |                                     |                       | 4.00              | 4.83                    | 4.00             | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 19340057<br>08/21                   | 24.5°                 | 7.00              | 7.71                    | 7.00             | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 19320102<br>08/21                   | 24.7°                 | 10.00             | 10.52                   | 10.00            | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 14460167<br>08/21                   | 24.5                  | 228               | <del>228</del><br>190.8 | 228              | +/- 20mV          | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 100.5                   | 100%             | +/- 6% saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0                       | 0                | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | .60                     | 1                | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.63                    | 9.68             | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 9/16/20

Time (start): 0700

Time (finish): 0800

SmartTroll SN: 646773

Turbidity Meter Type: Lemna He 2020

SN: 9009

Weather Conditions: cloudy, cool

Facility and Unit: Hammond

Project No: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 200016025<br>08/21                  | 20.9                  | 4490              | 4454            | 4400             | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  |                                     |                       | 4.0               | 4.84            | 4.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 14340057<br>08/21                   | 21.3                  | 7.0               | 7.66            | 7.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 14320102<br>08/21                   | 21.5                  | 10.0              | 10.44           | 10.00            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19460167<br><del>08/20</del> 08/21  | 21.4                  | +228              | 196             | +228             | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 94.9            | 100%             | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | .07             | .07              | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.66            | .62              | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.02            | 10               | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |

**EQUIPMENT CALIBRATION LOG**

Field Technician: Therese Vassler

Date: 9/18/20

Time (start): 0719

Time (finish): 0800

SmartTroll SN: 646773

Turbidity Meter Type: Limetech zero

SN: 70009

Weather Conditions: Sunny 70°

Facility and Unit: Hummond

Project No.: 6W6584

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 22.0                  | 4490              | 4386            | 4490             | +/- 5%            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  | 08/21                               |                       | 4.0               | 4.80            | 4.0              | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 14340057<br>08/21                   | 22.3                  | 7.00              | 7.63            | 7.00             | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 14320102<br>08/21                   | 22.4                  | 10.00             | 10.44           | 10.00            | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 1446167<br>08/21                    | 22.5                  | 228               | 143.4           | 228              | +/- 20mV          | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 96.1            | 100              | +/- 6% saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.56            | 0.88             | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 15.00           | 10               | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 9-21-20 Time (start): 0800 Time (finish): 0825  
 SmartTroll SN: 646773 Turbidity Meter Type: lanette 2020 SN: 7009  
 Weather Conditions: Sunny, 55° Facility and Unit: hammuel Project No.: 626889

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 13.8                  | 4490              | 4491            | 4490             | +/- 5%            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  | 08/21                               |                       | 4.0               | 4.91            | 4.0              | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 19310057<br>08/21                   | 15.4                  | 7.0               | 7.61            | 7.0              | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 19320102<br>08/21                   | 15.6                  | 10.00             | 10.35           | 10.0             | +/- 0.1 SU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19460167<br>08/21                   | 15.6                  | 228               | 205.7           | 228              | +/- 20mV          | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 92.8            | 100%             | +/- 6% saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 1.42            | 0.00             | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | .61             | 0.85             | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.25           | 10.00            | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 9/25/20

Time (start): 0900

Time (finish): 0930

SmartTroll SN: 646775

Turbidity Meter Type: Lemette ZOC

SN: 7009

Weather Conditions: Rainy, 68°

Facility and Unit: Hammond

Project No: GWGS81

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading        | Acceptable Range  | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|-------------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010625<br>08/21                   | 18.9                  | 4440              | 4304            | <del>4492</del><br>4440 | +/- 5%            | <input checked="" type="radio"/> Yes No |          |
| pH (4)  |                                     |                       | 4.0               | 4.92            | 4.0                     | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 19340054<br>08/21                   | 19.2                  | 7.0               | 7.59            | 7.0                     | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320102<br>08/21                   | 19.4                  | 10.00             | 10.39           | 10.00                   | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19440167<br>08/21                   | 19.7                  | 228               | 197.0           | <del>228</del><br>228   | +/- 20mV          | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 93.1            | 100                     | +/- 6% saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.92            | 0                       | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.44            | 1.04                    | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.82            | 10.39                   | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 9/28/20 Time (start): 0815 Time (finish): 0848  
 smarTroll SN: 646775 Turbidity Meter Type: Lanott 2020w SN: 7009  
 Weather Conditions: Sunny 68° Facility and Unit: hammerd Project No.: 610658

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 22.1                  | 4490              | 4448            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  | 08/21                               |                       | 4.00              | 4.87            | 4.0              | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 19340054<br>08/21                   | 22.8                  | 7.00              | 7.58            | 7.0              | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 19320002<br>08/21                   | 23.1                  | 10.00             | 10.42           | 10.00            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19460067<br>08/21                   | 23.3                  | 228               | 189.2           | 228              | +/- 20mV              | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 95.9            | 99.8             | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.01            | 0.00             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.29            | 1.28             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 6.73            | 9.85             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |



EQUIPMENT CALIBRATION LOG

Field Technician: Chad Ruso Date: 9/17/2020 Time (start): 1105 Time (finish): 1140  
 smarTroll SN: 597519 Turbidity Meter Type: LaMotte 2020mc SN: 1510-4111  
 Weather Conditions: 85°F SUNNY Facility and Unit: Hammond Project No.: GW 6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard     | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-----------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>8/2021                  | 25.1                  | 4490                  | 4364            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  |                                     |                       | 4                     | 4.12            | 4                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 19340057<br>8/2021                  | 27                    | 7                     | 7.07            | 7                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 19320102<br>8/2021                  | 26.6                  | <del>9.95</del><br>10 | 9.95            | 10               | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19468167<br>8/2021                  | 26.7                  | 228                   | 214.5           | 228.9            | +/- 20mV              | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100                   | 94.6            | 100.8            | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                     | 0.01            | 0.01             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                     | 1.47            | 1.47             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                    | 10.46           | 10.46            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/15/2020 Time (start): 0855 Time (finish): 0935  
 smarTroll SN: 597519 Turbidity Meter Type: LaMotte SN: 1510-7111  
 Weather Conditions: 75°F overcast Facility and Unit: Hamm Project No.: CW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>8/2021                  | 25.1                  | 4490              | 4327            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  |                                     |                       | 4                 | 4.23            | 4                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 19340057<br>8/2021                  | 25.5                  | 7                 | 7.14            | 7                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 11320182<br>8/2021                  | 25.6                  | 10                | 9.93            | 10               | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 14460167<br>8/2021                  | 25.4                  | 228               | 2124            | 229              | +/- 20mV              | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 90.6            | 99.9             | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.01            | 0.01             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.54            | 1.49             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.29           | 10.29            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/16/2020 Time (start): 0830 Time (finish): 0903  
 SmartTroll SN: 597519 Turbidity Meter Type: LAMotte 2020sc SN: 1510-4111  
 Weather Conditions: 70°F overcast Facility and Unit: Hammond Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?                                  | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|--|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 21.9                  | 4490              | 4410            | 4490             | +/- 5%            | <input checked="" type="checkbox"/> No |          |
| pH (4)  | 8/2021                              |                       | 4                 | 4.25            | 4                | +/- 0.1 SU        | <input checked="" type="checkbox"/> No |          |
| pH (7)  | 19340057<br>8/2021                  | 22.2                  | 7                 | 7.09            | 7                | +/- 0.1 SU        | <input checked="" type="checkbox"/> No |          |
| pH (10)                                       | 14320102<br>8/2021                  | 22.4                  | 10                | 9.92            | 10               | +/- 0.1 SU        | <input checked="" type="checkbox"/> No |          |
| ORP (mV)                                      | 19400167<br>8/2021                  | 22.3                  | 228               | 217.4           | 229.2            | +/- 20mV          | <input checked="" type="checkbox"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 90.3            | 100.4            | +/- 6% saturation | <input checked="" type="checkbox"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU       | <input checked="" type="checkbox"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.58            | 1.46             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.82            | 9.82             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/18/2020 Time (start): 0755 Time (finish): 0820  
 SmartTroll SN: 597519 Turbidity Meter Type: LaMotte 2020we SN: 1510-14111  
 Weather Conditions: 70°F Cloudy Facility and Unit: Hammond Project No: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>8/2021                  | 22.9                  | 4490              | 4413            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  |                                     |                       | 4                 | 4.30            | 4                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 19340057<br>8/2021                  | 23.1                  | 7                 | 7.11            | 7                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320162<br>8/2020                  | 23.3                  | 10                | 9.88            | 10               | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19460167<br>8/2021                  | 23.3                  | 228               | 205             | 230.3            | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 90.9            | 100              | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.4             | 1.4              | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 12.52           | 10.11            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/21/2020 Time (start): 0640 Time (finish): 0910  
 smarTroll SN: 547519 Turbidity Meter Type: Limette 2020mc SN: 1510-4111  
 Weather Conditions: 60°F sunny Facility and Unit: Hammond Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20610025<br>8/20/20                 | 17.9                  | 4490              | 4441            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  |                                     |                       | 4                 | 4.41            | 4                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 19340057<br>8/20/21                 | 18.6                  | 7                 | 7.12            | 7                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320102<br>8/20/21                 | 19                    | 10                | 9.86            | 10               | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19466107<br>8/20/21                 | 19.1                  | 228               | 196             | 231.3            | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 95.2            | 100              | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.38            | 1.1              | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.5             | 9.5              | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |



EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/25/2020 Time (start): 0910 Time (finish): 0941  
 smazTroll SN: 597519 Turbidity Meter Type: LaMotte SN: 1510-4111  
 Weather Conditions: 65°F overcast Facility and Unit: Hammond Project No: GW6981

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard  | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?   | Comments |
|---|-------------------------------------|-----------------------|--------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 21.0                  | 4490               | 4364            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  | 8/2021                              |                       | 4                  | 4.51            | 4                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 19340057<br>8/2021                  | 21.0                  | 7                  | 6.86            | 7                | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 14320362<br>8/2021                  | 21.2                  | 10                 | 8.55            | 10               | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19400167<br>8/2021                  | 21.3                  | 228                | 243.5           | 235.3            | +/- 20mV              | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | <del>100</del> 100 | 90.3            | 100.3            | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                  | 0               | 0                | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                  | 1.08            | 1.08             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                 | 7.62            | 10.06            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TADKOR

Date: 9-15-2020

Time (start): 08 55

Time (finish): 09 35

Smart TROLL SN: 512733

Turbidity Meter Type: LaMotte 200NL

SN: 2049-0413

Weather Conditions: 75°F overcast

Facility and Unit: HAMMOND

Project No: GW 6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range   | Pass?  | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|--------------------|--------|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/2021                 | 24.7                  | 4490              | 4478            | 4491             | +/- 5 %            | Yes No |          |
| pH (4)  |                                     |                       | 4.0               | 4.17            | 4.0              | +/- 0.1 SU         | Yes No |          |
| pH (7)  | 19340057<br>08/2021                 | 24.9                  | 7.0               | 7.06            | 7.0              | +/- 0.1 SU         | Yes No |          |
| pH (10)                                       | 19320102<br>08/2021                 | 24.8                  | 10                | 10.02           | 10               | +/- 0.1 SU         | Yes No |          |
| ORP (mV)                                      | 19460167<br>08/2021                 | 24.6                  | 228               | 224.3           | 228              | +/- 20mV           | Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 88              | 100%             | +/- 6 % saturation | Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.62            | 0                | +/- 0.5 NTU        | Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.99            | 1                | +/- 0.5 NTU        | Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 11.32           | 10               | +/- 0.5 NTU        | Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAVKOLZ Date: 9-16-2020 Time (start): 0730 Time (finish): 0755  
 SmartTroll SN: 512733 Turbidity Meter Type: LAMOTTE 2020WE SN: 2949-0413  
 Weather Conditions: 69F, OVERCAST, WINDY Facility and Unit: HAMMOND Project No: GW 0581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?  | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|--------|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/21                   | 21.5                  | 4490              | 4379            | 4490             | +/- 5 %               | Yes No |          |
| pH (4)  |                                     |                       | 4                 | 4.24            | 4.0              | +/- 0.1 SU            | Yes No |          |
| pH (7)  | 19340057<br>08/21                   | 21.8                  | 7                 | 7.07            | 7.0              | +/- 0.1 SU            | Yes No |          |
| pH (10)                                       | 19320102<br>08/21                   | 21.8                  | 10                | 9.98            | 10.0             | +/- 0.1 SU            | Yes No |          |
| ORP (mV)                                      | 19460107<br>08/21                   | 21.3                  | <del>228</del>    | 227.6           | 228              | +/- 20mV              | Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 90.5            | 100              | +/- 6 %<br>saturation | Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | <del>0.06</del> | 0                | +/- 0.5 NTU           | Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.04            | 0.87             | +/- 0.5 NTU           | Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.22           | 10.06            | +/- 0.5 NTU           | Yes No |          |



EQUIPMENT CALIBRATION LOG

Field Technician: ASHISH TANKAR Date: 9-18-20 Time (start): 07 25 Time (finish): 07 42  
 smarTroll SN: 512 733 Turbidity Meter Type: LAOTTE 2020WE SN: 2949-0413  
 Weather Conditions: 70F, OVERCAST Facility and Unit: HAMMOND Project No.: 6W6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010625<br>08/2021                 | 21.1                  | 4480              | 4382            | 4480             | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  |                                     |                       | 4                 | 4.26            | 4.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 19340057<br>08/2021                 | 21.9                  | 7                 | 7.08            | 7.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320102<br>08/2021                 | 22.2                  | 10                | 10.02           | 10.00            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19460167<br>08/21                   | 22.3                  | 228               | 223             | 228              | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 91.3            | 100              | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.00            | 0                | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.00            | 1.00             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.09           | 10.00            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: VISHAY THERMO

Date: 9-21-20

Time (start): 08 28

Time (finish): 08 42

smarTroll SN: 512 733

Turbidity Meter Type: LA MOTTE 2020WE

SN: 2949-0413

Weather Conditions: SSE, SUNNY

Facility and Unit: HAMMON

Project No.: GW 0581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range   | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|--------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 15.4°                 | 4490              | 4315            | 4490             | +/- 5 %            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  | 08/21                               |                       | 4                 | 4.37            | 4.00             | +/- 0.1 SU         | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 10340057 8/21                       | 16.5                  | 7                 | 7.12            | 7.00             | +/- 0.1 SU         | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 19320102 8/21                       | 16.8                  | 10                | 9.96            | 10.00            | +/- 0.1 SU         | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 19460167 8/21                       | 17.1                  | 228               | 226.7           | 228              | +/- 20mV           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 90.3            | 100              | +/- 6 % saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.10            | 0                | +/- 0.5 NTU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.05            | 1                | +/- 0.5 NTU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 9.76            | 10               | +/- 0.5 NTU        | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: WASHISH TAIKOR Date: 9-25-20 Time (start): 09:00 Time (finish): 09:20  
 smarTroll SN: 512733 Turbidity Meter Type: LAMOTTE 2000E SN: 2940-643  
 Weather Conditions: 68°F. RAINY Facility and Unit: HAMMOND Project No.: 646581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 2001 0025<br>8/21                   | 19.3                  | 4490              | 4321            | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (4)  |                                     |                       | 4                 | 4.36            | 4.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (7)  | 10340057<br>8/21                    | 19.3                  | 7                 | 7.10            | 7.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| pH (10)                                       | 19320102<br>8/21                    | 19.4                  | 10                | 9.97            | 10.00            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| ORP (mV)                                      | 9460167<br>8/21                     |                       | 228               | 207.6           | 228              | +/- 20mV              | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 94.1            | 100              | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.00            | 0.00             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.26            | 1.00             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 8.77            | 10.00            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes <input type="radio"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Becker Date: 9-28-2020 Time (start): 1330 Time (finish): 1405  
 smarTroll SN: 512733 Turbidity Meter Type: Lemotite SN: 2949  
 Weather Conditions: Sunny Hi 82/Lo 71 Facility and Unit: Hammond Project No.: GV6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?  | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|--------|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/2021                 | 27.5                  | 4490              | 4391            | 4490             | +/- 5 %               | Yes No |          |
| pH (4)  |                                     | 27.6                  | 4.00              | 4.25            | 4.00             | +/- 0.1 SU            | Yes No |          |
| pH (7)  | 08/2021<br>19340057                 | 26.7                  | 7.00              | 7.11            | 7.00             | +/- 0.1 SU            | Yes No |          |
| pH (10)                                       | 08/2021<br>19320102                 | 26.2                  | 10.00             | 10.08           | 10.00            | +/- 0.1 SU            | Yes No |          |
| ORP (mV)                                      | 19460167                            | 26.6                  | 228.0             | 197.4           | 228.0            | +/- 20mV              | Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 97.7            | 100%             | +/- 6 %<br>saturation | Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU           | Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1.00              | 0.99            | 1.00             | +/- 0.5 NTU           | Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10              | 10               | +/- 0.5 NTU           | Yes No |          |

November 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Shawn LTY Date: 11/10/2020 Time (start): 11:55 Time (finish): 12:15  
 smartTroll SN: 728634 Turbidity Meter Type: LaMotte 2020 We SN: 2953  
 Weather Conditions: cloudy Facility and Unit: Hammond Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?                               | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|-------------------------------------|----------|
| Specific Conductance (µS/cm)                  | 2010025                             | 22.29                 | 4490              | 4568.3          | 4322.9           | +/- 5%            | <input checked="" type="radio"/> No |          |
| pH (4)  | 08/2021                             |                       | 4.00              | 4.03            | 4.00             | +/- 0.1 SU        | <input checked="" type="radio"/> No |          |
| pH (7)  | 19340057<br>08/2021                 | 22.04                 | 7.00              | 7.5             | 7.00             | +/- 0.1 SU        | <input checked="" type="radio"/> No |          |
| pH (10)                                       | 19329102<br>08/2021                 | 22.04                 | 10.00             | 9.97            | 10.00            | +/- 0.1 SU        | <input checked="" type="radio"/> No |          |
| ORP (mV)                                      | 19460167<br>08/2021                 | 22.14                 | 228               | 240.7           | 227.6            | +/- 20mV          | <input checked="" type="radio"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 101.31          | 99.83            | +/- 6% saturation | <input checked="" type="radio"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU       | <input checked="" type="radio"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.92            | 0.97             | +/- 0.5 NTU       | <input checked="" type="radio"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 11.18           | 9.85             | +/- 0.5 NTU       | <input checked="" type="radio"/> No |          |



EQUIPMENT CALIBRATION LOG

Field Technician: Shawn Lin Date: 11/11/2020 Time (start): 7:30 Time (finish): 7:45  
 smarTroll SN: 728634 Turbidity Meter Type: LaMotte 2020w SN: 2953  
 Weather Conditions: cloudy Facility and Unit: Hammond Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 22.84                 | 4490              | 4574.0          | 4508.1           | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  | 08/2021                             |                       | 4.00              | 4.51            | 4.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 19340057<br>08/2021                 | 22.61                 | 7.00              | 6.99            | 7.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320102<br>08/2021                 | 22.52                 | 10.00             | 10.01           | 10.00            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19460167<br>08/2021                 | 22.36                 | 228               | 226.9           | 228.0            | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100               | 98.59           | 99.95            | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0               | 0                | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.98            | 0.99             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.99           | 10.03            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 11/10/2020

Time (start): 0738

Time (finish): 0808

smarTroll SN: 728550

Turbidity Meter Type: LaMotte 2020we

SN: 1859-0412

Weather Conditions: overcast, 70°

Facility and Unit: Plant Hammond

Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard       | Initial Reading         | Post-Cal Reading          | Acceptable Range      | Pass?                                   | Comments           |
|---|-------------------------------------|-----------------------|-------------------------|-------------------------|---------------------------|-----------------------|---|--------------------|
| Specific Conductance (µS/cm)                  | 20010025<br>/                       | 25°                   | 4490<br><del>4.60</del> | 5042<br><del>3.80</del> | 4490                      | +/- 5 %               | <input checked="" type="radio"/> Yes No | Aquatroll 400<br>↓ |
| pH (4)  | 08/21                               |                       | 4.00                    | 3.81                    | 4.00                      | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |                    |
| pH (7)  | 19340057<br>08/21                   | 20.61°                | 7.00                    | 7.12                    | 7.02<br><del>7.00</del>   | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |                    |
| pH (10)                                       | 19320102<br>08/21                   | 20.66°                | 10                      | 10.15                   | 10.04<br><del>10.00</del> | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |                    |
| ORP (mV)                                      | 19460167<br>08/21                   | 20.79                 | 228                     | 226.8                   | 228                       | +/- 20mV              | <input checked="" type="radio"/> Yes No |                    |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%                    | 99.93%                  | 100%                      | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |                    |
| Turbidity 0 NTU                               |                                     |                       | 0                       | 0.54                    | 0.38                      | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |                    |
| Turbidity 1 NTU                               |                                     |                       | 1.00                    | 1.00                    | 1.00                      | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |                    |
| Turbidity 10 NTU                              |                                     |                       | 10.00                   | 7.67                    | 9.93                      | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |                    |



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kusler Date: 11/11/20 Time (start): 745 Time (finish): 0815  
 smarTroll SN: 728550 Turbidity Meter Type: Lanette 2020ac SN: 1859-0412  
 Weather Conditions: overcast, 70° Facility and Unit: Plant Hammond Project No.: GW6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading                        | Acceptable Range  | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|---|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 20.67                 | 4490              | 4495.4          | 4490                                    | +/- 5%            | <input checked="" type="radio"/> Yes No |          |
| pH (4)  | 08/21                               |                       | 4.0               | 4.15            | 4.00 <sup>7.00</sup><br><del>4.00</del> | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 1934657<br>08/21<br>12180           | 20.90                 | 7.0               | 7.07            | 7.02 <sup>7.02</sup><br><del>7.02</del> | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 1932902<br>08/21                    | 21.03                 | 10.0              | 10.68           | 10.04                                   | +/- 0.1 SU        | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 1946167                             | 21.14                 | 228               | 229.9           | 228                                     | +/- 20mV          | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 99.15%          | 100%                                    | +/- 6% saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.79            | 0.01                                    | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1.00              | 0.52            | 0.78                                    | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10.00             | 10.91           | 10.68                                   | +/- 0.5 NTU       | <input checked="" type="radio"/> Yes No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kossler

Date: 11/12/2020

Time (start): 0730

Time (finish): 0758

smarTroll SN: 728550

Turbidity Meter Type: Lamotte 2020w

SN: 1859-0412

Weather Conditions: Overcast 70°

Facility and Unit: Plant Hammered

Project No: GWGS81

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range      | Pass?                                   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-----------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010025<br>08/21                   | 19.43                 | 4490              | 4598.3          | 4490             | +/- 5 %               | <input checked="" type="radio"/> Yes No |          |
| pH (4)  |                                     |                       | 4.00              | 4.03            | 4.00             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (7)  | 19340057<br>08/21                   | 20.66                 | 7.00              | 6.99            | 7.02             | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| pH (10)                                       | 19320102<br>08/21                   | 20.22                 | 10.00             | 10.00           | 10.04            | +/- 0.1 SU            | <input checked="" type="radio"/> Yes No |          |
| ORP (mV)                                      | 19460167<br>08/21                   | 20.32                 | 228               | 226.6           | 228              | +/- 20mV              | <input checked="" type="radio"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 97.43%          | 100%             | +/- 6 %<br>saturation | <input checked="" type="radio"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.67            | 0.01             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.60            | 0.86             | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.76           | 10.02            | +/- 0.5 NTU           | <input checked="" type="radio"/> Yes No |          |

December 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Messler Date: 12/15/20 Time (start): 826 Time (finish): 0850  
 SmartTroll SN: 728634 Turbidity Meter Type: Lumette 2020w SN: 14179-4011  
 Weather Conditions: Sunny, cold Facility and Unit: Plant Hammond Project No.: 6W6581

Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?   | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|---|----------|
| Specific Conductance (µS/cm)                  | 20010028                            | 11.26                 | 4490              | 4784            | 4490             | +/- 5%            | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| pH (4)  | 08121                               |                       | 4.0               | 4.00            | 4.00             | +/- 0.1 SU        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| pH (7)  | 19340057<br>08121                   | 10.67                 | 7.00              | 7.13            | 7.00             | +/- 0.1 SU        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| pH (10)                                       | 19320102<br>08121                   | 9.62                  | 10.00             | 10.22           | 10.00            | +/- 0.1 SU        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| ORP (mV)                                      | 19460167<br>08121                   | 8.94                  | 228               | 246             | 228              | +/- 20mV          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 101.75%         | 100%             | +/- 6% saturation | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | 0.03            | 0.03             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 1.08            | 1.03             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 10.16           | 9.71             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |          |

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Nessler

Date: 12/16/20

Time (start): 0742

Time (finish): 0809

SmartTroll SN: ~~72633~~ 728634

Turbidity Meter Type: Lanette 2020ave

SN: 1477-4011

Weather Conditions: Rainy, cold

Facility and Unit: Plant Hammond

Project No.: 600581

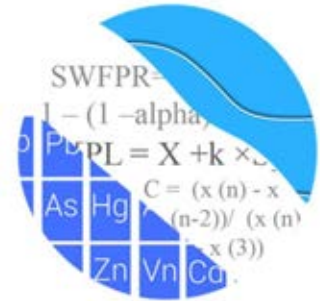
Calibration log

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Initial Reading | Post-Cal Reading | Acceptable Range  | Pass?                                      | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------|------------------|-------------------|--|----------|
| Specific Conductance (µS/cm)                  | 20010025                            | 7.37                  | 4490              | 4526            | 4490             | +/- 5%            | <input checked="" type="checkbox"/> Yes No |          |
| pH (4)  | 08/21                               |                       | 4.0               | 4.11            | 4.0              | +/- 0.1 SU        | <input checked="" type="checkbox"/> Yes No |          |
| pH (7)  | 19340857<br>08/21                   | 7.61                  | 7.0               | 7.10            | 7.0              | +/- 0.1 SU        | <input checked="" type="checkbox"/> Yes No |          |
| pH (10)                                       | 19320102<br>08/21                   | 7.84                  | 10.0              | 10.18           | 10               | +/- 0.1 SU        | <input checked="" type="checkbox"/> Yes No |          |
| ORP (mV)                                      | 19460167<br>08/21                   | 8.36                  | 228               | 226.1           | 228              | +/- 20mV          | <input checked="" type="checkbox"/> Yes No |          |
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       | 100%              | 101.92          | 100%             | +/- 6% saturation | <input checked="" type="checkbox"/> Yes No |          |
| Turbidity 0 NTU                               |                                     |                       | 0                 | -0.11           | 0                | +/- 0.5 NTU       | <input checked="" type="checkbox"/> Yes No |          |
| Turbidity 1 NTU                               |                                     |                       | 1                 | 0.94            | 1.03             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> Yes No |          |
| Turbidity 10 NTU                              |                                     |                       | 10                | 8.37            | 9.93             | +/- 0.5 NTU       | <input checked="" type="checkbox"/> Yes No |          |

# APPENDIX E

## Statistical Analysis Report

## GROUNDWATER STATS CONSULTING



February 16, 2021

Southern Company Services  
Attn: Ms. Kristen Jurinko  
241 Ralph McGill Blvd. NE, Bin 10160  
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 3 (AP-3)  
1<sup>st</sup> Semi-Annual Statistical Analysis – Fall 2020 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the 1<sup>st</sup> Semi-Annual Fall 2020 sample event for Georgia Power Company's Plant Hammond AP-3. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the USEPA Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells, except for those discussed below. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122
- **Downgradient wells:** HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126
- **Piezometer:** MW-39

New upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D were first sampled in September 2020 and have had 3 sample events through December 2020. As requested by Southern Company Services, upgradient wells with 2 or more samples will be



incorporated into statistical analyses. Sampling began at new downgradient wells HGWC-125 and HGWC-126 in May 2020 and there have been six rounds of background sampling through December 2020. Additionally, sampling began at piezometer MW-39 in March 2020 and there have been two rounds of background sampling, except for molybdenum which has had 4 rounds of sampling. Therefore, piezometer MW-39 is included in the Appendix IV analyses for molybdenum.

Sampling at the following delineation wells listed below started during 2020:

- **Delineation wells:** MW-32, MW-41, and MW-46D

When a minimum of 4 samples is available, these wells are evaluated using confidence intervals for the Appendix IV constituents. Note that wells MW-32 and MW-41 were last sampled during the September 2020 sampling event, while MW-46D was last sampled during the November 2020 sampling event for a non-routine event. These wells currently do not have sufficient samples for analysis of Appendix IV constituents except for well MW-32 for fluoride and molybdenum. Therefore no confidence intervals are provided for these well/constituent pairs except for fluoride and molybdenum at well MW-32.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting.

The CCR program consists of the following constituents listed below. The terms "constituent" and "parameter" are interchangeable.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

When no detections are present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. Additionally, when Appendix IV constituents are not detected during a scheduled Scan event, no statistical analyses are required during the semi-annual sample event. During the annual Scan event conducted in August 2020, arsenic, cadmium, mercury, selenium, and thallium were not detected, and therefore, were not required to be sampled during the Fall 2020 event. These constituents were included in the time series and box plots, but no formal statistics were required.



For all constituents, a substitution of the most recent reporting limit is used for nondetect data. For calculating prediction limits, the substitution is performed for individual wells and may differ across wells. This generally gives the most conservative limit in each case. In the time series plots, a single reporting limit substitution is used across all wells for a given parameter since the wells are plotted as a group. In the case of lithium, the reporting limit of 0.03 mg/L was substituted across all wells which is the most recent reporting limit provided by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Data at all wells were evaluated during the background screening described below for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the screening and demonstrated that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

### **Statistical Methods – Appendix III Parameters:**

Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan for the following constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality.

After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit (for data sets containing <15% nondetects as described above) are shown as the original reporting limit.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, an earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. When this step is required a summary of any adjusted records will be provided. No records were adjusted at this time.

## **Summary of Background Screening Conducted in March 2019**

### Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey box plot method, two outliers were identified. Those findings were submitted with that report. While this was not present in any of the data screened in this report, when the most recent value is identified as an outlier, values are not flagged in the database at this time as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged for TDS in upgradient well HGWA-122. All other values are similar to remaining measurements within a given well or neighboring wells or were reported nondetects. The outlier summary follows this report (Figure C).

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses showed one statistically significant decreasing trend for the Appendix III parameters. However, the trend noted was relatively low in magnitude when compared to average concentrations, and the background time period is short; therefore, no adjustments were made to the data sets.

### Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. However, interwell methods are currently implemented in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

### **Statistical Evaluation of Appendix III Parameters – September 2020**

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for all Appendix III parameters using all historical upgradient well data through September 2020 except for upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D, which have samples through December 2020 (Figure D). Downgradient measurements from the most recent sample event were compared to these interwell background limits. For wells HGWC-120, HGWC-121A, and HGWC-124 this included the September 2020 sample. For wells HGWC-125 and HGWC-126 this included the December 2020 sample. Interwell prediction limits use all available upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirm the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. If no resample is collected,

the initial exceedance is automatically confirmed. For Appendix III parameters, several prediction limit exceedances were identified. A summary table of the interwell prediction limits follows this letter and includes a list of exceedances.

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient well data are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient wells it is an indication of natural variability in groundwater quality unrelated to practices at the site. Trend tests require a minimum of 5 samples; therefore, the new upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D did not yet have sufficient samples and the entries on the summary table show "NaN". A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWA-2 (upgradient)
- Sulfate: HGWA-3 (upgradient)

Decreasing trends:

- Boron: HGWC-121A
- Sulfate: HGWA-122 (upgradient), HGWC-120, and HGWC-121A

## **Statistical Methods – Appendix IV Parameters**

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (MCL or CCR rule-specified limits) or site-specific limits that are based on upgradient background groundwater quality. Site-specific background limits are determined using tolerance limits, and the comparison of downgradient means or medians to GWPS is performed using confidence intervals. The methods are described below.

## **Statistical Evaluation of Appendix IV Parameters – September 2020**

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% nondetects do not require analysis. Data from all wells for Appendix IV parameters are

reassessed for outliers during each analysis. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

First, interwell upper tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through September 2020 except for upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D, which have samples through December 2020 for Appendix IV constituents (Figure F). As mentioned above, a reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% nondetects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, CCR-rule specified levels have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following Georgia EPD Rule requirements and the Federal CCR requirements, Federal and State GWPS were established for statistical comparison of Appendix IV constituents for all available samples in downgradient wells (Figures G and H, respectively). Delineation wells and piezometers are included in the confidence intervals when a minimum of 4 samples are available. At this time, only well MW-32 has sufficient samples for fluoride and molybdenum while piezometer MW-39 has sufficient samples for molybdenum.

Therefore, confidence intervals are included for these parameters at these wells. Note that GWPS are established for arsenic, cadmium, mercury, selenium, and thallium. However, since there were no recent detections of these parameters above the reporting limit, no statistical comparison with confidence intervals was required. Additionally, there are 100% nondetects for beryllium and no confidence intervals were required for this constituent.

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well. The Sanitas software was used to calculate both the tolerance limits and the confidence intervals. For Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule (Figure I). For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a) (Figure J). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Summaries of both the Federal and State confidence intervals follow this letter and exceedances were identified for the following well/constituent pairs:

The following confidence interval exceedances were identified:

Federal

- No exceedances

State

- Molybdenum: HGWC-120, MW-32, and MW-39

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-3. If you have any questions or comments, please feel free to contact me.

For Groundwater Stats Consulting,



Abdul Diane  
Groundwater Analyst



Andrew Collins  
Project Manager

# 100% Non-Detects

Analysis Run 2/12/2021 3:28 PM View: 100% NDs

Plant Hammond Client: Southern Company Data: Hammond Ash Pond 3

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## Antimony (mg/L)

HGWA-2, HGWC-120, HGWC-121A, HGWC-124, MW-39, MW-41, MW-46D

## Arsenic (mg/L)

HGWA-122, HGWA-44D, MW-32, MW-39, MW-41

## Beryllium (mg/L)

HGWA-1, HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41, MW-46D

## Cadmium (mg/L)

HGWA-1, HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

## Chromium (mg/L)

HGWA-43D, HGWA-45D, MW-39, MW-41

## Cobalt (mg/L)

HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-124, HGWC-126

## Lead (mg/L)

MW-32, MW-39, MW-41

## Lithium (mg/L)

HGWA-122

## Mercury (mg/L)

HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-121A, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

## Molybdenum (mg/L)

HGWA-1, HGWA-2, HGWA-3, HGWC-121A, HGWC-126

## Selenium (mg/L)

HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

## Thallium (mg/L)

HGWA-1, HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41



# Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

| Constituent                   | Well      | Upper Lim. | Date       | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|-------------------------------|-----------|------------|------------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Boron (mg/L)                  | HGWC-120  | 0.336      | 9/21/2020  | 0.93    | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Boron (mg/L)                  | HGWC-121A | 0.336      | 9/28/2020  | 2.3     | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Boron (mg/L)                  | HGWC-124  | 0.336      | 9/28/2020  | 0.43    | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Boron (mg/L)                  | HGWC-125  | 0.336      | 12/16/2020 | 1.5     | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Calcium (mg/L)                | HGWC-120  | 138        | 9/21/2020  | 152     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Calcium (mg/L)                | HGWC-121A | 138        | 9/28/2020  | 167     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Calcium (mg/L)                | HGWC-125  | 138        | 12/16/2020 | 194     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Sulfate (mg/L)                | HGWC-120  | 88.2       | 9/21/2020  | 225     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Sulfate (mg/L)                | HGWC-121A | 88.2       | 9/28/2020  | 182     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Sulfate (mg/L)                | HGWC-125  | 88.2       | 12/16/2020 | 306     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Total Dissolved Solids (mg/L) | HGWC-125  | 632        | 12/16/2020 | 816     | Yes  | 68   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004151 | NP Inter (normality) 1 of 2 |

# Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

| Constituent                          | Well             | Upper Lim.   | Date              | Observ.     | Sig.       | Bg N      | Bg Mean    | Std. Dev.  | %NDs         | ND Adj.    | Transform  | Alpha            | Method                             |
|--------------------------------------|------------------|--------------|-------------------|-------------|------------|-----------|------------|------------|--------------|------------|------------|------------------|------------------------------------|
| <b>Boron (mg/L)</b>                  | <b>HGWC-120</b>  | <b>0.336</b> | <b>9/21/2020</b>  | <b>0.93</b> | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Boron (mg/L)</b>                  | <b>HGWC-121A</b> | <b>0.336</b> | <b>9/28/2020</b>  | <b>2.3</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Boron (mg/L)</b>                  | <b>HGWC-124</b>  | <b>0.336</b> | <b>9/28/2020</b>  | <b>0.43</b> | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Boron (mg/L)</b>                  | <b>HGWC-125</b>  | <b>0.336</b> | <b>12/16/2020</b> | <b>1.5</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Boron (mg/L)                         | HGWC-126         | 0.336        | 12/16/2020        | 0.011J      | No         | 69        | n/a        | n/a        | 2.899        | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| <b>Calcium (mg/L)</b>                | <b>HGWC-120</b>  | <b>138</b>   | <b>9/21/2020</b>  | <b>152</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Calcium (mg/L)</b>                | <b>HGWC-121A</b> | <b>138</b>   | <b>9/28/2020</b>  | <b>167</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Calcium (mg/L)                       | HGWC-124         | 138          | 9/28/2020         | 107         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| <b>Calcium (mg/L)</b>                | <b>HGWC-125</b>  | <b>138</b>   | <b>12/16/2020</b> | <b>194</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Calcium (mg/L)                       | HGWC-126         | 138          | 12/16/2020        | 132         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-120         | 41.1         | 9/21/2020         | 2.4         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-121A        | 41.1         | 9/28/2020         | 23.2        | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-124         | 41.1         | 9/28/2020         | 2.5         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-125         | 41.1         | 12/16/2020        | 5.3         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-126         | 41.1         | 12/16/2020        | 8.9         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-120         | 0.67         | 9/21/2020         | 0.33        | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-121A        | 0.67         | 9/28/2020         | 0.15        | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-124         | 0.67         | 9/28/2020         | 0.1ND       | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-125         | 0.67         | 12/16/2020        | 0.2         | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-126         | 0.67         | 12/16/2020        | 0.49        | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-120         | 7.87         | 9/21/2020         | 6.98        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-121A        | 7.87         | 9/28/2020         | 6.93        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-124         | 7.87         | 9/28/2020         | 7.27        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-125         | 7.87         | 12/16/2020        | 6.61        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-126         | 7.87         | 12/16/2020        | 6.93        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| <b>Sulfate (mg/L)</b>                | <b>HGWC-120</b>  | <b>88.2</b>  | <b>9/21/2020</b>  | <b>225</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Sulfate (mg/L)</b>                | <b>HGWC-121A</b> | <b>88.2</b>  | <b>9/28/2020</b>  | <b>182</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Sulfate (mg/L)                       | HGWC-124         | 88.2         | 9/28/2020         | 86.2        | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| <b>Sulfate (mg/L)</b>                | <b>HGWC-125</b>  | <b>88.2</b>  | <b>12/16/2020</b> | <b>306</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Sulfate (mg/L)                       | HGWC-126         | 88.2         | 12/16/2020        | 68.1        | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Total Dissolved Solids (mg/L)        | HGWC-120         | 632          | 9/21/2020         | 272         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |
| Total Dissolved Solids (mg/L)        | HGWC-121A        | 632          | 9/28/2020         | 5ND         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |
| Total Dissolved Solids (mg/L)        | HGWC-124         | 632          | 9/28/2020         | 176         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |
| <b>Total Dissolved Solids (mg/L)</b> | <b>HGWC-125</b>  | <b>632</b>   | <b>12/16/2020</b> | <b>816</b>  | <b>Yes</b> | <b>68</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004151</b> | <b>NP Inter (normality) 1 of 2</b> |
| Total Dissolved Solids (mg/L)        | HGWC-126         | 632          | 12/16/2020        | 536         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |

# Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:46 PM

| <u>Constituent</u> | <u>Well</u>   | <u>Slope</u> | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u> | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|--------------------|---------------|--------------|--------------|-----------------|-------------|----------|-------------|------------------|--------------|--------------|---------------|
| Boron (mg/L)       | HGWA-2 (bg)   | 0.002014     | 57           | 53              | Yes         | 15       | 0           | n/a              | n/a          | 0.01         | NP            |
| Boron (mg/L)       | HGWC-121A     | -0.2314      | -49          | -43             | Yes         | 13       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWA-122 (bg) | -1.81        | -46          | -43             | Yes         | 13       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWA-3 (bg)   | 1.639        | 64           | 58              | Yes         | 16       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWC-120      | -17.58       | -50          | -48             | Yes         | 14       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWC-121A     | -25.97       | -50          | -43             | Yes         | 13       | 0           | n/a              | n/a          | 0.01         | NP            |

# Trend Test Summary - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-3    Printed 2/16/2021, 12:46 PM

| Constituent                   | Well                 | Slope           | Calc.      | Critical   | Sig.       | N         | %NDs     | Normality  | Xform      | Alpha       | Method    |
|-------------------------------|----------------------|-----------------|------------|------------|------------|-----------|----------|------------|------------|-------------|-----------|
| Boron (mg/L)                  | HGWA-1 (bg)          | 0.0004675       | 7          | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Boron (mg/L)                  | HGWA-122 (bg)        | -0.02677        | -41        | -43        | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Boron (mg/L)</b>           | <b>HGWA-2 (bg)</b>   | <b>0.002014</b> | <b>57</b>  | <b>53</b>  | <b>Yes</b> | <b>15</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Boron (mg/L)                  | HGWA-3 (bg)          | -0.0006127      | -25        | -58        | No         | 16        | 12.5     | n/a        | n/a        | 0.01        | NP        |
| Boron (mg/L)                  | HGWA-43D (bg)        | -0.0365         | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Boron (mg/L)                  | HGWA-44D (bg)        | 0.3244          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Boron (mg/L)                  | HGWA-45D (bg)        | 0               | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Boron (mg/L)                  | HGWC-120             | -0.05419        | -39        | -48        | No         | 14        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Boron (mg/L)</b>           | <b>HGWC-121A</b>     | <b>-0.2314</b>  | <b>-49</b> | <b>-43</b> | <b>Yes</b> | <b>13</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Boron (mg/L)                  | HGWC-124             | -0.01814        | -35        | -43        | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| Boron (mg/L)                  | HGWC-125             | 0               | -3         | -14        | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-1 (bg)          | 6.226           | 48         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-122 (bg)        | 0.6171          | 4          | 43         | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-2 (bg)          | 0.02596         | 1          | 53         | No         | 15        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-3 (bg)          | 2.935           | 46         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-43D (bg)        | 26.77           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Calcium (mg/L)                | HGWA-44D (bg)        | -5.272          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Calcium (mg/L)                | HGWA-45D (bg)        | -1.78           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Calcium (mg/L)                | HGWC-120             | 2.933           | 18         | 48         | No         | 14        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWC-121A            | -5.808          | -21        | -43        | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWC-125             | 44.88           | 7          | 14         | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |
| Sulfate (mg/L)                | HGWA-1 (bg)          | 7.687           | 53         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Sulfate (mg/L)</b>         | <b>HGWA-122 (bg)</b> | <b>-1.81</b>    | <b>-46</b> | <b>-43</b> | <b>Yes</b> | <b>13</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Sulfate (mg/L)                | HGWA-2 (bg)          | 1.235           | 49         | 53         | No         | 15        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Sulfate (mg/L)</b>         | <b>HGWA-3 (bg)</b>   | <b>1.639</b>    | <b>64</b>  | <b>58</b>  | <b>Yes</b> | <b>16</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Sulfate (mg/L)                | HGWA-43D (bg)        | -17.03          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Sulfate (mg/L)                | HGWA-44D (bg)        | -147.2          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Sulfate (mg/L)                | HGWA-45D (bg)        | 20.03           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| <b>Sulfate (mg/L)</b>         | <b>HGWC-120</b>      | <b>-17.58</b>   | <b>-50</b> | <b>-48</b> | <b>Yes</b> | <b>14</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| <b>Sulfate (mg/L)</b>         | <b>HGWC-121A</b>     | <b>-25.97</b>   | <b>-50</b> | <b>-43</b> | <b>Yes</b> | <b>13</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Sulfate (mg/L)                | HGWC-125             | -48.99          | -5         | -14        | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-1 (bg)          | 18.73           | 26         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-122 (bg)        | -1.249          | -2         | -38        | No         | 12        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-2 (bg)          | -3.989          | -24        | -53        | No         | 15        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-3 (bg)          | 2.145           | 12         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-43D (bg)        | 68.94           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Total Dissolved Solids (mg/L) | HGWA-44D (bg)        | 101.4           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Total Dissolved Solids (mg/L) | HGWA-45D (bg)        | 138             | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Total Dissolved Solids (mg/L) | HGWC-125             | 71.04           | 3          | 14         | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |

# Interwell Tolerance Limits Summary

Plant Hammond    Client: Southern Company    Data: Hammond AP-3    Printed 2/16/2021, 12:55 PM

| <u>Constituent</u>                | <u>Well</u> | <u>Upper Lim.</u> | <u>Bg N</u> | <u>Bg Mean</u> | <u>Std. Dev.</u> | <u>%NDs</u> | <u>ND Adj.</u> | <u>Transform</u> | <u>Alpha</u> | <u>Method</u>       |
|-----------------------------------|-------------|-------------------|-------------|----------------|------------------|-------------|----------------|------------------|--------------|---------------------|
| Antimony (mg/L)                   | n/a         | 0.003             | 68          | n/a            | n/a              | 86.76       | n/a            | n/a              | 0.03056      | NP Inter(NDs)       |
| Arsenic (mg/L)                    | n/a         | 0.005             | 70          | n/a            | n/a              | 71.43       | n/a            | n/a              | 0.02758      | NP Inter(normality) |
| Barium (mg/L)                     | n/a         | 0.52              | 76          | n/a            | n/a              | 0           | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Beryllium (mg/L)                  | n/a         | 0.003             | 68          | n/a            | n/a              | 80.88       | n/a            | n/a              | 0.03056      | NP Inter(NDs)       |
| Cadmium (mg/L)                    | n/a         | 0.0025            | 70          | n/a            | n/a              | 90          | n/a            | n/a              | 0.02758      | NP Inter(NDs)       |
| Chromium (mg/L)                   | n/a         | 0.01              | 70          | n/a            | n/a              | 74.29       | n/a            | n/a              | 0.02758      | NP Inter(normality) |
| Cobalt (mg/L)                     | n/a         | 0.038             | 76          | n/a            | n/a              | 75          | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Combined Radium 226 + 228 (pCi/L) | n/a         | 4.36              | 76          | n/a            | n/a              | 0           | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Fluoride (mg/L)                   | n/a         | 0.67              | 83          | n/a            | n/a              | 27.71       | n/a            | n/a              | 0.01416      | NP Inter(normality) |
| Lead (mg/L)                       | n/a         | 0.005             | 70          | n/a            | n/a              | 61.43       | n/a            | n/a              | 0.02758      | NP Inter(normality) |
| Lithium (mg/L)                    | n/a         | 0.03              | 76          | n/a            | n/a              | 38.16       | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Mercury (mg/L)                    | n/a         | 0.0005            | 55          | n/a            | n/a              | 90.91       | n/a            | n/a              | 0.05954      | NP Inter(NDs)       |
| Molybdenum (mg/L)                 | n/a         | 0.01              | 78          | n/a            | n/a              | 73.08       | n/a            | n/a              | 0.0183       | NP Inter(normality) |
| Selenium (mg/L)                   | n/a         | 0.01              | 70          | n/a            | n/a              | 98.57       | n/a            | n/a              | 0.02758      | NP Inter(NDs)       |
| Thallium (mg/L)                   | n/a         | 0.001             | 70          | n/a            | n/a              | 98.57       | n/a            | n/a              | 0.02758      | NP Inter(NDs)       |

| <b>PLANT HAMMOND AP-3 GWPS (Federal)</b> |            |                           |                         |                     |
|--|------------|---------------------------|-------------------------|---------------------|
| <b>Constituent Name</b>                  | <b>MCL</b> | <b>CCR-Rule Specified</b> | <b>Background Limit</b> | <b>Federal GWPS</b> |
| Antimony, Total (mg/L)                   | 0.006      |                           | 0.003                   | 0.006               |
| Arsenic, Total (mg/L)                    | 0.01       |                           | 0.005                   | 0.01                |
| Barium, Total (mg/L)                     | 2          |                           | 0.52                    | 2                   |
| Beryllium, Total (mg/L)                  | 0.004      |                           | 0.003                   | 0.004               |
| Cadmium, Total (mg/L)                    | 0.005      |                           | 0.0025                  | 0.005               |
| Chromium, Total (mg/L)                   | 0.1        |                           | 0.01                    | 0.1                 |
| Cobalt, Total (mg/L)                     | n/a        | 0.006                     | 0.038                   | 0.038               |
| Combined Radium, Total (pCi/L)           | 5          |                           | 4.36                    | 5                   |
| Fluoride, Total (mg/L)                   | 4          |                           | 0.67                    | 4                   |
| Lead, Total (mg/L)                       | n/a        | 0.015                     | 0.005                   | 0.015               |
| Lithium, Total (mg/L)                    | n/a        | 0.04                      | 0.03                    | 0.04                |
| Mercury, Total (mg/L)                    | 0.002      |                           | 0.0005                  | 0.002               |
| Molybdenum, Total (mg/L)                 | n/a        | 0.1                       | 0.01                    | 0.1                 |
| Selenium, Total (mg/L)                   | 0.05       |                           | 0.01                    | 0.05                |
| Thallium, Total (mg/L)                   | 0.002      |                           | 0.001                   | 0.002               |

*\*Grey cell indicates background is higher than MCL or CCR-Rule*

*\*MCL = Maximum Contaminant Level*

*\*CCR = Coal Combustion Residuals*

*\*GWPS = Groundwater Protection Standard*

| <b>PLANT HAMMOND AP-3 GWPS (State)</b> |            |                           |                         |                   |
|--|------------|---------------------------|-------------------------|-------------------|
| <b>Constituent Name</b>                | <b>MCL</b> | <b>CCR-Rule Specified</b> | <b>Background Limit</b> | <b>State GWPS</b> |
| Antimony, Total (mg/L)                 | 0.006      |                           | 0.003                   | 0.006             |
| Arsenic, Total (mg/L)                  | 0.01       |                           | 0.005                   | 0.01              |
| Barium, Total (mg/L)                   | 2          |                           | 0.52                    | 2                 |
| Beryllium, Total (mg/L)                | 0.004      |                           | 0.003                   | 0.004             |
| Cadmium, Total (mg/L)                  | 0.005      |                           | 0.0025                  | 0.005             |
| Chromium, Total (mg/L)                 | 0.1        |                           | 0.01                    | 0.1               |
| Cobalt, Total (mg/L)                   | n/a        | 0.006                     | 0.038                   | 0.038             |
| Combined Radium, Total (pCi/L)         | 5          |                           | 4.36                    | 5                 |
| Fluoride, Total (mg/L)                 | 4          |                           | 0.67                    | 4                 |
| Lead, Total (mg/L)                     | n/a        | 0.015                     | 0.005                   | 0.005             |
| Lithium, Total (mg/L)                  | n/a        | 0.04                      | 0.03                    | 0.03              |
| Mercury, Total (mg/L)                  | 0.002      |                           | 0.0005                  | 0.002             |
| Molybdenum, Total (mg/L)               | n/a        | 0.1                       | 0.01                    | 0.01              |
| Selenium, Total (mg/L)                 | 0.05       |                           | 0.01                    | 0.05              |
| Thallium, Total (mg/L)                 | 0.002      |                           | 0.001                   | 0.002             |

*\*Grey cell indicates background is higher than MCL or CCR-Rule*

*\*MCL = Maximum Contaminant Level*

*\*CCR = Coal Combustion Residuals*

*\*GWPS = Groundwater Protection Standard*

# Federal Confidence Interval Summary Table - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:04 PM

| Constituent                       | Well      | Upper Lim. | Lower Lim. | Compliance | Sig. N | Mean     | Std. Dev. | %NDs  | ND Adj.      | Transform | Alpha  | Method         |
|-----------------------------------|-----------|------------|------------|------------|--------|----------|-----------|-------|--------------|-----------|--------|----------------|
| Antimony (mg/L)                   | HGWC-125  | 0.003      | 0.00047    | 0.006      | No 6   | 0.002578 | 0.001033  | 83.33 | None         | No        | 0.0155 | NP (NDs)       |
| Antimony (mg/L)                   | HGWC-126  | 0.003      | 0.0004     | 0.006      | No 6   | 0.002567 | 0.001061  | 83.33 | None         | No        | 0.0155 | NP (NDs)       |
| Barium (mg/L)                     | HGWC-120  | 0.05206    | 0.04548    | 2          | No 13  | 0.04877  | 0.004422  | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-121A | 0.08505    | 0.06703    | 2          | No 13  | 0.07604  | 0.01211   | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-124  | 0.07376    | 0.06659    | 2          | No 13  | 0.07018  | 0.004822  | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-125  | 0.04916    | 0.03984    | 2          | No 6   | 0.0445   | 0.003391  | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-126  | 0.24       | 0.21       | 2          | No 6   | 0.2317   | 0.01169   | 0     | None         | No        | 0.0155 | NP (normality) |
| Chromium (mg/L)                   | HGWC-120  | 0.01       | 0.00072    | 0.1        | No 13  | 0.007913 | 0.00397   | 76.92 | None         | No        | 0.01   | NP (NDs)       |
| Chromium (mg/L)                   | HGWC-121A | 0.01       | 0.0005     | 0.1        | No 13  | 0.009269 | 0.002635  | 92.31 | None         | No        | 0.01   | NP (NDs)       |
| Chromium (mg/L)                   | HGWC-124  | 0.01       | 0.00051    | 0.1        | No 13  | 0.008536 | 0.003573  | 84.62 | None         | No        | 0.01   | NP (NDs)       |
| Chromium (mg/L)                   | HGWC-125  | 0.01       | 0.00052    | 0.1        | No 6   | 0.00685  | 0.00488   | 66.67 | None         | No        | 0.0155 | NP (normality) |
| Chromium (mg/L)                   | HGWC-126  | 0.01       | 0.00096    | 0.1        | No 6   | 0.008493 | 0.003691  | 83.33 | None         | No        | 0.0155 | NP (NDs)       |
| Cobalt (mg/L)                     | HGWC-120  | 0.003987   | 0.002859   | 0.038      | No 13  | 0.003423 | 0.0007585 | 0     | None         | No        | 0.01   | Param.         |
| Cobalt (mg/L)                     | HGWC-121A | 0.005      | 0.0005     | 0.038      | No 13  | 0.003931 | 0.002032  | 76.92 | None         | No        | 0.01   | NP (NDs)       |
| Cobalt (mg/L)                     | HGWC-125  | 0.01296    | 0.006308   | 0.038      | No 6   | 0.009633 | 0.00242   | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-120  | 1.121      | 0.5734     | 5          | No 13  | 0.8474   | 0.3685    | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-121A | 1.279      | 0.5176     | 5          | No 13  | 0.8985   | 0.5123    | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-124  | 0.9537     | 0.6046     | 5          | No 13  | 0.7792   | 0.2348    | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-125  | 1.774      | 0.6055     | 5          | No 6   | 1.158    | 0.4637    | 16.67 | Kaplan-Meier | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-126  | 1.82       | 0.837      | 5          | No 6   | 1.4      | 0.4854    | 0     | None         | No        | 0.0155 | NP (normality) |
| Fluoride (mg/L)                   | HGWC-120  | 0.8531     | 0.4277     | 4          | No 16  | 0.6925   | 0.3863    | 0     | None         | ln(x)     | 0.01   | Param.         |
| Fluoride (mg/L)                   | HGWC-121A | 0.23       | 0.14       | 4          | No 14  | 0.2682   | 0.2942    | 0     | None         | No        | 0.01   | NP (normality) |
| Fluoride (mg/L)                   | HGWC-124  | 0.15       | 0.05       | 4          | No 14  | 0.1091   | 0.08582   | 28.57 | None         | No        | 0.01   | NP (normality) |
| Fluoride (mg/L)                   | HGWC-125  | 0.1869     | 0.08305    | 4          | No 6   | 0.135    | 0.03782   | 0     | None         | No        | 0.01   | Param.         |
| Fluoride (mg/L)                   | HGWC-126  | 0.5116     | 0.4184     | 4          | No 6   | 0.465    | 0.03391   | 0     | None         | No        | 0.01   | Param.         |
| Fluoride (mg/L)                   | MW-32     | 0.3721     | 0.3079     | 4          | No 4   | 0.34     | 0.01414   | 0     | None         | No        | 0.01   | Param.         |
| Lead (mg/L)                       | HGWC-120  | 0.005      | 0.00009    | 0.015      | No 13  | 0.003875 | 0.002139  | 76.92 | None         | No        | 0.01   | NP (NDs)       |
| Lead (mg/L)                       | HGWC-121A | 0.005      | 0.00036    | 0.015      | No 13  | 0.004264 | 0.001798  | 84.62 | None         | No        | 0.01   | NP (NDs)       |
| Lead (mg/L)                       | HGWC-124  | 0.005      | 0.000075   | 0.015      | No 13  | 0.003104 | 0.002497  | 61.54 | None         | No        | 0.01   | NP (normality) |
| Lead (mg/L)                       | HGWC-125  | 0.005      | 0.000047   | 0.015      | No 6   | 0.002553 | 0.002681  | 50    | None         | No        | 0.0155 | NP (normality) |
| Lead (mg/L)                       | HGWC-126  | 0.005      | 0.000042   | 0.015      | No 6   | 0.003348 | 0.00256   | 66.67 | None         | No        | 0.0155 | NP (normality) |
| Lithium (mg/L)                    | HGWC-120  | 0.03385    | 0.0279     | 0.04       | No 13  | 0.03058  | 0.004517  | 0     | None         | x^3       | 0.01   | Param.         |
| Lithium (mg/L)                    | HGWC-121A | 0.009335   | 0.007773   | 0.04       | No 13  | 0.008554 | 0.00105   | 0     | None         | No        | 0.01   | Param.         |
| Lithium (mg/L)                    | HGWC-124  | 0.025      | 0.0011     | 0.04       | No 13  | 0.0103   | 0.0121    | 38.46 | None         | No        | 0.01   | NP (normality) |
| Lithium (mg/L)                    | HGWC-125  | 0.0055     | 0.0037     | 0.04       | No 6   | 0.00455  | 0.0008643 | 0     | None         | No        | 0.0155 | NP (normality) |
| Lithium (mg/L)                    | HGWC-126  | 0.00468    | 0.002787   | 0.04       | No 6   | 0.003733 | 0.000689  | 0     | None         | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | HGWC-120  | 0.03897    | 0.02407    | 0.1        | No 13  | 0.03152  | 0.01002   | 0     | None         | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | HGWC-124  | 0.01       | 0.00091    | 0.1        | No 13  | 0.004532 | 0.004503  | 38.46 | None         | No        | 0.01   | NP (normality) |
| Molybdenum (mg/L)                 | HGWC-125  | 0.009948   | -0.00304   | 0.1        | No 6   | 0.007782 | 0.005226  | 50    | Kaplan-Meier | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | MW-32     | 0.06546    | 0.05774    | 0.1        | No 5   | 0.0616   | 0.002302  | 0     | None         | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | MW-39     | 0.064      | 0.012      | 0.1        | No 4   | 0.05     | 0.02535   | 0     | None         | No        | 0.0625 | NP (normality) |



# State Confidence Interval Summary Table - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

| Constituent       | Well     | Upper Lim. | Lower Lim. | Compliance | Sig. N | Mean    | Std. Dev. | %NDs | ND Adj. | Transform | Alpha  | Method         |
|-------------------|----------|------------|------------|------------|--------|---------|-----------|------|---------|-----------|--------|----------------|
| Molybdenum (mg/L) | HGWC-120 | 0.03897    | 0.02407    | 0.01       | Yes 13 | 0.03152 | 0.01002   | 0    | None    | No        | 0.01   | Param.         |
| Molybdenum (mg/L) | MW-32    | 0.06546    | 0.05774    | 0.01       | Yes 5  | 0.0616  | 0.002302  | 0    | None    | No        | 0.01   | Param.         |
| Molybdenum (mg/L) | MW-39    | 0.064      | 0.012      | 0.01       | Yes 4  | 0.05    | 0.02535   | 0    | None    | No        | 0.0625 | NP (normality) |

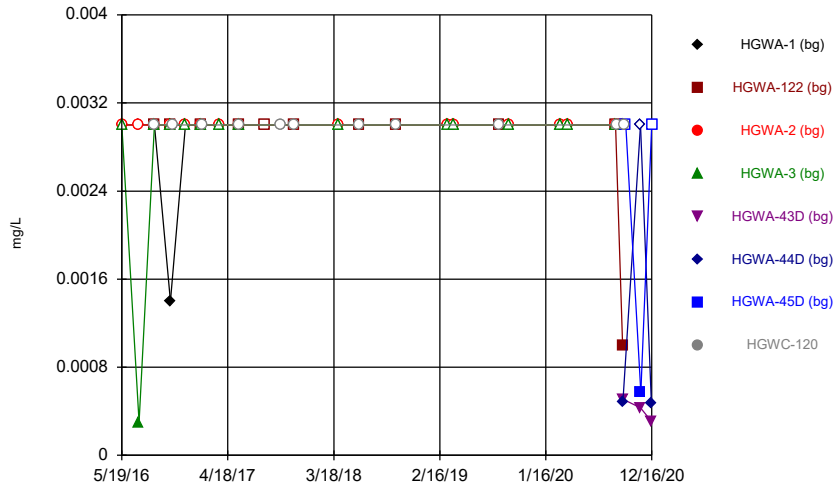
# State Confidence Interval Summary Table - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

| Constituent                       | Well            | Upper Lim.     | Lower Lim.     | Compliance  | Sig. N        | Mean           | Std. Dev.       | %NDs     | ND Adj.      | Transform | Alpha         | Method                |
|-----------------------------------|-----------------|----------------|----------------|-------------|---------------|----------------|-----------------|----------|--------------|-----------|---------------|-----------------------|
| Antimony (mg/L)                   | HGWC-125        | 0.003          | 0.00047        | 0.006       | No 6          | 0.002578       | 0.001033        | 83.33    | None         | No        | 0.0155        | NP (NDs)              |
| Antimony (mg/L)                   | HGWC-126        | 0.003          | 0.0004         | 0.006       | No 6          | 0.002567       | 0.001061        | 83.33    | None         | No        | 0.0155        | NP (NDs)              |
| Barium (mg/L)                     | HGWC-120        | 0.05206        | 0.04548        | 2           | No 13         | 0.04877        | 0.004422        | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-121A       | 0.08505        | 0.06703        | 2           | No 13         | 0.07604        | 0.01211         | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-124        | 0.07376        | 0.06659        | 2           | No 13         | 0.07018        | 0.004822        | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-125        | 0.04916        | 0.03984        | 2           | No 6          | 0.0445         | 0.003391        | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-126        | 0.24           | 0.21           | 2           | No 6          | 0.2317         | 0.01169         | 0        | None         | No        | 0.0155        | NP (normality)        |
| Chromium (mg/L)                   | HGWC-120        | 0.01           | 0.00072        | 0.1         | No 13         | 0.007913       | 0.00397         | 76.92    | None         | No        | 0.01          | NP (NDs)              |
| Chromium (mg/L)                   | HGWC-121A       | 0.01           | 0.0005         | 0.1         | No 13         | 0.009269       | 0.002635        | 92.31    | None         | No        | 0.01          | NP (NDs)              |
| Chromium (mg/L)                   | HGWC-124        | 0.01           | 0.00051        | 0.1         | No 13         | 0.008536       | 0.003573        | 84.62    | None         | No        | 0.01          | NP (NDs)              |
| Chromium (mg/L)                   | HGWC-125        | 0.01           | 0.00052        | 0.1         | No 6          | 0.00685        | 0.00488         | 66.67    | None         | No        | 0.0155        | NP (normality)        |
| Chromium (mg/L)                   | HGWC-126        | 0.01           | 0.00096        | 0.1         | No 6          | 0.008493       | 0.003691        | 83.33    | None         | No        | 0.0155        | NP (NDs)              |
| Cobalt (mg/L)                     | HGWC-120        | 0.003987       | 0.002859       | 0.038       | No 13         | 0.003423       | 0.0007585       | 0        | None         | No        | 0.01          | Param.                |
| Cobalt (mg/L)                     | HGWC-121A       | 0.005          | 0.0005         | 0.038       | No 13         | 0.003931       | 0.002032        | 76.92    | None         | No        | 0.01          | NP (NDs)              |
| Cobalt (mg/L)                     | HGWC-125        | 0.01296        | 0.006308       | 0.038       | No 6          | 0.009633       | 0.00242         | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-120        | 1.121          | 0.5734         | 5           | No 13         | 0.8474         | 0.3685          | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-121A       | 1.279          | 0.5176         | 5           | No 13         | 0.8985         | 0.5123          | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-124        | 0.9537         | 0.6046         | 5           | No 13         | 0.7792         | 0.2348          | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-125        | 1.774          | 0.6055         | 5           | No 6          | 1.158          | 0.4637          | 16.67    | Kaplan-Meier | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-126        | 1.82           | 0.837          | 5           | No 6          | 1.4            | 0.4854          | 0        | None         | No        | 0.0155        | NP (normality)        |
| Fluoride (mg/L)                   | HGWC-120        | 0.8531         | 0.4277         | 4           | No 16         | 0.6925         | 0.3863          | 0        | None         | ln(x)     | 0.01          | Param.                |
| Fluoride (mg/L)                   | HGWC-121A       | 0.23           | 0.14           | 4           | No 14         | 0.2682         | 0.2942          | 0        | None         | No        | 0.01          | NP (normality)        |
| Fluoride (mg/L)                   | HGWC-124        | 0.15           | 0.05           | 4           | No 14         | 0.1091         | 0.08582         | 28.57    | None         | No        | 0.01          | NP (normality)        |
| Fluoride (mg/L)                   | HGWC-125        | 0.1869         | 0.08305        | 4           | No 6          | 0.135          | 0.03782         | 0        | None         | No        | 0.01          | Param.                |
| Fluoride (mg/L)                   | HGWC-126        | 0.5116         | 0.4184         | 4           | No 6          | 0.465          | 0.03391         | 0        | None         | No        | 0.01          | Param.                |
| Fluoride (mg/L)                   | MW-32           | 0.3721         | 0.3079         | 4           | No 4          | 0.34           | 0.01414         | 0        | None         | No        | 0.01          | Param.                |
| Lead (mg/L)                       | HGWC-120        | 0.005          | 0.00009        | 0.005       | No 13         | 0.003875       | 0.002139        | 76.92    | None         | No        | 0.01          | NP (NDs)              |
| Lead (mg/L)                       | HGWC-121A       | 0.005          | 0.00036        | 0.005       | No 13         | 0.004264       | 0.001798        | 84.62    | None         | No        | 0.01          | NP (NDs)              |
| Lead (mg/L)                       | HGWC-124        | 0.005          | 0.000075       | 0.005       | No 13         | 0.003104       | 0.002497        | 61.54    | None         | No        | 0.01          | NP (normality)        |
| Lead (mg/L)                       | HGWC-125        | 0.005          | 0.000047       | 0.005       | No 6          | 0.002553       | 0.002681        | 50       | None         | No        | 0.0155        | NP (normality)        |
| Lead (mg/L)                       | HGWC-126        | 0.005          | 0.000042       | 0.005       | No 6          | 0.003348       | 0.00256         | 66.67    | None         | No        | 0.0155        | NP (normality)        |
| Lithium (mg/L)                    | HGWC-120        | 0.03385        | 0.0279         | 0.03        | No 13         | 0.03058        | 0.004517        | 0        | None         | x^3       | 0.01          | Param.                |
| Lithium (mg/L)                    | HGWC-121A       | 0.009335       | 0.007773       | 0.03        | No 13         | 0.008554       | 0.00105         | 0        | None         | No        | 0.01          | Param.                |
| Lithium (mg/L)                    | HGWC-124        | 0.025          | 0.0011         | 0.03        | No 13         | 0.0103         | 0.0121          | 38.46    | None         | No        | 0.01          | NP (normality)        |
| Lithium (mg/L)                    | HGWC-125        | 0.0055         | 0.0037         | 0.03        | No 6          | 0.00455        | 0.0008643       | 0        | None         | No        | 0.0155        | NP (normality)        |
| Lithium (mg/L)                    | HGWC-126        | 0.00468        | 0.002787       | 0.03        | No 6          | 0.003733       | 0.000689        | 0        | None         | No        | 0.01          | Param.                |
| <b>Molybdenum (mg/L)</b>          | <b>HGWC-120</b> | <b>0.03897</b> | <b>0.02407</b> | <b>0.01</b> | <b>Yes 13</b> | <b>0.03152</b> | <b>0.01002</b>  | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.01</b>   | <b>Param.</b>         |
| Molybdenum (mg/L)                 | HGWC-124        | 0.01           | 0.00091        | 0.01        | No 13         | 0.004532       | 0.004503        | 38.46    | None         | No        | 0.01          | NP (normality)        |
| Molybdenum (mg/L)                 | HGWC-125        | 0.009948       | -0.00304       | 0.01        | No 6          | 0.007782       | 0.005226        | 50       | Kaplan-Meier | No        | 0.01          | Param.                |
| <b>Molybdenum (mg/L)</b>          | <b>MW-32</b>    | <b>0.06546</b> | <b>0.05774</b> | <b>0.01</b> | <b>Yes 5</b>  | <b>0.0616</b>  | <b>0.002302</b> | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.01</b>   | <b>Param.</b>         |
| <b>Molybdenum (mg/L)</b>          | <b>MW-39</b>    | <b>0.064</b>   | <b>0.012</b>   | <b>0.01</b> | <b>Yes 4</b>  | <b>0.05</b>    | <b>0.02535</b>  | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.0625</b> | <b>NP (normality)</b> |

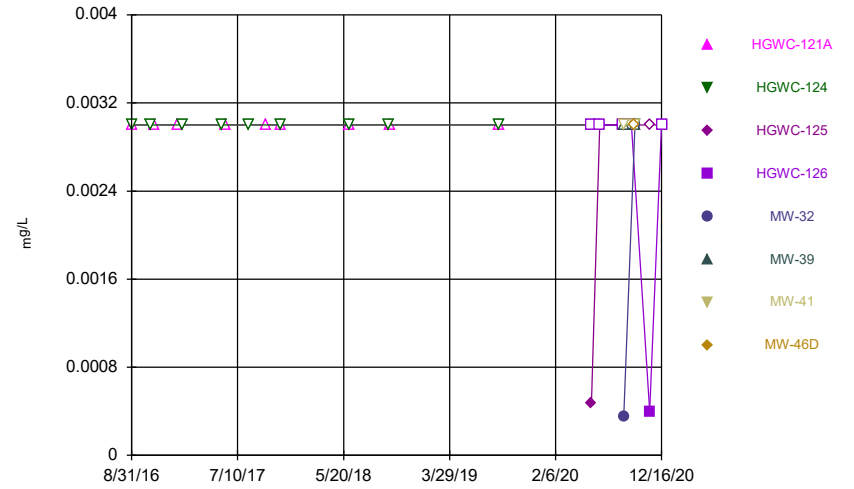
FIGURE A.

Time Series



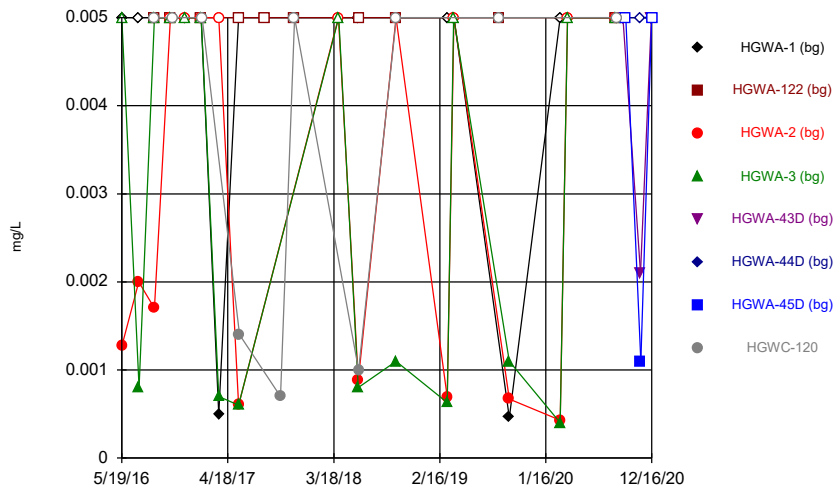
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



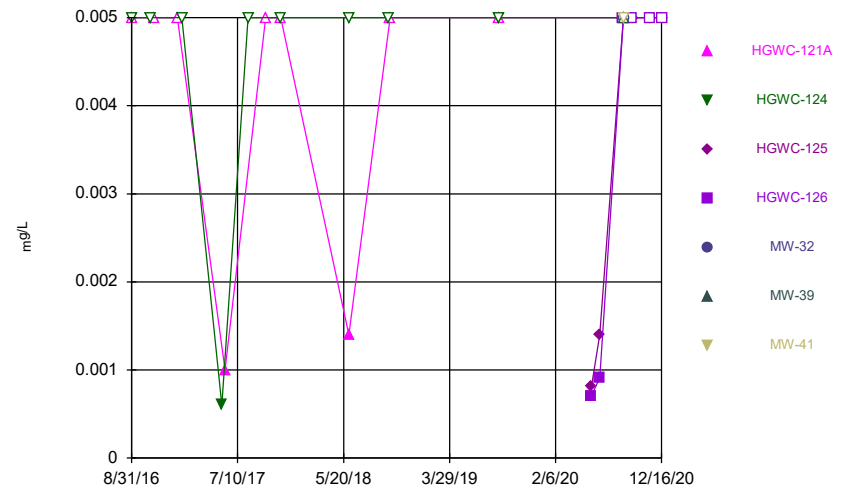
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



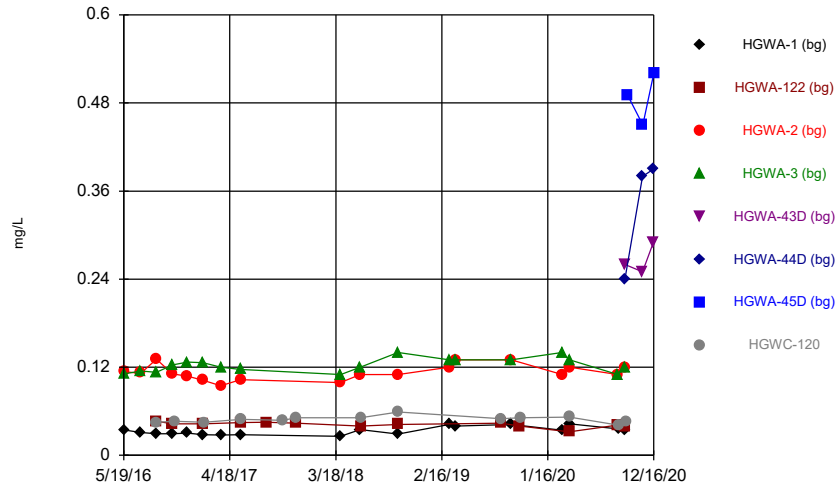
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



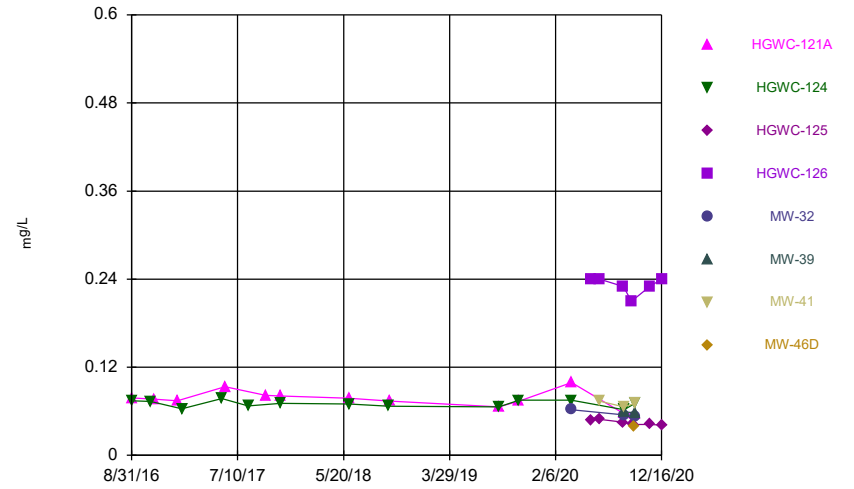
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



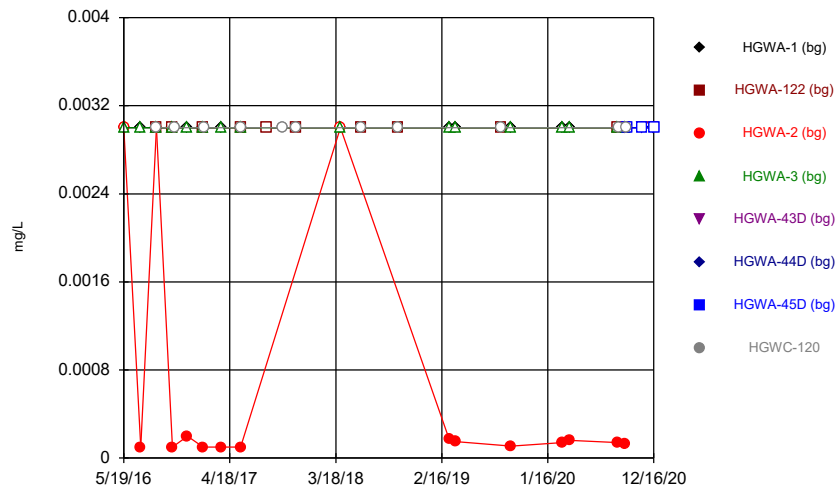
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



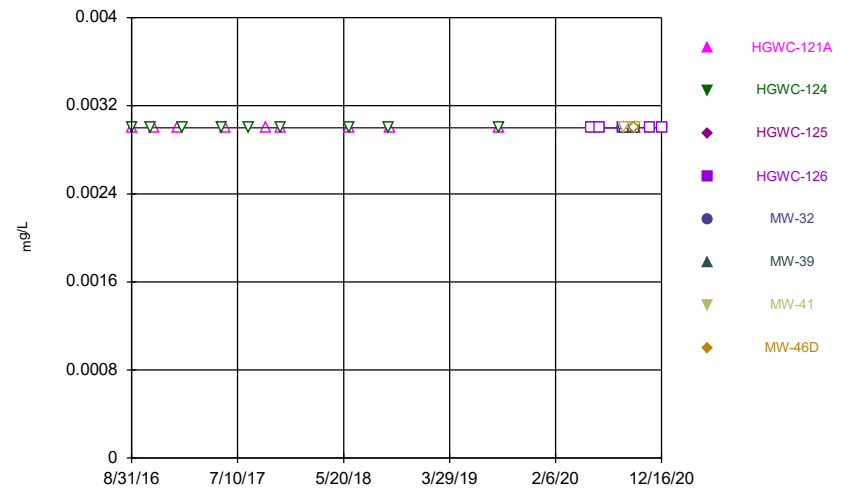
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



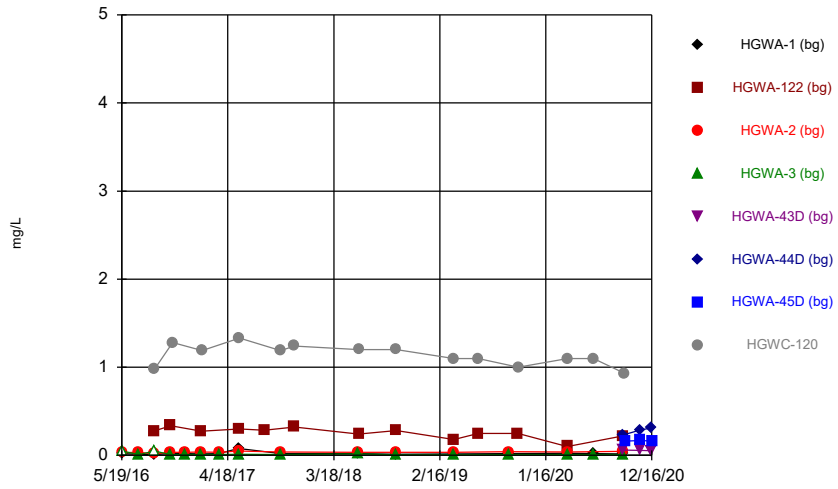
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



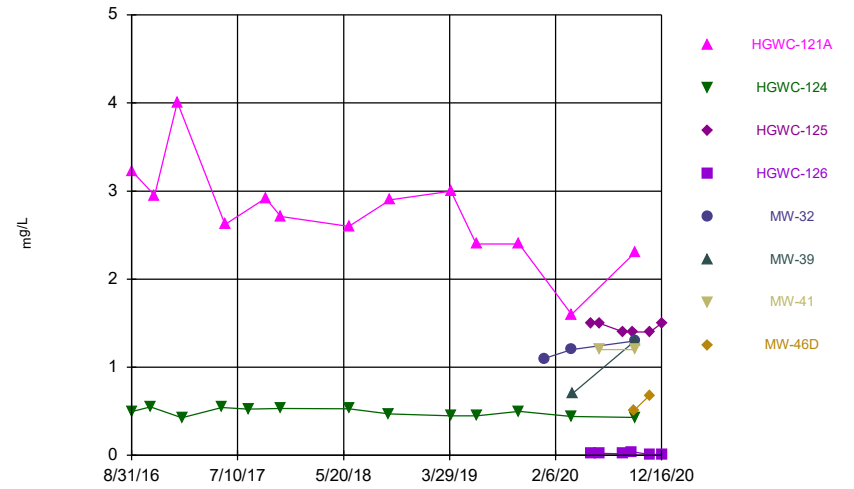
Constituent: Beryllium Analysis Run 2/16/2021 12:24 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



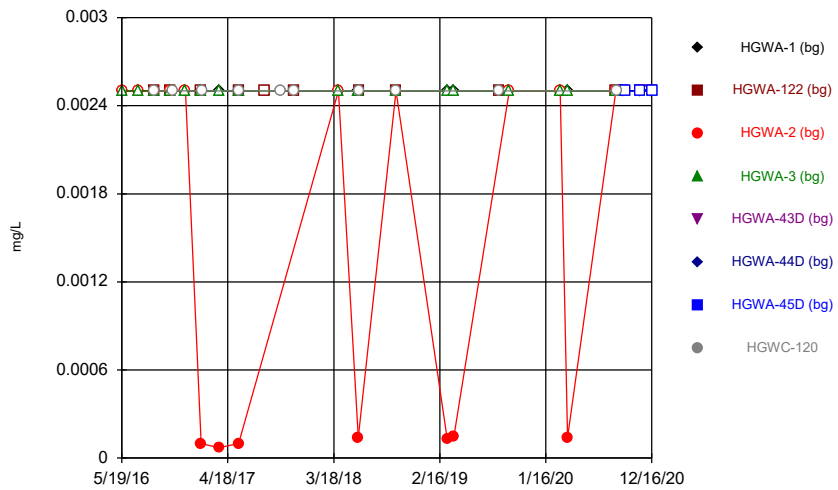
Constituent: Boron Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



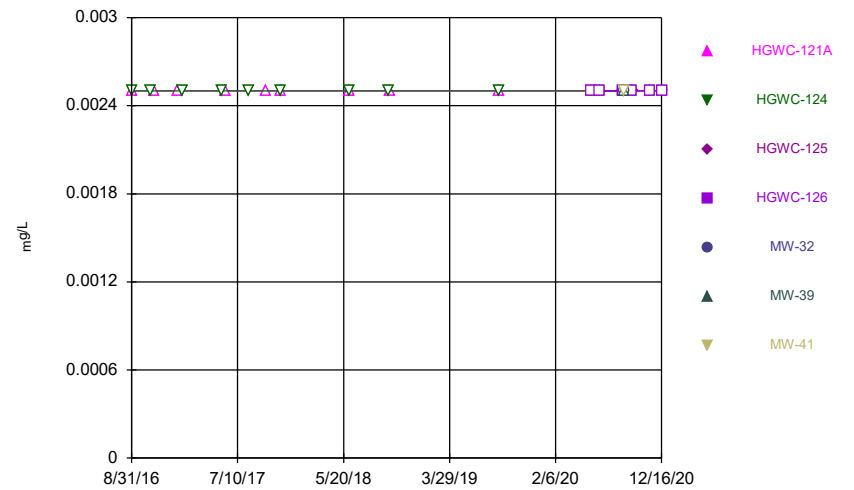
Constituent: Boron Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



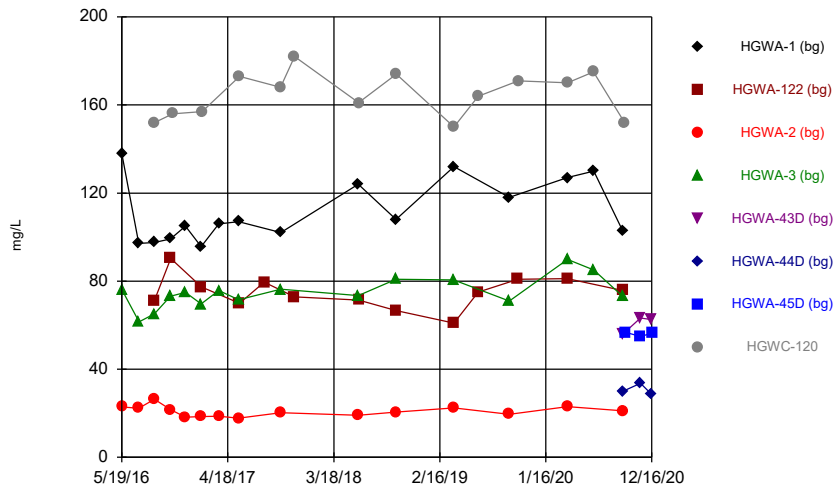
Constituent: Cadmium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



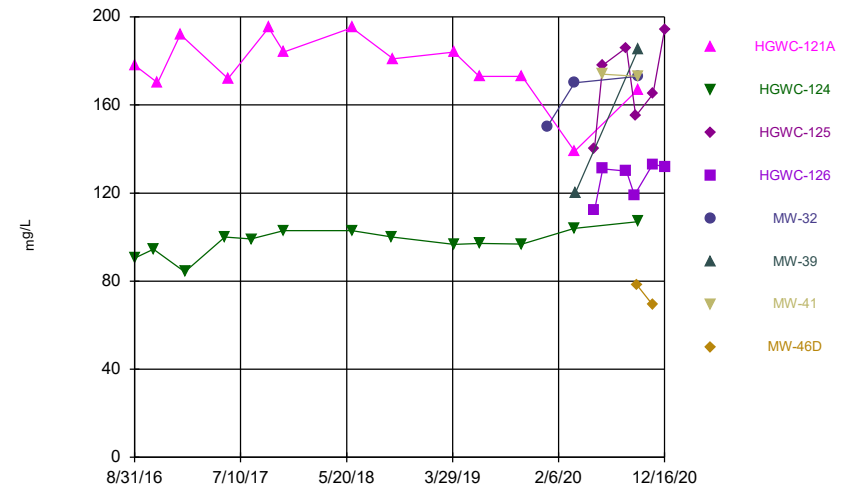
Constituent: Cadmium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



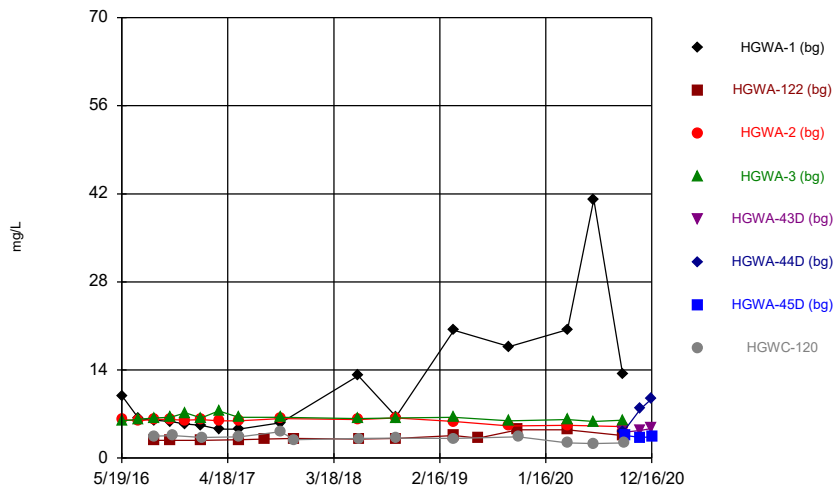
Constituent: Calcium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



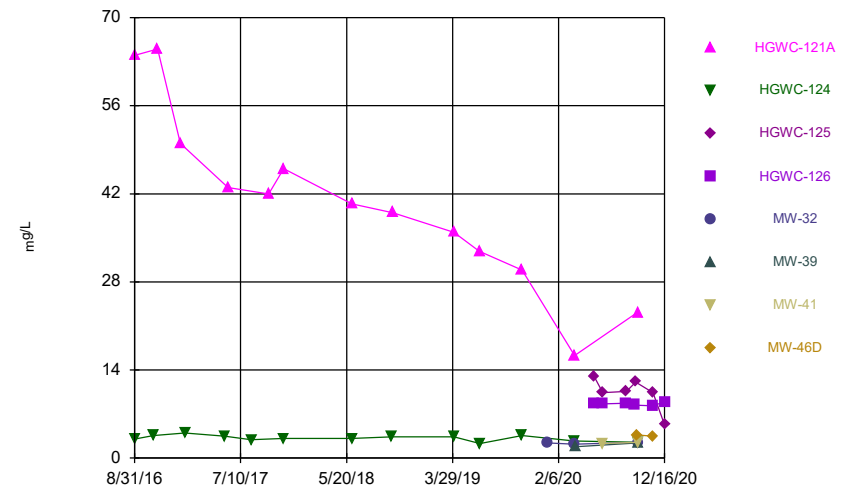
Constituent: Calcium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



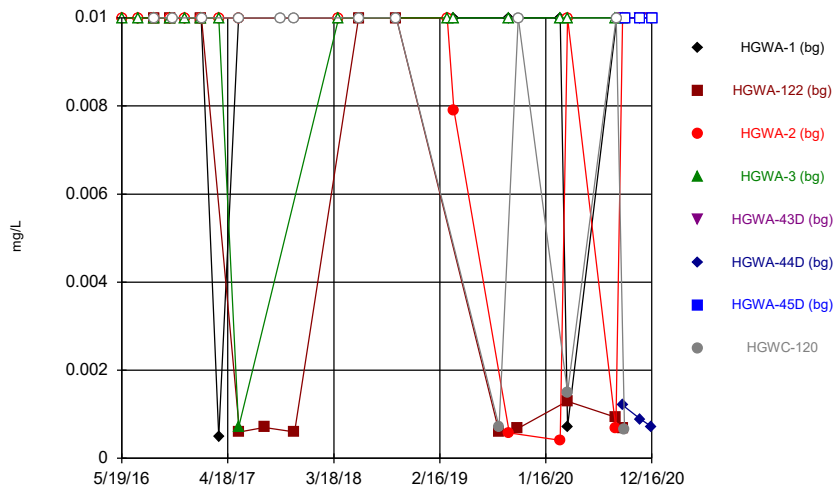
Constituent: Chloride Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



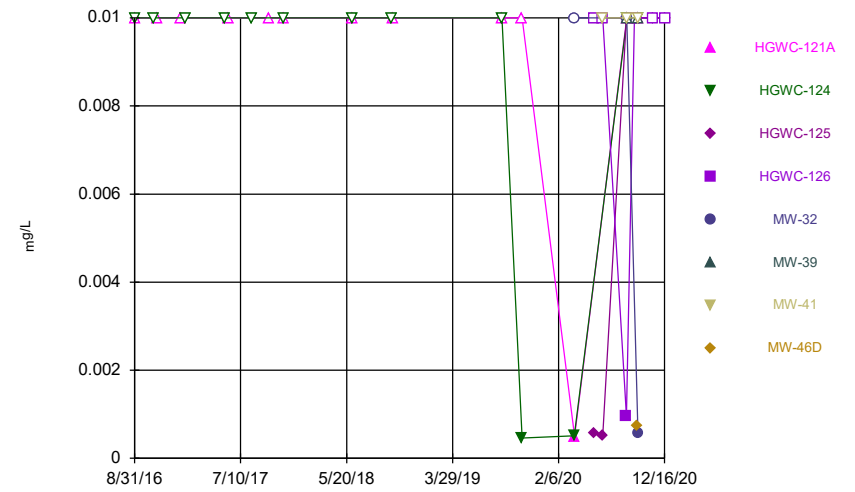
Constituent: Chloride Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



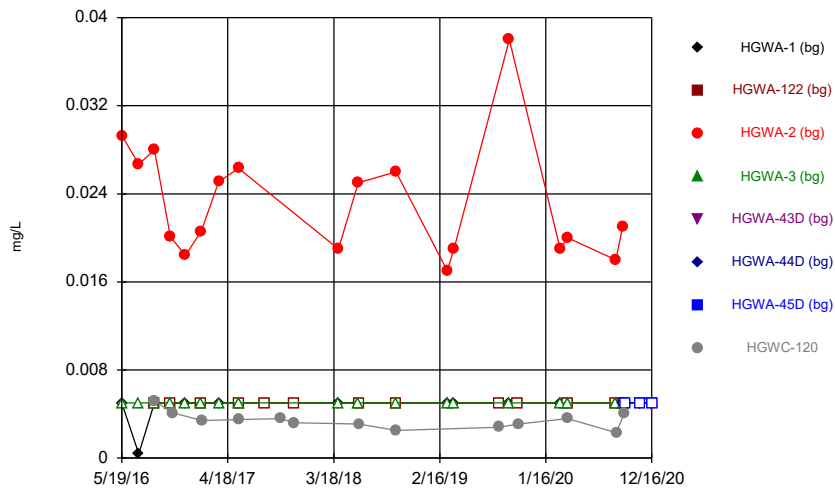
Constituent: Chromium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



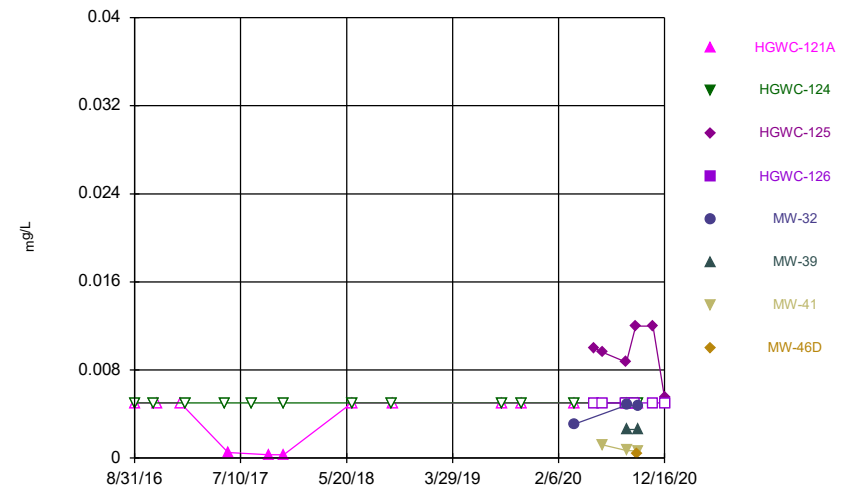
Constituent: Chromium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Cobalt Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

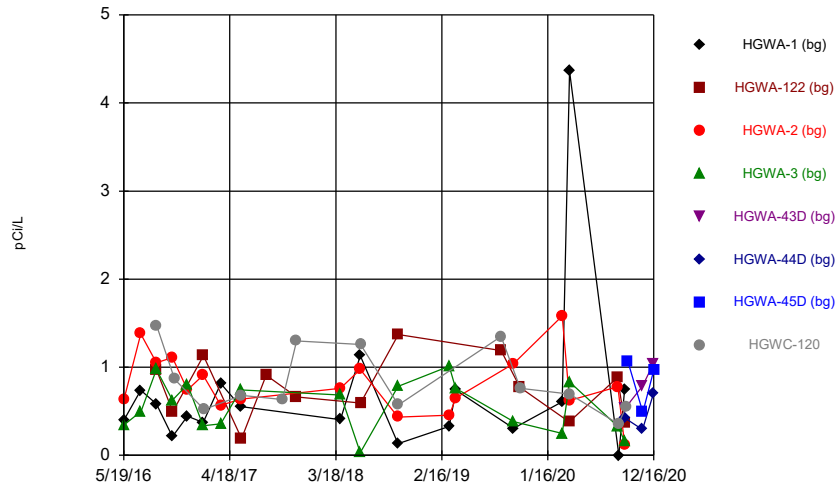
Time Series



Constituent: Cobalt Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

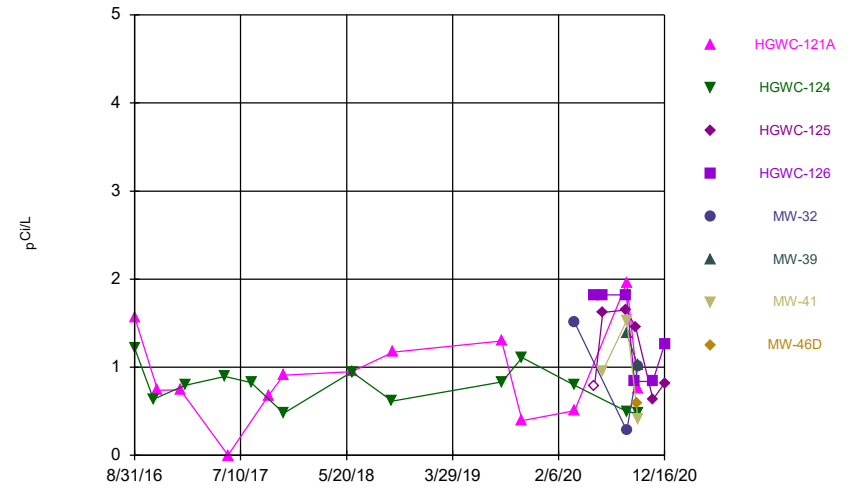


Time Series



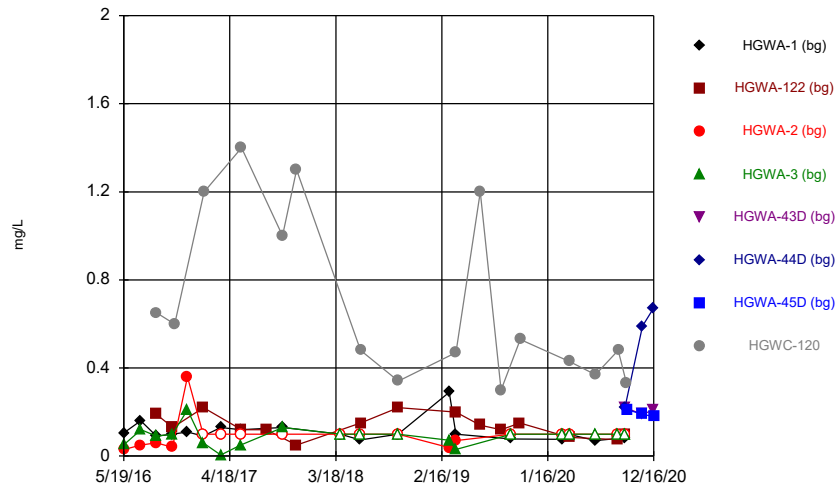
Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



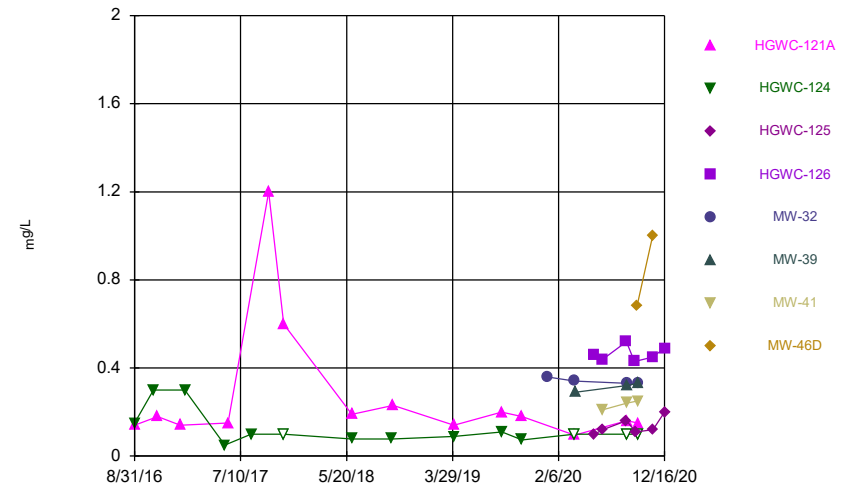
Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



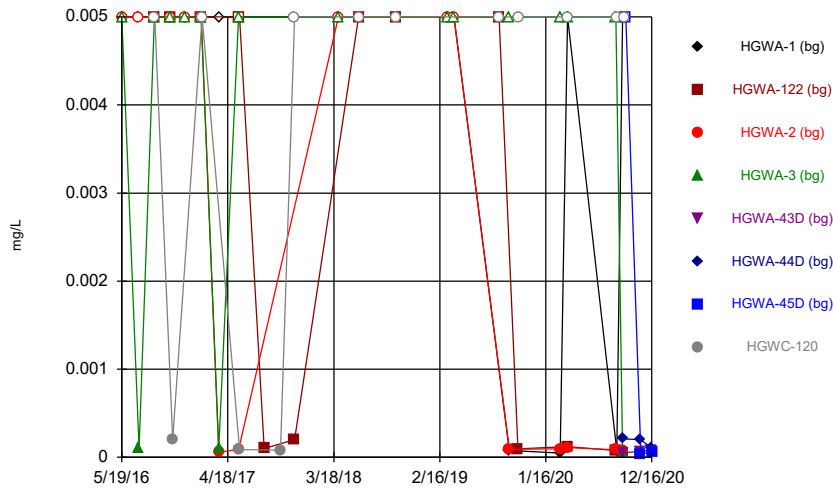
Constituent: Fluoride Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



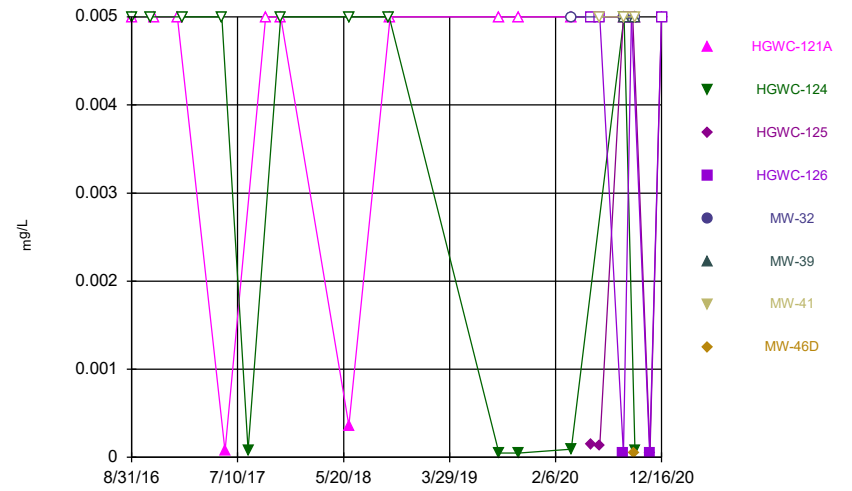
Constituent: Fluoride Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



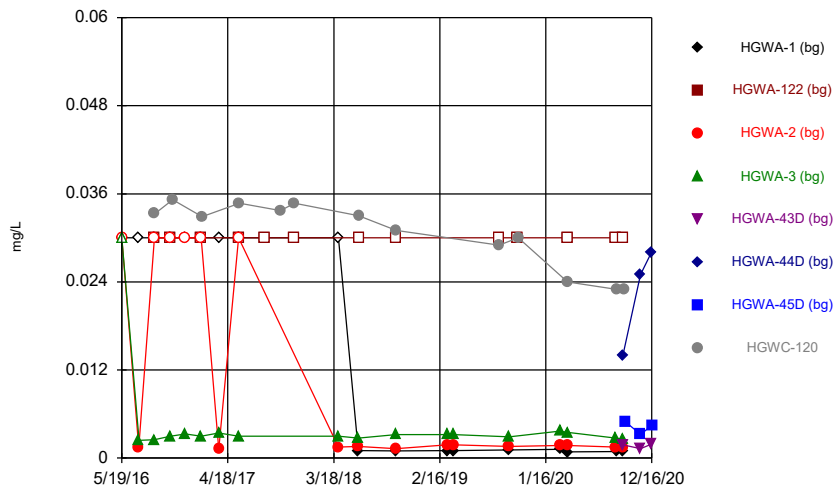
Constituent: Lead Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



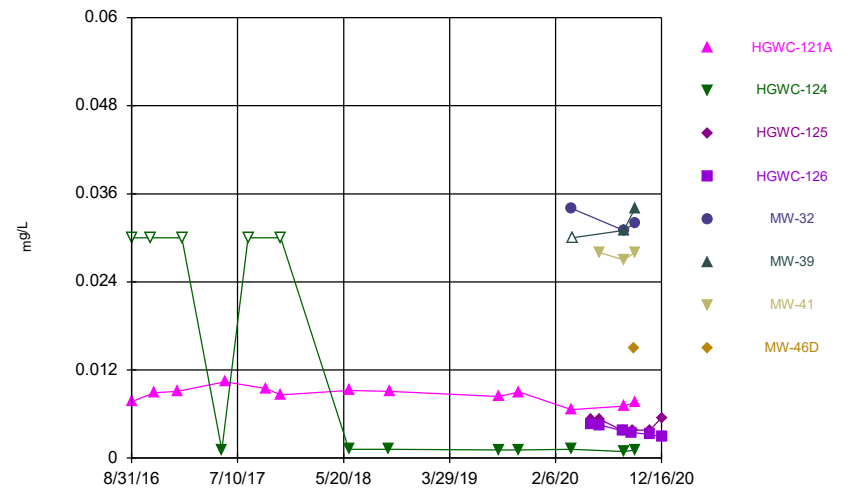
Constituent: Lead Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



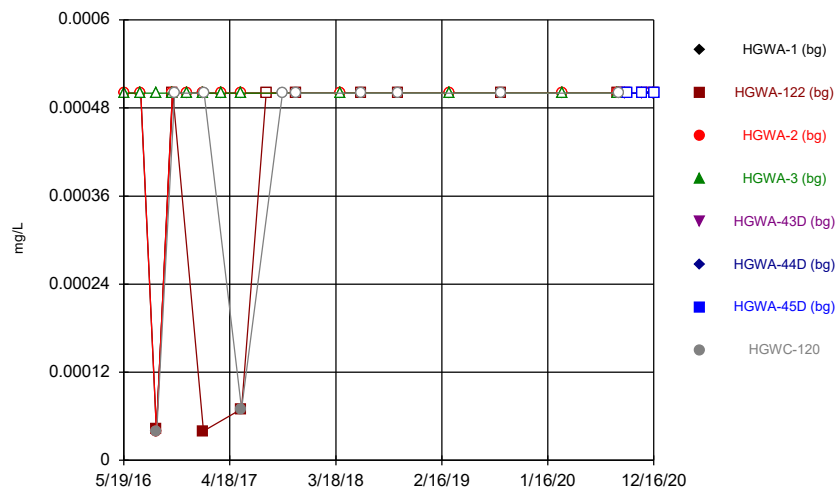
Constituent: Lithium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



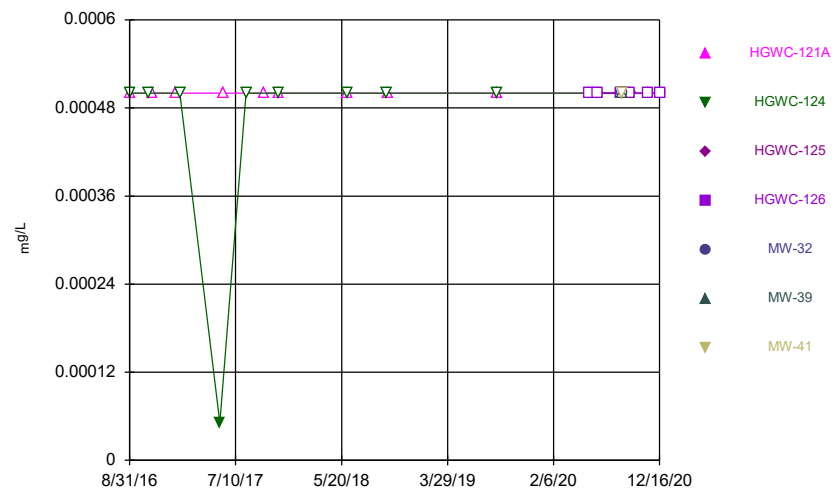
Constituent: Lithium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



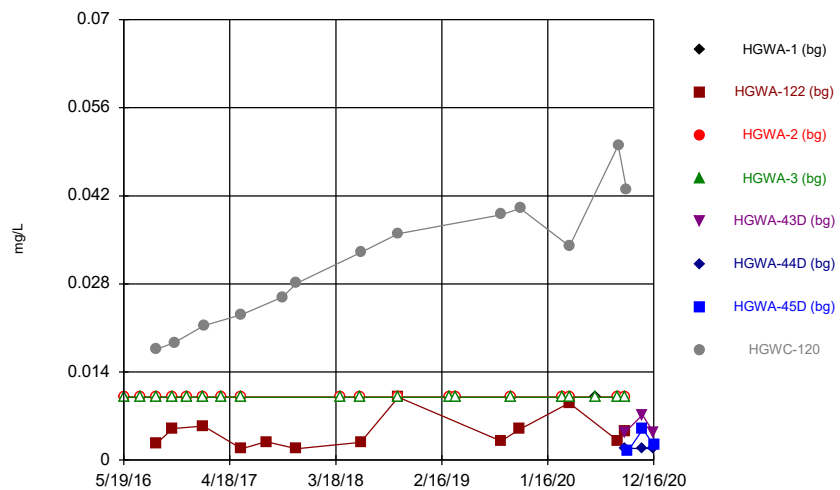
Constituent: Mercury Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



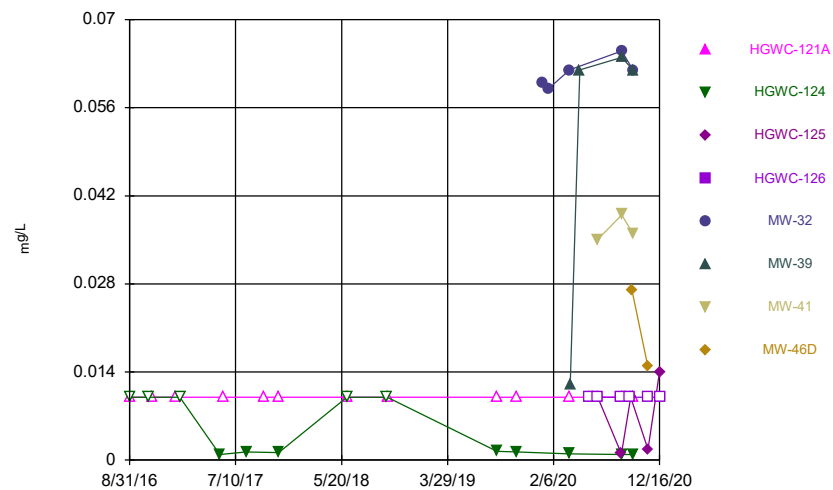
Constituent: Mercury Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



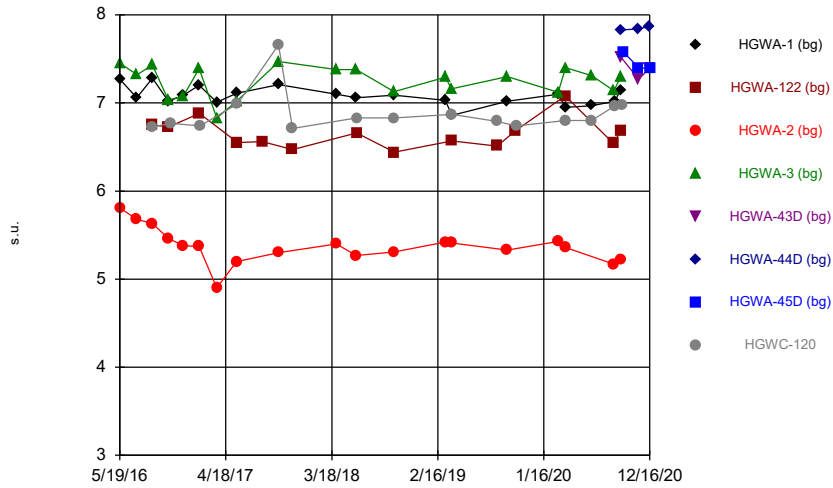
Constituent: Molybdenum Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



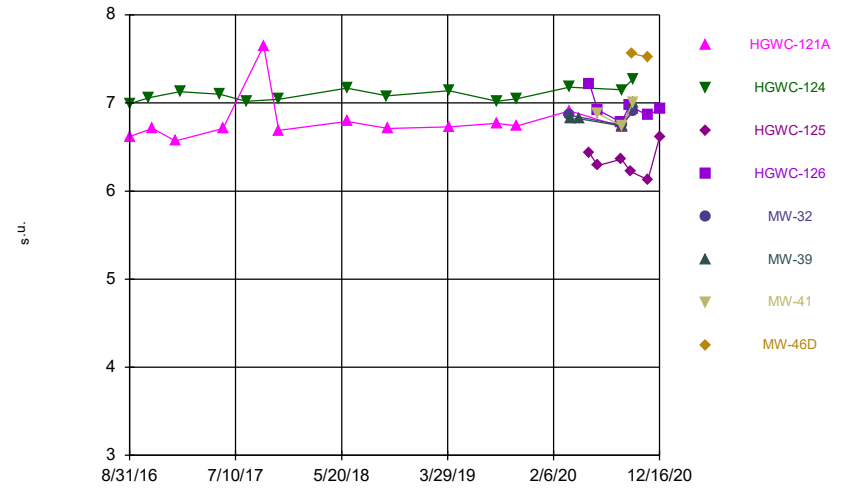
Constituent: Molybdenum Analysis Run 2/16/2021 12:25 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



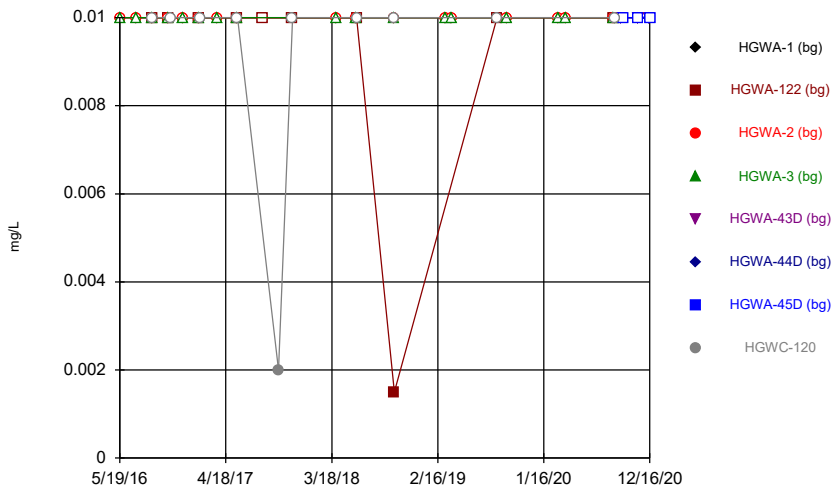
Constituent: pH Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



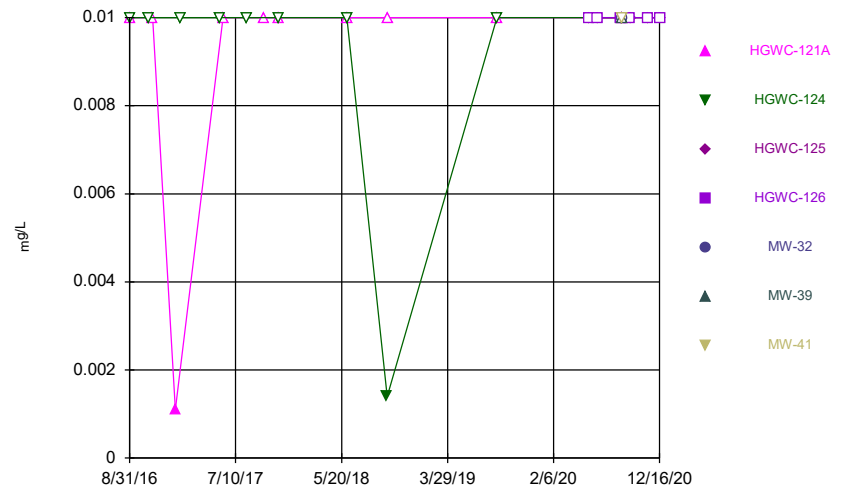
Constituent: pH Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



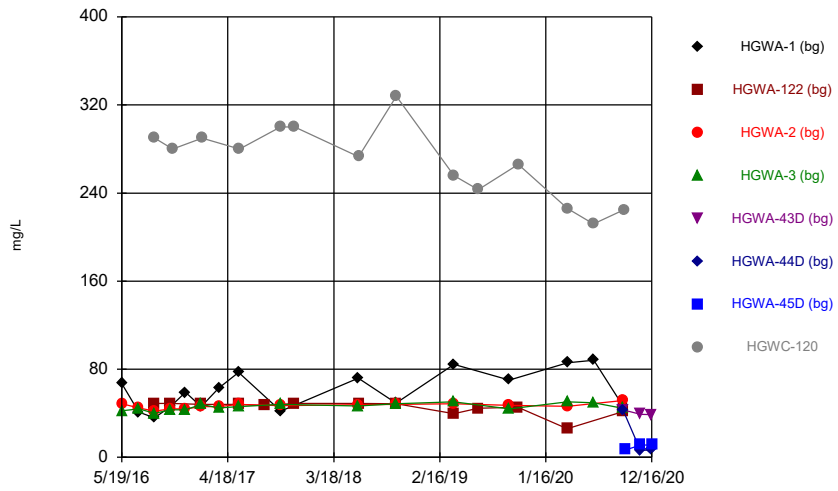
Constituent: Selenium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



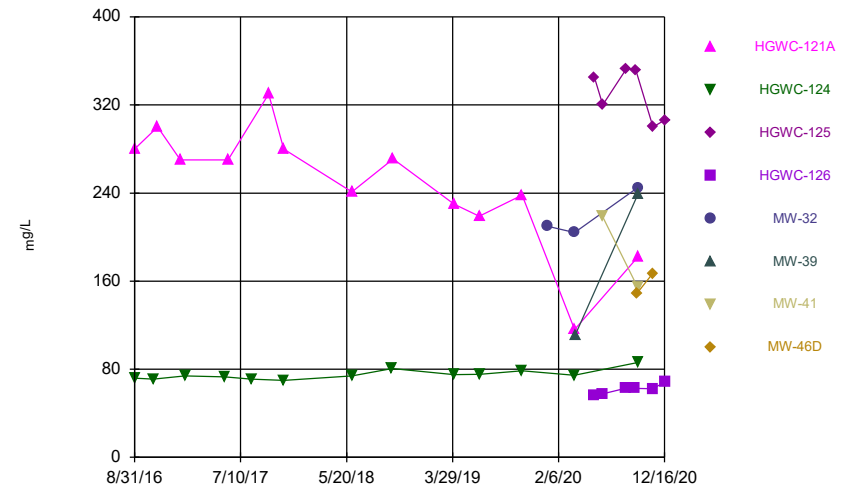
Constituent: Selenium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



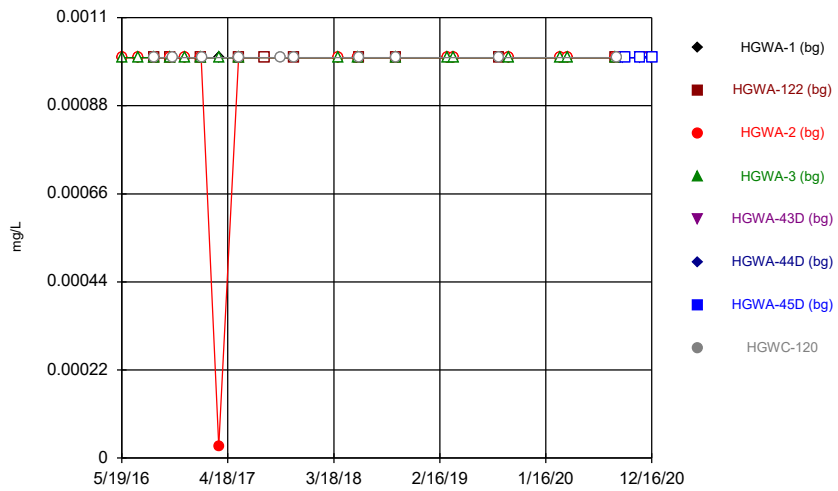
Constituent: Sulfate Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



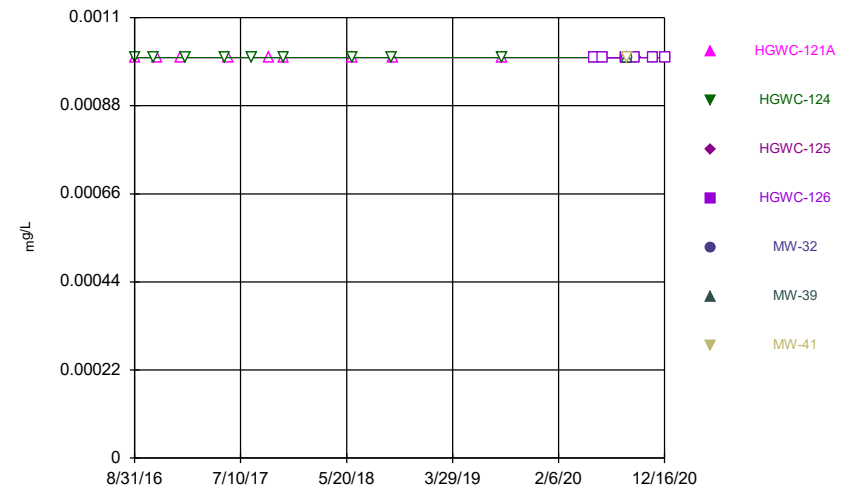
Constituent: Sulfate Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



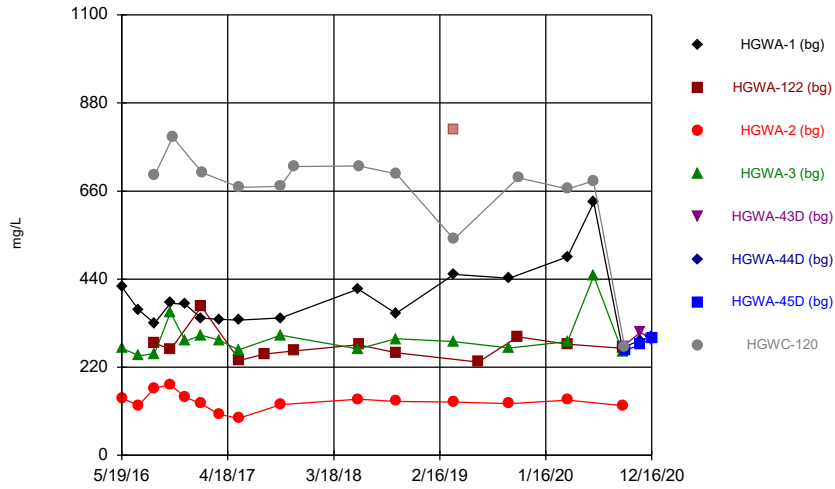
Constituent: Thallium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



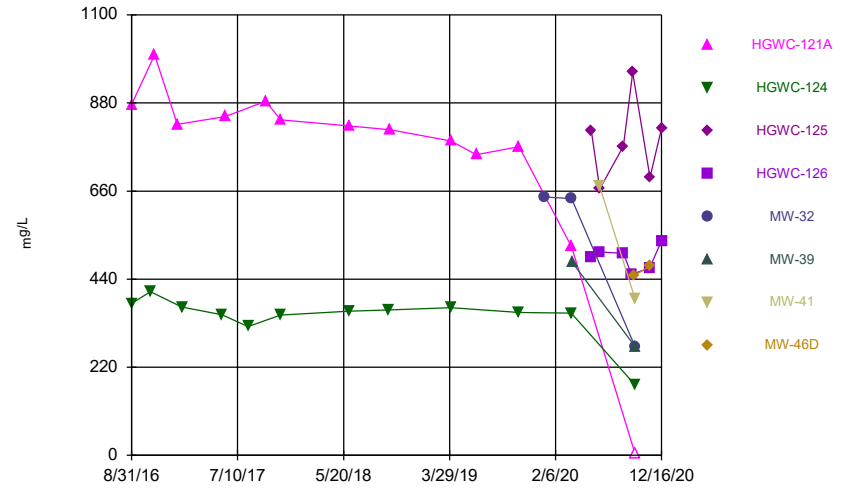
Constituent: Thallium Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:25 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

# Time Series

Constituent: Antimony (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120 |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|----------|
| 5/19/2016  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 7/11/2016  | <0.003      |               | <0.003      |             |               |               |               |          |
| 7/12/2016  |             |               |             | 0.0003 (J)  |               |               |               |          |
| 8/30/2016  | <0.003      | <0.003        | <0.003      | <0.003      |               |               |               |          |
| 8/31/2016  |             |               |             |             |               |               |               | <0.003   |
| 10/19/2016 | 0.0014 (J)  |               | <0.003      | <0.003      |               |               |               |          |
| 10/20/2016 |             | <0.003        |             |             |               |               |               |          |
| 10/26/2016 |             |               |             |             |               |               |               | <0.003   |
| 12/6/2016  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 1/24/2017  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 1/25/2017  |             | <0.003        |             |             |               |               |               |          |
| 1/27/2017  |             |               |             |             |               |               |               | <0.003   |
| 3/21/2017  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 5/22/2017  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 5/25/2017  |             | <0.003        |             |             |               |               |               | <0.003   |
| 8/11/2017  |             | <0.003        |             |             |               |               |               |          |
| 10/2/2017  |             |               |             |             |               |               |               | <0.003   |
| 11/15/2017 |             | <0.003        |             |             |               |               |               | <0.003   |
| 4/2/2018   | <0.003      |               | <0.003      |             |               |               |               |          |
| 4/3/2018   |             |               |             | <0.003      |               |               |               |          |
| 6/5/2018   |             | <0.003        |             |             |               |               |               | <0.003   |
| 10/2/2018  |             | <0.003        |             |             |               |               |               | <0.003   |
| 3/12/2019  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 4/1/2019   |             |               |             | <0.003      |               |               |               |          |
| 4/2/2019   | <0.003      |               | <0.003      |             |               |               |               |          |
| 8/22/2019  |             | <0.003        |             |             |               |               |               | <0.003   |
| 9/23/2019  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 3/2/2020   | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 3/25/2020  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 8/24/2020  |             | <0.003        |             |             |               |               |               |          |
| 8/25/2020  |             |               | <0.003      | <0.003      |               |               |               |          |
| 8/26/2020  |             |               |             |             |               |               |               | <0.003   |
| 8/28/2020  | <0.003      |               |             |             |               |               |               |          |
| 9/15/2020  | <0.003      | 0.001 (J)     | <0.003      | <0.003      |               |               |               |          |
| 9/16/2020  |             |               |             |             | 0.00051 (J)   | 0.00049 (J)   |               |          |
| 9/21/2020  |             |               |             |             |               |               |               | <0.003   |
| 9/25/2020  |             |               |             |             |               |               | <0.003        |          |
| 11/10/2020 |             |               |             |             | 0.00043 (J)   | <0.003        |               |          |
| 11/11/2020 |             |               |             |             |               |               | 0.00057 (J)   |          |
| 12/15/2020 |             |               |             |             | 0.00031 (J)   | 0.00047 (J)   |               |          |
| 12/16/2020 |             |               |             |             |               |               | <0.003        |          |

# Time Series

Constituent: Antimony (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125    | HGWC-126   | MW-32       | MW-39  | MW-41  | MW-46D |
|------------|-----------|----------|-------------|------------|-------------|--------|--------|--------|
| 8/31/2016  | <0.003    | <0.003   |             |            |             |        |        |        |
| 10/26/2016 |           | <0.003   |             |            |             |        |        |        |
| 11/7/2016  | <0.003    |          |             |            |             |        |        |        |
| 1/13/2017  | <0.003    |          |             |            |             |        |        |        |
| 1/27/2017  |           | <0.003   |             |            |             |        |        |        |
| 5/25/2017  |           | <0.003   |             |            |             |        |        |        |
| 6/3/2017   | <0.003    |          |             |            |             |        |        |        |
| 8/11/2017  |           | <0.003   |             |            |             |        |        |        |
| 10/2/2017  | <0.003    |          |             |            |             |        |        |        |
| 11/15/2017 | <0.003    | <0.003   |             |            |             |        |        |        |
| 6/5/2018   | <0.003    | <0.003   |             |            |             |        |        |        |
| 10/2/2018  |           | <0.003   |             |            |             |        |        |        |
| 10/5/2018  | <0.003    |          |             |            |             |        |        |        |
| 8/22/2019  | <0.003    |          |             |            |             |        |        |        |
| 8/23/2019  |           | <0.003   |             |            |             |        |        |        |
| 5/22/2020  |           |          | 0.00047 (J) | <0.003     |             |        |        |        |
| 6/16/2020  |           |          | <0.003      | <0.003     |             |        |        |        |
| 8/25/2020  |           |          | <0.003      | <0.003     |             |        |        |        |
| 8/26/2020  | <0.003    |          |             |            | 0.00035 (J) | <0.003 | <0.003 |        |
| 8/27/2020  |           | <0.003   |             |            |             |        |        |        |
| 9/18/2020  |           |          |             | <0.003     |             |        |        |        |
| 9/21/2020  |           |          | <0.003      |            |             |        |        |        |
| 9/25/2020  |           |          |             |            |             |        |        | <0.003 |
| 9/28/2020  | <0.003    | <0.003   |             |            | <0.003      | <0.003 | <0.003 |        |
| 11/11/2020 |           |          |             | 0.0004 (J) |             |        |        |        |
| 11/12/2020 |           |          | <0.003      |            |             |        |        |        |
| 12/16/2020 |           |          | <0.003      | <0.003     |             |        |        |        |



# Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120   |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|------------|
| 5/19/2016  | <0.005      |               | 0.00127 (J) | <0.005      |               |               |               |            |
| 7/11/2016  | <0.005      |               | 0.002 (J)   |             |               |               |               |            |
| 7/12/2016  |             |               |             | 0.0008 (J)  |               |               |               |            |
| 8/30/2016  | <0.005      | <0.005        | 0.0017 (J)  | <0.005      |               |               |               |            |
| 8/31/2016  |             |               |             |             |               |               |               | <0.005     |
| 10/19/2016 | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 10/20/2016 |             | <0.005        |             |             |               |               |               |            |
| 10/26/2016 |             |               |             |             |               |               |               | <0.005     |
| 12/6/2016  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 1/24/2017  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 1/25/2017  |             | <0.005        |             |             |               |               |               |            |
| 1/27/2017  |             |               |             |             |               |               |               | <0.005     |
| 3/21/2017  | 0.0005 (J)  |               | <0.005      | 0.0007 (J)  |               |               |               |            |
| 5/22/2017  | <0.005      |               | 0.0006 (J)  | 0.0006 (J)  |               |               |               |            |
| 5/25/2017  |             | <0.005        |             |             |               |               |               | 0.0014 (J) |
| 8/11/2017  |             | <0.005        |             |             |               |               |               |            |
| 10/2/2017  |             |               |             |             |               |               |               | 0.0007 (J) |
| 11/15/2017 |             | <0.005        |             |             |               |               |               | <0.005     |
| 4/2/2018   | <0.005      |               | <0.005      |             |               |               |               |            |
| 4/3/2018   |             |               |             | <0.005      |               |               |               |            |
| 6/4/2018   | <0.005      |               | 0.00088 (J) | 0.0008 (J)  |               |               |               |            |
| 6/5/2018   |             | <0.005        |             |             |               |               |               | 0.001 (J)  |
| 10/1/2018  | <0.005      |               | <0.005      | 0.0011 (J)  |               |               |               |            |
| 10/2/2018  |             | <0.005        |             |             |               |               |               | <0.005     |
| 3/12/2019  | <0.005      |               | 0.00069 (J) | 0.00063 (J) |               |               |               |            |
| 4/1/2019   |             |               |             | <0.005      |               |               |               |            |
| 4/2/2019   | <0.005      |               | <0.005      |             |               |               |               |            |
| 8/22/2019  |             | <0.005        |             |             |               |               |               | <0.005     |
| 9/23/2019  | 0.00046 (J) |               | 0.00067 (J) | 0.0011 (J)  |               |               |               |            |
| 3/2/2020   | <0.005      |               | 0.00043 (J) | 0.0004 (J)  |               |               |               |            |
| 3/25/2020  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 8/24/2020  |             | <0.005        |             |             |               |               |               |            |
| 8/25/2020  |             |               | <0.005      | <0.005      |               |               |               |            |
| 8/26/2020  |             |               |             |             |               |               |               | <0.005     |
| 8/28/2020  | <0.005      |               |             |             |               |               |               |            |
| 9/16/2020  |             |               |             |             | <0.005        | <0.005        |               |            |
| 9/25/2020  |             |               |             |             |               |               | <0.005        |            |
| 11/10/2020 |             |               |             |             | 0.0021 (J)    | <0.005        |               |            |
| 11/11/2020 |             |               |             |             |               |               | 0.0011 (J)    |            |
| 12/15/2020 |             |               |             |             | <0.005        | <0.005        |               |            |
| 12/16/2020 |             |               |             |             |               |               | <0.005        |            |

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A  | HGWC-124   | HGWC-125    | HGWC-126    | MW-32  | MW-39  | MW-41  |
|------------|------------|------------|-------------|-------------|--------|--------|--------|
| 8/31/2016  | <0.005     | <0.005     |             |             |        |        |        |
| 10/26/2016 |            | <0.005     |             |             |        |        |        |
| 11/7/2016  | <0.005     |            |             |             |        |        |        |
| 1/13/2017  | <0.005     |            |             |             |        |        |        |
| 1/27/2017  |            | <0.005     |             |             |        |        |        |
| 5/25/2017  |            | 0.0006 (J) |             |             |        |        |        |
| 6/3/2017   | 0.001 (J)  |            |             |             |        |        |        |
| 8/11/2017  |            | <0.005     |             |             |        |        |        |
| 10/2/2017  | <0.005     |            |             |             |        |        |        |
| 11/15/2017 | <0.005     | <0.005     |             |             |        |        |        |
| 6/5/2018   | 0.0014 (J) | <0.005     |             |             |        |        |        |
| 10/2/2018  |            | <0.005     |             |             |        |        |        |
| 10/5/2018  | <0.005     |            |             |             |        |        |        |
| 8/22/2019  | <0.005     |            |             |             |        |        |        |
| 8/23/2019  |            | <0.005     |             |             |        |        |        |
| 5/22/2020  |            |            | 0.00081 (J) | 0.00071 (J) |        |        |        |
| 6/16/2020  |            |            | 0.0014 (J)  | 0.00091 (J) |        |        |        |
| 8/25/2020  |            |            | <0.005      | <0.005      |        |        |        |
| 8/26/2020  | <0.005     |            |             |             | <0.005 | <0.005 | <0.005 |
| 8/27/2020  |            | <0.005     |             |             |        |        |        |
| 9/18/2020  |            |            |             | <0.005      |        |        |        |
| 9/21/2020  |            |            | <0.005      |             |        |        |        |
| 11/11/2020 |            |            |             | <0.005      |        |        |        |
| 11/12/2020 |            |            | <0.005      |             |        |        |        |
| 12/16/2020 |            |            | <0.005      | <0.005      |        |        |        |



# Time Series

Constituent: Barium (mg/L)    Analysis Run 2/16/2021 12:27 PM    View: Descriptive  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 0.0782    | 0.0744   |          |          |       |       |       |        |
| 10/26/2016 |           | 0.0735   |          |          |       |       |       |        |
| 11/7/2016  | 0.0764    |          |          |          |       |       |       |        |
| 1/13/2017  | 0.0744    |          |          |          |       |       |       |        |
| 1/27/2017  |           | 0.0632   |          |          |       |       |       |        |
| 5/25/2017  |           | 0.0773   |          |          |       |       |       |        |
| 6/3/2017   | 0.0933    |          |          |          |       |       |       |        |
| 8/11/2017  |           | 0.0672   |          |          |       |       |       |        |
| 10/2/2017  | 0.0815    |          |          |          |       |       |       |        |
| 11/15/2017 | 0.0807    | 0.0707   |          |          |       |       |       |        |
| 6/5/2018   | 0.078     | 0.07     |          |          |       |       |       |        |
| 10/2/2018  |           | 0.067    |          |          |       |       |       |        |
| 10/5/2018  | 0.074     |          |          |          |       |       |       |        |
| 8/22/2019  | 0.066     |          |          |          |       |       |       |        |
| 8/23/2019  |           | 0.066    |          |          |       |       |       |        |
| 10/21/2019 | 0.074     | 0.075    |          |          |       |       |       |        |
| 3/24/2020  |           | 0.075    |          |          |       |       |       |        |
| 3/25/2020  | 0.099     |          |          |          | 0.062 |       |       |        |
| 5/22/2020  |           |          | 0.048    | 0.24     |       |       |       |        |
| 6/15/2020  |           |          |          |          |       |       | 0.074 |        |
| 6/16/2020  |           |          | 0.049    | 0.24     |       |       |       |        |
| 8/25/2020  |           |          | 0.045    | 0.23     |       |       |       |        |
| 8/26/2020  | 0.057     |          |          |          | 0.055 | 0.059 | 0.066 |        |
| 8/27/2020  |           | 0.062    |          |          |       |       |       |        |
| 9/18/2020  |           |          |          | 0.21     |       |       |       |        |
| 9/21/2020  |           |          | 0.042    |          |       |       |       |        |
| 9/25/2020  |           |          |          |          |       |       |       | 0.04   |
| 9/28/2020  | 0.056     | 0.071    |          |          | 0.053 | 0.058 | 0.071 |        |
| 11/11/2020 |           |          |          | 0.23     |       |       |       |        |
| 11/12/2020 |           |          | 0.042    |          |       |       |       |        |
| 12/16/2020 |           |          | 0.041    | 0.24     |       |       |       |        |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120 |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|----------|
| 5/19/2016  | <0.003      |               | <0.003      | <0.003      |               |               |               |          |
| 7/11/2016  | <0.003      |               | 0.0001 (J)  |             |               |               |               |          |
| 7/12/2016  |             |               |             | <0.003      |               |               |               |          |
| 8/30/2016  | <0.003      | <0.003        | <0.003      | <0.003      |               |               |               |          |
| 8/31/2016  |             |               |             |             |               |               |               | <0.003   |
| 10/19/2016 | <0.003      |               | 0.0001 (J)  | <0.003      |               |               |               |          |
| 10/20/2016 |             | <0.003        |             |             |               |               |               |          |
| 10/26/2016 |             |               |             |             |               |               |               | <0.003   |
| 12/6/2016  | <0.003      |               | 0.0002 (J)  | <0.003      |               |               |               |          |
| 1/24/2017  | <0.003      |               | 0.0001 (J)  | <0.003      |               |               |               |          |
| 1/25/2017  |             | <0.003        |             |             |               |               |               |          |
| 1/27/2017  |             |               |             |             |               |               |               | <0.003   |
| 3/21/2017  | <0.003      |               | 0.0001 (J)  | <0.003      |               |               |               |          |
| 5/22/2017  | <0.003      |               | 0.0001 (J)  | <0.003      |               |               |               |          |
| 5/25/2017  |             | <0.003        |             |             |               |               |               | <0.003   |
| 8/11/2017  |             | <0.003        |             |             |               |               |               |          |
| 10/2/2017  |             |               |             |             |               |               |               | <0.003   |
| 11/15/2017 |             | <0.003        |             |             |               |               |               | <0.003   |
| 4/2/2018   | <0.003      |               | <0.003      |             |               |               |               |          |
| 4/3/2018   |             |               |             | <0.003      |               |               |               |          |
| 6/5/2018   |             | <0.003        |             |             |               |               |               | <0.003   |
| 10/2/2018  |             | <0.003        |             |             |               |               |               | <0.003   |
| 3/12/2019  | <0.003      |               | 0.00017 (J) | <0.003      |               |               |               |          |
| 4/1/2019   |             |               |             | <0.003      |               |               |               |          |
| 4/2/2019   | <0.003      |               | 0.00015 (J) |             |               |               |               |          |
| 8/22/2019  |             | <0.003        |             |             |               |               |               | <0.003   |
| 9/23/2019  | <0.003      |               | 0.00011 (J) | <0.003      |               |               |               |          |
| 3/2/2020   | <0.003      |               | 0.00014 (J) | <0.003      |               |               |               |          |
| 3/25/2020  | <0.003      |               | 0.00016 (J) | <0.003      |               |               |               |          |
| 8/24/2020  |             | <0.003        |             |             |               |               |               |          |
| 8/25/2020  |             |               | 0.00014 (J) | <0.003      |               |               |               |          |
| 8/26/2020  |             |               |             |             |               |               |               | <0.003   |
| 8/28/2020  | <0.003      |               |             |             |               |               |               |          |
| 9/15/2020  | <0.003      | <0.003        | 0.00013 (J) | <0.003      |               |               |               |          |
| 9/16/2020  |             |               |             |             | <0.003        | <0.003        |               |          |
| 9/21/2020  |             |               |             |             |               |               |               | <0.003   |
| 9/25/2020  |             |               |             |             |               |               | <0.003        |          |
| 11/10/2020 |             |               |             |             | <0.003        | <0.003        |               |          |
| 11/11/2020 |             |               |             |             |               |               | <0.003        |          |
| 12/15/2020 |             |               |             |             | <0.003        | <0.003        |               |          |
| 12/16/2020 |             |               |             |             |               |               | <0.003        |          |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32  | MW-39  | MW-41  | MW-46D |
|------------|-----------|----------|----------|----------|--------|--------|--------|--------|
| 8/31/2016  | <0.003    | <0.003   |          |          |        |        |        |        |
| 10/26/2016 |           | <0.003   |          |          |        |        |        |        |
| 11/7/2016  | <0.003    |          |          |          |        |        |        |        |
| 1/13/2017  | <0.003    |          |          |          |        |        |        |        |
| 1/27/2017  |           | <0.003   |          |          |        |        |        |        |
| 5/25/2017  |           | <0.003   |          |          |        |        |        |        |
| 6/3/2017   | <0.003    |          |          |          |        |        |        |        |
| 8/11/2017  |           | <0.003   |          |          |        |        |        |        |
| 10/2/2017  | <0.003    |          |          |          |        |        |        |        |
| 11/15/2017 | <0.003    | <0.003   |          |          |        |        |        |        |
| 6/5/2018   | <0.003    | <0.003   |          |          |        |        |        |        |
| 10/2/2018  |           | <0.003   |          |          |        |        |        |        |
| 10/5/2018  | <0.003    |          |          |          |        |        |        |        |
| 8/22/2019  | <0.003    |          |          |          |        |        |        |        |
| 8/23/2019  |           | <0.003   |          |          |        |        |        |        |
| 5/22/2020  |           |          | <0.003   | <0.003   |        |        |        |        |
| 6/16/2020  |           |          | <0.003   | <0.003   |        |        |        |        |
| 8/25/2020  |           |          | <0.003   | <0.003   |        |        |        |        |
| 8/26/2020  | <0.003    |          |          |          | <0.003 | <0.003 | <0.003 |        |
| 8/27/2020  |           | <0.003   |          |          |        |        |        |        |
| 9/18/2020  |           |          |          | <0.003   |        |        |        |        |
| 9/21/2020  |           |          | <0.003   |          |        |        |        |        |
| 9/25/2020  |           |          |          |          |        |        |        | <0.003 |
| 9/28/2020  | <0.003    | <0.003   |          |          | <0.003 | <0.003 | <0.003 |        |
| 11/11/2020 |           |          |          | <0.003   |        |        |        |        |
| 11/12/2020 |           |          | <0.003   |          |        |        |        |        |
| 12/16/2020 |           |          | <0.003   | <0.003   |        |        |        |        |



# Time Series

Constituent: Boron (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126  | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|-----------|-------|-------|-------|--------|
| 8/31/2016  | 3.23      | 0.494    |          |           |       |       |       |        |
| 10/26/2016 |           | 0.55     |          |           |       |       |       |        |
| 11/7/2016  | 2.95      |          |          |           |       |       |       |        |
| 1/13/2017  | 4.01      |          |          |           |       |       |       |        |
| 1/27/2017  |           | 0.428    |          |           |       |       |       |        |
| 5/25/2017  |           | 0.544    |          |           |       |       |       |        |
| 6/3/2017   | 2.62      |          |          |           |       |       |       |        |
| 8/11/2017  |           | 0.524    |          |           |       |       |       |        |
| 10/2/2017  | 2.92      |          |          |           |       |       |       |        |
| 11/15/2017 | 2.71      | 0.531    |          |           |       |       |       |        |
| 6/5/2018   | 2.6       | 0.53     |          |           |       |       |       |        |
| 10/2/2018  |           | 0.47     |          |           |       |       |       |        |
| 10/5/2018  | 2.9       |          |          |           |       |       |       |        |
| 4/3/2019   | 3         | 0.45     |          |           |       |       |       |        |
| 6/17/2019  | 2.4       |          |          |           |       |       |       |        |
| 6/18/2019  |           | 0.45     |          |           |       |       |       |        |
| 10/21/2019 | 2.4       | 0.5      |          |           |       |       |       |        |
| 1/3/2020   |           |          |          |           | 1.1   |       |       |        |
| 3/24/2020  |           | 0.44     |          |           |       |       |       |        |
| 3/25/2020  | 1.6       |          |          |           | 1.2   |       |       |        |
| 3/27/2020  |           |          |          |           |       | 0.7   |       |        |
| 5/22/2020  |           |          | 1.5      | 0.026 (J) |       |       |       |        |
| 6/15/2020  |           |          |          |           |       |       | 1.2   |        |
| 6/16/2020  |           |          | 1.5      | 0.023 (J) |       |       |       |        |
| 8/25/2020  |           |          | 1.4      | 0.016 (J) |       |       |       |        |
| 9/18/2020  |           |          |          | 0.041 (J) |       |       |       |        |
| 9/21/2020  |           |          | 1.4      |           |       |       |       |        |
| 9/25/2020  |           |          |          |           |       |       |       | 0.51   |
| 9/28/2020  | 2.3       | 0.43     |          |           | 1.3   | 1.3   | 1.2   |        |
| 11/11/2020 |           |          |          | 0.009 (J) |       |       |       | 0.68   |
| 11/12/2020 |           |          | 1.4      |           |       |       |       |        |
| 12/16/2020 |           |          | 1.5      | 0.011 (J) |       |       |       |        |



# Time Series

Constituent: Cadmium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120 |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|----------|
| 5/19/2016  | <0.0025     |               | <0.0025     | <0.0025     |               |               |               |          |
| 7/11/2016  | <0.0025     |               | <0.0025     |             |               |               |               |          |
| 7/12/2016  |             |               |             | <0.0025     |               |               |               |          |
| 8/30/2016  | <0.0025     | <0.0025       | <0.0025     | <0.0025     |               |               |               |          |
| 8/31/2016  |             |               |             |             |               |               |               | <0.0025  |
| 10/19/2016 | <0.0025     |               | <0.0025     | <0.0025     |               |               |               |          |
| 10/20/2016 |             | <0.0025       |             |             |               |               |               |          |
| 10/26/2016 |             |               |             |             |               |               |               | <0.0025  |
| 12/6/2016  | <0.0025     |               | <0.0025     | <0.0025     |               |               |               |          |
| 1/24/2017  | <0.0025     |               | 0.0001 (J)  | <0.0025     |               |               |               |          |
| 1/25/2017  |             | <0.0025       |             |             |               |               |               |          |
| 1/27/2017  |             |               |             |             |               |               |               | <0.0025  |
| 3/21/2017  | <0.0025     |               | 7E-05 (J)   | <0.0025     |               |               |               |          |
| 5/22/2017  | <0.0025     |               | 0.0001 (J)  | <0.0025     |               |               |               |          |
| 5/25/2017  |             | <0.0025       |             |             |               |               |               | <0.0025  |
| 8/11/2017  |             | <0.0025       |             |             |               |               |               |          |
| 10/2/2017  |             |               |             |             |               |               |               | <0.0025  |
| 11/15/2017 |             | <0.0025       |             |             |               |               |               | <0.0025  |
| 4/2/2018   | <0.0025     |               | <0.0025     |             |               |               |               |          |
| 4/3/2018   |             |               |             | <0.0025     |               |               |               |          |
| 6/4/2018   | <0.0025     |               | 0.00014 (J) | <0.0025     |               |               |               |          |
| 6/5/2018   |             | <0.0025       |             |             |               |               |               | <0.0025  |
| 10/1/2018  | <0.0025     |               | <0.0025     | <0.0025     |               |               |               |          |
| 10/2/2018  |             | <0.0025       |             |             |               |               |               | <0.0025  |
| 3/12/2019  | <0.0025     |               | 0.00013 (J) | <0.0025     |               |               |               |          |
| 4/1/2019   |             |               |             | <0.0025     |               |               |               |          |
| 4/2/2019   | <0.0025     |               | 0.00015 (J) |             |               |               |               |          |
| 8/22/2019  |             | <0.0025       |             |             |               |               |               | <0.0025  |
| 9/23/2019  | <0.0025     |               | <0.0025     | <0.0025     |               |               |               |          |
| 3/2/2020   | <0.0025     |               | <0.0025     | <0.0025     |               |               |               |          |
| 3/25/2020  | <0.0025     |               | 0.00014 (J) | <0.0025     |               |               |               |          |
| 8/24/2020  |             | <0.0025       |             |             |               |               |               |          |
| 8/25/2020  |             |               | <0.0025     | <0.0025     |               |               |               |          |
| 8/26/2020  |             |               |             |             |               |               |               | <0.0025  |
| 8/28/2020  | <0.0025     |               |             |             |               |               |               |          |
| 9/16/2020  |             |               |             |             | <0.0025       | <0.0025       |               |          |
| 9/25/2020  |             |               |             |             |               |               | <0.0025       |          |
| 11/10/2020 |             |               |             |             | <0.0025       | <0.0025       |               |          |
| 11/11/2020 |             |               |             |             |               |               | <0.0025       |          |
| 12/15/2020 |             |               |             |             | <0.0025       | <0.0025       |               |          |
| 12/16/2020 |             |               |             |             |               |               | <0.0025       |          |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32   | MW-39   | MW-41   |
|------------|-----------|----------|----------|----------|---------|---------|---------|
| 8/31/2016  | <0.0025   | <0.0025  |          |          |         |         |         |
| 10/26/2016 |           | <0.0025  |          |          |         |         |         |
| 11/7/2016  | <0.0025   |          |          |          |         |         |         |
| 1/13/2017  | <0.0025   |          |          |          |         |         |         |
| 1/27/2017  |           | <0.0025  |          |          |         |         |         |
| 5/25/2017  |           | <0.0025  |          |          |         |         |         |
| 6/3/2017   | <0.0025   |          |          |          |         |         |         |
| 8/11/2017  |           | <0.0025  |          |          |         |         |         |
| 10/2/2017  | <0.0025   |          |          |          |         |         |         |
| 11/15/2017 | <0.0025   | <0.0025  |          |          |         |         |         |
| 6/5/2018   | <0.0025   | <0.0025  |          |          |         |         |         |
| 10/2/2018  |           | <0.0025  |          |          |         |         |         |
| 10/5/2018  | <0.0025   |          |          |          |         |         |         |
| 8/22/2019  | <0.0025   |          |          |          |         |         |         |
| 8/23/2019  |           | <0.0025  |          |          |         |         |         |
| 5/22/2020  |           |          | <0.0025  | <0.0025  |         |         |         |
| 6/16/2020  |           |          | <0.0025  | <0.0025  |         |         |         |
| 8/25/2020  |           |          | <0.0025  | <0.0025  |         |         |         |
| 8/26/2020  | <0.0025   |          |          |          | <0.0025 | <0.0025 | <0.0025 |
| 8/27/2020  |           | <0.0025  |          |          |         |         |         |
| 9/18/2020  |           |          |          | <0.0025  |         |         |         |
| 9/21/2020  |           |          | <0.0025  |          |         |         |         |
| 11/11/2020 |           |          |          | <0.0025  |         |         |         |
| 11/12/2020 |           |          | <0.0025  |          |         |         |         |
| 12/16/2020 |           |          | <0.0025  | <0.0025  |         |         |         |



# Time Series

Constituent: Calcium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 178       | 90.4     |          |          |       |       |       |        |
| 10/26/2016 |           | 94.5     |          |          |       |       |       |        |
| 11/7/2016  | 170       |          |          |          |       |       |       |        |
| 1/13/2017  | 192       |          |          |          |       |       |       |        |
| 1/27/2017  |           | 84.2     |          |          |       |       |       |        |
| 5/25/2017  |           | 100      |          |          |       |       |       |        |
| 6/3/2017   | 172       |          |          |          |       |       |       |        |
| 8/11/2017  |           | 99.1     |          |          |       |       |       |        |
| 10/2/2017  | 195       |          |          |          |       |       |       |        |
| 11/15/2017 | 184       | 103      |          |          |       |       |       |        |
| 6/5/2018   | 195       | 103      |          |          |       |       |       |        |
| 10/2/2018  |           | 100      |          |          |       |       |       |        |
| 10/5/2018  | 181       |          |          |          |       |       |       |        |
| 4/3/2019   | 184       | 96.7     |          |          |       |       |       |        |
| 6/17/2019  | 173       |          |          |          |       |       |       |        |
| 6/18/2019  |           | 97.1     |          |          |       |       |       |        |
| 10/21/2019 | 173       | 96.9     |          |          |       |       |       |        |
| 1/3/2020   |           |          |          |          | 150   |       |       |        |
| 3/24/2020  |           | 104      |          |          |       |       |       |        |
| 3/25/2020  | 139       |          |          |          | 170   |       |       |        |
| 3/27/2020  |           |          |          |          |       | 120   |       |        |
| 5/22/2020  |           |          | 140      | 112      |       |       |       |        |
| 6/15/2020  |           |          |          |          |       |       | 174   |        |
| 6/16/2020  |           |          | 178      | 131      |       |       |       |        |
| 8/25/2020  |           |          | 186      | 130      |       |       |       |        |
| 9/18/2020  |           |          |          | 119      |       |       |       |        |
| 9/21/2020  |           |          | 155      |          |       |       |       |        |
| 9/25/2020  |           |          |          |          |       |       |       | 78.3   |
| 9/28/2020  | 167       | 107      |          |          | 173   | 185   | 173   |        |
| 11/11/2020 |           |          |          | 133      |       |       |       | 69.3   |
| 11/12/2020 |           |          | 165      |          |       |       |       |        |
| 12/16/2020 |           |          | 194      | 132      |       |       |       |        |



# Time Series

Constituent: Chloride (mg/L)    Analysis Run 2/16/2021 12:27 PM    View: Descriptive  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 64        | 3        |          |          |       |       |       |        |
| 10/26/2016 |           | 3.6      |          |          |       |       |       |        |
| 11/7/2016  | 65        |          |          |          |       |       |       |        |
| 1/13/2017  | 50        |          |          |          |       |       |       |        |
| 1/27/2017  |           | 4        |          |          |       |       |       |        |
| 5/25/2017  |           | 3.5      |          |          |       |       |       |        |
| 6/3/2017   | 43        |          |          |          |       |       |       |        |
| 8/11/2017  |           | 2.9      |          |          |       |       |       |        |
| 10/2/2017  | 42        |          |          |          |       |       |       |        |
| 11/15/2017 | 46        | 3.1      |          |          |       |       |       |        |
| 6/5/2018   | 40.4      | 3.1      |          |          |       |       |       |        |
| 10/2/2018  |           | 3.4      |          |          |       |       |       |        |
| 10/5/2018  | 39        |          |          |          |       |       |       |        |
| 4/3/2019   | 35.9      | 3.4      |          |          |       |       |       |        |
| 6/17/2019  | 32.9      |          |          |          |       |       |       |        |
| 6/18/2019  |           | 2.3 (J)  |          |          |       |       |       |        |
| 10/21/2019 | 29.9      | 3.6      |          |          |       |       |       |        |
| 1/3/2020   |           |          |          |          | 2.4   |       |       |        |
| 3/24/2020  |           | 2.7      |          |          |       |       |       |        |
| 3/25/2020  | 16.3      |          |          |          | 2.2   |       |       |        |
| 3/27/2020  |           |          |          |          |       | 1.8   |       |        |
| 5/22/2020  |           |          | 12.9     | 8.6      |       |       |       |        |
| 6/15/2020  |           |          |          |          |       |       | 2.3   |        |
| 6/16/2020  |           |          | 10.4     | 8.6      |       |       |       |        |
| 8/25/2020  |           |          | 10.6     | 8.7      |       |       |       |        |
| 9/18/2020  |           |          |          | 8.4      |       |       |       |        |
| 9/21/2020  |           |          | 12.1     |          |       |       |       |        |
| 9/25/2020  |           |          |          |          |       |       |       | 3.7    |
| 9/28/2020  | 23.2      | 2.5      |          |          | 2.5   | 2.4   | 2.5   |        |
| 11/11/2020 |           |          |          | 8.3      |       |       |       | 3.5    |
| 11/12/2020 |           |          | 10.4     |          |       |       |       |        |
| 12/16/2020 |           |          | 5.3      | 8.9      |       |       |       |        |

# Time Series

Constituent: Chromium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120    |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|-------------|
| 5/19/2016  | <0.01       |               | <0.01       | <0.01       |               |               |               |             |
| 7/11/2016  | <0.01       |               | <0.01       |             |               |               |               |             |
| 7/12/2016  |             |               |             | <0.01       |               |               |               |             |
| 8/30/2016  | <0.01       | <0.01         | <0.01       | <0.01       |               |               |               |             |
| 8/31/2016  |             |               |             |             |               |               |               | <0.01       |
| 10/19/2016 | <0.01       |               | <0.01       | <0.01       |               |               |               |             |
| 10/20/2016 |             | <0.01         |             |             |               |               |               |             |
| 10/26/2016 |             |               |             |             |               |               |               | <0.01       |
| 12/6/2016  | <0.01       |               | <0.01       | <0.01       |               |               |               |             |
| 1/24/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |             |
| 1/25/2017  |             | <0.01         |             |             |               |               |               |             |
| 1/27/2017  |             |               |             |             |               |               |               | <0.01       |
| 3/21/2017  | 0.0005 (J)  |               | <0.01       | <0.01       |               |               |               |             |
| 5/22/2017  | <0.01       |               | <0.01       | 0.0007 (J)  |               |               |               |             |
| 5/25/2017  |             | 0.0006 (J)    |             |             |               |               |               | <0.01       |
| 8/11/2017  |             | 0.0007 (J)    |             |             |               |               |               |             |
| 10/2/2017  |             |               |             |             |               |               |               | <0.01       |
| 11/15/2017 |             | 0.0006 (J)    |             |             |               |               |               | <0.01       |
| 4/2/2018   | <0.01       |               | <0.01       |             |               |               |               |             |
| 4/3/2018   |             |               |             | <0.01       |               |               |               |             |
| 6/5/2018   |             | <0.01         |             |             |               |               |               | <0.01       |
| 10/2/2018  |             | <0.01         |             |             |               |               |               | <0.01       |
| 3/12/2019  | <0.01       |               | <0.01       | <0.01       |               |               |               |             |
| 4/1/2019   |             |               |             | <0.01       |               |               |               |             |
| 4/2/2019   | <0.01       |               | 0.0079 (J)  |             |               |               |               |             |
| 8/22/2019  |             | 0.0006 (J)    |             |             |               |               |               | 0.00072 (J) |
| 9/23/2019  | <0.01       |               | 0.00058 (J) | <0.01       |               |               |               |             |
| 10/21/2019 |             | 0.00068 (J)   |             |             |               |               |               |             |
| 10/22/2019 |             |               |             |             |               |               |               | <0.01       |
| 3/2/2020   | <0.01       |               | 0.00041 (J) | <0.01       |               |               |               |             |
| 3/24/2020  |             | 0.0013 (J)    |             |             |               |               |               |             |
| 3/25/2020  | 0.00072 (J) |               | <0.01       | <0.01       |               |               |               | 0.0015 (J)  |
| 8/24/2020  |             | 0.00093 (J)   |             |             |               |               |               |             |
| 8/25/2020  |             |               | 0.00067 (J) | <0.01       |               |               |               |             |
| 8/26/2020  |             |               |             |             |               |               |               | <0.01       |
| 8/28/2020  | <0.01       |               |             |             |               |               |               |             |
| 9/15/2020  | <0.01       | 0.00067 (J)   | <0.01       | <0.01       |               |               |               |             |
| 9/16/2020  |             |               |             |             | <0.01         | 0.0012 (J)    |               |             |
| 9/21/2020  |             |               |             |             |               |               |               | 0.00065 (J) |
| 9/25/2020  |             |               |             |             |               |               | <0.01         |             |
| 11/10/2020 |             |               |             |             | <0.01         | 0.00089 (J)   |               |             |
| 11/11/2020 |             |               |             |             |               |               | <0.01         |             |
| 12/15/2020 |             |               |             |             | <0.01         | 0.00072 (J)   |               |             |
| 12/16/2020 |             |               |             |             |               |               | <0.01         |             |

# Time Series

Constituent: Chromium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A  | HGWC-124    | HGWC-125    | HGWC-126    | MW-32       | MW-39 | MW-41 | MW-46D      |
|------------|------------|-------------|-------------|-------------|-------------|-------|-------|-------------|
| 8/31/2016  | <0.01      | <0.01       |             |             |             |       |       |             |
| 10/26/2016 |            | <0.01       |             |             |             |       |       |             |
| 11/7/2016  | <0.01      |             |             |             |             |       |       |             |
| 1/13/2017  | <0.01      |             |             |             |             |       |       |             |
| 1/27/2017  |            | <0.01       |             |             |             |       |       |             |
| 5/25/2017  |            | <0.01       |             |             |             |       |       |             |
| 6/3/2017   | <0.01      |             |             |             |             |       |       |             |
| 8/11/2017  |            | <0.01       |             |             |             |       |       |             |
| 10/2/2017  | <0.01      |             |             |             |             |       |       |             |
| 11/15/2017 | <0.01      | <0.01       |             |             |             |       |       |             |
| 6/5/2018   | <0.01      | <0.01       |             |             |             |       |       |             |
| 10/2/2018  |            | <0.01       |             |             |             |       |       |             |
| 10/5/2018  | <0.01      |             |             |             |             |       |       |             |
| 8/22/2019  | <0.01      |             |             |             |             |       |       |             |
| 8/23/2019  |            | <0.01       |             |             |             |       |       |             |
| 10/21/2019 | <0.01      | 0.00046 (J) |             |             |             |       |       |             |
| 3/24/2020  |            | 0.00051 (J) |             |             |             |       |       |             |
| 3/25/2020  | 0.0005 (J) |             |             |             | <0.01       |       |       |             |
| 5/22/2020  |            |             | 0.00058 (J) | <0.01       |             |       |       |             |
| 6/15/2020  |            |             |             |             |             |       | <0.01 |             |
| 6/16/2020  |            |             | 0.00052 (J) | <0.01       |             |       |       |             |
| 8/25/2020  |            |             | <0.01       | 0.00096 (J) |             |       |       |             |
| 8/26/2020  | <0.01      |             |             |             | <0.01       | <0.01 | <0.01 |             |
| 8/27/2020  |            | <0.01       |             |             |             |       |       |             |
| 9/18/2020  |            |             |             | <0.01       |             |       |       |             |
| 9/21/2020  |            |             | <0.01       |             |             |       |       |             |
| 9/25/2020  |            |             |             |             |             |       |       | 0.00075 (J) |
| 9/28/2020  | <0.01      | <0.01       |             |             | 0.00058 (J) | <0.01 | <0.01 |             |
| 11/11/2020 |            |             |             | <0.01       |             |       |       |             |
| 11/12/2020 |            |             | <0.01       |             |             |       |       |             |
| 12/16/2020 |            |             | <0.01       | <0.01       |             |       |       |             |



# Time Series

Constituent: Cobalt (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120   |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|------------|
| 5/19/2016  | <0.005      |               | 0.0293      | <0.005      |               |               |               |            |
| 7/11/2016  | 0.0004 (J)  |               | 0.0267      |             |               |               |               |            |
| 7/12/2016  |             |               |             | <0.005      |               |               |               |            |
| 8/30/2016  | <0.005      | <0.005        | 0.028       | <0.005      |               |               |               |            |
| 8/31/2016  |             |               |             |             |               |               |               | 0.0052 (J) |
| 10/19/2016 | <0.005      |               | 0.0201      | <0.005      |               |               |               |            |
| 10/20/2016 |             | <0.005        |             |             |               |               |               |            |
| 10/26/2016 |             |               |             |             |               |               |               | 0.0041 (J) |
| 12/6/2016  | <0.005      |               | 0.0184      | <0.005      |               |               |               |            |
| 1/24/2017  | <0.005      |               | 0.0206      | <0.005      |               |               |               |            |
| 1/25/2017  |             | <0.005        |             |             |               |               |               |            |
| 1/27/2017  |             |               |             |             |               |               |               | 0.0034 (J) |
| 3/21/2017  | <0.005      |               | 0.0251      | <0.005      |               |               |               |            |
| 5/22/2017  | <0.005      |               | 0.0263      | <0.005      |               |               |               |            |
| 5/25/2017  |             | <0.005        |             |             |               |               |               | 0.0035 (J) |
| 8/11/2017  |             | <0.005        |             |             |               |               |               |            |
| 10/2/2017  |             |               |             |             |               |               |               | 0.0036 (J) |
| 11/15/2017 |             | <0.005        |             |             |               |               |               | 0.0032 (J) |
| 4/2/2018   | <0.005      |               | 0.019       |             |               |               |               |            |
| 4/3/2018   |             |               |             | <0.005      |               |               |               |            |
| 6/4/2018   | <0.005      |               | 0.025       | <0.005      |               |               |               |            |
| 6/5/2018   |             | <0.005        |             |             |               |               |               | 0.0031 (J) |
| 10/1/2018  | <0.005      |               | 0.026       | <0.005      |               |               |               |            |
| 10/2/2018  |             | <0.005        |             |             |               |               |               | 0.0025 (J) |
| 3/12/2019  | <0.005      |               | 0.017       | <0.005      |               |               |               |            |
| 4/1/2019   |             |               |             | <0.005      |               |               |               |            |
| 4/2/2019   | <0.005      |               | 0.019       |             |               |               |               |            |
| 8/22/2019  |             | <0.005        |             |             |               |               |               | 0.0028 (J) |
| 9/23/2019  | <0.005      |               | 0.038       | <0.005      |               |               |               |            |
| 10/21/2019 |             | <0.005        |             |             |               |               |               |            |
| 10/22/2019 |             |               |             |             |               |               |               | 0.0031 (J) |
| 3/2/2020   | <0.005      |               | 0.019       | <0.005      |               |               |               |            |
| 3/24/2020  |             | <0.005        |             |             |               |               |               |            |
| 3/25/2020  | <0.005      |               | 0.02        | <0.005      |               |               |               | 0.0036 (J) |
| 8/24/2020  |             | <0.005        |             |             |               |               |               |            |
| 8/25/2020  |             |               | 0.018       | <0.005      |               |               |               |            |
| 8/26/2020  |             |               |             |             |               |               |               | 0.0023 (J) |
| 8/28/2020  | <0.005      |               |             |             |               |               |               |            |
| 9/15/2020  | <0.005      | <0.005        | 0.021       | <0.005      |               |               |               |            |
| 9/16/2020  |             |               |             |             | <0.005        | <0.005        |               |            |
| 9/21/2020  |             |               |             |             |               |               |               | 0.0041 (J) |
| 9/25/2020  |             |               |             |             |               |               | <0.005        |            |
| 11/10/2020 |             |               |             |             | <0.005        | <0.005        |               |            |
| 11/11/2020 |             |               |             |             |               |               | <0.005        |            |
| 12/15/2020 |             |               |             |             | <0.005        | <0.005        |               |            |
| 12/16/2020 |             |               |             |             |               |               | <0.005        |            |

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A  | HGWC-124 | HGWC-125 | HGWC-126 | MW-32      | MW-39      | MW-41       | MW-46D      |
|------------|------------|----------|----------|----------|------------|------------|-------------|-------------|
| 8/31/2016  | <0.005     | <0.005   |          |          |            |            |             |             |
| 10/26/2016 |            | <0.005   |          |          |            |            |             |             |
| 11/7/2016  | <0.005     |          |          |          |            |            |             |             |
| 1/13/2017  | <0.005     |          |          |          |            |            |             |             |
| 1/27/2017  |            | <0.005   |          |          |            |            |             |             |
| 5/25/2017  |            | <0.005   |          |          |            |            |             |             |
| 6/3/2017   | 0.0005 (J) |          |          |          |            |            |             |             |
| 8/11/2017  |            | <0.005   |          |          |            |            |             |             |
| 10/2/2017  | 0.0003 (J) |          |          |          |            |            |             |             |
| 11/15/2017 | 0.0003 (J) | <0.005   |          |          |            |            |             |             |
| 6/5/2018   | <0.005     | <0.005   |          |          |            |            |             |             |
| 10/2/2018  |            | <0.005   |          |          |            |            |             |             |
| 10/5/2018  | <0.005     |          |          |          |            |            |             |             |
| 8/22/2019  | <0.005     |          |          |          |            |            |             |             |
| 8/23/2019  |            | <0.005   |          |          |            |            |             |             |
| 10/21/2019 | <0.005     | <0.005   |          |          |            |            |             |             |
| 3/24/2020  |            | <0.005   |          |          |            |            |             |             |
| 3/25/2020  | <0.005     |          |          |          | 0.0031 (J) |            |             |             |
| 5/22/2020  |            |          | 0.01     | <0.005   |            |            |             |             |
| 6/15/2020  |            |          |          |          |            |            | 0.0012 (J)  |             |
| 6/16/2020  |            |          | 0.0096   | <0.005   |            |            |             |             |
| 8/25/2020  |            |          | 0.0087   | <0.005   |            |            |             |             |
| 8/26/2020  | <0.005     |          |          |          | 0.0048 (J) | 0.0026 (J) | 0.00068 (J) |             |
| 8/27/2020  |            | <0.005   |          |          |            |            |             |             |
| 9/18/2020  |            |          |          | <0.005   |            |            |             |             |
| 9/21/2020  |            |          | 0.012    |          |            |            |             |             |
| 9/25/2020  |            |          |          |          |            |            |             | 0.00041 (J) |
| 9/28/2020  | <0.005     | <0.005   |          |          | 0.0047 (J) | 0.0026 (J) | 0.00066 (J) |             |
| 11/11/2020 |            |          |          | <0.005   |            |            |             |             |
| 11/12/2020 |            |          | 0.012    |          |            |            |             |             |
| 12/16/2020 |            |          | 0.0055   | <0.005   |            |            |             |             |

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120  |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|-----------|
| 5/19/2016  | 0.397 (U)   |               | 0.627 (U)   | 0.342 (U)   |               |               |               |           |
| 7/11/2016  | 0.738 (U)   |               | 1.38        |             |               |               |               |           |
| 7/12/2016  |             |               |             | 0.499 (U)   |               |               |               |           |
| 8/30/2016  | 0.581 (U)   | 0.972 (U)     | 1.05 (U)    | 0.976 (U)   |               |               |               |           |
| 8/31/2016  |             |               |             |             |               |               |               | 1.47      |
| 10/19/2016 | 0.213 (U)   |               | 1.11 (U)    | 0.626 (U)   |               |               |               |           |
| 10/20/2016 |             | 0.496 (U)     |             |             |               |               |               |           |
| 10/26/2016 |             |               |             |             |               |               |               | 0.864 (U) |
| 12/6/2016  | 0.444 (U)   |               | 0.741 (U)   | 0.805 (U)   |               |               |               |           |
| 1/24/2017  | 0.373 (U)   |               | 0.908 (U)   | 0.336 (U)   |               |               |               |           |
| 1/25/2017  |             | 1.13 (U)      |             |             |               |               |               |           |
| 1/27/2017  |             |               |             |             |               |               |               | 0.521 (U) |
| 3/21/2017  | 0.816 (U)   |               | 0.567 (U)   | 0.358 (U)   |               |               |               |           |
| 5/22/2017  | 0.554 (U)   |               | 0.638 (U)   | 0.744 (U)   |               |               |               |           |
| 5/25/2017  |             | 0.192 (U)     |             |             |               |               |               | 0.681 (U) |
| 8/11/2017  |             | 0.908 (U)     |             |             |               |               |               |           |
| 10/2/2017  |             |               |             |             |               |               |               | 0.632 (U) |
| 11/15/2017 |             | 0.662 (U)     |             |             |               |               |               | 1.3       |
| 4/2/2018   | 0.405 (U)   |               | 0.761 (U)   |             |               |               |               |           |
| 4/3/2018   |             |               |             | 0.684 (U)   |               |               |               |           |
| 6/4/2018   | 1.13 (U)    |               | 0.975 (U)   | 0.0291 (U)  |               |               |               |           |
| 6/5/2018   |             | 0.593 (U)     |             |             |               |               |               | 1.26 (U)  |
| 10/1/2018  | 0.132 (U)   |               | 0.434 (U)   | 0.781 (U)   |               |               |               |           |
| 10/2/2018  |             | 1.37          |             |             |               |               |               | 0.572 (U) |
| 3/12/2019  | 0.327 (U)   |               | 0.454 (U)   | 1.01 (U)    |               |               |               |           |
| 4/1/2019   |             |               |             | 0.76 (U)    |               |               |               |           |
| 4/2/2019   | 0.739 (U)   |               | 0.651 (U)   |             |               |               |               |           |
| 8/22/2019  |             | 1.19 (U)      |             |             |               |               |               | 1.35      |
| 9/30/2019  | 0.306 (U)   |               | 1.04 (U)    | 0.384 (U)   |               |               |               |           |
| 10/21/2019 |             | 0.772 (U)     |             |             |               |               |               |           |
| 10/22/2019 |             |               |             |             |               |               |               | 0.76 (U)  |
| 3/2/2020   | 0.61 (U)    |               | 1.58        | 0.249 (U)   |               |               |               |           |
| 3/24/2020  |             | 0.379 (U)     |             |             |               |               |               |           |
| 3/25/2020  | 4.36        |               | 0.621 (U)   | 0.833 (U)   |               |               |               | 0.696 (U) |
| 8/24/2020  |             | 0.883 (U)     |             |             |               |               |               |           |
| 8/25/2020  |             |               | 0.778 (U)   | 0.33 (U)    |               |               |               |           |
| 8/26/2020  |             |               |             |             |               |               |               | 0.357 (U) |
| 8/28/2020  | 0 (U)       |               |             |             |               |               |               |           |
| 9/15/2020  | 0.748 (U)   | 0.375 (U)     | 0.124 (U)   | 0.161 (U)   |               |               |               |           |
| 9/16/2020  |             |               |             |             | 0.531 (U)     | 0.422 (U)     |               |           |
| 9/21/2020  |             |               |             |             |               |               |               | 0.553 (U) |
| 9/25/2020  |             |               |             |             |               |               | 1.07 (U)      |           |
| 11/10/2020 |             |               |             |             | 0.788 (U)     | 0.293 (U)     |               |           |
| 11/11/2020 |             |               |             |             |               |               | 0.49 (U)      |           |
| 12/15/2020 |             |               |             |             | 1.04 (U)      | 0.7 (U)       |               |           |
| 12/16/2020 |             |               |             |             |               |               | 0.963 (U)     |           |

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124  | HGWC-125  | HGWC-126  | MW-32     | MW-39    | MW-41     | MW-46D    |
|------------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|
| 8/31/2016  | 1.57      | 1.22      |           |           |           |          |           |           |
| 10/26/2016 |           | 0.637 (U) |           |           |           |          |           |           |
| 11/7/2016  | 0.739 (U) |           |           |           |           |          |           |           |
| 1/13/2017  | 0.744 (U) |           |           |           |           |          |           |           |
| 1/27/2017  |           | 0.795 (U) |           |           |           |          |           |           |
| 5/25/2017  |           | 0.896 (U) |           |           |           |          |           |           |
| 6/3/2017   | 0 (U)     |           |           |           |           |          |           |           |
| 8/11/2017  |           | 0.828 (U) |           |           |           |          |           |           |
| 10/2/2017  | 0.68 (U)  |           |           |           |           |          |           |           |
| 11/15/2017 | 0.911 (U) | 0.478 (U) |           |           |           |          |           |           |
| 6/5/2018   | 0.948 (U) | 0.947 (U) |           |           |           |          |           |           |
| 10/2/2018  |           | 0.617 (U) |           |           |           |          |           |           |
| 10/5/2018  | 1.17 (U)  |           |           |           |           |          |           |           |
| 8/22/2019  | 1.3       |           |           |           |           |          |           |           |
| 8/23/2019  |           | 0.834     |           |           |           |          |           |           |
| 10/21/2019 | 0.393 (U) | 1.11 (U)  |           |           |           |          |           |           |
| 3/24/2020  |           | 0.796 (U) |           |           |           |          |           |           |
| 3/25/2020  | 0.505 (U) |           |           |           | 1.51      |          |           |           |
| 5/22/2020  |           |           | <1.56     | 1.82      |           |          |           |           |
| 6/15/2020  |           |           |           |           |           |          | 0.948 (U) |           |
| 6/16/2020  |           |           | 1.62      | 1.82      |           |          |           |           |
| 8/25/2020  |           |           | 1.65      | 1.82      |           |          |           |           |
| 8/26/2020  | 1.96      |           |           |           | 0.281 (U) | 1.38     | 1.53      |           |
| 8/27/2020  |           | 0.494 (U) |           |           |           |          |           |           |
| 9/18/2020  |           |           |           | 0.841 (U) |           |          |           |           |
| 9/21/2020  |           |           | 1.45      |           |           |          |           |           |
| 9/25/2020  |           |           |           |           |           |          |           | 0.594 (U) |
| 9/28/2020  | 0.761 (U) | 0.477 (U) |           |           | 1.01 (U)  | 1.02 (U) | 0.409 (U) |           |
| 11/11/2020 |           |           |           | 0.837 (U) |           |          |           |           |
| 11/12/2020 |           |           | 0.633 (U) |           |           |          |           |           |
| 12/16/2020 |           |           | 0.818 (U) | 1.26 (U)  |           |          |           |           |



# Time Series

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124  | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|-----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 0.14 (J)  | 0.15 (J)  |          |          |       |       |       |        |
| 10/26/2016 |           | 0.3       |          |          |       |       |       |        |
| 11/7/2016  | 0.18 (J)  |           |          |          |       |       |       |        |
| 1/13/2017  | 0.14 (J)  |           |          |          |       |       |       |        |
| 1/27/2017  |           | 0.3       |          |          |       |       |       |        |
| 5/25/2017  |           | 0.05 (J)  |          |          |       |       |       |        |
| 6/3/2017   | 0.15 (J)  |           |          |          |       |       |       |        |
| 8/11/2017  |           | 0.1 (J)   |          |          |       |       |       |        |
| 10/2/2017  | 1.2       |           |          |          |       |       |       |        |
| 11/15/2017 | 0.6       | <0.1      |          |          |       |       |       |        |
| 6/5/2018   | 0.19 (J)  | 0.078 (J) |          |          |       |       |       |        |
| 10/2/2018  |           | 0.078 (J) |          |          |       |       |       |        |
| 10/5/2018  | 0.23 (J)  |           |          |          |       |       |       |        |
| 4/3/2019   | 0.14 (J)  | 0.089 (J) |          |          |       |       |       |        |
| 8/22/2019  | 0.2 (J)   |           |          |          |       |       |       |        |
| 8/23/2019  |           | 0.11 (J)  |          |          |       |       |       |        |
| 10/21/2019 | 0.18 (J)  | 0.073 (J) |          |          |       |       |       |        |
| 1/3/2020   |           |           |          |          | 0.36  |       |       |        |
| 3/24/2020  |           | <0.1      |          |          |       |       |       |        |
| 3/25/2020  | 0.095 (J) |           |          |          | 0.34  |       |       |        |
| 3/27/2020  |           |           |          |          |       | 0.29  |       |        |
| 5/22/2020  |           |           | 0.1 (J)  | 0.46     |       |       |       |        |
| 6/15/2020  |           |           |          |          |       |       | 0.21  |        |
| 6/16/2020  |           |           | 0.12     | 0.44     |       |       |       |        |
| 8/25/2020  |           |           | 0.16     | 0.52     |       |       |       |        |
| 8/26/2020  | 0.16      |           |          |          | 0.33  | 0.32  | 0.24  |        |
| 8/27/2020  |           | <0.1      |          |          |       |       |       |        |
| 9/18/2020  |           |           |          | 0.43     |       |       |       |        |
| 9/21/2020  |           |           | 0.11     |          |       |       |       |        |
| 9/25/2020  |           |           |          |          |       |       |       | 0.68   |
| 9/28/2020  | 0.15      | <0.1      |          |          | 0.33  | 0.33  | 0.25  |        |
| 11/11/2020 |           |           |          | 0.45     |       |       |       | 1      |
| 11/12/2020 |           |           | 0.12     |          |       |       |       |        |
| 12/16/2020 |           |           | 0.2      | 0.49     |       |       |       |        |

# Time Series

Constituent: Lead (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120   |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|------------|
| 5/19/2016  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 7/11/2016  | <0.005      |               | <0.005      |             |               |               |               |            |
| 7/12/2016  |             |               |             | 0.0001 (J)  |               |               |               |            |
| 8/30/2016  | <0.005      | <0.005        | <0.005      | <0.005      |               |               |               |            |
| 8/31/2016  |             |               |             |             |               |               |               | <0.005     |
| 10/19/2016 | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 10/20/2016 |             | <0.005        |             |             |               |               |               |            |
| 10/26/2016 |             |               |             |             |               |               |               | 0.0002 (J) |
| 12/6/2016  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 1/24/2017  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 1/25/2017  |             | <0.005        |             |             |               |               |               |            |
| 1/27/2017  |             |               |             |             |               |               |               | <0.005     |
| 3/21/2017  | <0.005      |               | 6E-05 (J)   | 0.0001 (J)  |               |               |               |            |
| 5/22/2017  | <0.005      |               | 9E-05 (J)   | <0.005      |               |               |               |            |
| 5/25/2017  |             | <0.005        |             |             |               |               |               | 9E-05 (J)  |
| 8/11/2017  |             | 0.0001 (J)    |             |             |               |               |               |            |
| 10/2/2017  |             |               |             |             |               |               |               | 8E-05 (J)  |
| 11/15/2017 |             | 0.0002 (J)    |             |             |               |               |               | <0.005     |
| 4/2/2018   | <0.005      |               | <0.005      |             |               |               |               |            |
| 4/3/2018   |             |               |             | <0.005      |               |               |               |            |
| 6/5/2018   |             | <0.005        |             |             |               |               |               | <0.005     |
| 10/2/2018  |             | <0.005        |             |             |               |               |               | <0.005     |
| 3/12/2019  | <0.005      |               | <0.005      | <0.005      |               |               |               |            |
| 4/1/2019   |             |               |             | <0.005      |               |               |               |            |
| 4/2/2019   | <0.005      |               | <0.005      |             |               |               |               |            |
| 8/22/2019  |             | <0.005        |             |             |               |               |               | <0.005     |
| 9/23/2019  | 7.8E-05 (J) |               | 9.2E-05 (J) | <0.005      |               |               |               |            |
| 10/21/2019 |             | 9.7E-05 (J)   |             |             |               |               |               |            |
| 10/22/2019 |             |               |             |             |               |               |               | <0.005     |
| 3/2/2020   | 4.8E-05 (J) |               | 9.5E-05 (J) | <0.005      |               |               |               |            |
| 3/24/2020  |             | 0.00012 (J)   |             |             |               |               |               |            |
| 3/25/2020  | <0.005      |               | 0.00011 (J) | <0.005      |               |               |               | <0.005     |
| 8/24/2020  |             | 7.7E-05 (J)   |             |             |               |               |               |            |
| 8/25/2020  |             |               | 8.5E-05 (J) | <0.005      |               |               |               |            |
| 8/26/2020  |             |               |             |             |               |               |               | <0.005     |
| 8/28/2020  | 7E-05 (J)   |               |             |             |               |               |               |            |
| 9/15/2020  | <0.005      | 4.3E-05 (J)   | 8E-05 (J)   | 4.2E-05 (J) |               |               |               |            |
| 9/16/2020  |             |               |             |             | 5E-05 (J)     | 0.00021 (J)   |               |            |
| 9/21/2020  |             |               |             |             |               |               |               | <0.005     |
| 9/25/2020  |             |               |             |             |               |               | <0.005        |            |
| 11/10/2020 |             |               |             |             | 6.9E-05 (J)   | 0.0002 (J)    |               |            |
| 11/11/2020 |             |               |             |             |               |               | 4E-05 (J)     |            |
| 12/15/2020 |             |               |             |             | 8.2E-05 (J)   | 0.00011 (J)   |               |            |
| 12/16/2020 |             |               |             |             |               |               | 5.8E-05 (J)   |            |

# Time Series

Constituent: Lead (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A   | HGWC-124    | HGWC-125    | HGWC-126    | MW-32  | MW-39  | MW-41  | MW-46D      |
|------------|-------------|-------------|-------------|-------------|--------|--------|--------|-------------|
| 8/31/2016  | <0.005      | <0.005      |             |             |        |        |        |             |
| 10/26/2016 |             | <0.005      |             |             |        |        |        |             |
| 11/7/2016  | <0.005      |             |             |             |        |        |        |             |
| 1/13/2017  | <0.005      |             |             |             |        |        |        |             |
| 1/27/2017  |             | <0.005      |             |             |        |        |        |             |
| 5/25/2017  |             | <0.005      |             |             |        |        |        |             |
| 6/3/2017   | 7E-05 (J)   |             |             |             |        |        |        |             |
| 8/11/2017  |             | 8E-05 (J)   |             |             |        |        |        |             |
| 10/2/2017  | <0.005      |             |             |             |        |        |        |             |
| 11/15/2017 | <0.005      | <0.005      |             |             |        |        |        |             |
| 6/5/2018   | 0.00036 (J) | <0.005      |             |             |        |        |        |             |
| 10/2/2018  |             | <0.005      |             |             |        |        |        |             |
| 10/5/2018  | <0.005      |             |             |             |        |        |        |             |
| 8/22/2019  | <0.005      |             |             |             |        |        |        |             |
| 8/23/2019  |             | 4.9E-05 (J) |             |             |        |        |        |             |
| 10/21/2019 | <0.005      | 4.9E-05 (J) |             |             |        |        |        |             |
| 3/24/2020  |             | 9.4E-05 (J) |             |             |        |        |        |             |
| 3/25/2020  | <0.005      |             |             |             | <0.005 |        |        |             |
| 5/22/2020  |             |             | 0.00014 (J) | <0.005      |        |        |        |             |
| 6/15/2020  |             |             |             |             |        |        | <0.005 |             |
| 6/16/2020  |             |             | 0.00013 (J) | <0.005      |        |        |        |             |
| 8/25/2020  |             |             | <0.005      | 4.5E-05 (J) |        |        |        |             |
| 8/26/2020  | <0.005      |             |             |             | <0.005 | <0.005 | <0.005 |             |
| 8/27/2020  |             | <0.005      |             |             |        |        |        |             |
| 9/18/2020  |             |             |             | <0.005      |        |        |        |             |
| 9/21/2020  |             |             | <0.005      |             |        |        |        |             |
| 9/25/2020  |             |             |             |             |        |        |        | 4.8E-05 (J) |
| 9/28/2020  | <0.005      | 7.5E-05 (J) |             |             | <0.005 | <0.005 | <0.005 |             |
| 11/11/2020 |             |             |             | 4.2E-05 (J) |        |        |        |             |
| 11/12/2020 |             |             | 4.7E-05 (J) |             |        |        |        |             |
| 12/16/2020 |             |             | <0.005      | <0.005      |        |        |        |             |



# Time Series

Constituent: Lithium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120   |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|------------|
| 5/19/2016  | <0.03       |               | <0.03       | <0.03       |               |               |               |            |
| 7/11/2016  | <0.03       |               | 0.0014 (J)  |             |               |               |               |            |
| 7/12/2016  |             |               |             | 0.0024 (J)  |               |               |               |            |
| 8/30/2016  | <0.03       | <0.03         | <0.03       | 0.0025 (J)  |               |               |               |            |
| 8/31/2016  |             |               |             |             |               |               |               | 0.0333 (J) |
| 10/19/2016 | <0.03       |               | <0.03       | 0.003 (J)   |               |               |               |            |
| 10/20/2016 |             | <0.03         |             |             |               |               |               |            |
| 10/26/2016 |             |               |             |             |               |               |               | 0.0352 (J) |
| 12/6/2016  | <0.03       |               | <0.03       | 0.0033 (J)  |               |               |               |            |
| 1/24/2017  | <0.03       |               | <0.03       | 0.003 (J)   |               |               |               |            |
| 1/25/2017  |             | <0.03         |             |             |               |               |               |            |
| 1/27/2017  |             |               |             |             |               |               |               | 0.0329 (J) |
| 3/21/2017  | <0.03       |               | 0.0012 (J)  | 0.0034 (J)  |               |               |               |            |
| 5/22/2017  | <0.03       |               | <0.03       | 0.003 (J)   |               |               |               |            |
| 5/25/2017  |             | <0.03         |             |             |               |               |               | 0.0347 (J) |
| 8/11/2017  |             | <0.03         |             |             |               |               |               |            |
| 10/2/2017  |             |               |             |             |               |               |               | 0.0337 (J) |
| 11/15/2017 |             | <0.03         |             |             |               |               |               | 0.0347 (J) |
| 4/2/2018   | <0.03       |               | 0.0015 (J)  |             |               |               |               |            |
| 4/3/2018   |             |               |             | 0.003 (J)   |               |               |               |            |
| 6/4/2018   | 0.001 (J)   |               | 0.0016 (J)  | 0.0027 (J)  |               |               |               |            |
| 6/5/2018   |             | <0.03         |             |             |               |               |               | 0.033 (J)  |
| 10/1/2018  | 0.00099 (J) |               | 0.0013 (J)  | 0.0032 (J)  |               |               |               |            |
| 10/2/2018  |             | <0.03         |             |             |               |               |               | 0.031 (J)  |
| 3/12/2019  | 0.001 (J)   |               | 0.0018 (J)  | 0.0032 (J)  |               |               |               |            |
| 4/1/2019   |             |               |             | 0.0032 (J)  |               |               |               |            |
| 4/2/2019   | 0.001 (J)   |               | 0.0018 (J)  |             |               |               |               |            |
| 8/22/2019  |             | <0.03         |             |             |               |               |               | 0.029 (J)  |
| 9/23/2019  | 0.0011 (J)  |               | 0.0016 (J)  | 0.0029 (J)  |               |               |               |            |
| 10/21/2019 |             | <0.03         |             |             |               |               |               |            |
| 10/22/2019 |             |               |             |             |               |               |               | 0.03 (J)   |
| 3/2/2020   | 0.0012 (J)  |               | 0.0017 (J)  | 0.0037 (J)  |               |               |               |            |
| 3/24/2020  |             | <0.03         |             |             |               |               |               |            |
| 3/25/2020  | 0.00083 (J) |               | 0.0017 (J)  | 0.0035 (J)  |               |               |               | 0.024 (J)  |
| 8/24/2020  |             | <0.03         |             |             |               |               |               |            |
| 8/25/2020  |             |               | 0.0015 (J)  | 0.0027 (J)  |               |               |               |            |
| 8/26/2020  |             |               |             |             |               |               |               | 0.023 (J)  |
| 8/28/2020  | 0.00087 (J) |               |             |             |               |               |               |            |
| 9/15/2020  | 0.00087 (J) | <0.03         | 0.0015 (J)  | 0.0026 (J)  |               |               |               |            |
| 9/16/2020  |             |               |             |             | 0.0018 (J)    | 0.014 (J)     |               |            |
| 9/21/2020  |             |               |             |             |               |               |               | 0.023 (J)  |
| 9/25/2020  |             |               |             |             |               |               | 0.0049 (J)    |            |
| 11/10/2020 |             |               |             |             | 0.0013 (J)    | 0.025 (J)     |               |            |
| 11/11/2020 |             |               |             |             |               |               | 0.0032 (J)    |            |
| 12/15/2020 |             |               |             |             | 0.0019 (J)    | 0.028 (J)     |               |            |
| 12/16/2020 |             |               |             |             |               |               | 0.0045 (J)    |            |

# Time Series

Constituent: Lithium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A  | HGWC-124    | HGWC-125   | HGWC-126   | MW-32 | MW-39 | MW-41     | MW-46D    |
|------------|------------|-------------|------------|------------|-------|-------|-----------|-----------|
| 8/31/2016  | 0.0077 (J) | <0.03       |            |            |       |       |           |           |
| 10/26/2016 |            | <0.03       |            |            |       |       |           |           |
| 11/7/2016  | 0.0089 (J) |             |            |            |       |       |           |           |
| 1/13/2017  | 0.0091 (J) |             |            |            |       |       |           |           |
| 1/27/2017  |            | <0.03       |            |            |       |       |           |           |
| 5/25/2017  |            | 0.0011 (J)  |            |            |       |       |           |           |
| 6/3/2017   | 0.0104 (J) |             |            |            |       |       |           |           |
| 8/11/2017  |            | <0.03       |            |            |       |       |           |           |
| 10/2/2017  | 0.0095 (J) |             |            |            |       |       |           |           |
| 11/15/2017 | 0.0086 (J) | <0.03       |            |            |       |       |           |           |
| 6/5/2018   | 0.0092 (J) | 0.0012 (J)  |            |            |       |       |           |           |
| 10/2/2018  |            | 0.0012 (J)  |            |            |       |       |           |           |
| 10/5/2018  | 0.0091 (J) |             |            |            |       |       |           |           |
| 8/22/2019  | 0.0084 (J) |             |            |            |       |       |           |           |
| 8/23/2019  |            | 0.0011 (J)  |            |            |       |       |           |           |
| 10/21/2019 | 0.009 (J)  | 0.0011 (J)  |            |            |       |       |           |           |
| 3/24/2020  |            | 0.0012 (J)  |            |            |       |       |           |           |
| 3/25/2020  | 0.0066 (J) |             |            |            | 0.034 |       |           |           |
| 3/27/2020  |            |             |            |            |       | <0.03 |           |           |
| 5/22/2020  |            |             | 0.0052 (J) | 0.0046 (J) |       |       |           |           |
| 6/15/2020  |            |             |            |            |       |       | 0.028 (J) |           |
| 6/16/2020  |            |             | 0.0053 (J) | 0.0045 (J) |       |       |           |           |
| 8/25/2020  |            |             | 0.0037 (J) | 0.0037 (J) |       |       |           |           |
| 8/26/2020  | 0.0071 (J) |             |            |            | 0.031 | 0.031 | 0.027 (J) |           |
| 8/27/2020  |            | 0.00091 (J) |            |            |       |       |           |           |
| 9/18/2020  |            |             |            | 0.0035 (J) |       |       |           |           |
| 9/21/2020  |            |             | 0.0038 (J) |            |       |       |           |           |
| 9/25/2020  |            |             |            |            |       |       |           | 0.015 (J) |
| 9/28/2020  | 0.0076 (J) | 0.0011 (J)  |            |            | 0.032 | 0.034 | 0.028 (J) |           |
| 11/11/2020 |            |             |            | 0.0032 (J) |       |       |           |           |
| 11/12/2020 |            |             | 0.0038 (J) |            |       |       |           |           |
| 12/16/2020 |            |             | 0.0055 (J) | 0.0029 (J) |       |       |           |           |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120  |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|-----------|
| 5/19/2016  | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 7/11/2016  | <0.0005     |               | <0.0005     |             |               |               |               |           |
| 7/12/2016  |             |               |             | <0.0005     |               |               |               |           |
| 8/30/2016  | 4E-05 (J)   | 4.3E-05 (J)   | 4E-05 (J)   | <0.0005     |               |               |               |           |
| 8/31/2016  |             |               |             |             |               |               |               | 4E-05 (J) |
| 10/19/2016 | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 10/20/2016 |             | <0.0005       |             |             |               |               |               |           |
| 10/26/2016 |             |               |             |             |               |               |               | <0.0005   |
| 12/6/2016  | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 1/24/2017  | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 1/25/2017  |             | 4E-05 (J)     |             |             |               |               |               |           |
| 1/27/2017  |             |               |             |             |               |               |               | <0.0005   |
| 3/21/2017  | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 5/22/2017  | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 5/25/2017  |             | 7E-05 (J)     |             |             |               |               |               | 7E-05 (J) |
| 8/11/2017  |             | <0.0005       |             |             |               |               |               |           |
| 10/2/2017  |             |               |             |             |               |               |               | <0.0005   |
| 11/15/2017 |             | <0.0005       |             |             |               |               |               | <0.0005   |
| 4/2/2018   | <0.0005     |               | <0.0005     |             |               |               |               |           |
| 4/3/2018   |             |               |             | <0.0005     |               |               |               |           |
| 6/5/2018   |             | <0.0005       |             |             |               |               |               | <0.0005   |
| 10/2/2018  |             | <0.0005       |             |             |               |               |               | <0.0005   |
| 3/12/2019  | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 8/22/2019  |             | <0.0005       |             |             |               |               |               | <0.0005   |
| 3/2/2020   | <0.0005     |               | <0.0005     | <0.0005     |               |               |               |           |
| 8/24/2020  |             | <0.0005       |             |             |               |               |               |           |
| 8/25/2020  |             |               | <0.0005     | <0.0005     |               |               |               |           |
| 8/26/2020  |             |               |             |             |               |               |               | <0.0005   |
| 8/28/2020  | <0.0005     |               |             |             |               |               |               |           |
| 9/16/2020  |             |               |             |             | <0.0005       | <0.0005       |               |           |
| 9/25/2020  |             |               |             |             |               |               | <0.0005       |           |
| 11/10/2020 |             |               |             |             | <0.0005       | <0.0005       |               |           |
| 11/11/2020 |             |               |             |             |               |               | <0.0005       |           |
| 12/15/2020 |             |               |             |             | <0.0005       | <0.0005       |               |           |
| 12/16/2020 |             |               |             |             |               |               | <0.0005       |           |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124    | HGWC-125 | HGWC-126 | MW-32   | MW-39   | MW-41   |
|------------|-----------|-------------|----------|----------|---------|---------|---------|
| 8/31/2016  | <0.0005   | <0.0005     |          |          |         |         |         |
| 10/26/2016 |           | <0.0005     |          |          |         |         |         |
| 11/7/2016  | <0.0005   |             |          |          |         |         |         |
| 1/13/2017  | <0.0005   |             |          |          |         |         |         |
| 1/27/2017  |           | <0.0005     |          |          |         |         |         |
| 5/25/2017  |           | 5.1E-05 (J) |          |          |         |         |         |
| 6/3/2017   | <0.0005   |             |          |          |         |         |         |
| 8/11/2017  |           | <0.0005     |          |          |         |         |         |
| 10/2/2017  | <0.0005   |             |          |          |         |         |         |
| 11/15/2017 | <0.0005   | <0.0005     |          |          |         |         |         |
| 6/5/2018   | <0.0005   | <0.0005     |          |          |         |         |         |
| 10/2/2018  |           | <0.0005     |          |          |         |         |         |
| 10/5/2018  | <0.0005   |             |          |          |         |         |         |
| 8/22/2019  | <0.0005   |             |          |          |         |         |         |
| 8/23/2019  |           | <0.0005     |          |          |         |         |         |
| 5/22/2020  |           |             | <0.0005  | <0.0005  |         |         |         |
| 6/16/2020  |           |             | <0.0005  | <0.0005  |         |         |         |
| 8/25/2020  |           |             | <0.0005  | <0.0005  |         |         |         |
| 8/26/2020  | <0.0005   |             |          |          | <0.0005 | <0.0005 | <0.0005 |
| 8/27/2020  |           | <0.0005     |          |          |         |         |         |
| 9/18/2020  |           |             |          | <0.0005  |         |         |         |
| 9/21/2020  |           |             | <0.0005  |          |         |         |         |
| 11/11/2020 |           |             |          | <0.0005  |         |         |         |
| 11/12/2020 |           |             | <0.0005  |          |         |         |         |
| 12/16/2020 |           |             | <0.0005  | <0.0005  |         |         |         |

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120 |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|----------|
| 5/19/2016  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 7/11/2016  | <0.01       |               | <0.01       |             |               |               |               |          |
| 7/12/2016  |             |               |             | <0.01       |               |               |               |          |
| 8/30/2016  | <0.01       | 0.0026 (J)    | <0.01       | <0.01       |               |               |               |          |
| 8/31/2016  |             |               |             |             |               |               |               | 0.0176   |
| 10/19/2016 | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 10/20/2016 |             | 0.005 (J)     |             |             |               |               |               |          |
| 10/26/2016 |             |               |             |             |               |               |               | 0.0187   |
| 12/6/2016  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 1/24/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 1/25/2017  |             | 0.0054 (J)    |             |             |               |               |               |          |
| 1/27/2017  |             |               |             |             |               |               |               | 0.0214   |
| 3/21/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 5/22/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 5/25/2017  |             | 0.0018 (J)    |             |             |               |               |               | 0.0231   |
| 8/11/2017  |             | 0.0029 (J)    |             |             |               |               |               |          |
| 10/2/2017  |             |               |             |             |               |               |               | 0.0259   |
| 11/15/2017 |             | 0.0018 (J)    |             |             |               |               |               | 0.0281   |
| 4/2/2018   | <0.01       |               | <0.01       |             |               |               |               |          |
| 4/3/2018   |             |               |             | <0.01       |               |               |               |          |
| 6/4/2018   | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 6/5/2018   |             | 0.0028 (J)    |             |             |               |               |               | 0.033    |
| 10/1/2018  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 10/2/2018  |             | <0.01         |             |             |               |               |               | 0.036    |
| 3/12/2019  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 4/1/2019   |             |               |             | <0.01       |               |               |               |          |
| 4/2/2019   | <0.01       |               | <0.01       |             |               |               |               |          |
| 8/22/2019  |             | 0.003 (J)     |             |             |               |               |               | 0.039    |
| 9/23/2019  | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 10/21/2019 |             | 0.0049 (J)    |             |             |               |               |               |          |
| 10/22/2019 |             |               |             |             |               |               |               | 0.04     |
| 3/2/2020   | <0.01       |               | <0.01       | <0.01       |               |               |               |          |
| 3/24/2020  |             | 0.0091 (J)    |             |             |               |               |               |          |
| 3/25/2020  | <0.01       |               | <0.01       | <0.01       |               |               |               | 0.034    |
| 6/16/2020  | <0.01       |               |             | <0.01       |               |               |               |          |
| 8/24/2020  |             | 0.0031 (J)    |             |             |               |               |               |          |
| 8/25/2020  |             |               | <0.01       | <0.01       |               |               |               |          |
| 8/26/2020  |             |               |             |             |               |               |               | 0.05     |
| 8/28/2020  | <0.01       |               |             |             |               |               |               |          |
| 9/15/2020  | <0.01       | 0.0045 (J)    | <0.01       | <0.01       |               |               |               |          |
| 9/16/2020  |             |               |             |             | 0.0044 (J)    | 0.0019 (J)    |               |          |
| 9/21/2020  |             |               |             |             |               |               |               | 0.043    |
| 9/25/2020  |             |               |             |             |               |               | 0.0014 (J)    |          |
| 11/10/2020 |             |               |             |             | 0.0072 (J)    | 0.0018 (J)    |               |          |
| 11/11/2020 |             |               |             |             |               |               | 0.0049 (J)    |          |
| 12/15/2020 |             |               |             |             | 0.0044 (J)    | 0.0019 (J)    |               |          |
| 12/16/2020 |             |               |             |             |               |               | 0.0024 (J)    |          |

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124    | HGWC-125    | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|-------------|-------------|----------|-------|-------|-------|--------|
| 8/31/2016  | <0.01     | <0.01       |             |          |       |       |       |        |
| 10/26/2016 |           | <0.01       |             |          |       |       |       |        |
| 11/7/2016  | <0.01     |             |             |          |       |       |       |        |
| 1/13/2017  | <0.01     |             |             |          |       |       |       |        |
| 1/27/2017  |           | <0.01       |             |          |       |       |       |        |
| 5/25/2017  |           | 0.0009 (J)  |             |          |       |       |       |        |
| 6/3/2017   | <0.01     |             |             |          |       |       |       |        |
| 8/11/2017  |           | 0.0013 (J)  |             |          |       |       |       |        |
| 10/2/2017  | <0.01     |             |             |          |       |       |       |        |
| 11/15/2017 | <0.01     | 0.0012 (J)  |             |          |       |       |       |        |
| 6/5/2018   | <0.01     | <0.01       |             |          |       |       |       |        |
| 10/2/2018  |           | <0.01       |             |          |       |       |       |        |
| 10/5/2018  | <0.01     |             |             |          |       |       |       |        |
| 8/22/2019  | <0.01     |             |             |          |       |       |       |        |
| 8/23/2019  |           | 0.0014 (J)  |             |          |       |       |       |        |
| 10/21/2019 | <0.01     | 0.0013 (J)  |             |          |       |       |       |        |
| 1/3/2020   |           |             |             |          | 0.06  |       |       |        |
| 1/22/2020  |           |             |             |          | 0.059 |       |       |        |
| 3/24/2020  |           | 0.001 (J)   |             |          |       |       |       |        |
| 3/25/2020  | <0.01     |             |             |          | 0.062 |       |       |        |
| 3/27/2020  |           |             |             |          |       | 0.012 |       |        |
| 4/24/2020  |           |             |             |          |       | 0.062 |       |        |
| 5/22/2020  |           |             | <0.01       | <0.01    |       |       |       |        |
| 6/15/2020  |           |             |             |          |       |       | 0.035 |        |
| 6/16/2020  |           |             | <0.01       | <0.01    |       |       |       |        |
| 8/25/2020  |           |             | 0.00099 (J) | <0.01    |       |       |       |        |
| 8/26/2020  | <0.01     |             |             |          | 0.065 | 0.064 | 0.039 |        |
| 8/27/2020  |           | 0.00091 (J) |             |          |       |       |       |        |
| 9/18/2020  |           |             |             | <0.01    |       |       |       |        |
| 9/21/2020  |           |             | <0.01       |          |       |       |       |        |
| 9/25/2020  |           |             |             |          |       |       |       | 0.027  |
| 9/28/2020  | <0.01     | 0.0009 (J)  |             |          | 0.062 | 0.062 | 0.036 |        |
| 11/11/2020 |           |             |             | <0.01    |       |       |       | 0.015  |
| 11/12/2020 |           |             | 0.0017 (J)  |          |       |       |       |        |
| 12/16/2020 |           |             | 0.014       | <0.01    |       |       |       |        |



# Time Series

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 6.62      | 6.99     |          |          |       |       |       |        |
| 10/27/2016 |           | 7.06     |          |          |       |       |       |        |
| 11/7/2016  | 6.71      |          |          |          |       |       |       |        |
| 1/13/2017  | 6.57      |          |          |          |       |       |       |        |
| 1/27/2017  |           | 7.13     |          |          |       |       |       |        |
| 5/25/2017  |           | 7.1      |          |          |       |       |       |        |
| 6/3/2017   | 6.71      |          |          |          |       |       |       |        |
| 8/11/2017  |           | 7.02     |          |          |       |       |       |        |
| 10/2/2017  | 7.65      |          |          |          |       |       |       |        |
| 11/15/2017 | 6.69      | 7.04     |          |          |       |       |       |        |
| 6/5/2018   | 6.79      | 7.17     |          |          |       |       |       |        |
| 10/2/2018  |           | 7.08     |          |          |       |       |       |        |
| 10/5/2018  | 6.71      |          |          |          |       |       |       |        |
| 4/3/2019   | 6.73      | 7.14     |          |          |       |       |       |        |
| 8/22/2019  | 6.77      |          |          |          |       |       |       |        |
| 8/23/2019  |           | 7.02     |          |          |       |       |       |        |
| 10/21/2019 | 6.74      | 7.05     |          |          |       |       |       |        |
| 3/24/2020  |           | 7.18     |          |          |       |       |       |        |
| 3/25/2020  | 6.91      |          |          |          | 6.86  |       |       |        |
| 3/27/2020  |           |          |          |          |       | 6.82  |       |        |
| 4/24/2020  |           |          |          |          |       | 6.82  |       |        |
| 5/22/2020  |           |          | 6.43     | 7.22     |       |       |       |        |
| 6/15/2020  |           |          |          |          |       |       | 6.88  |        |
| 6/16/2020  |           |          | 6.29     | 6.92     |       |       |       |        |
| 8/25/2020  |           |          | 6.36     | 6.78     |       |       |       |        |
| 8/26/2020  | 6.73      |          |          |          | 6.75  | 6.74  | 6.74  |        |
| 8/27/2020  |           | 7.15     |          |          |       |       |       |        |
| 9/18/2020  |           |          |          | 6.97     |       |       |       |        |
| 9/21/2020  |           |          | 6.22     |          |       |       |       |        |
| 9/25/2020  |           |          |          |          |       |       |       | 7.56   |
| 9/28/2020  | 6.93      | 7.27     |          |          | 6.9   | 7     | 7     |        |
| 11/11/2020 |           |          |          | 6.86     |       |       |       | 7.52   |
| 11/12/2020 |           |          | 6.13     |          |       |       |       |        |
| 12/16/2020 |           |          | 6.61     | 6.93     |       |       |       |        |



# Time Series

Constituent: Selenium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120  |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|-----------|
| 5/19/2016  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 7/11/2016  | <0.01       |               | <0.01       |             |               |               |               |           |
| 7/12/2016  |             |               |             | <0.01       |               |               |               |           |
| 8/30/2016  | <0.01       | <0.01         | <0.01       | <0.01       |               |               |               |           |
| 8/31/2016  |             |               |             |             |               |               |               | <0.01     |
| 10/19/2016 | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 10/20/2016 |             | <0.01         |             |             |               |               |               |           |
| 10/26/2016 |             |               |             |             |               |               |               | <0.01     |
| 12/6/2016  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 1/24/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 1/25/2017  |             | <0.01         |             |             |               |               |               |           |
| 1/27/2017  |             |               |             |             |               |               |               | <0.01     |
| 3/21/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 5/22/2017  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 5/25/2017  |             | <0.01         |             |             |               |               |               | <0.01     |
| 8/11/2017  |             | <0.01         |             |             |               |               |               |           |
| 10/2/2017  |             |               |             |             |               |               |               | 0.002 (J) |
| 11/15/2017 |             | <0.01         |             |             |               |               |               | <0.01     |
| 4/2/2018   | <0.01       |               | <0.01       |             |               |               |               |           |
| 4/3/2018   |             |               |             | <0.01       |               |               |               |           |
| 6/4/2018   | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 6/5/2018   |             | <0.01         |             |             |               |               |               | <0.01     |
| 10/1/2018  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 10/2/2018  |             | 0.0015 (J)    |             |             |               |               |               | <0.01     |
| 3/12/2019  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 4/1/2019   |             |               |             | <0.01       |               |               |               |           |
| 4/2/2019   | <0.01       |               | <0.01       |             |               |               |               |           |
| 8/22/2019  |             | <0.01         |             |             |               |               |               | <0.01     |
| 9/23/2019  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 3/2/2020   | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 3/25/2020  | <0.01       |               | <0.01       | <0.01       |               |               |               |           |
| 8/24/2020  |             | <0.01         |             |             |               |               |               |           |
| 8/25/2020  |             |               | <0.01       | <0.01       |               |               |               |           |
| 8/26/2020  |             |               |             |             |               |               |               | <0.01     |
| 8/28/2020  | <0.01       |               |             |             |               |               |               |           |
| 9/16/2020  |             |               |             |             | <0.01         | <0.01         |               |           |
| 9/25/2020  |             |               |             |             |               |               | <0.01         |           |
| 11/10/2020 |             |               |             |             | <0.01         | <0.01         |               |           |
| 11/11/2020 |             |               |             |             |               |               | <0.01         |           |
| 12/15/2020 |             |               |             |             | <0.01         | <0.01         |               |           |
| 12/16/2020 |             |               |             |             |               |               | <0.01         |           |

# Time Series

Constituent: Selenium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A  | HGWC-124   | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 |
|------------|------------|------------|----------|----------|-------|-------|-------|
| 8/31/2016  | <0.01      | <0.01      |          |          |       |       |       |
| 10/26/2016 |            | <0.01      |          |          |       |       |       |
| 11/7/2016  | <0.01      |            |          |          |       |       |       |
| 1/13/2017  | 0.0011 (J) |            |          |          |       |       |       |
| 1/27/2017  |            | <0.01      |          |          |       |       |       |
| 5/25/2017  |            | <0.01      |          |          |       |       |       |
| 6/3/2017   | <0.01      |            |          |          |       |       |       |
| 8/11/2017  |            | <0.01      |          |          |       |       |       |
| 10/2/2017  | <0.01      |            |          |          |       |       |       |
| 11/15/2017 | <0.01      | <0.01      |          |          |       |       |       |
| 6/5/2018   | <0.01      | <0.01      |          |          |       |       |       |
| 10/2/2018  |            | 0.0014 (J) |          |          |       |       |       |
| 10/5/2018  | <0.01      |            |          |          |       |       |       |
| 8/22/2019  | <0.01      |            |          |          |       |       |       |
| 8/23/2019  |            | <0.01      |          |          |       |       |       |
| 5/22/2020  |            |            | <0.01    | <0.01    |       |       |       |
| 6/16/2020  |            |            | <0.01    | <0.01    |       |       |       |
| 8/25/2020  |            |            | <0.01    | <0.01    |       |       |       |
| 8/26/2020  | <0.01      |            |          |          | <0.01 | <0.01 | <0.01 |
| 8/27/2020  |            | <0.01      |          |          |       |       |       |
| 9/18/2020  |            |            |          | <0.01    |       |       |       |
| 9/21/2020  |            |            | <0.01    |          |       |       |       |
| 11/11/2020 |            |            |          | <0.01    |       |       |       |
| 11/12/2020 |            |            | <0.01    |          |       |       |       |
| 12/16/2020 |            |            | <0.01    | <0.01    |       |       |       |



# Time Series

Constituent: Sulfate (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 280       | 72       |          |          |       |       |       |        |
| 10/26/2016 |           | 71       |          |          |       |       |       |        |
| 11/7/2016  | 300       |          |          |          |       |       |       |        |
| 1/13/2017  | 270       |          |          |          |       |       |       |        |
| 1/27/2017  |           | 74       |          |          |       |       |       |        |
| 5/25/2017  |           | 73       |          |          |       |       |       |        |
| 6/3/2017   | 270       |          |          |          |       |       |       |        |
| 8/11/2017  |           | 71       |          |          |       |       |       |        |
| 10/2/2017  | 330       |          |          |          |       |       |       |        |
| 11/15/2017 | 280       | 70       |          |          |       |       |       |        |
| 6/5/2018   | 241       | 74       |          |          |       |       |       |        |
| 10/2/2018  |           | 80.7     |          |          |       |       |       |        |
| 10/5/2018  | 271       |          |          |          |       |       |       |        |
| 4/3/2019   | 230       | 75.2     |          |          |       |       |       |        |
| 6/17/2019  | 219       |          |          |          |       |       |       |        |
| 6/18/2019  |           | 75.3     |          |          |       |       |       |        |
| 10/21/2019 | 238       | 78.5     |          |          |       |       |       |        |
| 1/3/2020   |           |          |          |          | 210   |       |       |        |
| 3/24/2020  |           | 74.6     |          |          |       |       |       |        |
| 3/25/2020  | 116       |          |          |          | 204   |       |       |        |
| 3/27/2020  |           |          |          |          |       | 111   |       |        |
| 5/22/2020  |           |          | 345      | 56.1     |       |       |       |        |
| 6/15/2020  |           |          |          |          |       |       | 219   |        |
| 6/16/2020  |           |          | 320      | 57.6     |       |       |       |        |
| 8/25/2020  |           |          | 353      | 62.8     |       |       |       |        |
| 9/18/2020  |           |          |          | 62.7     |       |       |       |        |
| 9/21/2020  |           |          | 352      |          |       |       |       |        |
| 9/25/2020  |           |          |          |          |       |       |       | 149    |
| 9/28/2020  | 182       | 86.2     |          |          | 245   | 239   | 154   |        |
| 11/11/2020 |           |          |          | 62.3     |       |       |       | 167    |
| 11/12/2020 |           |          | 300      |          |       |       |       |        |
| 12/16/2020 |           |          | 306      | 68.1     |       |       |       |        |

# Time Series

Constituent: Thallium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-122 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) | HGWC-120 |
|------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|----------|
| 5/19/2016  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 7/11/2016  | <0.001      |               | <0.001      |             |               |               |               |          |
| 7/12/2016  |             |               |             | <0.001      |               |               |               |          |
| 8/30/2016  | <0.001      | <0.001        | <0.001      | <0.001      |               |               |               |          |
| 8/31/2016  |             |               |             |             |               |               |               | <0.001   |
| 10/19/2016 | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 10/20/2016 |             | <0.001        |             |             |               |               |               |          |
| 10/26/2016 |             |               |             |             |               |               |               | <0.001   |
| 12/6/2016  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 1/24/2017  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 1/25/2017  |             | <0.001        |             |             |               |               |               |          |
| 1/27/2017  |             |               |             |             |               |               |               | <0.001   |
| 3/21/2017  | <0.001      |               | 3E-05 (J)   | <0.001      |               |               |               |          |
| 5/22/2017  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 5/25/2017  |             | <0.001        |             |             |               |               |               | <0.001   |
| 8/11/2017  |             | <0.001        |             |             |               |               |               |          |
| 10/2/2017  |             |               |             |             |               |               |               | <0.001   |
| 11/15/2017 |             | <0.001        |             |             |               |               |               | <0.001   |
| 4/2/2018   | <0.001      |               | <0.001      |             |               |               |               |          |
| 4/3/2018   |             |               |             | <0.001      |               |               |               |          |
| 6/4/2018   | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 6/5/2018   |             | <0.001        |             |             |               |               |               | <0.001   |
| 10/1/2018  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 10/2/2018  |             | <0.001        |             |             |               |               |               | <0.001   |
| 3/12/2019  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 4/1/2019   |             |               |             | <0.001      |               |               |               |          |
| 4/2/2019   | <0.001      |               | <0.001      |             |               |               |               |          |
| 8/22/2019  |             | <0.001        |             |             |               |               |               | <0.001   |
| 9/23/2019  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 3/2/2020   | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 3/25/2020  | <0.001      |               | <0.001      | <0.001      |               |               |               |          |
| 8/24/2020  |             | <0.001        |             |             |               |               |               |          |
| 8/25/2020  |             |               | <0.001      | <0.001      |               |               |               |          |
| 8/26/2020  |             |               |             |             |               |               |               | <0.001   |
| 8/28/2020  | <0.001      |               |             |             |               |               |               |          |
| 9/16/2020  |             |               |             |             | <0.001        | <0.001        |               |          |
| 9/25/2020  |             |               |             |             |               |               | <0.001        |          |
| 11/10/2020 |             |               |             |             | <0.001        | <0.001        |               |          |
| 11/11/2020 |             |               |             |             |               |               | <0.001        |          |
| 12/15/2020 |             |               |             |             | <0.001        | <0.001        |               |          |
| 12/16/2020 |             |               |             |             |               |               | <0.001        |          |

# Time Series

Constituent: Thallium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32  | MW-39  | MW-41  |
|------------|-----------|----------|----------|----------|--------|--------|--------|
| 8/31/2016  | <0.001    | <0.001   |          |          |        |        |        |
| 10/26/2016 |           | <0.001   |          |          |        |        |        |
| 11/7/2016  | <0.001    |          |          |          |        |        |        |
| 1/13/2017  | <0.001    |          |          |          |        |        |        |
| 1/27/2017  |           | <0.001   |          |          |        |        |        |
| 5/25/2017  |           | <0.001   |          |          |        |        |        |
| 6/3/2017   | <0.001    |          |          |          |        |        |        |
| 8/11/2017  |           | <0.001   |          |          |        |        |        |
| 10/2/2017  | <0.001    |          |          |          |        |        |        |
| 11/15/2017 | <0.001    | <0.001   |          |          |        |        |        |
| 6/5/2018   | <0.001    | <0.001   |          |          |        |        |        |
| 10/2/2018  |           | <0.001   |          |          |        |        |        |
| 10/5/2018  | <0.001    |          |          |          |        |        |        |
| 8/22/2019  | <0.001    |          |          |          |        |        |        |
| 8/23/2019  |           | <0.001   |          |          |        |        |        |
| 5/22/2020  |           |          | <0.001   | <0.001   |        |        |        |
| 6/16/2020  |           |          | <0.001   | <0.001   |        |        |        |
| 8/25/2020  |           |          | <0.001   | <0.001   |        |        |        |
| 8/26/2020  | <0.001    |          |          |          | <0.001 | <0.001 | <0.001 |
| 8/27/2020  |           | <0.001   |          |          |        |        |        |
| 9/18/2020  |           |          |          | <0.001   |        |        |        |
| 9/21/2020  |           |          | <0.001   |          |        |        |        |
| 11/11/2020 |           |          |          | <0.001   |        |        |        |
| 11/12/2020 |           |          | <0.001   |          |        |        |        |
| 12/16/2020 |           |          | <0.001   | <0.001   |        |        |        |



# Time Series

Constituent: T Total Dissolved Solids (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

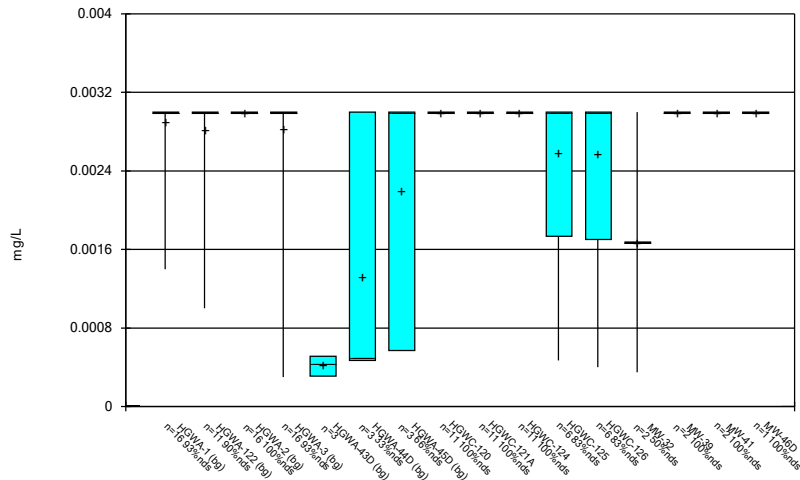
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWC-121A | HGWC-124 | HGWC-125 | HGWC-126 | MW-32 | MW-39 | MW-41 | MW-46D |
|------------|-----------|----------|----------|----------|-------|-------|-------|--------|
| 8/31/2016  | 876       | 379      |          |          |       |       |       |        |
| 10/26/2016 |           | 409      |          |          |       |       |       |        |
| 11/7/2016  | 1000      |          |          |          |       |       |       |        |
| 1/13/2017  | 827       |          |          |          |       |       |       |        |
| 1/27/2017  |           | 370      |          |          |       |       |       |        |
| 5/25/2017  |           | 351      |          |          |       |       |       |        |
| 6/3/2017   | 846       |          |          |          |       |       |       |        |
| 8/11/2017  |           | 322      |          |          |       |       |       |        |
| 10/2/2017  | 884       |          |          |          |       |       |       |        |
| 11/15/2017 | 838       | 350      |          |          |       |       |       |        |
| 6/5/2018   | 823       | 360      |          |          |       |       |       |        |
| 10/2/2018  |           | 363      |          |          |       |       |       |        |
| 10/5/2018  | 813       |          |          |          |       |       |       |        |
| 4/3/2019   | 785       | 369      |          |          |       |       |       |        |
| 6/17/2019  | 751       |          |          |          |       |       |       |        |
| 10/21/2019 | 771       | 357      |          |          |       |       |       |        |
| 1/3/2020   |           |          |          |          | 645   |       |       |        |
| 3/24/2020  |           | 355      |          |          |       |       |       |        |
| 3/25/2020  | 521       |          |          |          | 641   |       |       |        |
| 3/27/2020  |           |          |          |          |       | 482   |       |        |
| 5/22/2020  |           |          | 809      | 496      |       |       |       |        |
| 6/15/2020  |           |          |          |          |       |       | 674   |        |
| 6/16/2020  |           |          | 665      | 508      |       |       |       |        |
| 8/25/2020  |           |          | 772      | 505      |       |       |       |        |
| 9/18/2020  |           |          |          | 452      |       |       |       |        |
| 9/21/2020  |           |          | 956      |          |       |       |       |        |
| 9/25/2020  |           |          |          |          |       |       |       | 449    |
| 9/28/2020  | <10       | 176      |          |          | 272   | 272   | 392   |        |
| 11/11/2020 |           |          |          | 468      |       |       |       | 472    |
| 11/12/2020 |           |          | 694      |          |       |       |       |        |
| 12/16/2020 |           |          | 816      | 536      |       |       |       |        |



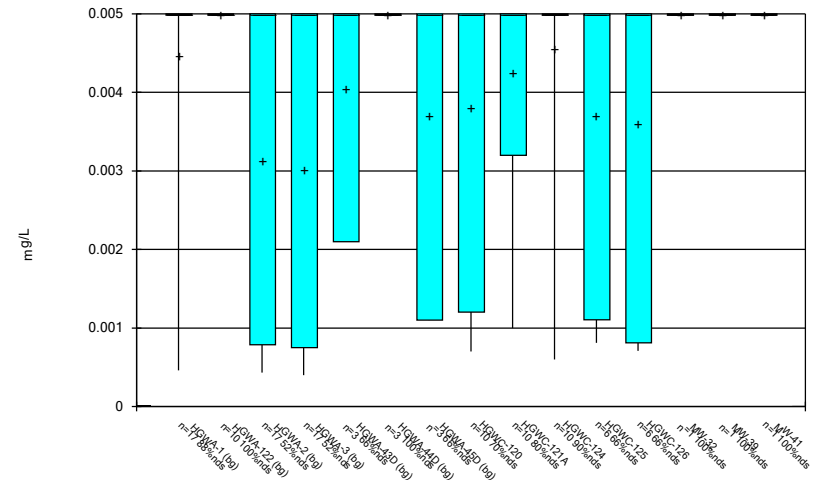
FIGURE B.

Box & Whiskers Plot



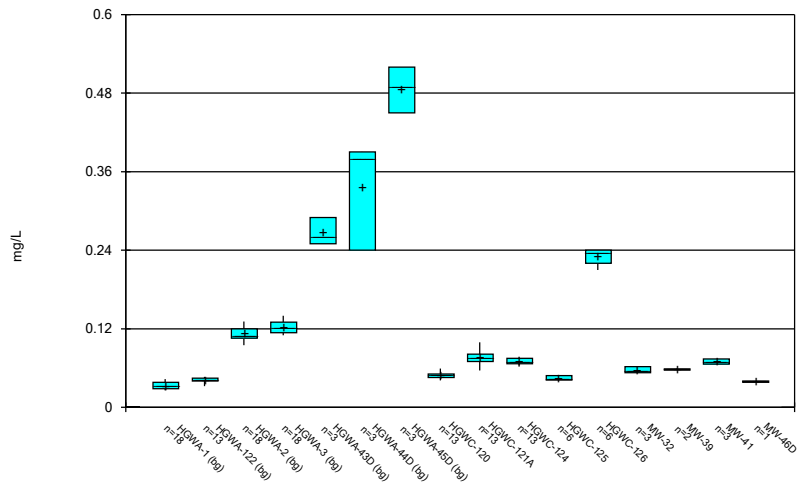
Constituent: Antimony Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



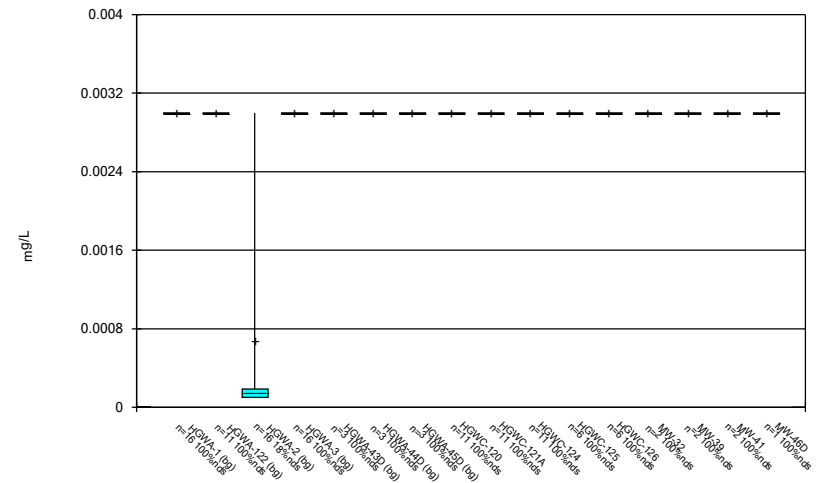
Constituent: Arsenic Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



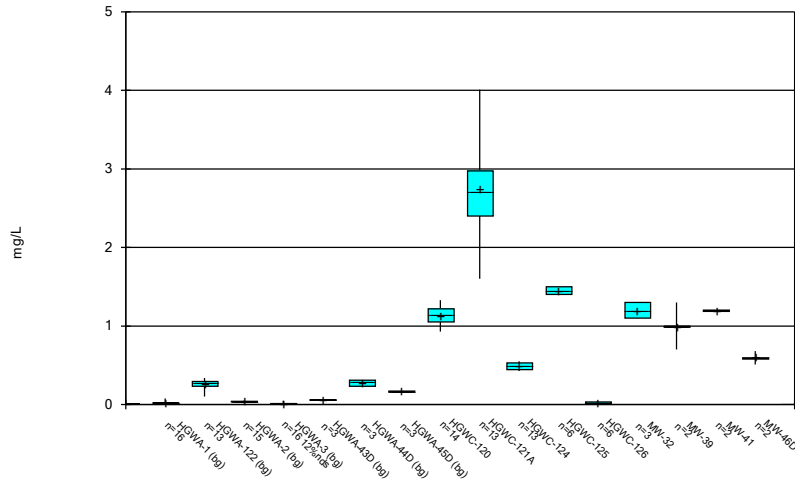
Constituent: Barium Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



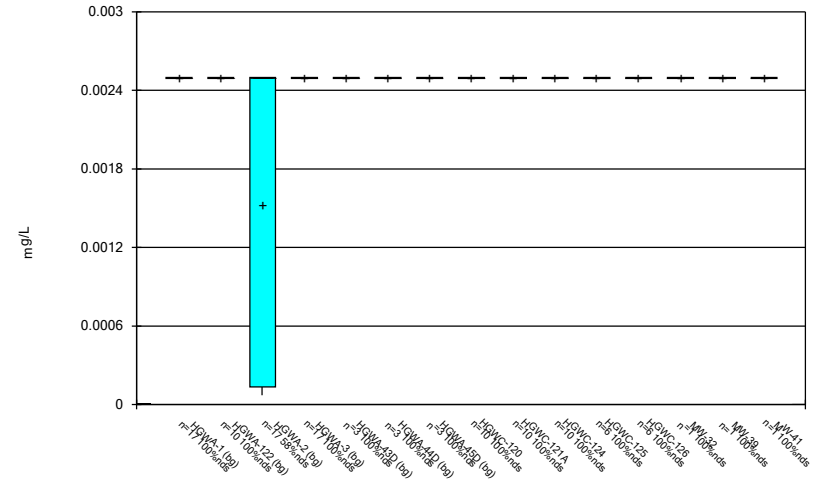
Constituent: Beryllium Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



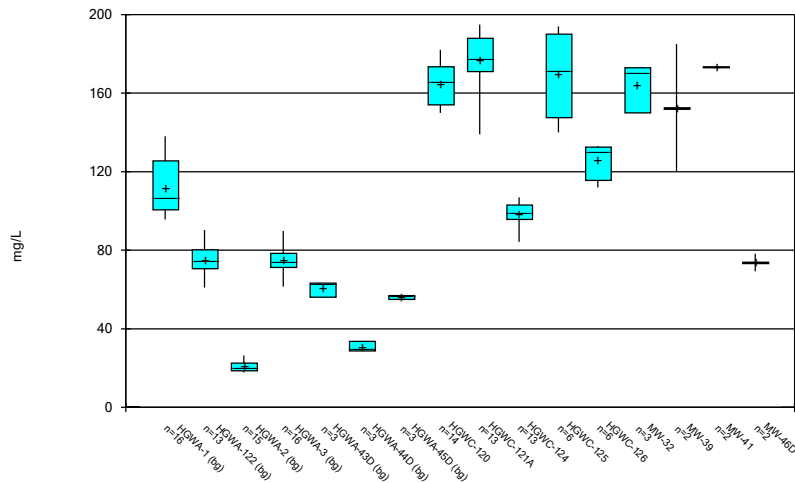
Constituent: Boron Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



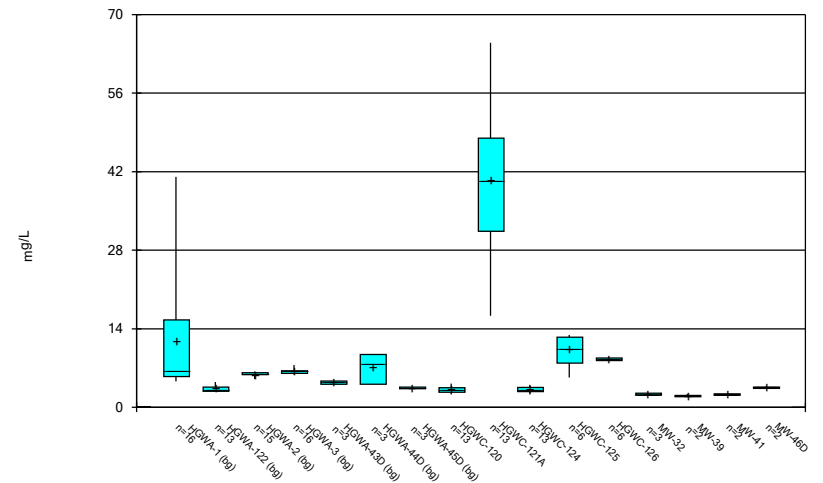
Constituent: Cadmium Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



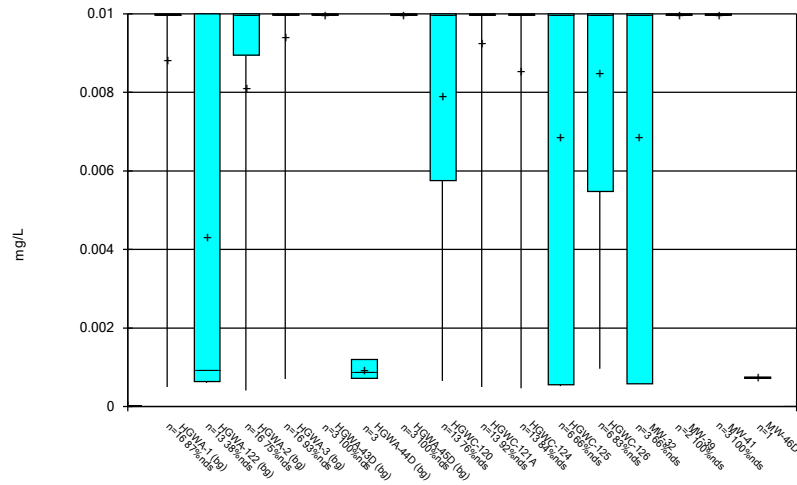
Constituent: Calcium Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



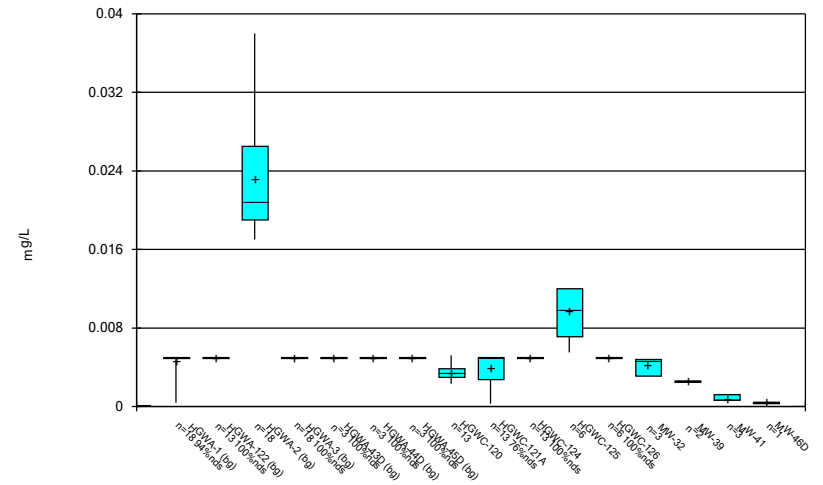
Constituent: Chloride Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



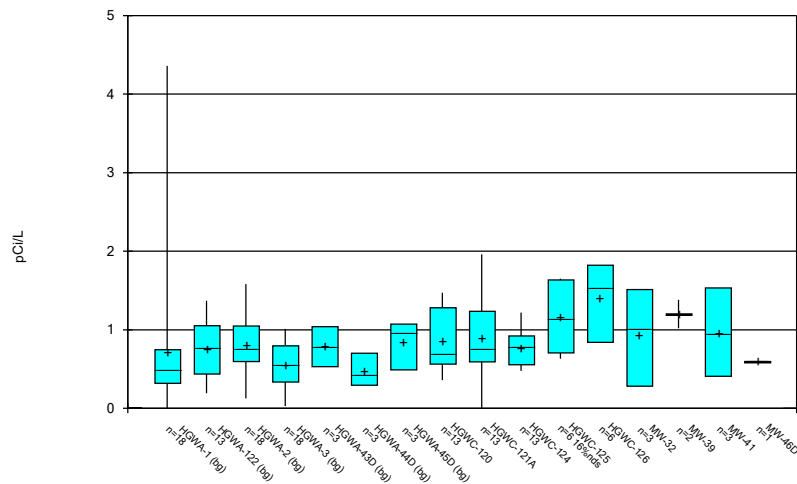
Constituent: Chromium Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



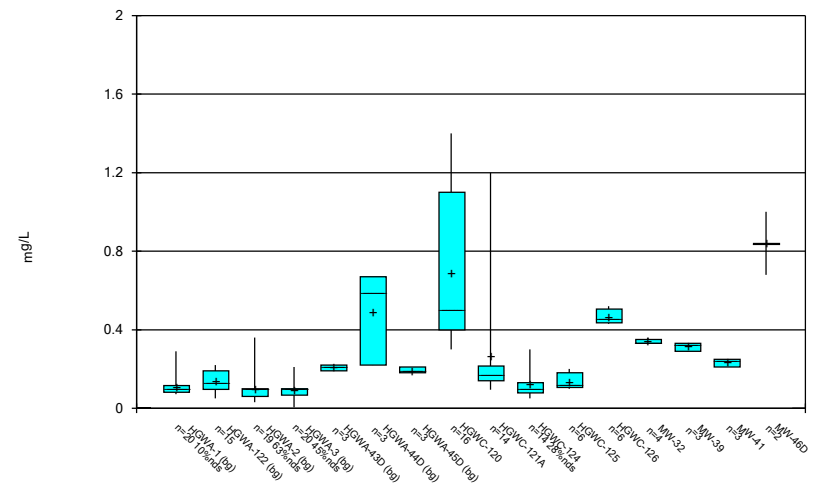
Constituent: Cobalt Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



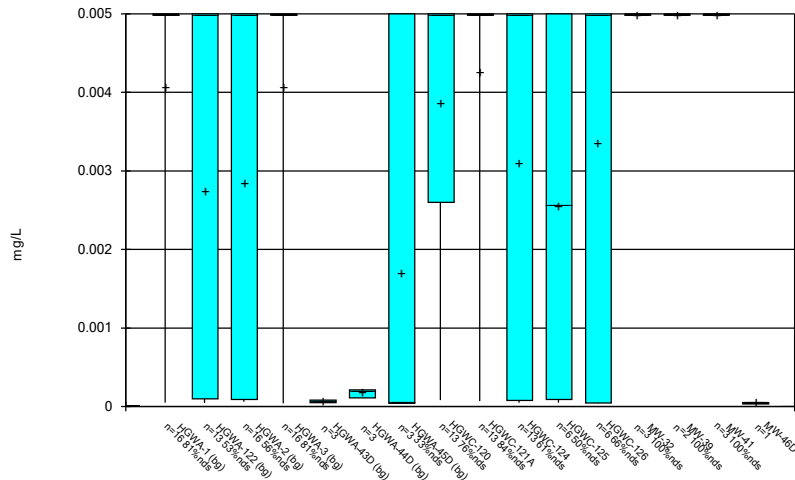
Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



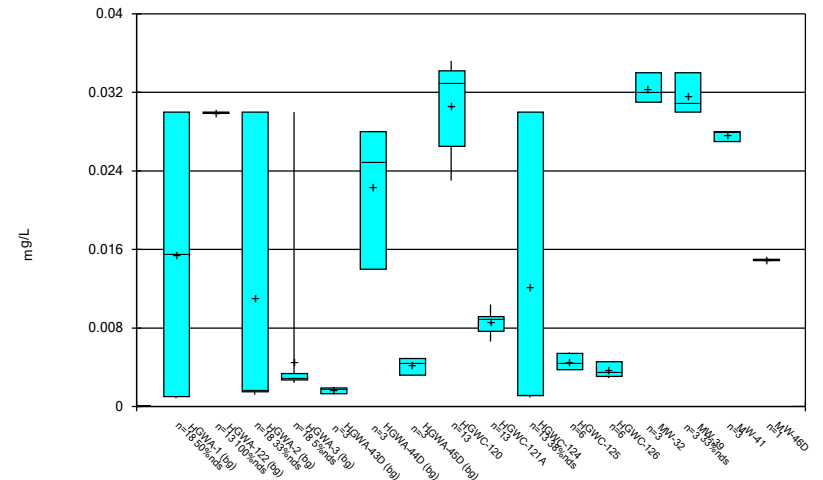
Constituent: Fluoride Analysis Run 2/16/2021 12:32 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



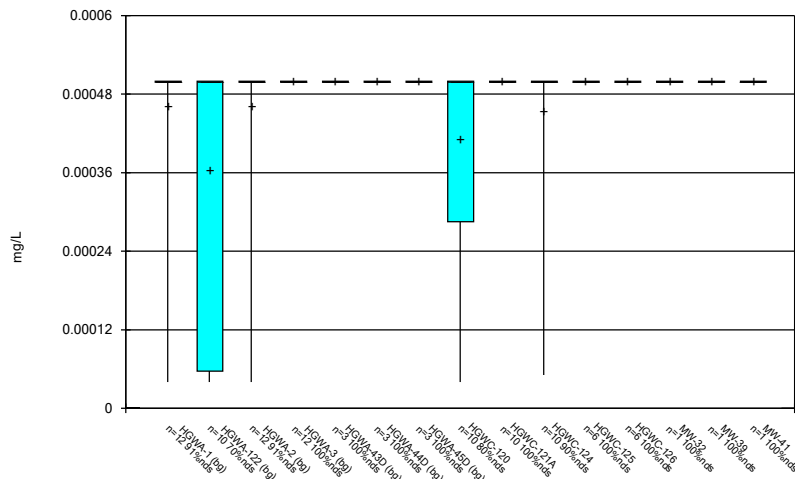
Constituent: Lead Analysis Run 2/16/2021 12:33 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



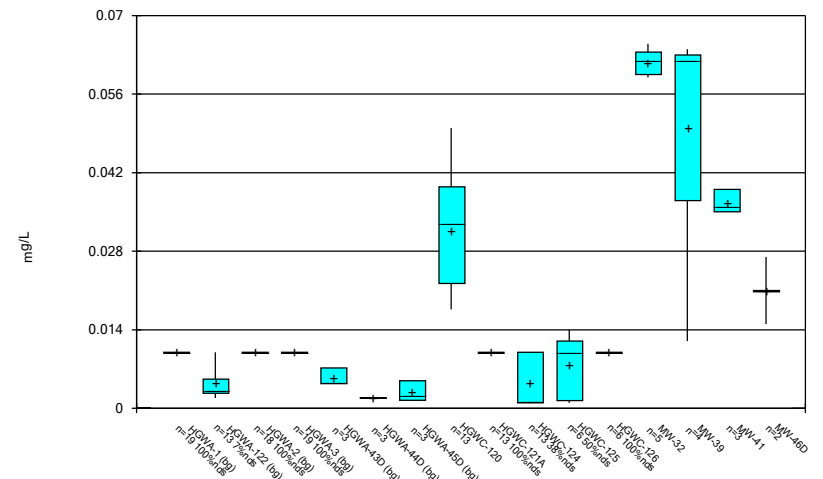
Constituent: Lithium Analysis Run 2/16/2021 12:33 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



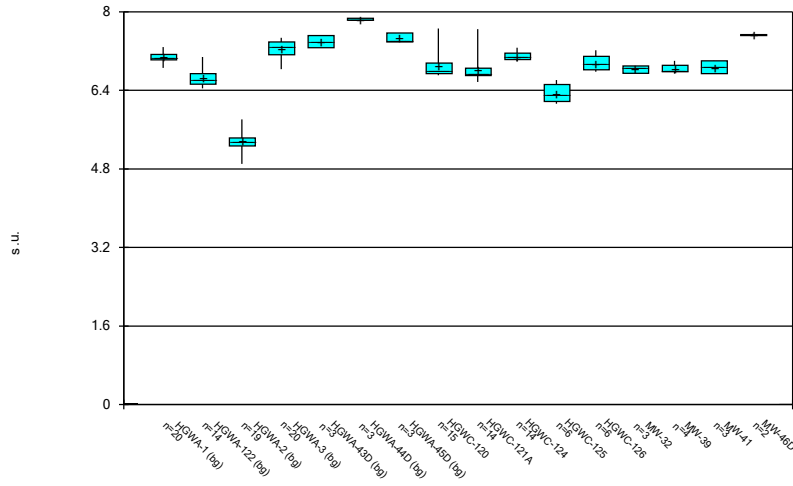
Constituent: Mercury Analysis Run 2/16/2021 12:33 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



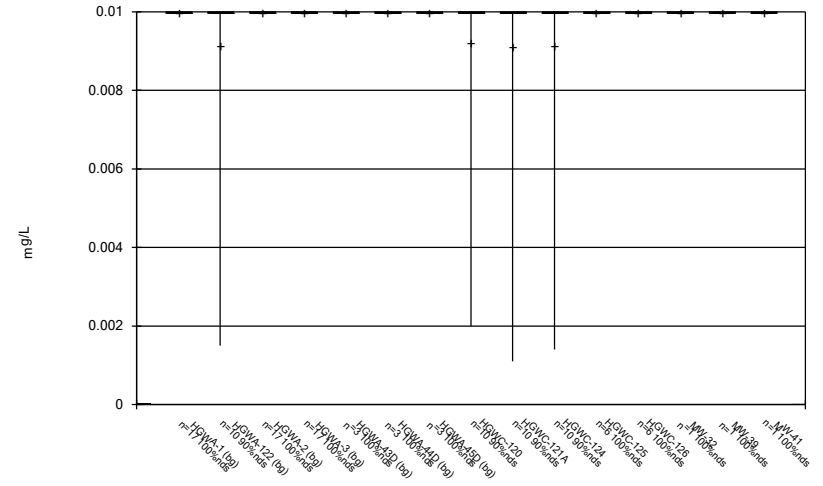
Constituent: Molybdenum Analysis Run 2/16/2021 12:33 PM View: Descriptive  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



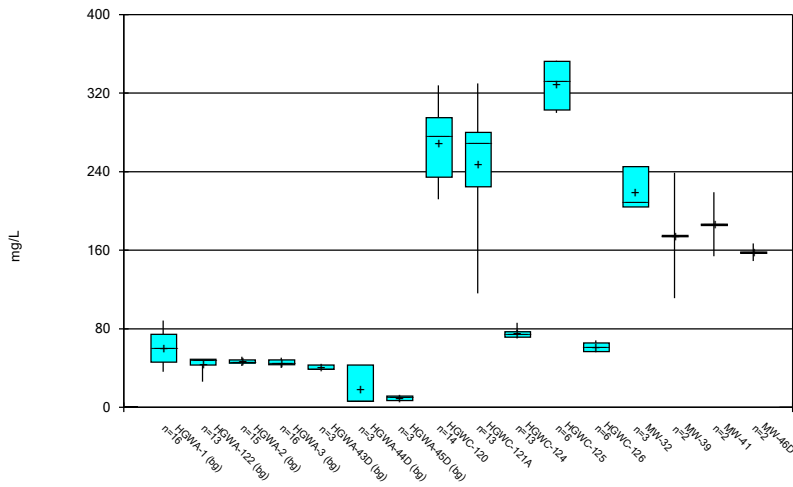
Constituent: pH Analysis Run 2/16/2021 12:33 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



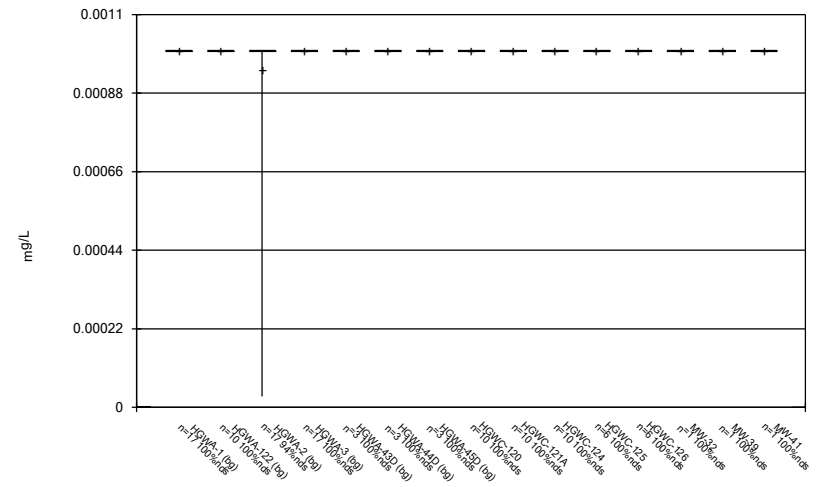
Constituent: Selenium Analysis Run 2/16/2021 12:33 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



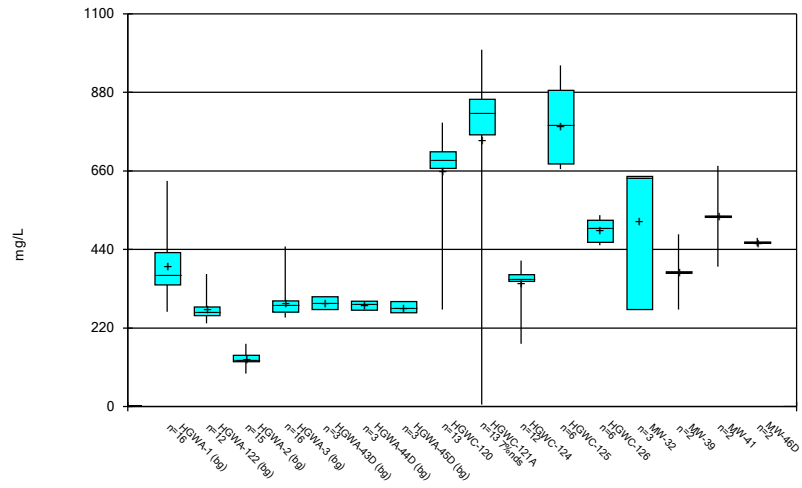
Constituent: Sulfate Analysis Run 2/16/2021 12:33 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Thallium Analysis Run 2/16/2021 12:33 PM View: Descriptive  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Box & Whiskers Plot



Constituent: Total Dissolved Solids    Analysis Run 2/16/2021 12:33 PM    View: Descriptive  
Plant Hammond    Client: Southern Company    Data: Hammond AP-3

FIGURE C.



# Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 12/16/2020, 10:30 PM

HQWA-122 Total Dissolved Solids (mg/L)

4/2/2019

814 (o)

FIGURE D.

# Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

| Constituent                   | Well      | Upper Lim. | Date       | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|-------------------------------|-----------|------------|------------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Boron (mg/L)                  | HGWC-120  | 0.336      | 9/21/2020  | 0.93    | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Boron (mg/L)                  | HGWC-121A | 0.336      | 9/28/2020  | 2.3     | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Boron (mg/L)                  | HGWC-124  | 0.336      | 9/28/2020  | 0.43    | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Boron (mg/L)                  | HGWC-125  | 0.336      | 12/16/2020 | 1.5     | Yes  | 69   | n/a     | n/a       | 2.899 | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Calcium (mg/L)                | HGWC-120  | 138        | 9/21/2020  | 152     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Calcium (mg/L)                | HGWC-121A | 138        | 9/28/2020  | 167     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Calcium (mg/L)                | HGWC-125  | 138        | 12/16/2020 | 194     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Sulfate (mg/L)                | HGWC-120  | 88.2       | 9/21/2020  | 225     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Sulfate (mg/L)                | HGWC-121A | 88.2       | 9/28/2020  | 182     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Sulfate (mg/L)                | HGWC-125  | 88.2       | 12/16/2020 | 306     | Yes  | 69   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004016 | NP Inter (normality) 1 of 2 |
| Total Dissolved Solids (mg/L) | HGWC-125  | 632        | 12/16/2020 | 816     | Yes  | 68   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004151 | NP Inter (normality) 1 of 2 |

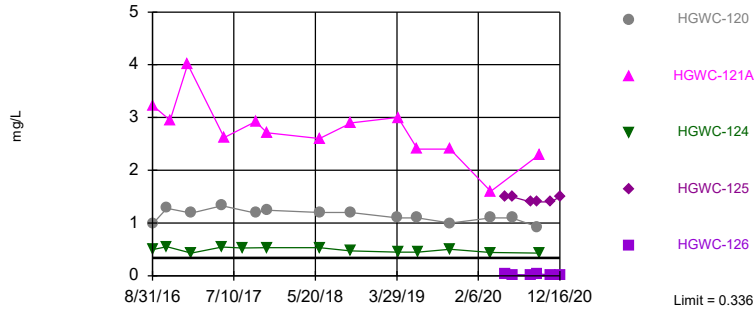
# Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

| Constituent                          | Well             | Upper Lim.   | Date              | Observ.     | Sig.       | Bg N      | Bg Mean    | Std. Dev.  | %NDs         | ND Adj.    | Transform  | Alpha            | Method                             |
|--------------------------------------|------------------|--------------|-------------------|-------------|------------|-----------|------------|------------|--------------|------------|------------|------------------|------------------------------------|
| <b>Boron (mg/L)</b>                  | <b>HGWC-120</b>  | <b>0.336</b> | <b>9/21/2020</b>  | <b>0.93</b> | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Boron (mg/L)</b>                  | <b>HGWC-121A</b> | <b>0.336</b> | <b>9/28/2020</b>  | <b>2.3</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Boron (mg/L)</b>                  | <b>HGWC-124</b>  | <b>0.336</b> | <b>9/28/2020</b>  | <b>0.43</b> | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Boron (mg/L)</b>                  | <b>HGWC-125</b>  | <b>0.336</b> | <b>12/16/2020</b> | <b>1.5</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>2.899</b> | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Boron (mg/L)                         | HGWC-126         | 0.336        | 12/16/2020        | 0.011J      | No         | 69        | n/a        | n/a        | 2.899        | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| <b>Calcium (mg/L)</b>                | <b>HGWC-120</b>  | <b>138</b>   | <b>9/21/2020</b>  | <b>152</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Calcium (mg/L)</b>                | <b>HGWC-121A</b> | <b>138</b>   | <b>9/28/2020</b>  | <b>167</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Calcium (mg/L)                       | HGWC-124         | 138          | 9/28/2020         | 107         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| <b>Calcium (mg/L)</b>                | <b>HGWC-125</b>  | <b>138</b>   | <b>12/16/2020</b> | <b>194</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Calcium (mg/L)                       | HGWC-126         | 138          | 12/16/2020        | 132         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-120         | 41.1         | 9/21/2020         | 2.4         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-121A        | 41.1         | 9/28/2020         | 23.2        | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-124         | 41.1         | 9/28/2020         | 2.5         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-125         | 41.1         | 12/16/2020        | 5.3         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Chloride (mg/L)                      | HGWC-126         | 41.1         | 12/16/2020        | 8.9         | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-120         | 0.67         | 9/21/2020         | 0.33        | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-121A        | 0.67         | 9/28/2020         | 0.15        | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-124         | 0.67         | 9/28/2020         | 0.1ND       | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-125         | 0.67         | 12/16/2020        | 0.2         | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| Fluoride (mg/L)                      | HGWC-126         | 0.67         | 12/16/2020        | 0.49        | No         | 83        | n/a        | n/a        | 27.71        | n/a        | n/a        | 0.0002807        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-120         | 7.87         | 9/21/2020         | 6.98        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-121A        | 7.87         | 9/28/2020         | 6.93        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-124         | 7.87         | 9/28/2020         | 7.27        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-125         | 7.87         | 12/16/2020        | 6.61        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| pH (s.u.)                            | HGWC-126         | 7.87         | 12/16/2020        | 6.93        | No         | 82        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0005738        | NP Inter (normality) 1 of 2        |
| <b>Sulfate (mg/L)</b>                | <b>HGWC-120</b>  | <b>88.2</b>  | <b>9/21/2020</b>  | <b>225</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>Sulfate (mg/L)</b>                | <b>HGWC-121A</b> | <b>88.2</b>  | <b>9/28/2020</b>  | <b>182</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Sulfate (mg/L)                       | HGWC-124         | 88.2         | 9/28/2020         | 86.2        | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| <b>Sulfate (mg/L)</b>                | <b>HGWC-125</b>  | <b>88.2</b>  | <b>12/16/2020</b> | <b>306</b>  | <b>Yes</b> | <b>69</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004016</b> | <b>NP Inter (normality) 1 of 2</b> |
| Sulfate (mg/L)                       | HGWC-126         | 88.2         | 12/16/2020        | 68.1        | No         | 69        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004016        | NP Inter (normality) 1 of 2        |
| Total Dissolved Solids (mg/L)        | HGWC-120         | 632          | 9/21/2020         | 272         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |
| Total Dissolved Solids (mg/L)        | HGWC-121A        | 632          | 9/28/2020         | 5ND         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |
| Total Dissolved Solids (mg/L)        | HGWC-124         | 632          | 9/28/2020         | 176         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |
| <b>Total Dissolved Solids (mg/L)</b> | <b>HGWC-125</b>  | <b>632</b>   | <b>12/16/2020</b> | <b>816</b>  | <b>Yes</b> | <b>68</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>     | <b>n/a</b> | <b>n/a</b> | <b>0.0004151</b> | <b>NP Inter (normality) 1 of 2</b> |
| Total Dissolved Solids (mg/L)        | HGWC-126         | 632          | 12/16/2020        | 536         | No         | 68        | n/a        | n/a        | 0            | n/a        | n/a        | 0.0004151        | NP Inter (normality) 1 of 2        |

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-124, HGWC-125

Prediction Limit  
Interwell Non-parametric

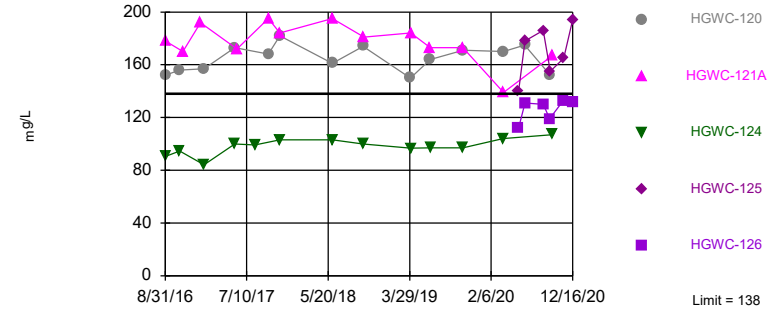


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 2.899% NDs. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 2/16/2021 12:36 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-125

Prediction Limit  
Interwell Non-parametric

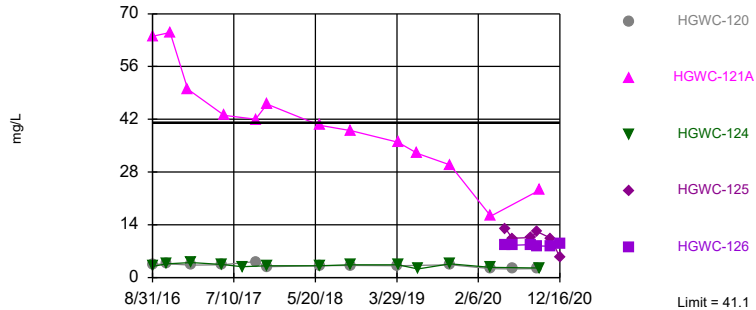


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Calcium Analysis Run 2/16/2021 12:36 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit  
Interwell Non-parametric

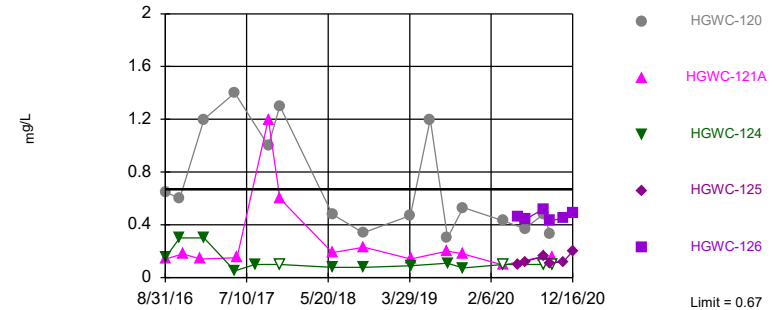


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride Analysis Run 2/16/2021 12:36 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit  
Interwell Non-parametric

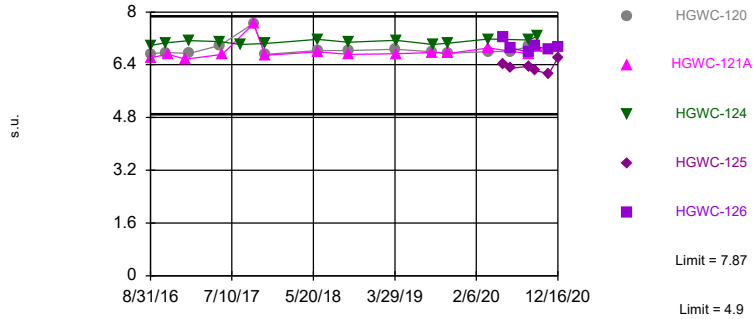


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 83 background values. 27.71% NDs. Annual per-constituent alpha = 0.002804. Individual comparison alpha = 0.0002807 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 2/16/2021 12:36 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limits

Prediction Limit  
Interwell Non-parametric

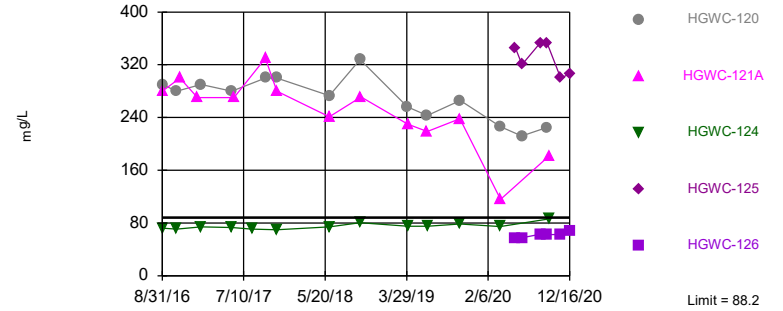


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 82 background values. Annual per-constituent alpha = 0.00573. Individual comparison alpha = 0.0005738 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 2/16/2021 12:36 PM View: PLS  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-125

Prediction Limit  
Interwell Non-parametric

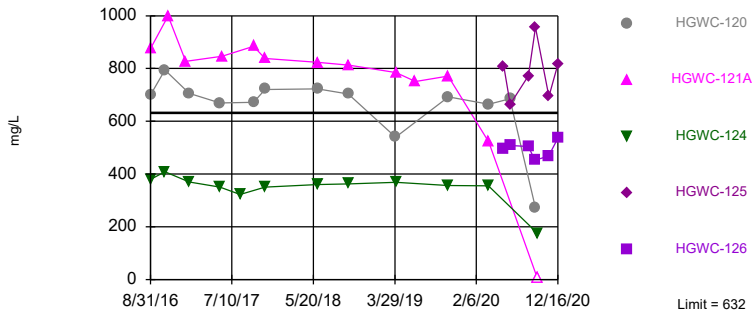


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 2/16/2021 12:36 PM View: PLS  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-125

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 68 background values. Annual per-constituent alpha = 0.004143. Individual comparison alpha = 0.0004151 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:36 PM View: PLS  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-122 (bg) | HGWC-124 | HGWC-121A | HGWC-120 | HGWC-125 | HGWC-126  |
|------------|-------------|-------------|-------------|---------------|----------|-----------|----------|----------|-----------|
| 5/19/2016  | 0.0214 (J)  | 0.0321 (J)  | <0.1        |               |          |           |          |          |           |
| 7/11/2016  | 0.0142 (J)  | 0.0337 (J)  |             |               |          |           |          |          |           |
| 7/12/2016  |             |             | 0.0074 (J)  |               |          |           |          |          |           |
| 8/30/2016  | 0.0074 (J)  | 0.0173 (J)  | <0.1        | 0.277         |          |           |          |          |           |
| 8/31/2016  |             |             |             |               | 0.494    | 3.23      | 0.981    |          |           |
| 10/19/2016 | 0.0224 (J)  | 0.0341 (J)  | 0.0085 (J)  |               |          |           |          |          |           |
| 10/20/2016 |             |             |             | 0.336         |          |           |          |          |           |
| 10/26/2016 |             |             |             |               | 0.55     |           | 1.28     |          |           |
| 11/7/2016  |             |             |             |               |          | 2.95      |          |          |           |
| 12/6/2016  | 0.0211 (J)  | 0.0326 (J)  | 0.0085 (J)  |               |          |           |          |          |           |
| 1/13/2017  |             |             |             |               |          | 4.01      |          |          |           |
| 1/24/2017  | 0.0165 (J)  | 0.0365 (J)  | 0.01 (J)    |               |          |           |          |          |           |
| 1/25/2017  |             |             |             | 0.274         |          |           |          |          |           |
| 1/27/2017  |             |             |             |               | 0.428    |           | 1.19     |          |           |
| 3/21/2017  | 0.0187 (J)  | 0.0349 (J)  | 0.0079 (J)  |               |          |           |          |          |           |
| 5/22/2017  | 0.0782      | 0.0475      | 0.0131 (J)  |               |          |           |          |          |           |
| 5/25/2017  |             |             |             | 0.298         | 0.544    |           | 1.33     |          |           |
| 6/3/2017   |             |             |             |               |          | 2.62      |          |          |           |
| 8/11/2017  |             |             |             | 0.285         | 0.524    |           |          |          |           |
| 10/2/2017  |             |             |             |               |          | 2.92      | 1.19     |          |           |
| 10/3/2017  | 0.0198 (J)  | 0.0386 (J)  | 0.0097 (J)  |               |          |           |          |          |           |
| 11/15/2017 |             |             |             | 0.322         | 0.531    | 2.71      | 1.24     |          |           |
| 6/4/2018   | 0.02 (J)    | 0.036 (J)   | 0.017 (J)   |               |          |           |          |          |           |
| 6/5/2018   |             |             |             | 0.24          | 0.53     | 2.6       | 1.2      |          |           |
| 10/1/2018  | 0.013 (J)   | 0.035 (J)   | 0.0061 (J)  |               |          |           |          |          |           |
| 10/2/2018  |             |             |             | 0.28          | 0.47     |           | 1.2      |          |           |
| 10/5/2018  |             |             |             |               |          | 2.9       |          |          |           |
| 4/1/2019   |             |             | 0.0066 (J)  |               |          |           |          |          |           |
| 4/2/2019   | 0.016 (J)   | 0.034 (J)   |             | 0.18          |          |           | 1.1      |          |           |
| 4/3/2019   |             |             |             |               | 0.45     | 3         |          |          |           |
| 6/17/2019  |             |             |             |               |          | 2.4       | 1.1      |          |           |
| 6/18/2019  |             |             |             | 0.25          | 0.45     |           |          |          |           |
| 9/23/2019  | 0.021 (J)   | 0.04 (J)    | 0.0081 (J)  |               |          |           |          |          |           |
| 10/21/2019 |             |             |             | 0.25          | 0.5      | 2.4       |          |          |           |
| 10/22/2019 |             |             |             |               |          |           | 1        |          |           |
| 3/24/2020  |             |             |             | 0.1           | 0.44     |           |          |          |           |
| 3/25/2020  | 0.025 (J)   | 0.039 (J)   | 0.0096 (J)  |               |          | 1.6       | 1.1      |          |           |
| 5/22/2020  |             |             |             |               |          |           |          | 1.5      | 0.026 (J) |
| 6/15/2020  |             |             |             |               |          |           | 1.1      |          |           |
| 6/16/2020  | 0.021 (J)   |             | 0.01 (J)    |               |          |           |          | 1.5      | 0.023 (J) |
| 8/25/2020  |             |             |             |               |          |           |          | 1.4      | 0.016 (J) |
| 9/15/2020  | 0.017 (J)   | 0.044 (J)   | 0.0071 (J)  | 0.22          |          |           |          |          |           |
| 9/16/2020  |             |             |             |               |          |           |          |          |           |
| 9/18/2020  |             |             |             |               |          |           |          |          | 0.041 (J) |
| 9/21/2020  |             |             |             |               |          |           | 0.93     | 1.4      |           |
| 9/25/2020  |             |             |             |               |          |           |          |          |           |
| 9/28/2020  |             |             |             |               | 0.43     | 2.3       |          |          |           |
| 11/10/2020 |             |             |             |               |          |           |          |          |           |
| 11/11/2020 |             |             |             |               |          |           |          |          | 0.009 (J) |
| 11/12/2020 |             |             |             |               |          |           | 1.4      |          |           |
| 12/15/2020 |             |             |             |               |          |           |          |          |           |
| 12/16/2020 |             |             |             |               |          |           | 1.5      |          | 0.011 (J) |

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 5/19/2016  |               |               |               |
| 7/11/2016  |               |               |               |
| 7/12/2016  |               |               |               |
| 8/30/2016  |               |               |               |
| 8/31/2016  |               |               |               |
| 10/19/2016 |               |               |               |
| 10/20/2016 |               |               |               |
| 10/26/2016 |               |               |               |
| 11/7/2016  |               |               |               |
| 12/6/2016  |               |               |               |
| 1/13/2017  |               |               |               |
| 1/24/2017  |               |               |               |
| 1/25/2017  |               |               |               |
| 1/27/2017  |               |               |               |
| 3/21/2017  |               |               |               |
| 5/22/2017  |               |               |               |
| 5/25/2017  |               |               |               |
| 6/3/2017   |               |               |               |
| 8/11/2017  |               |               |               |
| 10/2/2017  |               |               |               |
| 10/3/2017  |               |               |               |
| 11/15/2017 |               |               |               |
| 6/4/2018   |               |               |               |
| 6/5/2018   |               |               |               |
| 10/1/2018  |               |               |               |
| 10/2/2018  |               |               |               |
| 10/5/2018  |               |               |               |
| 4/1/2019   |               |               |               |
| 4/2/2019   |               |               |               |
| 4/3/2019   |               |               |               |
| 6/17/2019  |               |               |               |
| 6/18/2019  |               |               |               |
| 9/23/2019  |               |               |               |
| 10/21/2019 |               |               |               |
| 10/22/2019 |               |               |               |
| 3/24/2020  |               |               |               |
| 3/25/2020  |               |               |               |
| 5/22/2020  |               |               |               |
| 6/15/2020  |               |               |               |
| 6/16/2020  |               |               |               |
| 8/25/2020  |               |               |               |
| 9/15/2020  |               |               |               |
| 9/16/2020  | 0.061 (J)     | 0.23          |               |
| 9/18/2020  |               |               |               |
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 0.16          |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 0.057 (J)     | 0.29          |               |
| 11/11/2020 |               |               | 0.17          |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 0.052 (J)     | 0.31          |               |
| 12/16/2020 |               |               | 0.16          |





# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 5/19/2016  |               |               |               |
| 7/11/2016  |               |               |               |
| 7/12/2016  |               |               |               |
| 8/30/2016  |               |               |               |
| 8/31/2016  |               |               |               |
| 10/19/2016 |               |               |               |
| 10/20/2016 |               |               |               |
| 10/26/2016 |               |               |               |
| 11/7/2016  |               |               |               |
| 12/6/2016  |               |               |               |
| 1/13/2017  |               |               |               |
| 1/24/2017  |               |               |               |
| 1/25/2017  |               |               |               |
| 1/27/2017  |               |               |               |
| 3/21/2017  |               |               |               |
| 5/22/2017  |               |               |               |
| 5/25/2017  |               |               |               |
| 6/3/2017   |               |               |               |
| 8/11/2017  |               |               |               |
| 10/2/2017  |               |               |               |
| 10/3/2017  |               |               |               |
| 11/15/2017 |               |               |               |
| 6/4/2018   |               |               |               |
| 6/5/2018   |               |               |               |
| 10/1/2018  |               |               |               |
| 10/2/2018  |               |               |               |
| 10/5/2018  |               |               |               |
| 4/1/2019   |               |               |               |
| 4/2/2019   |               |               |               |
| 4/3/2019   |               |               |               |
| 6/17/2019  |               |               |               |
| 6/18/2019  |               |               |               |
| 9/23/2019  |               |               |               |
| 10/21/2019 |               |               |               |
| 10/22/2019 |               |               |               |
| 3/24/2020  |               |               |               |
| 3/25/2020  |               |               |               |
| 5/22/2020  |               |               |               |
| 6/15/2020  |               |               |               |
| 6/16/2020  |               |               |               |
| 8/25/2020  |               |               |               |
| 9/15/2020  |               |               |               |
| 9/16/2020  | 56            | 30            |               |
| 9/18/2020  |               |               |               |
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 56.8          |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 63.3          | 33.6          |               |
| 11/11/2020 |               |               | 54.9          |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 62.6          | 28.7          |               |
| 12/16/2020 |               |               | 56.4          |

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-3 (bg) | HGWA-2 (bg) | HGWA-122 (bg) | HGWC-124 | HGWC-121A | HGWC-120 | HGWC-125 | HGWC-126 |
|------------|-------------|-------------|-------------|---------------|----------|-----------|----------|----------|----------|
| 5/19/2016  | 9.94        | 5.93        | 6.14        |               |          |           |          |          |          |
| 7/11/2016  | 6.3         |             | 5.9         |               |          |           |          |          |          |
| 7/12/2016  |             | 6.2         |             |               |          |           |          |          |          |
| 8/30/2016  | 6           | 6.4         | 6.2         | 2.8           |          |           |          |          |          |
| 8/31/2016  |             |             |             |               | 3        | 64        | 3.5      |          |          |
| 10/19/2016 | 5.8         | 6.5         | 6.1         |               |          |           |          |          |          |
| 10/20/2016 |             |             |             | 2.8           |          |           |          |          |          |
| 10/26/2016 |             |             |             |               | 3.6      |           | 3.6      |          |          |
| 11/7/2016  |             |             |             |               |          | 65        |          |          |          |
| 12/6/2016  | 5.4         | 7.2         | 6           |               |          |           |          |          |          |
| 1/13/2017  |             |             |             |               |          | 50        |          |          |          |
| 1/24/2017  | 5.2         | 6.4         | 6.1         |               |          |           |          |          |          |
| 1/25/2017  |             |             |             | 2.8           |          |           |          |          |          |
| 1/27/2017  |             |             |             |               | 4        |           | 3.3      |          |          |
| 3/21/2017  | 4.6         | 7.5         | 5.9         |               |          |           |          |          |          |
| 5/22/2017  | 4.6         | 6.5         | 5.9         |               |          |           |          |          |          |
| 5/25/2017  |             |             |             | 2.9           | 3.5      |           | 3.4      |          |          |
| 6/3/2017   |             |             |             |               |          | 43        |          |          |          |
| 8/11/2017  |             |             |             | 3             | 2.9      |           |          |          |          |
| 10/2/2017  |             |             |             |               |          | 42        | 4.2      |          |          |
| 10/3/2017  | 5.6         | 6.5         | 6.3         |               |          |           |          |          |          |
| 11/15/2017 |             |             |             | 3.1           | 3.1      | 46        | 2.9      |          |          |
| 6/4/2018   | 13.1        | 6.3         | 6.1         |               |          |           |          |          |          |
| 6/5/2018   |             |             |             | 3             | 3.1      | 40.4      | 3.1      |          |          |
| 10/1/2018  | 6.6         | 6.4         | 6.4         |               |          |           |          |          |          |
| 10/2/2018  |             |             |             | 3.1           | 3.4      |           | 3.2      |          |          |
| 10/5/2018  |             |             |             |               |          | 39        |          |          |          |
| 4/1/2019   |             | 6.5         |             |               |          |           |          |          |          |
| 4/2/2019   | 20.3        |             | 5.8         | 3.6           |          |           | 3.1      |          |          |
| 4/3/2019   |             |             |             |               | 3.4      | 35.9      |          |          |          |
| 6/17/2019  |             |             |             |               |          | 32.9      |          |          |          |
| 6/18/2019  |             |             |             | 3.2           | 2.3 (J)  |           |          |          |          |
| 9/23/2019  | 17.7        | 5.9         | 5.1         |               |          |           |          |          |          |
| 10/21/2019 |             |             |             | 4.5           | 3.6      | 29.9      |          |          |          |
| 10/22/2019 |             |             |             |               |          |           | 3.4      |          |          |
| 3/24/2020  |             |             |             | 4.5           | 2.7      |           |          |          |          |
| 3/25/2020  | 20.4        | 6.1         | 5.2         |               |          | 16.3      | 2.4      |          |          |
| 5/22/2020  |             |             |             |               |          |           |          | 12.9     | 8.6      |
| 6/15/2020  |             |             |             |               |          |           | 2.3      |          |          |
| 6/16/2020  | 41.1        | 5.8         |             |               |          |           |          | 10.4     | 8.6      |
| 8/25/2020  |             |             |             |               |          |           |          | 10.6     | 8.7      |
| 9/15/2020  | 13.4        | 6           | 5           | 3.6           |          |           |          |          |          |
| 9/16/2020  |             |             |             |               |          |           |          |          |          |
| 9/18/2020  |             |             |             |               |          |           |          |          | 8.4      |
| 9/21/2020  |             |             |             |               |          |           | 2.4      | 12.1     |          |
| 9/25/2020  |             |             |             |               |          |           |          |          |          |
| 9/28/2020  |             |             |             |               | 2.5      | 23.2      |          |          |          |
| 11/10/2020 |             |             |             |               |          |           |          |          |          |
| 11/11/2020 |             |             |             |               |          |           |          |          | 8.3      |
| 11/12/2020 |             |             |             |               |          |           |          | 10.4     |          |
| 12/15/2020 |             |             |             |               |          |           |          |          |          |
| 12/16/2020 |             |             |             |               |          |           | 5.3      |          | 8.9      |

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 5/19/2016  |               |               |               |
| 7/11/2016  |               |               |               |
| 7/12/2016  |               |               |               |
| 8/30/2016  |               |               |               |
| 8/31/2016  |               |               |               |
| 10/19/2016 |               |               |               |
| 10/20/2016 |               |               |               |
| 10/26/2016 |               |               |               |
| 11/7/2016  |               |               |               |
| 12/6/2016  |               |               |               |
| 1/13/2017  |               |               |               |
| 1/24/2017  |               |               |               |
| 1/25/2017  |               |               |               |
| 1/27/2017  |               |               |               |
| 3/21/2017  |               |               |               |
| 5/22/2017  |               |               |               |
| 5/25/2017  |               |               |               |
| 6/3/2017   |               |               |               |
| 8/11/2017  |               |               |               |
| 10/2/2017  |               |               |               |
| 10/3/2017  |               |               |               |
| 11/15/2017 |               |               |               |
| 6/4/2018   |               |               |               |
| 6/5/2018   |               |               |               |
| 10/1/2018  |               |               |               |
| 10/2/2018  |               |               |               |
| 10/5/2018  |               |               |               |
| 4/1/2019   |               |               |               |
| 4/2/2019   |               |               |               |
| 4/3/2019   |               |               |               |
| 6/17/2019  |               |               |               |
| 6/18/2019  |               |               |               |
| 9/23/2019  |               |               |               |
| 10/21/2019 |               |               |               |
| 10/22/2019 |               |               |               |
| 3/24/2020  |               |               |               |
| 3/25/2020  |               |               |               |
| 5/22/2020  |               |               |               |
| 6/15/2020  |               |               |               |
| 6/16/2020  |               |               |               |
| 8/25/2020  |               |               |               |
| 9/15/2020  |               |               |               |
| 9/16/2020  | 4.1           | 4.1           |               |
| 9/18/2020  |               |               |               |
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 3.6           |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 4.4           | 7.8           |               |
| 11/11/2020 |               |               | 3.3           |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 4.7           | 9.4           |               |
| 12/16/2020 |               |               | 3.4           |

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-122 (bg) | HGWC-120 | HGWC-124  | HGWC-121A | HGWC-126 | HGWC-125 |
|------------|-------------|-------------|-------------|---------------|----------|-----------|-----------|----------|----------|
| 5/19/2016  | 0.105 (J)   | 0.0303 (J)  | 0.0513 (J)  |               |          |           |           |          |          |
| 7/11/2016  | 0.16 (J)    | 0.05 (J)    |             |               |          |           |           |          |          |
| 7/12/2016  |             |             | 0.12 (J)    |               |          |           |           |          |          |
| 8/30/2016  | 0.09 (J)    | 0.06 (J)    | 0.09 (J)    | 0.19 (J)      |          |           |           |          |          |
| 8/31/2016  |             |             |             |               | 0.65     | 0.15 (J)  | 0.14 (J)  |          |          |
| 10/19/2016 | 0.1 (J)     | 0.04 (J)    | 0.1 (J)     |               |          |           |           |          |          |
| 10/20/2016 |             |             |             | 0.13 (J)      |          |           |           |          |          |
| 10/26/2016 |             |             |             |               | 0.6      | 0.3       |           |          |          |
| 11/7/2016  |             |             |             |               |          |           | 0.18 (J)  |          |          |
| 12/6/2016  | 0.11 (J)    | 0.36        | 0.21 (J)    |               |          |           |           |          |          |
| 1/13/2017  |             |             |             |               |          |           | 0.14 (J)  |          |          |
| 1/24/2017  | 0.09 (J)    | <0.1        | 0.06 (J)    |               |          |           |           |          |          |
| 1/25/2017  |             |             |             | 0.22 (J)      |          |           |           |          |          |
| 1/27/2017  |             |             |             |               | 1.2      | 0.3       |           |          |          |
| 3/21/2017  | 0.13 (J)    | <0.1        | 0.005 (J)   |               |          |           |           |          |          |
| 5/22/2017  | 0.12 (J)    | <0.1        | 0.05 (J)    |               |          |           |           |          |          |
| 5/25/2017  |             |             |             | 0.12 (J)      | 1.4      | 0.05 (J)  |           |          |          |
| 6/3/2017   |             |             |             |               |          |           | 0.15 (J)  |          |          |
| 8/11/2017  |             |             |             | 0.12 (J)      |          | 0.1 (J)   |           |          |          |
| 10/2/2017  |             |             |             |               | 1        |           | 1.2       |          |          |
| 10/3/2017  | 0.13 (J)    | <0.1        | 0.13 (J)    |               |          |           |           |          |          |
| 11/15/2017 |             |             |             | 0.05 (J)      | 1.3      | <0.1      | 0.6       |          |          |
| 4/2/2018   | <0.1        | <0.1        |             |               |          |           |           |          |          |
| 4/3/2018   |             |             | <0.1        |               |          |           |           |          |          |
| 6/4/2018   | 0.074 (J)   | <0.1        | <0.1        |               |          |           |           |          |          |
| 6/5/2018   |             |             |             | 0.15 (J)      | 0.48     | 0.078 (J) | 0.19 (J)  |          |          |
| 10/1/2018  | <0.1        | <0.1        | <0.1        |               |          |           |           |          |          |
| 10/2/2018  |             |             |             | 0.22 (J)      | 0.34     | 0.078 (J) |           |          |          |
| 10/5/2018  |             |             |             |               |          |           | 0.23 (J)  |          |          |
| 3/12/2019  | 0.29 (J)    | 0.038 (J)   | 0.072 (J)   |               |          |           |           |          |          |
| 4/1/2019   |             |             | 0.029 (J)   |               |          |           |           |          |          |
| 4/2/2019   | 0.1 (J)     | 0.071 (J)   |             | 0.2 (J)       | 0.47     |           |           |          |          |
| 4/3/2019   |             |             |             |               |          | 0.089 (J) | 0.14 (J)  |          |          |
| 6/17/2019  |             |             |             |               | 1.2      |           |           |          |          |
| 6/18/2019  |             |             |             | 0.14 (J)      |          |           |           |          |          |
| 8/22/2019  |             |             |             | 0.12 (J)      | 0.3 (J)  |           | 0.2 (J)   |          |          |
| 8/23/2019  |             |             |             |               |          | 0.11 (J)  |           |          |          |
| 9/23/2019  | 0.078 (J)   | <0.1        | <0.1        |               |          |           |           |          |          |
| 10/21/2019 |             |             |             | 0.15 (J)      |          | 0.073 (J) | 0.18 (J)  |          |          |
| 10/22/2019 |             |             |             |               | 0.53     |           |           |          |          |
| 3/2/2020   | 0.076 (J)   | <0.1        | <0.1        |               |          |           |           |          |          |
| 3/24/2020  |             |             |             | 0.085 (J)     |          | <0.1      |           |          |          |
| 3/25/2020  | 0.098 (J)   | <0.1        | <0.1        |               | 0.43     |           | 0.095 (J) |          |          |
| 5/22/2020  |             |             |             |               |          |           |           | 0.46     | 0.1 (J)  |
| 6/15/2020  |             |             |             |               | 0.37     |           |           |          |          |
| 6/16/2020  | 0.071 (J)   |             | <0.1        |               |          |           | 0.44      | 0.12     |          |
| 8/24/2020  |             |             |             | 0.075 (J)     |          |           |           |          |          |
| 8/25/2020  |             | <0.1        | <0.1        |               |          |           | 0.52      | 0.16     |          |
| 8/26/2020  |             |             |             |               | 0.48     |           | 0.16      |          |          |
| 8/27/2020  |             |             |             |               |          | <0.1      |           |          |          |
| 8/28/2020  | 0.08 (J)    |             |             |               |          |           |           |          |          |
| 9/15/2020  | 0.082 (J)   | <0.1        | <0.1        | 0.096 (J)     |          |           |           |          |          |



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

HGWA-43D (bg) HGWA-44D (bg) HGWA-45D (bg)

5/19/2016  
7/11/2016  
7/12/2016  
8/30/2016  
8/31/2016  
10/19/2016  
10/20/2016  
10/26/2016  
11/7/2016  
12/6/2016  
1/13/2017  
1/24/2017  
1/25/2017  
1/27/2017  
3/21/2017  
5/22/2017  
5/25/2017  
6/3/2017  
8/11/2017  
10/2/2017  
10/3/2017  
11/15/2017  
4/2/2018  
4/3/2018  
6/4/2018  
6/5/2018  
10/1/2018  
10/2/2018  
10/5/2018  
3/12/2019  
4/1/2019  
4/2/2019  
4/3/2019  
6/17/2019  
6/18/2019  
8/22/2019  
8/23/2019  
9/23/2019  
10/21/2019  
10/22/2019  
3/2/2020  
3/24/2020  
3/25/2020  
5/22/2020  
6/15/2020  
6/16/2020  
8/24/2020  
8/25/2020  
8/26/2020  
8/27/2020  
8/28/2020  
9/15/2020

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 9/16/2020  | 0.22          | 0.22          |               |
| 9/18/2020  |               |               |               |
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 0.21          |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 0.19          | 0.59          |               |
| 11/11/2020 |               |               | 0.19          |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 0.21          | 0.67          |               |
| 12/16/2020 |               |               | 0.18          |



# Prediction Limit

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-122 (bg) | HGWC-121A | HGWC-124 | HGWC-120 | HGWC-126 | HGWC-125 |
|------------|-------------|-------------|-------------|---------------|-----------|----------|----------|----------|----------|
| 5/19/2016  | 7.27        | 5.81        | 7.45        |               |           |          |          |          |          |
| 7/11/2016  | 7.06        | 5.68        |             |               |           |          |          |          |          |
| 7/12/2016  |             |             | 7.32        |               |           |          |          |          |          |
| 8/30/2016  | 7.28        | 5.63        | 7.43        | 6.75          |           |          |          |          |          |
| 8/31/2016  |             |             |             |               | 6.62      | 6.99     | 6.73     |          |          |
| 10/19/2016 | 7.02        | 5.46        | 7.03        |               |           |          |          |          |          |
| 10/20/2016 |             |             |             | 6.73          |           |          |          |          |          |
| 10/27/2016 |             |             |             |               |           | 7.06     | 6.77     |          |          |
| 11/7/2016  |             |             |             |               | 6.71      |          |          |          |          |
| 12/6/2016  | 7.09        | 5.38        | 7.08        |               |           |          |          |          |          |
| 1/13/2017  |             |             |             |               | 6.57      |          |          |          |          |
| 1/24/2017  | 7.2         | 5.37        | 7.39        |               |           |          |          |          |          |
| 1/25/2017  |             |             |             | 6.88          |           |          |          |          |          |
| 1/27/2017  |             |             |             |               |           | 7.13     | 6.74     |          |          |
| 3/21/2017  | 7.01        | 4.9         | 6.83        |               |           |          |          |          |          |
| 5/22/2017  | 7.11        | 5.2         | 7.02        |               |           |          |          |          |          |
| 5/25/2017  |             |             |             | 6.55          |           | 7.1      | 6.99     |          |          |
| 6/3/2017   |             |             |             |               | 6.71      |          |          |          |          |
| 8/11/2017  |             |             |             | 6.56          |           | 7.02     |          |          |          |
| 10/2/2017  |             |             |             |               | 7.65      |          | 7.66     |          |          |
| 10/3/2017  | 7.21        | 5.3         | 7.47        |               |           |          |          |          |          |
| 11/15/2017 |             |             |             | 6.47          | 6.69      | 7.04     | 6.71     |          |          |
| 4/2/2018   | 7.1         | 5.4         |             |               |           |          |          |          |          |
| 4/3/2018   |             |             | 7.38        |               |           |          |          |          |          |
| 6/4/2018   | 7.06        | 5.27        | 7.38        |               |           |          |          |          |          |
| 6/5/2018   |             |             |             | 6.66          | 6.79      | 7.17     | 6.83     |          |          |
| 10/1/2018  | 7.09        | 5.31        | 7.13        |               |           |          |          |          |          |
| 10/2/2018  |             |             |             | 6.44          |           | 7.08     | 6.83     |          |          |
| 10/5/2018  |             |             |             |               | 6.71      |          |          |          |          |
| 3/12/2019  | 7.03        | 5.42        | 7.29        |               |           |          |          |          |          |
| 4/1/2019   |             |             | 7.16        |               |           |          |          |          |          |
| 4/2/2019   | 6.86        | 5.41        |             | 6.57          |           |          | 6.87     |          |          |
| 4/3/2019   |             |             |             |               | 6.73      | 7.14     |          |          |          |
| 8/22/2019  |             |             |             | 6.51          | 6.77      |          | 6.79     |          |          |
| 8/23/2019  |             |             |             |               |           | 7.02     |          |          |          |
| 9/23/2019  | 7.02        | 5.33        | 7.3         |               |           |          |          |          |          |
| 10/21/2019 |             |             |             | 6.69          | 6.74      | 7.05     |          |          |          |
| 10/22/2019 |             |             |             |               |           |          | 6.74     |          |          |
| 3/2/2020   | 7.1         | 5.43        | 7.12        |               |           |          |          |          |          |
| 3/24/2020  |             |             |             | 7.08          |           | 7.18     |          |          |          |
| 3/25/2020  | 6.95        | 5.36        | 7.4         |               | 6.91      |          | 6.8      |          |          |
| 5/22/2020  |             |             |             |               |           |          |          | 7.22     | 6.43     |
| 6/15/2020  |             |             |             |               |           |          | 6.8      |          |          |
| 6/16/2020  | 6.97        |             | 7.31        |               |           |          |          | 6.92     | 6.29     |
| 8/24/2020  |             |             |             | 6.54          |           |          |          |          |          |
| 8/25/2020  |             | 5.17        | 7.14        |               |           |          |          | 6.78     | 6.36     |
| 8/26/2020  |             |             |             |               | 6.73      |          | 6.96     |          |          |
| 8/27/2020  |             |             |             |               |           | 7.15     |          |          |          |
| 8/28/2020  | 7.02        |             |             |               |           |          |          |          |          |
| 9/15/2020  | 7.15        | 5.22        | 7.29        | 6.68          |           |          |          |          |          |
| 9/16/2020  |             |             |             |               |           |          |          |          |          |
| 9/18/2020  |             |             |             |               |           |          | 6.97     |          |          |



# Prediction Limit

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 5/19/2016  |               |               |               |
| 7/11/2016  |               |               |               |
| 7/12/2016  |               |               |               |
| 8/30/2016  |               |               |               |
| 8/31/2016  |               |               |               |
| 10/19/2016 |               |               |               |
| 10/20/2016 |               |               |               |
| 10/27/2016 |               |               |               |
| 11/7/2016  |               |               |               |
| 12/6/2016  |               |               |               |
| 1/13/2017  |               |               |               |
| 1/24/2017  |               |               |               |
| 1/25/2017  |               |               |               |
| 1/27/2017  |               |               |               |
| 3/21/2017  |               |               |               |
| 5/22/2017  |               |               |               |
| 5/25/2017  |               |               |               |
| 6/3/2017   |               |               |               |
| 8/11/2017  |               |               |               |
| 10/2/2017  |               |               |               |
| 10/3/2017  |               |               |               |
| 11/15/2017 |               |               |               |
| 4/2/2018   |               |               |               |
| 4/3/2018   |               |               |               |
| 6/4/2018   |               |               |               |
| 6/5/2018   |               |               |               |
| 10/1/2018  |               |               |               |
| 10/2/2018  |               |               |               |
| 10/5/2018  |               |               |               |
| 3/12/2019  |               |               |               |
| 4/1/2019   |               |               |               |
| 4/2/2019   |               |               |               |
| 4/3/2019   |               |               |               |
| 8/22/2019  |               |               |               |
| 8/23/2019  |               |               |               |
| 9/23/2019  |               |               |               |
| 10/21/2019 |               |               |               |
| 10/22/2019 |               |               |               |
| 3/2/2020   |               |               |               |
| 3/24/2020  |               |               |               |
| 3/25/2020  |               |               |               |
| 5/22/2020  |               |               |               |
| 6/15/2020  |               |               |               |
| 6/16/2020  |               |               |               |
| 8/24/2020  |               |               |               |
| 8/25/2020  |               |               |               |
| 8/26/2020  |               |               |               |
| 8/27/2020  |               |               |               |
| 8/28/2020  |               |               |               |
| 9/15/2020  |               |               |               |
| 9/16/2020  | 7.52          | 7.83          |               |
| 9/18/2020  |               |               |               |

# Prediction Limit

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 7.57          |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 7.27          | 7.84          |               |
| 11/11/2020 |               |               | 7.4           |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 7.39          | 7.87          |               |
| 12/16/2020 |               |               | 7.39          |

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-1 (bg) | HGWA-2 (bg) | HGWA-3 (bg) | HGWA-122 (bg) | HGWC-124 | HGWC-121A | HGWC-120 | HGWC-125 | HGWC-126 |
|------------|-------------|-------------|-------------|---------------|----------|-----------|----------|----------|----------|
| 5/19/2016  | 66.9        | 48.6        | 42.3        |               |          |           |          |          |          |
| 7/11/2016  | 41          | 45          |             |               |          |           |          |          |          |
| 7/12/2016  |             |             | 44          |               |          |           |          |          |          |
| 8/30/2016  | 36          | 42          | 40          | 49            |          |           |          |          |          |
| 8/31/2016  |             |             |             |               | 72       | 280       | 290      |          |          |
| 10/19/2016 | 46          | 44          | 43          |               |          |           |          |          |          |
| 10/20/2016 |             |             |             | 49            |          |           |          |          |          |
| 10/26/2016 |             |             |             |               | 71       |           | 280      |          |          |
| 11/7/2016  |             |             |             |               |          | 300       |          |          |          |
| 12/6/2016  | 59          | 44          | 43          |               |          |           |          |          |          |
| 1/13/2017  |             |             |             |               |          | 270       |          |          |          |
| 1/24/2017  | 46          | 46          | 48          |               |          |           |          |          |          |
| 1/25/2017  |             |             |             | 48            |          |           |          |          |          |
| 1/27/2017  |             |             |             |               | 74       |           | 290      |          |          |
| 3/21/2017  | 63          | 46          | 45          |               |          |           |          |          |          |
| 5/22/2017  | 77          | 48          | 46          |               |          |           |          |          |          |
| 5/25/2017  |             |             |             | 48            | 73       |           | 280      |          |          |
| 6/3/2017   |             |             |             |               |          | 270       |          |          |          |
| 8/11/2017  |             |             |             | 47            | 71       |           |          |          |          |
| 10/2/2017  |             |             |             |               |          | 330       | 300      |          |          |
| 10/3/2017  | 42          | 47          | 48          |               |          |           |          |          |          |
| 11/15/2017 |             |             |             | 49            | 70       | 280       | 300      |          |          |
| 6/4/2018   | 71.8        | 47.8        | 46.6        |               |          |           |          |          |          |
| 6/5/2018   |             |             |             | 48.9          | 74       | 241       | 273      |          |          |
| 10/1/2018  | 49.1        | 48.1        | 48.6        |               |          |           |          |          |          |
| 10/2/2018  |             |             |             | 48.6          | 80.7     |           | 328      |          |          |
| 10/5/2018  |             |             |             |               |          | 271       |          |          |          |
| 4/1/2019   |             |             | 50.4        |               |          |           |          |          |          |
| 4/2/2019   | 84.3        | 48.7        |             | 39.6          |          |           | 256      |          |          |
| 4/3/2019   |             |             |             |               | 75.2     | 230       |          |          |          |
| 6/17/2019  |             |             |             |               |          | 219       | 243      |          |          |
| 6/18/2019  |             |             |             | 44.5          | 75.3     |           |          |          |          |
| 9/23/2019  | 70.2        | 47.2        | 43.9        |               |          |           |          |          |          |
| 10/21/2019 |             |             |             | 45.6          | 78.5     | 238       |          |          |          |
| 10/22/2019 |             |             |             |               |          |           | 266      |          |          |
| 3/24/2020  |             |             |             | 25.9          | 74.6     |           |          |          |          |
| 3/25/2020  | 85.9        | 46.3        | 50.5        |               |          | 116       | 226      |          |          |
| 5/22/2020  |             |             |             |               |          |           |          | 345      | 56.1     |
| 6/15/2020  |             |             |             |               |          |           | 212      |          |          |
| 6/16/2020  | 88.2        |             | 49.5        |               |          |           |          | 320      | 57.6     |
| 8/25/2020  |             |             |             |               |          |           |          | 353      | 62.8     |
| 9/15/2020  | 47.3        | 51.5        | 44.7        | 41.4          |          |           |          |          |          |
| 9/16/2020  |             |             |             |               |          |           |          |          |          |
| 9/18/2020  |             |             |             |               |          |           |          |          | 62.7     |
| 9/21/2020  |             |             |             |               |          |           | 225      | 352      |          |
| 9/25/2020  |             |             |             |               |          |           |          |          |          |
| 9/28/2020  |             |             |             |               | 86.2     | 182       |          |          |          |
| 11/10/2020 |             |             |             |               |          |           |          |          |          |
| 11/11/2020 |             |             |             |               |          |           |          |          | 62.3     |
| 11/12/2020 |             |             |             |               |          |           | 300      |          |          |
| 12/15/2020 |             |             |             |               |          |           |          |          |          |
| 12/16/2020 |             |             |             |               |          |           | 306      |          | 68.1     |

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 5/19/2016  |               |               |               |
| 7/11/2016  |               |               |               |
| 7/12/2016  |               |               |               |
| 8/30/2016  |               |               |               |
| 8/31/2016  |               |               |               |
| 10/19/2016 |               |               |               |
| 10/20/2016 |               |               |               |
| 10/26/2016 |               |               |               |
| 11/7/2016  |               |               |               |
| 12/6/2016  |               |               |               |
| 1/13/2017  |               |               |               |
| 1/24/2017  |               |               |               |
| 1/25/2017  |               |               |               |
| 1/27/2017  |               |               |               |
| 3/21/2017  |               |               |               |
| 5/22/2017  |               |               |               |
| 5/25/2017  |               |               |               |
| 6/3/2017   |               |               |               |
| 8/11/2017  |               |               |               |
| 10/2/2017  |               |               |               |
| 10/3/2017  |               |               |               |
| 11/15/2017 |               |               |               |
| 6/4/2018   |               |               |               |
| 6/5/2018   |               |               |               |
| 10/1/2018  |               |               |               |
| 10/2/2018  |               |               |               |
| 10/5/2018  |               |               |               |
| 4/1/2019   |               |               |               |
| 4/2/2019   |               |               |               |
| 4/3/2019   |               |               |               |
| 6/17/2019  |               |               |               |
| 6/18/2019  |               |               |               |
| 9/23/2019  |               |               |               |
| 10/21/2019 |               |               |               |
| 10/22/2019 |               |               |               |
| 3/24/2020  |               |               |               |
| 3/25/2020  |               |               |               |
| 5/22/2020  |               |               |               |
| 6/15/2020  |               |               |               |
| 6/16/2020  |               |               |               |
| 8/25/2020  |               |               |               |
| 9/15/2020  |               |               |               |
| 9/16/2020  | 43            | 43            |               |
| 9/18/2020  |               |               |               |
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 6.8           |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 39            | 6.3           |               |
| 11/11/2020 |               |               | 11.2          |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 38.8          | 6.7           |               |
| 12/16/2020 |               |               | 11.3          |



# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS  
Plant Hammond Client: Southern Company Data: Hammond AP-3

|            | HGWA-43D (bg) | HGWA-44D (bg) | HGWA-45D (bg) |
|------------|---------------|---------------|---------------|
| 5/19/2016  |               |               |               |
| 7/11/2016  |               |               |               |
| 7/12/2016  |               |               |               |
| 8/30/2016  |               |               |               |
| 8/31/2016  |               |               |               |
| 10/19/2016 |               |               |               |
| 10/20/2016 |               |               |               |
| 10/26/2016 |               |               |               |
| 11/7/2016  |               |               |               |
| 12/6/2016  |               |               |               |
| 1/13/2017  |               |               |               |
| 1/24/2017  |               |               |               |
| 1/25/2017  |               |               |               |
| 1/27/2017  |               |               |               |
| 3/21/2017  |               |               |               |
| 5/22/2017  |               |               |               |
| 5/25/2017  |               |               |               |
| 6/3/2017   |               |               |               |
| 8/11/2017  |               |               |               |
| 10/2/2017  |               |               |               |
| 10/3/2017  |               |               |               |
| 11/15/2017 |               |               |               |
| 6/4/2018   |               |               |               |
| 6/5/2018   |               |               |               |
| 10/1/2018  |               |               |               |
| 10/2/2018  |               |               |               |
| 10/5/2018  |               |               |               |
| 4/1/2019   |               |               |               |
| 4/2/2019   |               |               |               |
| 4/3/2019   |               |               |               |
| 6/17/2019  |               |               |               |
| 6/18/2019  |               |               |               |
| 9/23/2019  |               |               |               |
| 10/21/2019 |               |               |               |
| 10/22/2019 |               |               |               |
| 3/24/2020  |               |               |               |
| 3/25/2020  |               |               |               |
| 5/22/2020  |               |               |               |
| 6/15/2020  |               |               |               |
| 6/16/2020  |               |               |               |
| 8/25/2020  |               |               |               |
| 9/15/2020  |               |               |               |
| 9/16/2020  | 272           | 270           |               |
| 9/18/2020  |               |               |               |
| 9/21/2020  |               |               |               |
| 9/25/2020  |               |               | 263           |
| 9/28/2020  |               |               |               |
| 11/10/2020 | 307           | 287           |               |
| 11/11/2020 |               |               | 276           |
| 11/12/2020 |               |               |               |
| 12/15/2020 | 289           | 295           |               |
| 12/16/2020 |               |               | 294           |



FIGURE E.

# Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:46 PM

| <u>Constituent</u> | <u>Well</u>   | <u>Slope</u> | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u> | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|--------------------|---------------|--------------|--------------|-----------------|-------------|----------|-------------|------------------|--------------|--------------|---------------|
| Boron (mg/L)       | HGWA-2 (bg)   | 0.002014     | 57           | 53              | Yes         | 15       | 0           | n/a              | n/a          | 0.01         | NP            |
| Boron (mg/L)       | HGWC-121A     | -0.2314      | -49          | -43             | Yes         | 13       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWA-122 (bg) | -1.81        | -46          | -43             | Yes         | 13       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWA-3 (bg)   | 1.639        | 64           | 58              | Yes         | 16       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWC-120      | -17.58       | -50          | -48             | Yes         | 14       | 0           | n/a              | n/a          | 0.01         | NP            |
| Sulfate (mg/L)     | HGWC-121A     | -25.97       | -50          | -43             | Yes         | 13       | 0           | n/a              | n/a          | 0.01         | NP            |

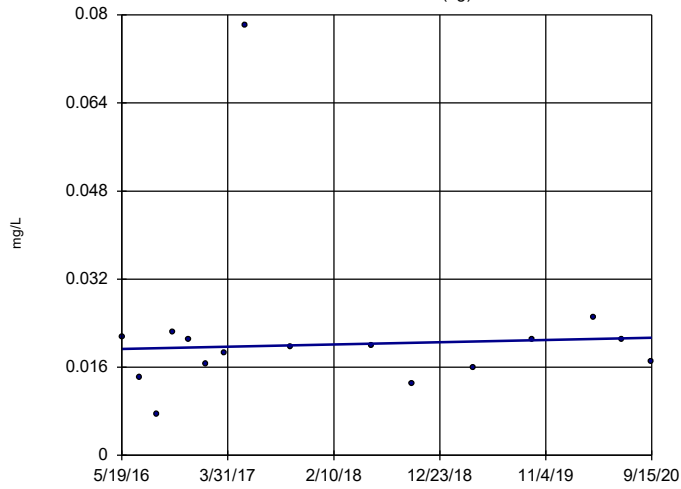
# Trend Test Summary - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-3    Printed 2/16/2021, 12:46 PM

| Constituent                   | Well                 | Slope           | Calc.      | Critical   | Sig.       | N         | %NDs     | Normality  | Xform      | Alpha       | Method    |
|-------------------------------|----------------------|-----------------|------------|------------|------------|-----------|----------|------------|------------|-------------|-----------|
| Boron (mg/L)                  | HGWA-1 (bg)          | 0.0004675       | 7          | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Boron (mg/L)                  | HGWA-122 (bg)        | -0.02677        | -41        | -43        | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Boron (mg/L)</b>           | <b>HGWA-2 (bg)</b>   | <b>0.002014</b> | <b>57</b>  | <b>53</b>  | <b>Yes</b> | <b>15</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Boron (mg/L)                  | HGWA-3 (bg)          | -0.0006127      | -25        | -58        | No         | 16        | 12.5     | n/a        | n/a        | 0.01        | NP        |
| Boron (mg/L)                  | HGWA-43D (bg)        | -0.0365         | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Boron (mg/L)                  | HGWA-44D (bg)        | 0.3244          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Boron (mg/L)                  | HGWA-45D (bg)        | 0               | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Boron (mg/L)                  | HGWC-120             | -0.05419        | -39        | -48        | No         | 14        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Boron (mg/L)</b>           | <b>HGWC-121A</b>     | <b>-0.2314</b>  | <b>-49</b> | <b>-43</b> | <b>Yes</b> | <b>13</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Boron (mg/L)                  | HGWC-124             | -0.01814        | -35        | -43        | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| Boron (mg/L)                  | HGWC-125             | 0               | -3         | -14        | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-1 (bg)          | 6.226           | 48         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-122 (bg)        | 0.6171          | 4          | 43         | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-2 (bg)          | 0.02596         | 1          | 53         | No         | 15        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-3 (bg)          | 2.935           | 46         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWA-43D (bg)        | 26.77           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Calcium (mg/L)                | HGWA-44D (bg)        | -5.272          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Calcium (mg/L)                | HGWA-45D (bg)        | -1.78           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Calcium (mg/L)                | HGWC-120             | 2.933           | 18         | 48         | No         | 14        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWC-121A            | -5.808          | -21        | -43        | No         | 13        | 0        | n/a        | n/a        | 0.01        | NP        |
| Calcium (mg/L)                | HGWC-125             | 44.88           | 7          | 14         | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |
| Sulfate (mg/L)                | HGWA-1 (bg)          | 7.687           | 53         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Sulfate (mg/L)</b>         | <b>HGWA-122 (bg)</b> | <b>-1.81</b>    | <b>-46</b> | <b>-43</b> | <b>Yes</b> | <b>13</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Sulfate (mg/L)                | HGWA-2 (bg)          | 1.235           | 49         | 53         | No         | 15        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>Sulfate (mg/L)</b>         | <b>HGWA-3 (bg)</b>   | <b>1.639</b>    | <b>64</b>  | <b>58</b>  | <b>Yes</b> | <b>16</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Sulfate (mg/L)                | HGWA-43D (bg)        | -17.03          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Sulfate (mg/L)                | HGWA-44D (bg)        | -147.2          | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Sulfate (mg/L)                | HGWA-45D (bg)        | 20.03           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| <b>Sulfate (mg/L)</b>         | <b>HGWC-120</b>      | <b>-17.58</b>   | <b>-50</b> | <b>-48</b> | <b>Yes</b> | <b>14</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| <b>Sulfate (mg/L)</b>         | <b>HGWC-121A</b>     | <b>-25.97</b>   | <b>-50</b> | <b>-43</b> | <b>Yes</b> | <b>13</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |
| Sulfate (mg/L)                | HGWC-125             | -48.99          | -5         | -14        | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-1 (bg)          | 18.73           | 26         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-122 (bg)        | -1.249          | -2         | -38        | No         | 12        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-2 (bg)          | -3.989          | -24        | -53        | No         | 15        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-3 (bg)          | 2.145           | 12         | 58         | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Total Dissolved Solids (mg/L) | HGWA-43D (bg)        | 68.94           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Total Dissolved Solids (mg/L) | HGWA-44D (bg)        | 101.4           | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Total Dissolved Solids (mg/L) | HGWA-45D (bg)        | 138             | NaN        | NaN        | No         | 3         | 0        | n/a        | n/a        | NaN         | NP        |
| Total Dissolved Solids (mg/L) | HGWC-125             | 71.04           | 3          | 14         | No         | 6         | 0        | n/a        | n/a        | 0.01        | NP        |

### Sen's Slope Estimator

HGWA-1 (bg)

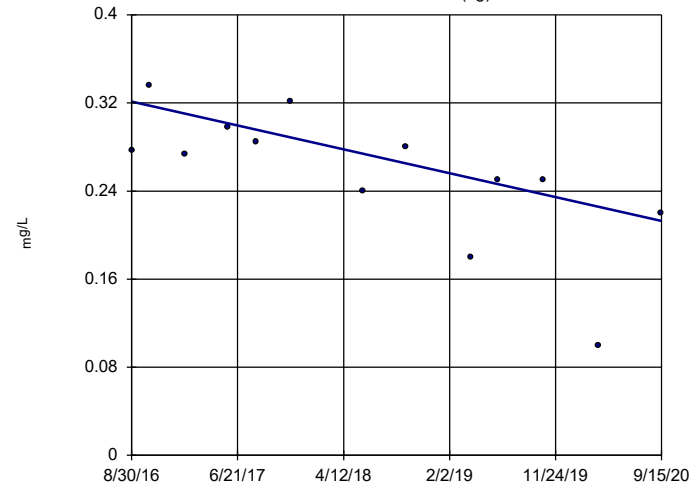


n = 16  
 Slope = 0.0004675  
 units per year.  
 Mann-Kendall  
 statistic = 7  
 critical = 58  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWA-122 (bg)

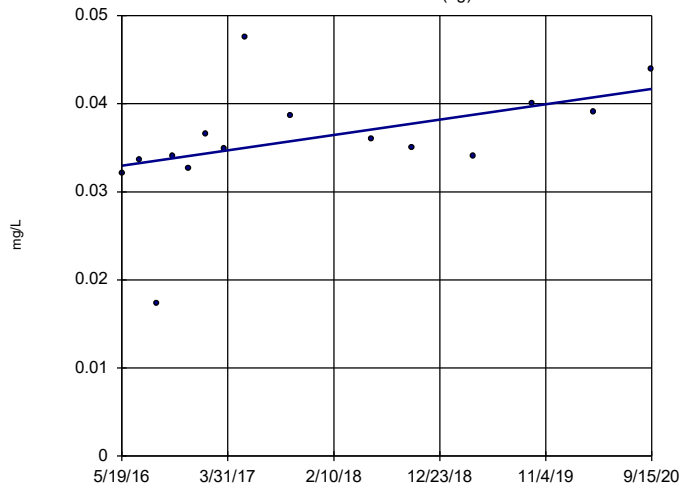


n = 13  
 Slope = -0.02677  
 units per year.  
 Mann-Kendall  
 statistic = -41  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWA-2 (bg)



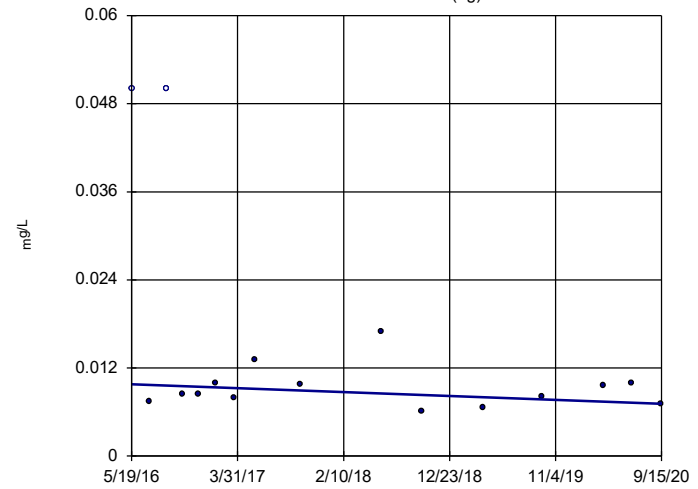
n = 15  
 Slope = 0.002014  
 units per year.  
 Mann-Kendall  
 statistic = 57  
 critical = 53  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Hollow symbols indicate censored values.

### Sen's Slope Estimator

HGWA-3 (bg)

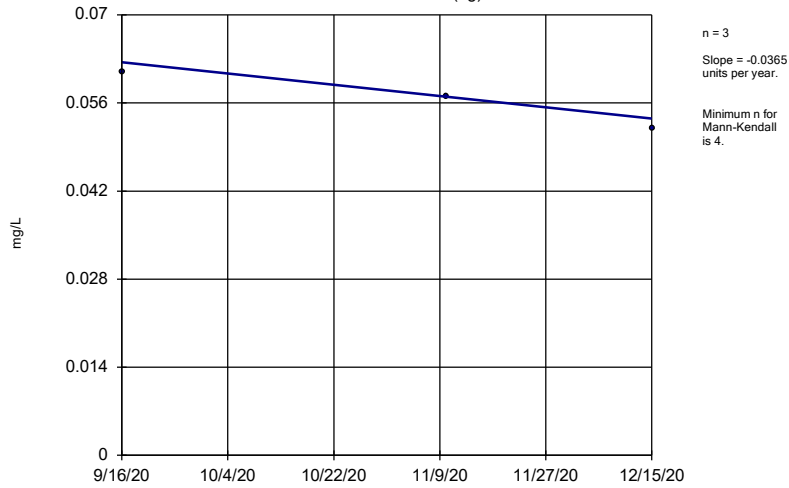


n = 16  
 Slope = -0.0006127  
 units per year.  
 Mann-Kendall  
 statistic = -25  
 critical = -58  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

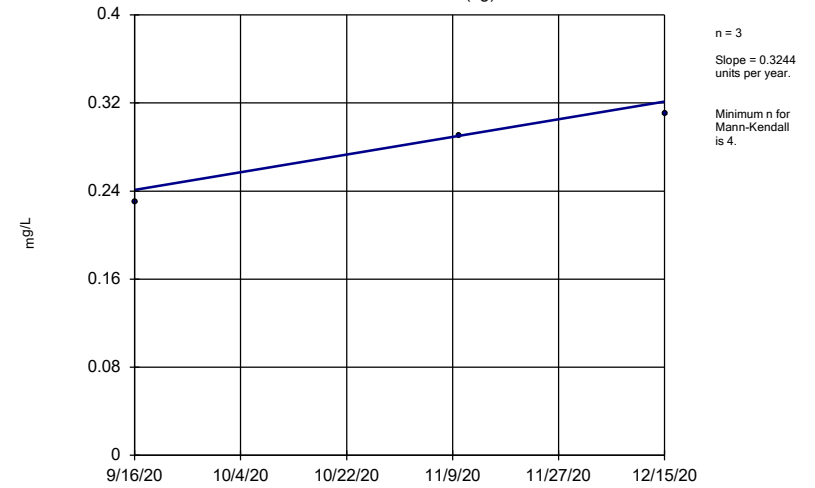
HGWA-43D (bg)



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

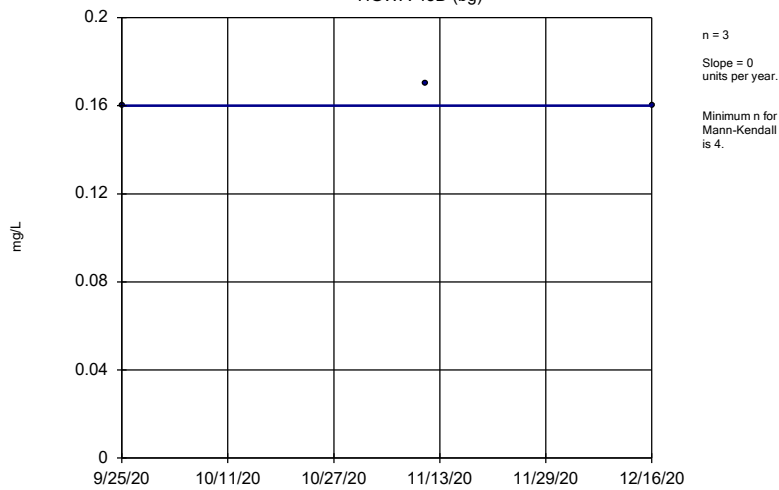
HGWA-44D (bg)



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

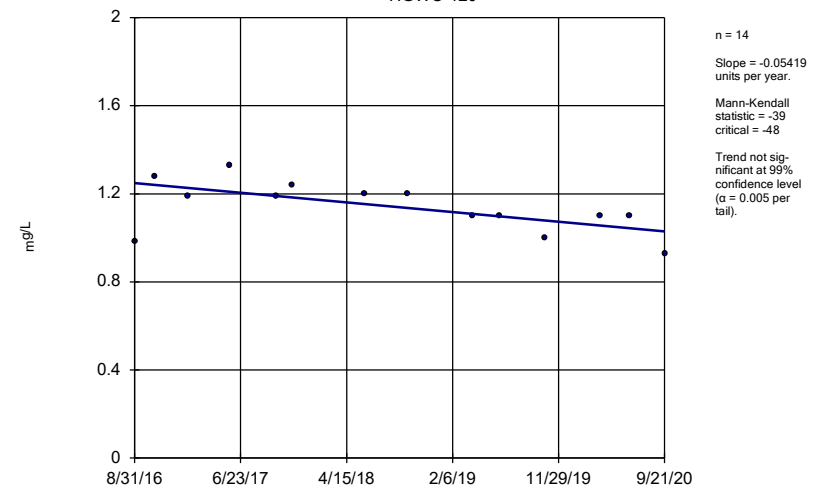
HGWA-45D (bg)



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

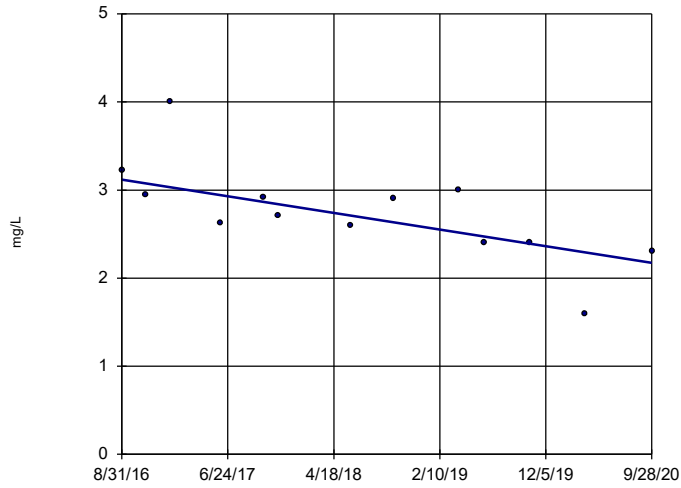
HGWC-120



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWC-121A

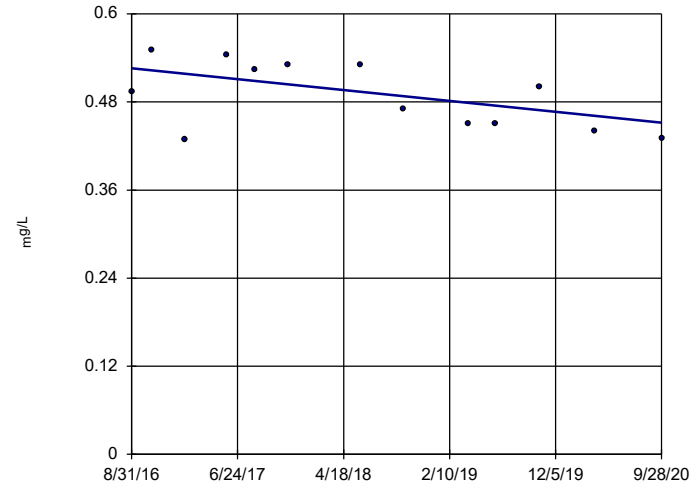


n = 13  
 Slope = -0.2314 units per year.  
 Mann-Kendall statistic = -49  
 critical = -43  
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWC-124

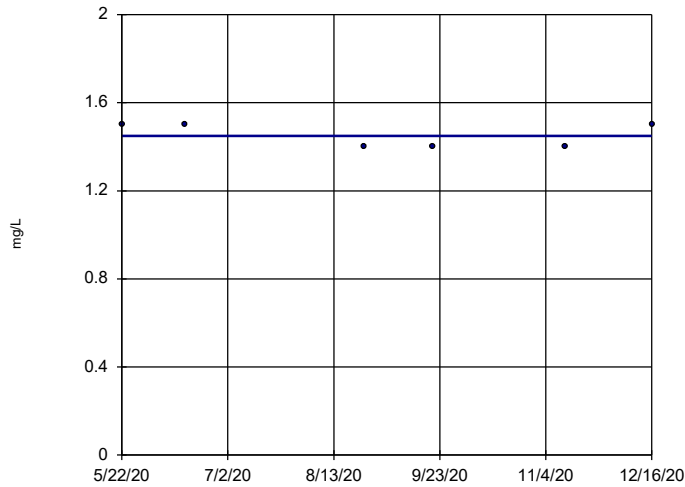


n = 13  
 Slope = -0.01814 units per year.  
 Mann-Kendall statistic = -35  
 critical = -43  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWC-125

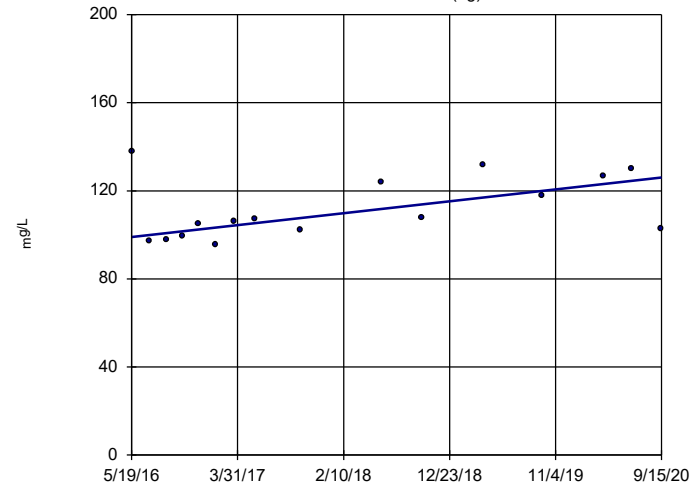


n = 6  
 Slope = 0 units per year.  
 Mann-Kendall statistic = -3  
 critical = -14  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWA-1 (bg)

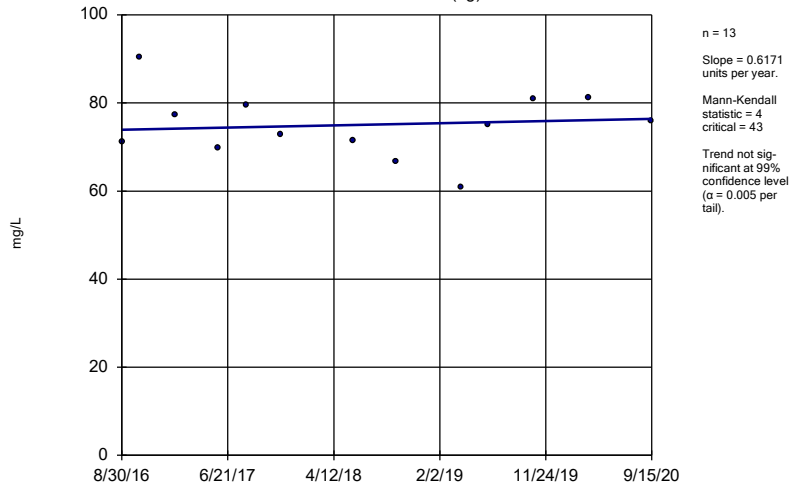


n = 16  
 Slope = 6.226 units per year.  
 Mann-Kendall statistic = 48  
 critical = 58  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

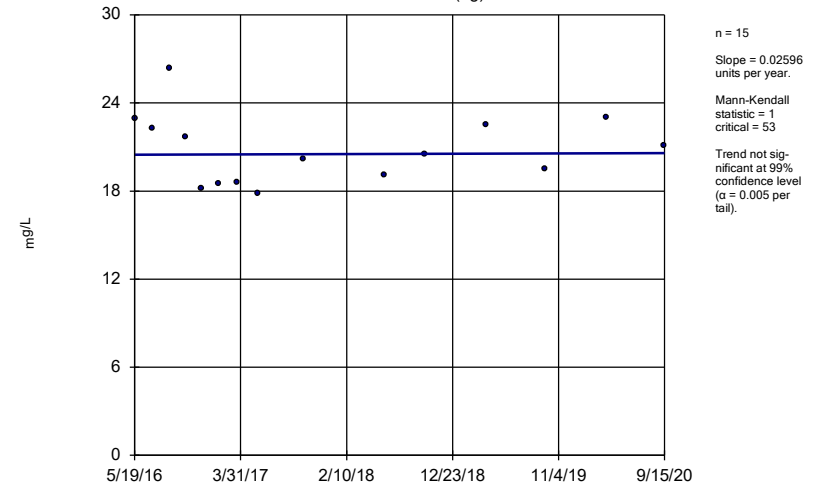
HGWA-122 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

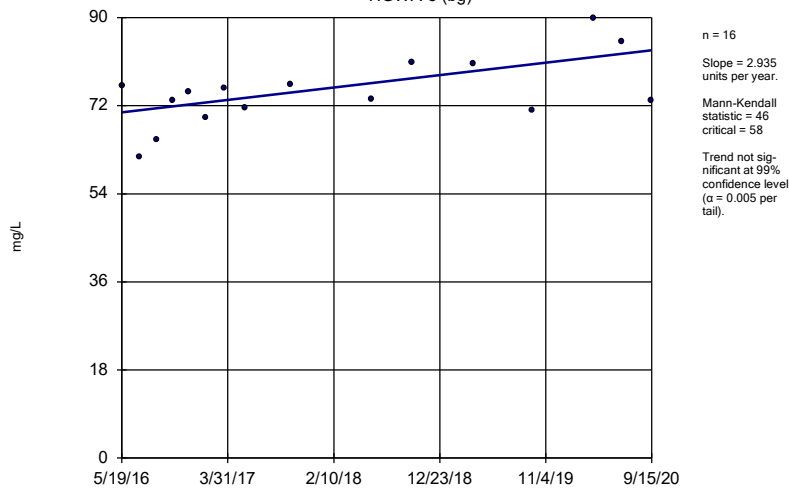
HGWA-2 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

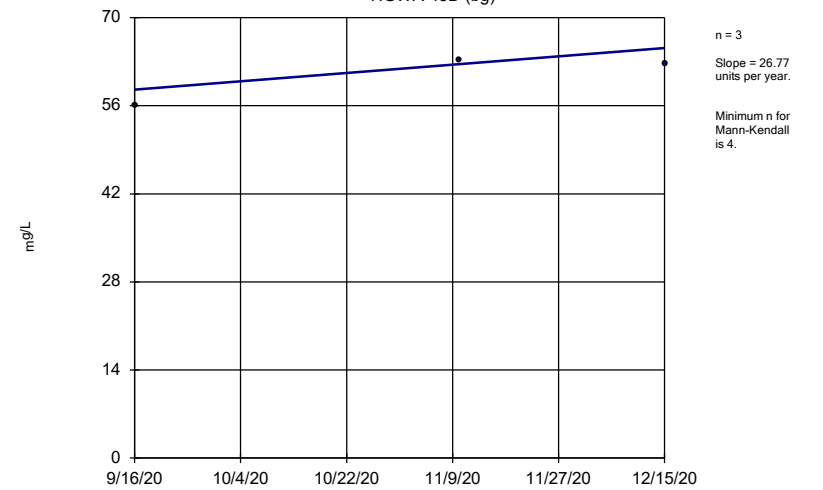
HGWA-3 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

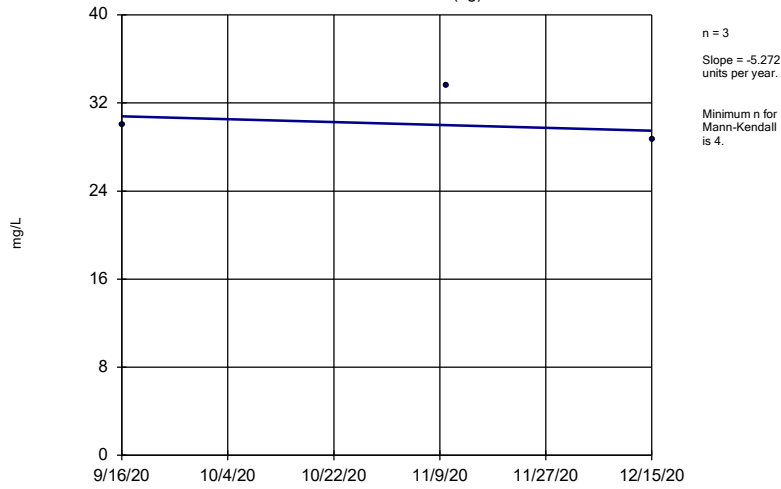
HGWA-43D (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

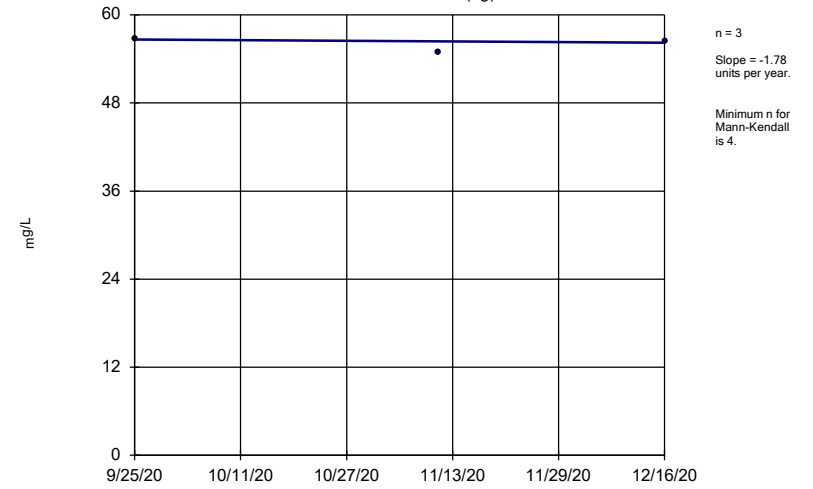
HGWA-44D (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

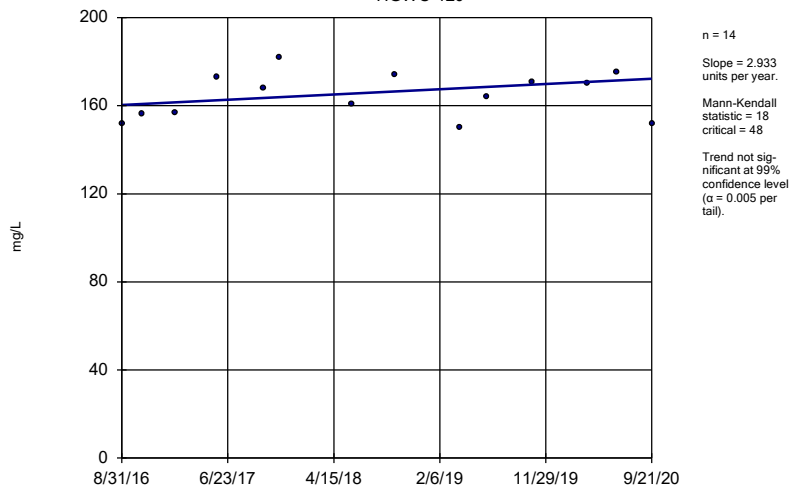
HGWA-45D (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

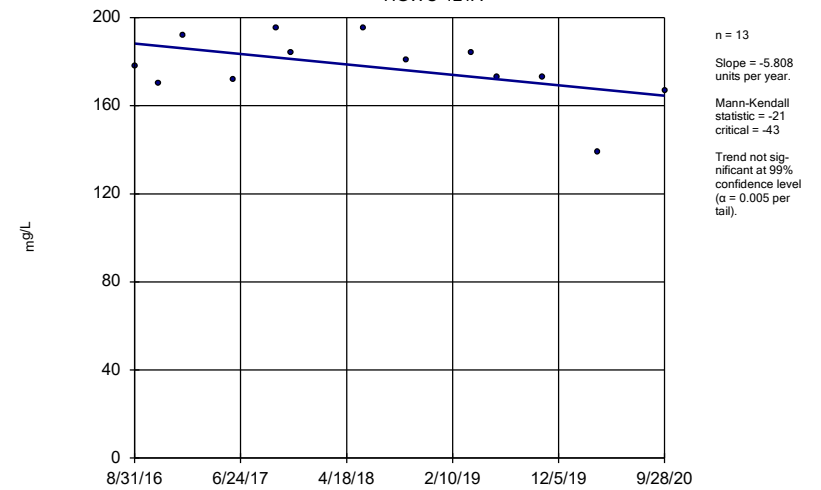
HGWC-120



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

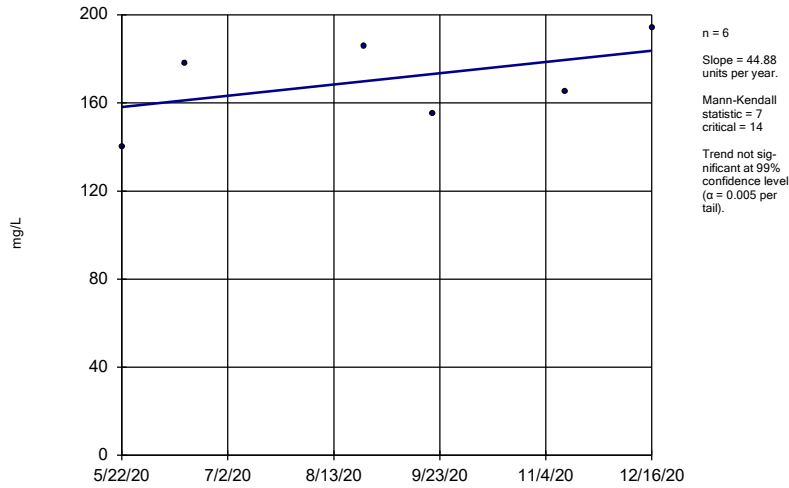
HGWC-121A





### Sen's Slope Estimator

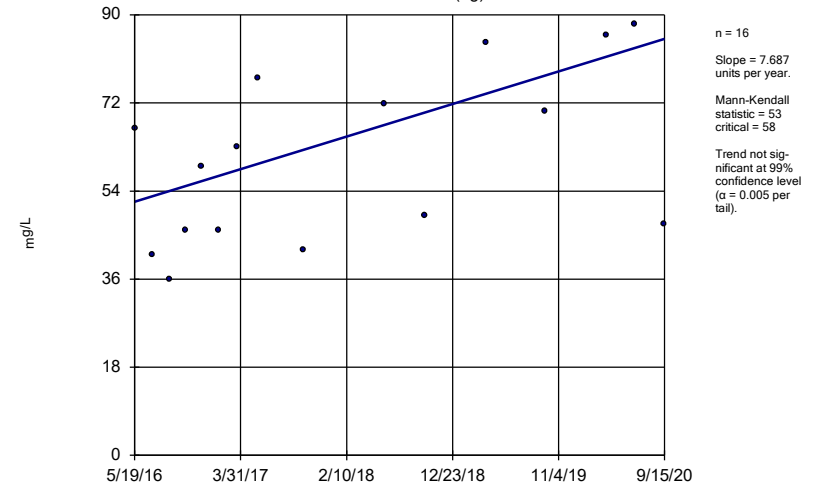
HGWC-125



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

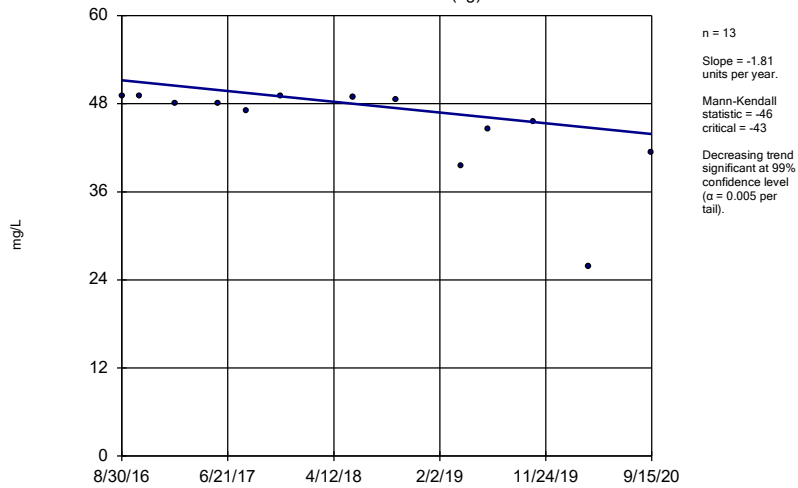
HGWA-1 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

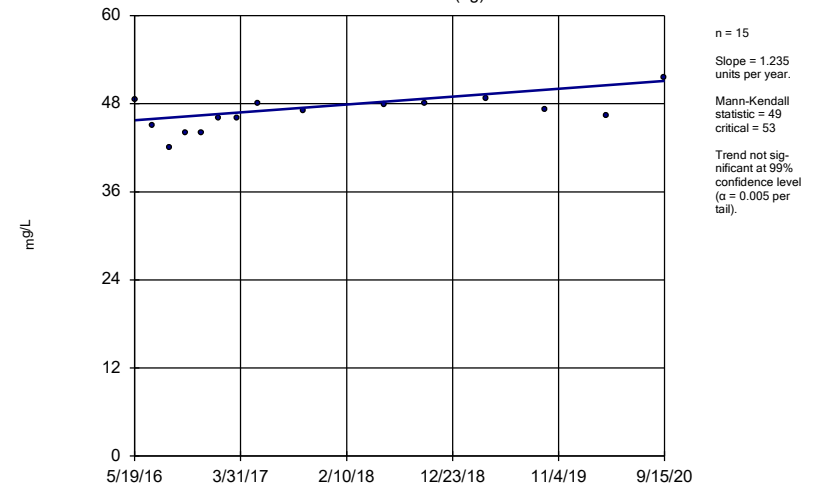
HGWA-122 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

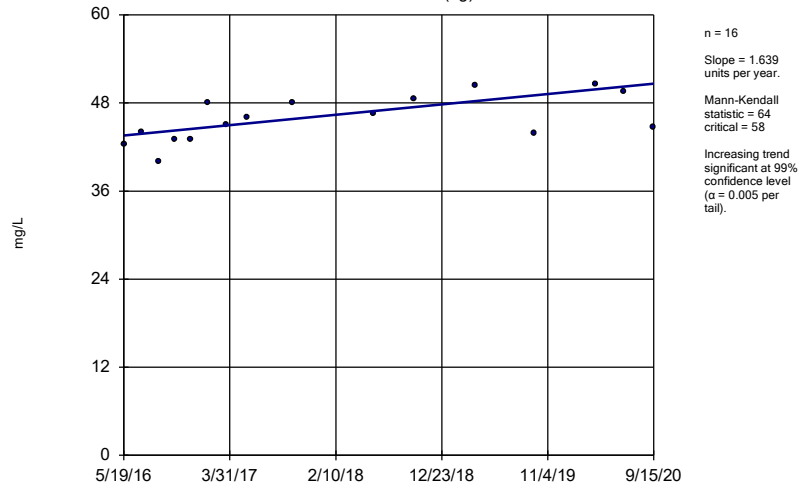
HGWA-2 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

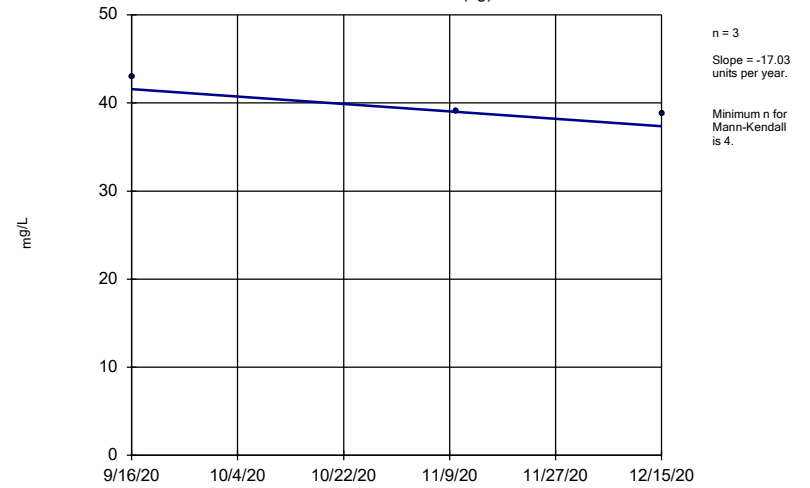
HGWA-3 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

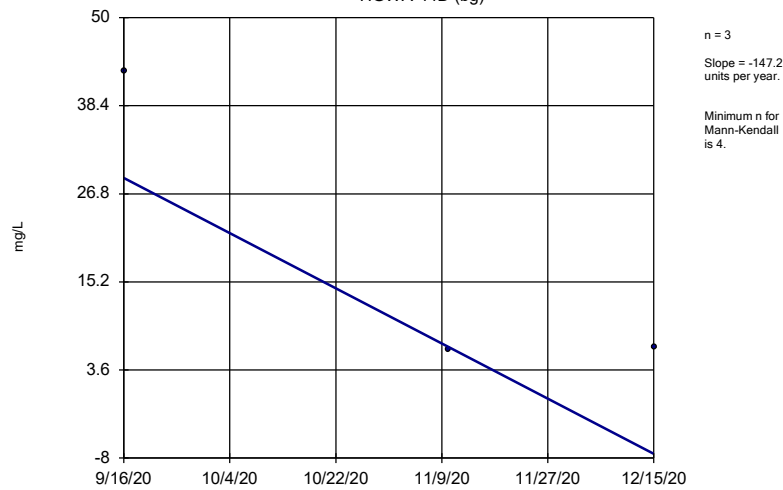
HGWA-43D (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

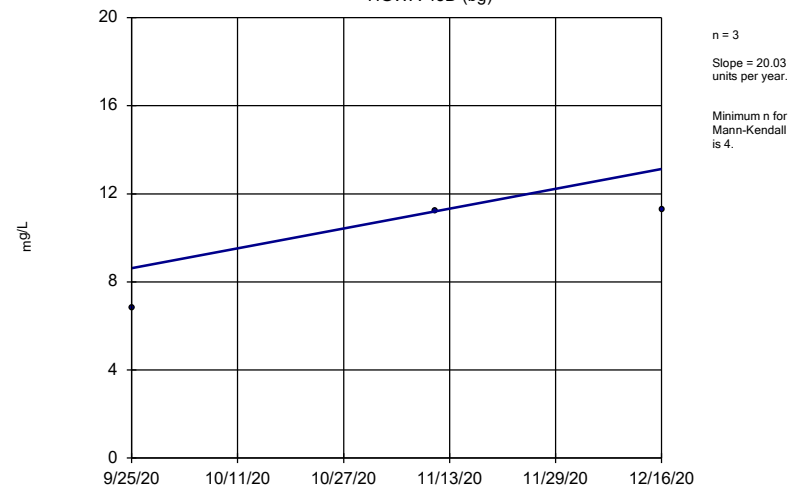
HGWA-44D (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

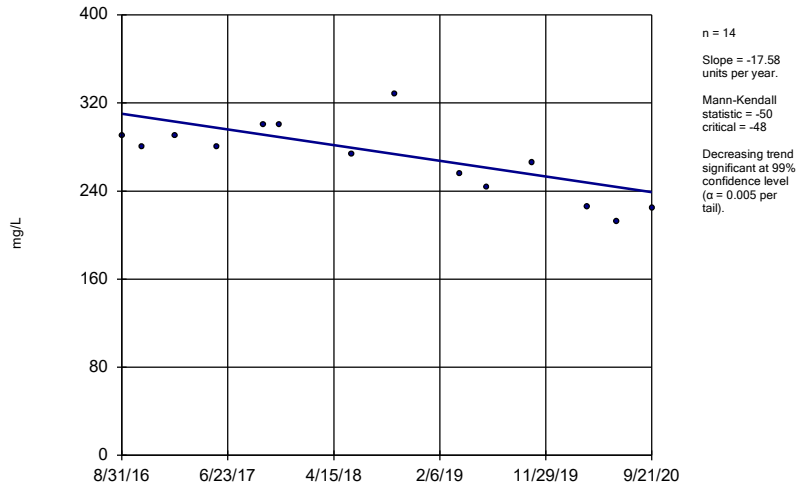
HGWA-45D (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

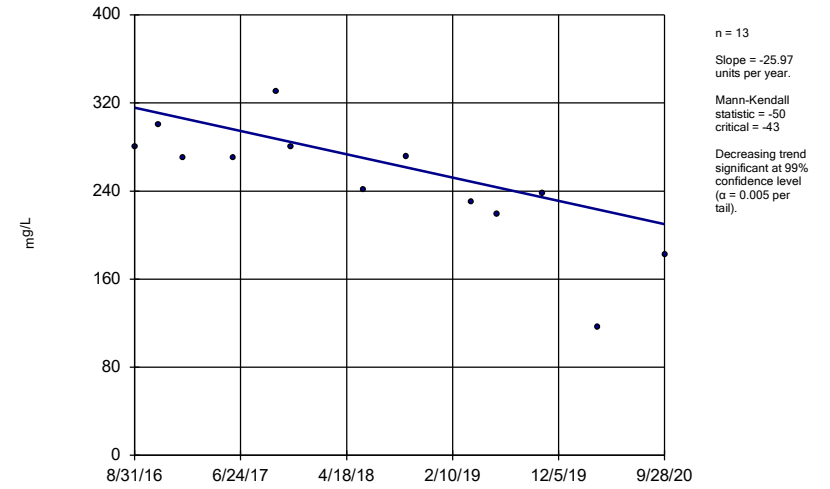
HGWC-120



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

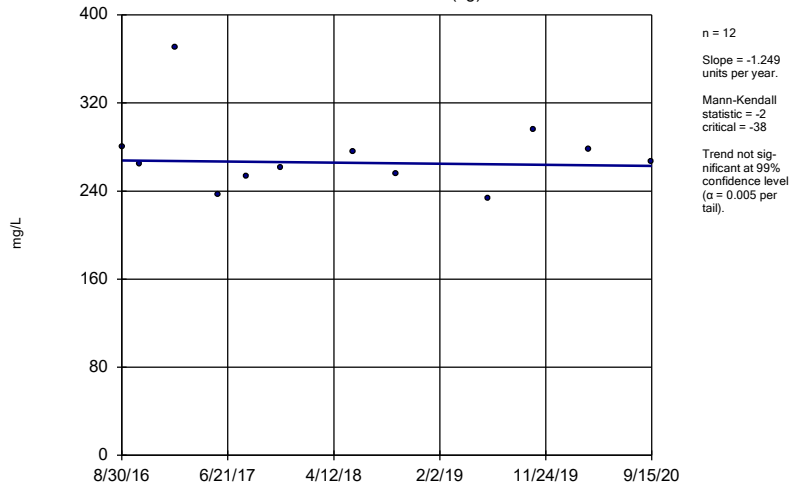
### Sen's Slope Estimator

HGWC-121A



### Sen's Slope Estimator

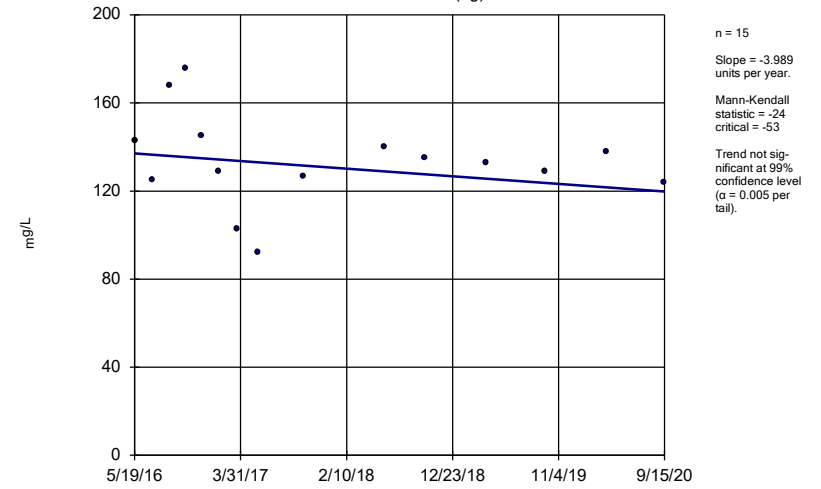
HGWA-122 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

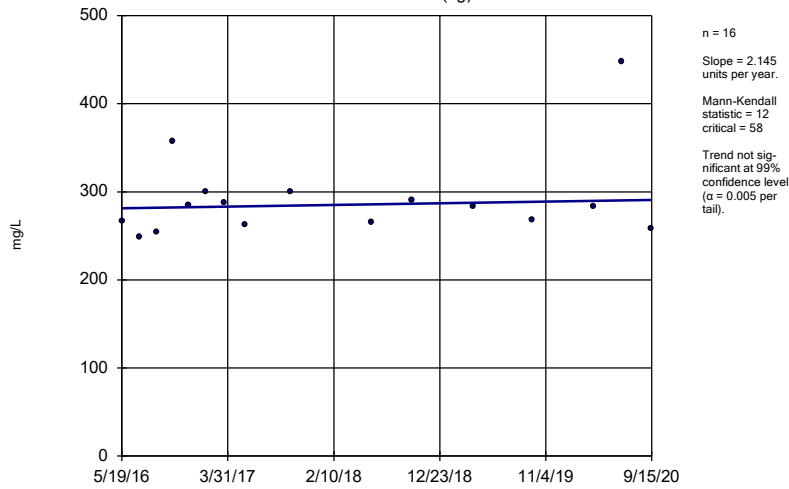
HGWA-2 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

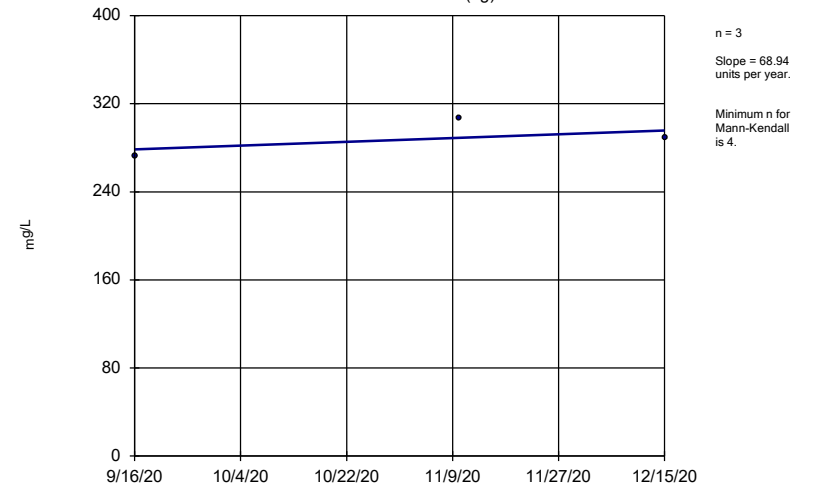
HGWA-3 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

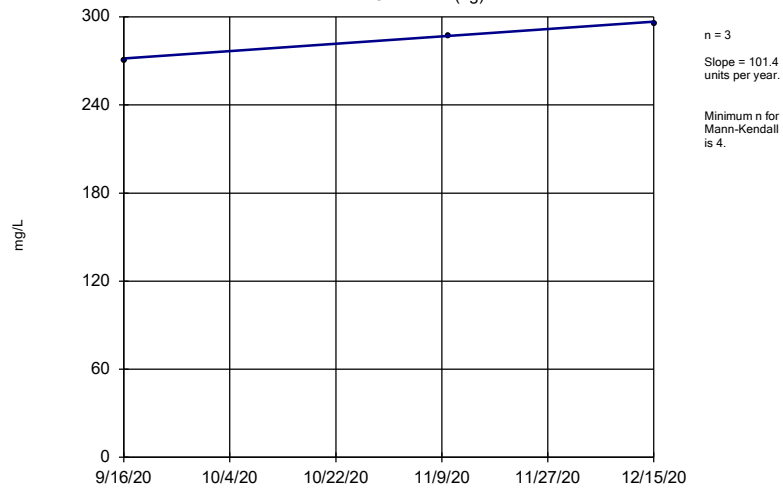
HGWA-43D (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

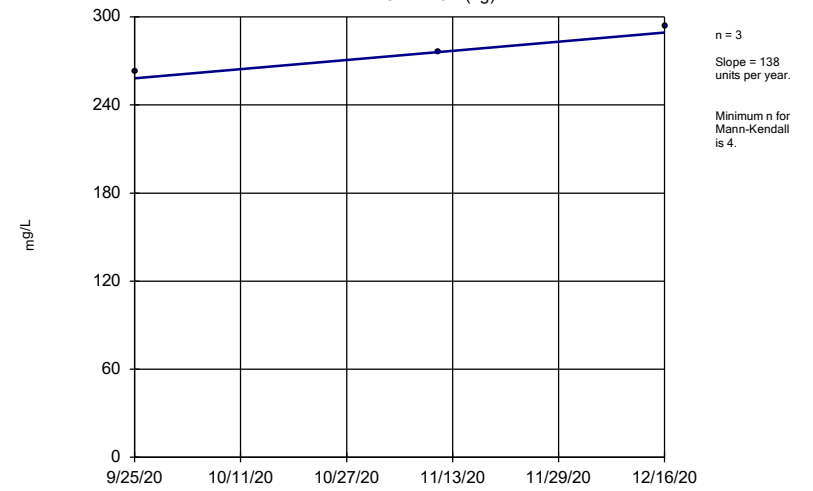
HGWA-44D (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

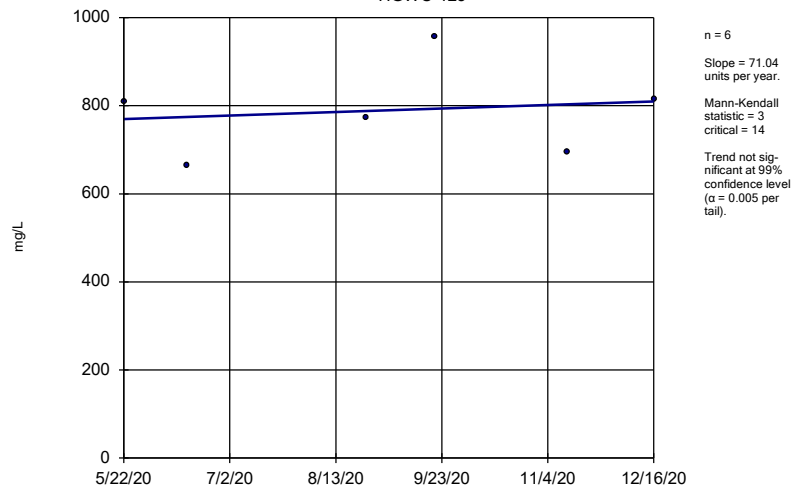
HGWA-45D (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sen's Slope Estimator

HGWC-125



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE F.

# Interwell Tolerance Limits Summary

Plant Hammond    Client: Southern Company    Data: Hammond AP-3    Printed 2/16/2021, 12:55 PM

| <u>Constituent</u>                | <u>Well</u> | <u>Upper Lim.</u> | <u>Bg N</u> | <u>Bg Mean</u> | <u>Std. Dev.</u> | <u>%NDs</u> | <u>ND Adj.</u> | <u>Transform</u> | <u>Alpha</u> | <u>Method</u>       |
|-----------------------------------|-------------|-------------------|-------------|----------------|------------------|-------------|----------------|------------------|--------------|---------------------|
| Antimony (mg/L)                   | n/a         | 0.003             | 68          | n/a            | n/a              | 86.76       | n/a            | n/a              | 0.03056      | NP Inter(NDs)       |
| Arsenic (mg/L)                    | n/a         | 0.005             | 70          | n/a            | n/a              | 71.43       | n/a            | n/a              | 0.02758      | NP Inter(normality) |
| Barium (mg/L)                     | n/a         | 0.52              | 76          | n/a            | n/a              | 0           | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Beryllium (mg/L)                  | n/a         | 0.003             | 68          | n/a            | n/a              | 80.88       | n/a            | n/a              | 0.03056      | NP Inter(NDs)       |
| Cadmium (mg/L)                    | n/a         | 0.0025            | 70          | n/a            | n/a              | 90          | n/a            | n/a              | 0.02758      | NP Inter(NDs)       |
| Chromium (mg/L)                   | n/a         | 0.01              | 70          | n/a            | n/a              | 74.29       | n/a            | n/a              | 0.02758      | NP Inter(normality) |
| Cobalt (mg/L)                     | n/a         | 0.038             | 76          | n/a            | n/a              | 75          | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Combined Radium 226 + 228 (pCi/L) | n/a         | 4.36              | 76          | n/a            | n/a              | 0           | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Fluoride (mg/L)                   | n/a         | 0.67              | 83          | n/a            | n/a              | 27.71       | n/a            | n/a              | 0.01416      | NP Inter(normality) |
| Lead (mg/L)                       | n/a         | 0.005             | 70          | n/a            | n/a              | 61.43       | n/a            | n/a              | 0.02758      | NP Inter(normality) |
| Lithium (mg/L)                    | n/a         | 0.03              | 76          | n/a            | n/a              | 38.16       | n/a            | n/a              | 0.02028      | NP Inter(normality) |
| Mercury (mg/L)                    | n/a         | 0.0005            | 55          | n/a            | n/a              | 90.91       | n/a            | n/a              | 0.05954      | NP Inter(NDs)       |
| Molybdenum (mg/L)                 | n/a         | 0.01              | 78          | n/a            | n/a              | 73.08       | n/a            | n/a              | 0.0183       | NP Inter(normality) |
| Selenium (mg/L)                   | n/a         | 0.01              | 70          | n/a            | n/a              | 98.57       | n/a            | n/a              | 0.02758      | NP Inter(NDs)       |
| Thallium (mg/L)                   | n/a         | 0.001             | 70          | n/a            | n/a              | 98.57       | n/a            | n/a              | 0.02758      | NP Inter(NDs)       |

FIGURE G.



| <b>PLANT HAMMOND AP-3 GWPS (Federal)</b> |            |                           |                         |                     |
|--|------------|---------------------------|-------------------------|---------------------|
| <b>Constituent Name</b>                  | <b>MCL</b> | <b>CCR-Rule Specified</b> | <b>Background Limit</b> | <b>Federal GWPS</b> |
| Antimony, Total (mg/L)                   | 0.006      |                           | 0.003                   | 0.006               |
| Arsenic, Total (mg/L)                    | 0.01       |                           | 0.005                   | 0.01                |
| Barium, Total (mg/L)                     | 2          |                           | 0.52                    | 2                   |
| Beryllium, Total (mg/L)                  | 0.004      |                           | 0.003                   | 0.004               |
| Cadmium, Total (mg/L)                    | 0.005      |                           | 0.0025                  | 0.005               |
| Chromium, Total (mg/L)                   | 0.1        |                           | 0.01                    | 0.1                 |
| Cobalt, Total (mg/L)                     | n/a        | 0.006                     | 0.038                   | 0.038               |
| Combined Radium, Total (pCi/L)           | 5          |                           | 4.36                    | 5                   |
| Fluoride, Total (mg/L)                   | 4          |                           | 0.67                    | 4                   |
| Lead, Total (mg/L)                       | n/a        | 0.015                     | 0.005                   | 0.015               |
| Lithium, Total (mg/L)                    | n/a        | 0.04                      | 0.03                    | 0.04                |
| Mercury, Total (mg/L)                    | 0.002      |                           | 0.0005                  | 0.002               |
| Molybdenum, Total (mg/L)                 | n/a        | 0.1                       | 0.01                    | 0.1                 |
| Selenium, Total (mg/L)                   | 0.05       |                           | 0.01                    | 0.05                |
| Thallium, Total (mg/L)                   | 0.002      |                           | 0.001                   | 0.002               |

*\*Grey cell indicates background is higher than MCL or CCR-Rule*

*\*MCL = Maximum Contaminant Level*

*\*CCR = Coal Combustion Residuals*

*\*GWPS = Groundwater Protection Standard*

FIGURE H.

| <b>PLANT HAMMOND AP-3 GWPS (State)</b> |            |                           |                         |                   |
|--|------------|---------------------------|-------------------------|-------------------|
| <b>Constituent Name</b>                | <b>MCL</b> | <b>CCR-Rule Specified</b> | <b>Background Limit</b> | <b>State GWPS</b> |
| Antimony, Total (mg/L)                 | 0.006      |                           | 0.003                   | 0.006             |
| Arsenic, Total (mg/L)                  | 0.01       |                           | 0.005                   | 0.01              |
| Barium, Total (mg/L)                   | 2          |                           | 0.52                    | 2                 |
| Beryllium, Total (mg/L)                | 0.004      |                           | 0.003                   | 0.004             |
| Cadmium, Total (mg/L)                  | 0.005      |                           | 0.0025                  | 0.005             |
| Chromium, Total (mg/L)                 | 0.1        |                           | 0.01                    | 0.1               |
| Cobalt, Total (mg/L)                   | n/a        | 0.006                     | 0.038                   | 0.038             |
| Combined Radium, Total (pCi/L)         | 5          |                           | 4.36                    | 5                 |
| Fluoride, Total (mg/L)                 | 4          |                           | 0.67                    | 4                 |
| Lead, Total (mg/L)                     | n/a        | 0.015                     | 0.005                   | 0.005             |
| Lithium, Total (mg/L)                  | n/a        | 0.04                      | 0.03                    | 0.03              |
| Mercury, Total (mg/L)                  | 0.002      |                           | 0.0005                  | 0.002             |
| Molybdenum, Total (mg/L)               | n/a        | 0.1                       | 0.01                    | 0.01              |
| Selenium, Total (mg/L)                 | 0.05       |                           | 0.01                    | 0.05              |
| Thallium, Total (mg/L)                 | 0.002      |                           | 0.001                   | 0.002             |

*\*Grey cell indicates background is higher than MCL or CCR-Rule*

*\*MCL = Maximum Contaminant Level*

*\*CCR = Coal Combustion Residuals*

*\*GWPS = Groundwater Protection Standard*

FIGURE I.

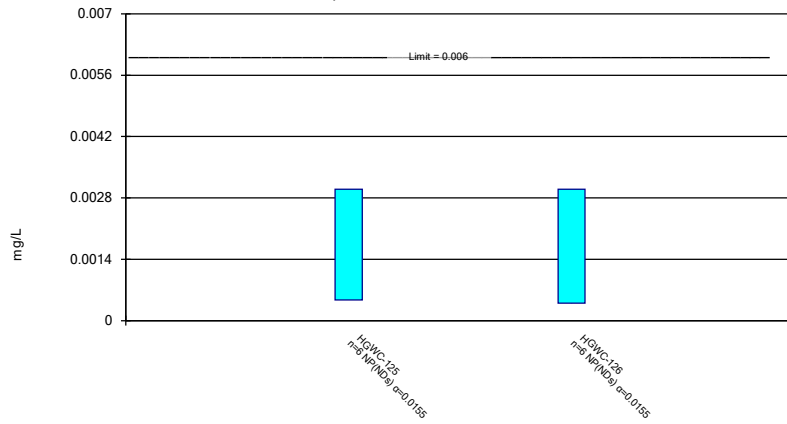
# Federal Confidence Interval Summary Table - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:04 PM

| Constituent                       | Well      | Upper Lim. | Lower Lim. | Compliance | Sig. N | Mean     | Std. Dev. | %NDs  | ND Adj.      | Transform | Alpha  | Method         |
|-----------------------------------|-----------|------------|------------|------------|--------|----------|-----------|-------|--------------|-----------|--------|----------------|
| Antimony (mg/L)                   | HGWC-125  | 0.003      | 0.00047    | 0.006      | No 6   | 0.002578 | 0.001033  | 83.33 | None         | No        | 0.0155 | NP (NDs)       |
| Antimony (mg/L)                   | HGWC-126  | 0.003      | 0.0004     | 0.006      | No 6   | 0.002567 | 0.001061  | 83.33 | None         | No        | 0.0155 | NP (NDs)       |
| Barium (mg/L)                     | HGWC-120  | 0.05206    | 0.04548    | 2          | No 13  | 0.04877  | 0.004422  | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-121A | 0.08505    | 0.06703    | 2          | No 13  | 0.07604  | 0.01211   | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-124  | 0.07376    | 0.06659    | 2          | No 13  | 0.07018  | 0.004822  | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-125  | 0.04916    | 0.03984    | 2          | No 6   | 0.0445   | 0.003391  | 0     | None         | No        | 0.01   | Param.         |
| Barium (mg/L)                     | HGWC-126  | 0.24       | 0.21       | 2          | No 6   | 0.2317   | 0.01169   | 0     | None         | No        | 0.0155 | NP (normality) |
| Chromium (mg/L)                   | HGWC-120  | 0.01       | 0.00072    | 0.1        | No 13  | 0.007913 | 0.00397   | 76.92 | None         | No        | 0.01   | NP (NDs)       |
| Chromium (mg/L)                   | HGWC-121A | 0.01       | 0.0005     | 0.1        | No 13  | 0.009269 | 0.002635  | 92.31 | None         | No        | 0.01   | NP (NDs)       |
| Chromium (mg/L)                   | HGWC-124  | 0.01       | 0.00051    | 0.1        | No 13  | 0.008536 | 0.003573  | 84.62 | None         | No        | 0.01   | NP (NDs)       |
| Chromium (mg/L)                   | HGWC-125  | 0.01       | 0.00052    | 0.1        | No 6   | 0.00685  | 0.00488   | 66.67 | None         | No        | 0.0155 | NP (normality) |
| Chromium (mg/L)                   | HGWC-126  | 0.01       | 0.00096    | 0.1        | No 6   | 0.008493 | 0.003691  | 83.33 | None         | No        | 0.0155 | NP (NDs)       |
| Cobalt (mg/L)                     | HGWC-120  | 0.003987   | 0.002859   | 0.038      | No 13  | 0.003423 | 0.0007585 | 0     | None         | No        | 0.01   | Param.         |
| Cobalt (mg/L)                     | HGWC-121A | 0.005      | 0.0005     | 0.038      | No 13  | 0.003931 | 0.002032  | 76.92 | None         | No        | 0.01   | NP (NDs)       |
| Cobalt (mg/L)                     | HGWC-125  | 0.01296    | 0.006308   | 0.038      | No 6   | 0.009633 | 0.00242   | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-120  | 1.121      | 0.5734     | 5          | No 13  | 0.8474   | 0.3685    | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-121A | 1.279      | 0.5176     | 5          | No 13  | 0.8985   | 0.5123    | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-124  | 0.9537     | 0.6046     | 5          | No 13  | 0.7792   | 0.2348    | 0     | None         | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-125  | 1.774      | 0.6055     | 5          | No 6   | 1.158    | 0.4637    | 16.67 | Kaplan-Meier | No        | 0.01   | Param.         |
| Combined Radium 226 + 228 (pCi/L) | HGWC-126  | 1.82       | 0.837      | 5          | No 6   | 1.4      | 0.4854    | 0     | None         | No        | 0.0155 | NP (normality) |
| Fluoride (mg/L)                   | HGWC-120  | 0.8531     | 0.4277     | 4          | No 16  | 0.6925   | 0.3863    | 0     | None         | ln(x)     | 0.01   | Param.         |
| Fluoride (mg/L)                   | HGWC-121A | 0.23       | 0.14       | 4          | No 14  | 0.2682   | 0.2942    | 0     | None         | No        | 0.01   | NP (normality) |
| Fluoride (mg/L)                   | HGWC-124  | 0.15       | 0.05       | 4          | No 14  | 0.1091   | 0.08582   | 28.57 | None         | No        | 0.01   | NP (normality) |
| Fluoride (mg/L)                   | HGWC-125  | 0.1869     | 0.08305    | 4          | No 6   | 0.135    | 0.03782   | 0     | None         | No        | 0.01   | Param.         |
| Fluoride (mg/L)                   | HGWC-126  | 0.5116     | 0.4184     | 4          | No 6   | 0.465    | 0.03391   | 0     | None         | No        | 0.01   | Param.         |
| Fluoride (mg/L)                   | MW-32     | 0.3721     | 0.3079     | 4          | No 4   | 0.34     | 0.01414   | 0     | None         | No        | 0.01   | Param.         |
| Lead (mg/L)                       | HGWC-120  | 0.005      | 0.00009    | 0.015      | No 13  | 0.003875 | 0.002139  | 76.92 | None         | No        | 0.01   | NP (NDs)       |
| Lead (mg/L)                       | HGWC-121A | 0.005      | 0.00036    | 0.015      | No 13  | 0.004264 | 0.001798  | 84.62 | None         | No        | 0.01   | NP (NDs)       |
| Lead (mg/L)                       | HGWC-124  | 0.005      | 0.000075   | 0.015      | No 13  | 0.003104 | 0.002497  | 61.54 | None         | No        | 0.01   | NP (normality) |
| Lead (mg/L)                       | HGWC-125  | 0.005      | 0.000047   | 0.015      | No 6   | 0.002553 | 0.002681  | 50    | None         | No        | 0.0155 | NP (normality) |
| Lead (mg/L)                       | HGWC-126  | 0.005      | 0.000042   | 0.015      | No 6   | 0.003348 | 0.00256   | 66.67 | None         | No        | 0.0155 | NP (normality) |
| Lithium (mg/L)                    | HGWC-120  | 0.03385    | 0.0279     | 0.04       | No 13  | 0.03058  | 0.004517  | 0     | None         | x^3       | 0.01   | Param.         |
| Lithium (mg/L)                    | HGWC-121A | 0.009335   | 0.007773   | 0.04       | No 13  | 0.008554 | 0.00105   | 0     | None         | No        | 0.01   | Param.         |
| Lithium (mg/L)                    | HGWC-124  | 0.025      | 0.0011     | 0.04       | No 13  | 0.0103   | 0.0121    | 38.46 | None         | No        | 0.01   | NP (normality) |
| Lithium (mg/L)                    | HGWC-125  | 0.0055     | 0.0037     | 0.04       | No 6   | 0.00455  | 0.0008643 | 0     | None         | No        | 0.0155 | NP (normality) |
| Lithium (mg/L)                    | HGWC-126  | 0.00468    | 0.002787   | 0.04       | No 6   | 0.003733 | 0.000689  | 0     | None         | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | HGWC-120  | 0.03897    | 0.02407    | 0.1        | No 13  | 0.03152  | 0.01002   | 0     | None         | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | HGWC-124  | 0.01       | 0.00091    | 0.1        | No 13  | 0.004532 | 0.004503  | 38.46 | None         | No        | 0.01   | NP (normality) |
| Molybdenum (mg/L)                 | HGWC-125  | 0.009948   | -0.00304   | 0.1        | No 6   | 0.007782 | 0.005226  | 50    | Kaplan-Meier | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | MW-32     | 0.06546    | 0.05774    | 0.1        | No 5   | 0.0616   | 0.002302  | 0     | None         | No        | 0.01   | Param.         |
| Molybdenum (mg/L)                 | MW-39     | 0.064      | 0.012      | 0.1        | No 4   | 0.05     | 0.02535   | 0     | None         | No        | 0.0625 | NP (normality) |

### Non-Parametric Confidence Interval

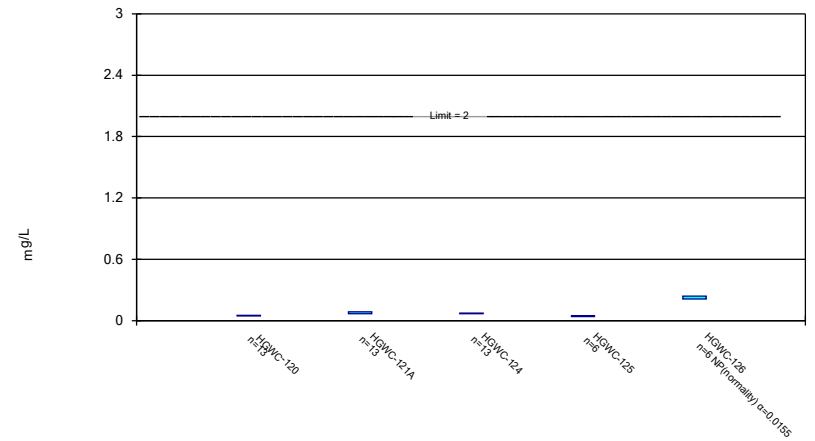
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

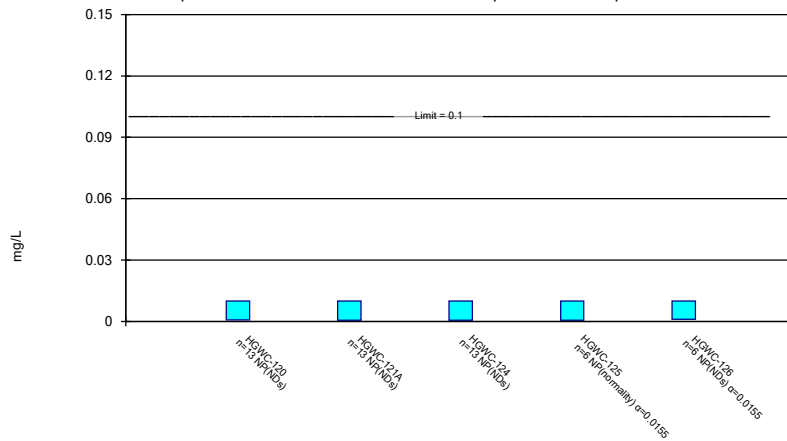
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Non-Parametric Confidence Interval

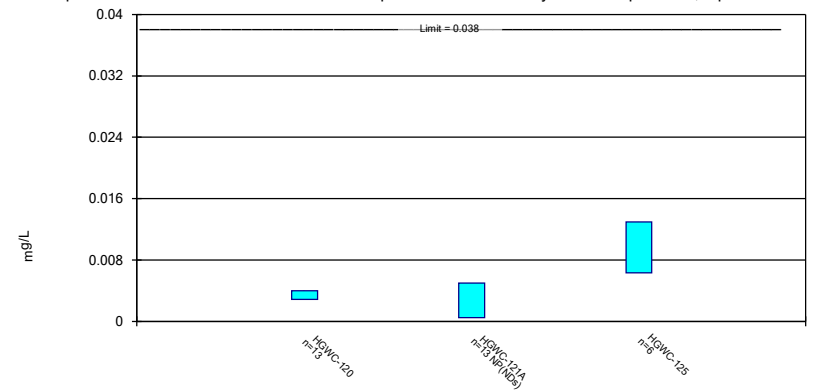
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

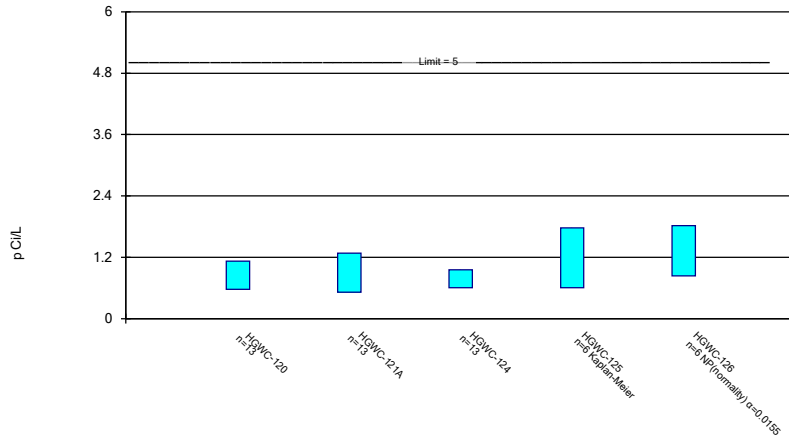
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

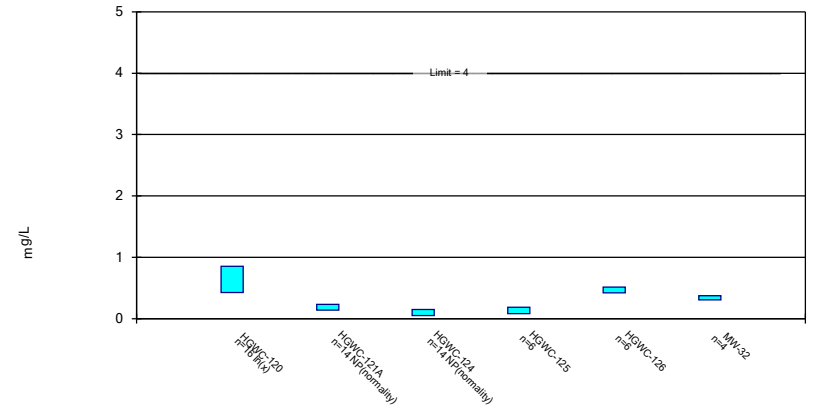
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

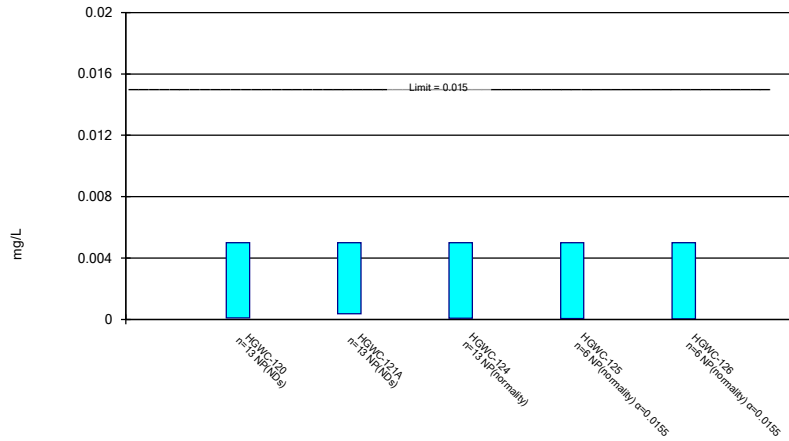
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Non-Parametric Confidence Interval

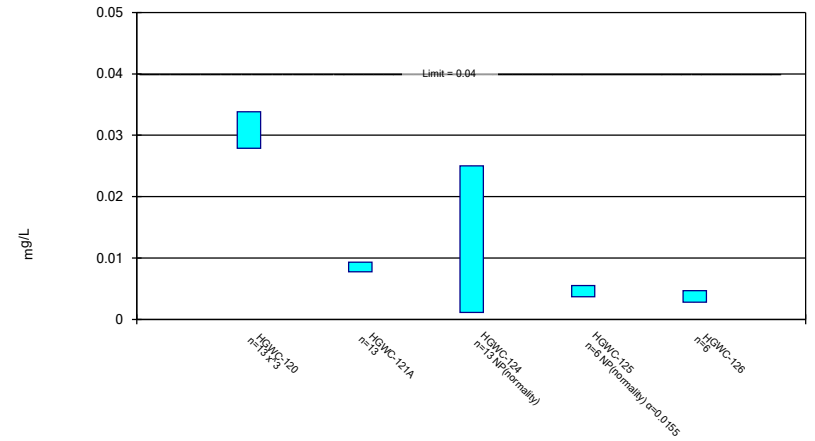
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

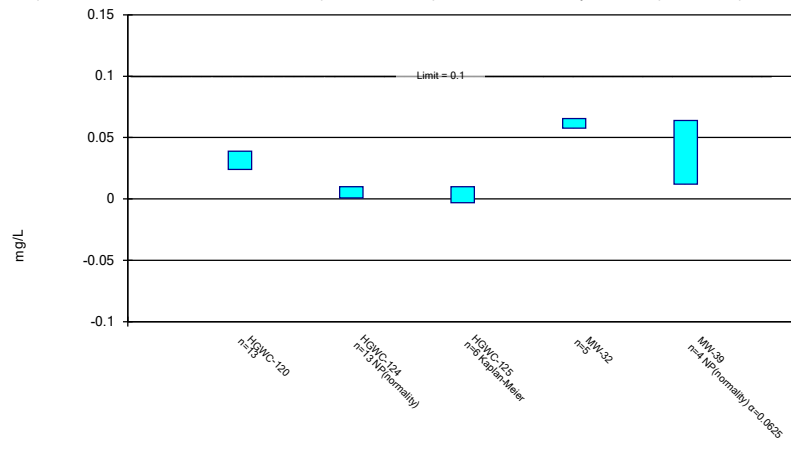
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum    Analysis Run 2/16/2021 1:03 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-3



FIGURE J.

# State Confidence Interval Summary Table - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

| Constituent       | Well     | Upper Lim. | Lower Lim. | Compliance | Sig. N | Mean    | Std. Dev. | %NDs | ND Adj. | Transform | Alpha  | Method         |
|-------------------|----------|------------|------------|------------|--------|---------|-----------|------|---------|-----------|--------|----------------|
| Molybdenum (mg/L) | HGWC-120 | 0.03897    | 0.02407    | 0.01       | Yes 13 | 0.03152 | 0.01002   | 0    | None    | No        | 0.01   | Param.         |
| Molybdenum (mg/L) | MW-32    | 0.06546    | 0.05774    | 0.01       | Yes 5  | 0.0616  | 0.002302  | 0    | None    | No        | 0.01   | Param.         |
| Molybdenum (mg/L) | MW-39    | 0.064      | 0.012      | 0.01       | Yes 4  | 0.05    | 0.02535   | 0    | None    | No        | 0.0625 | NP (normality) |

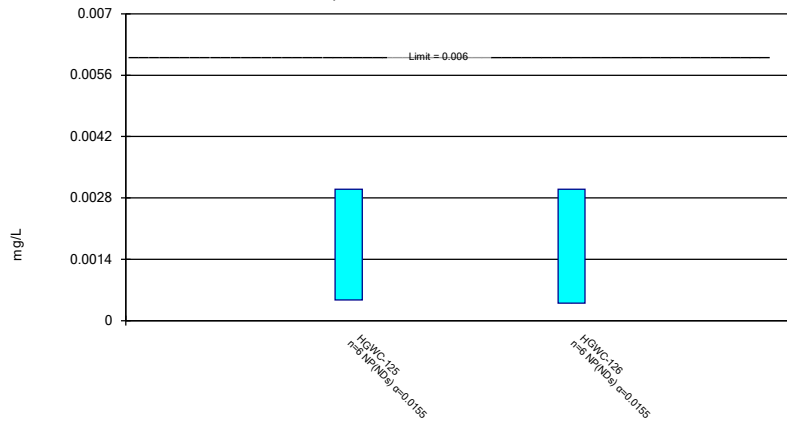
# State Confidence Interval Summary Table - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

| Constituent                       | Well            | Upper Lim.     | Lower Lim.     | Compliance  | Sig. N        | Mean           | Std. Dev.       | %NDs     | ND Adj.      | Transform | Alpha         | Method                |
|-----------------------------------|-----------------|----------------|----------------|-------------|---------------|----------------|-----------------|----------|--------------|-----------|---------------|-----------------------|
| Antimony (mg/L)                   | HGWC-125        | 0.003          | 0.00047        | 0.006       | No 6          | 0.002578       | 0.001033        | 83.33    | None         | No        | 0.0155        | NP (NDs)              |
| Antimony (mg/L)                   | HGWC-126        | 0.003          | 0.0004         | 0.006       | No 6          | 0.002567       | 0.001061        | 83.33    | None         | No        | 0.0155        | NP (NDs)              |
| Barium (mg/L)                     | HGWC-120        | 0.05206        | 0.04548        | 2           | No 13         | 0.04877        | 0.004422        | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-121A       | 0.08505        | 0.06703        | 2           | No 13         | 0.07604        | 0.01211         | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-124        | 0.07376        | 0.06659        | 2           | No 13         | 0.07018        | 0.004822        | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-125        | 0.04916        | 0.03984        | 2           | No 6          | 0.0445         | 0.003391        | 0        | None         | No        | 0.01          | Param.                |
| Barium (mg/L)                     | HGWC-126        | 0.24           | 0.21           | 2           | No 6          | 0.2317         | 0.01169         | 0        | None         | No        | 0.0155        | NP (normality)        |
| Chromium (mg/L)                   | HGWC-120        | 0.01           | 0.00072        | 0.1         | No 13         | 0.007913       | 0.00397         | 76.92    | None         | No        | 0.01          | NP (NDs)              |
| Chromium (mg/L)                   | HGWC-121A       | 0.01           | 0.0005         | 0.1         | No 13         | 0.009269       | 0.002635        | 92.31    | None         | No        | 0.01          | NP (NDs)              |
| Chromium (mg/L)                   | HGWC-124        | 0.01           | 0.00051        | 0.1         | No 13         | 0.008536       | 0.003573        | 84.62    | None         | No        | 0.01          | NP (NDs)              |
| Chromium (mg/L)                   | HGWC-125        | 0.01           | 0.00052        | 0.1         | No 6          | 0.00685        | 0.00488         | 66.67    | None         | No        | 0.0155        | NP (normality)        |
| Chromium (mg/L)                   | HGWC-126        | 0.01           | 0.00096        | 0.1         | No 6          | 0.008493       | 0.003691        | 83.33    | None         | No        | 0.0155        | NP (NDs)              |
| Cobalt (mg/L)                     | HGWC-120        | 0.003987       | 0.002859       | 0.038       | No 13         | 0.003423       | 0.0007585       | 0        | None         | No        | 0.01          | Param.                |
| Cobalt (mg/L)                     | HGWC-121A       | 0.005          | 0.0005         | 0.038       | No 13         | 0.003931       | 0.002032        | 76.92    | None         | No        | 0.01          | NP (NDs)              |
| Cobalt (mg/L)                     | HGWC-125        | 0.01296        | 0.006308       | 0.038       | No 6          | 0.009633       | 0.00242         | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-120        | 1.121          | 0.5734         | 5           | No 13         | 0.8474         | 0.3685          | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-121A       | 1.279          | 0.5176         | 5           | No 13         | 0.8985         | 0.5123          | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-124        | 0.9537         | 0.6046         | 5           | No 13         | 0.7792         | 0.2348          | 0        | None         | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-125        | 1.774          | 0.6055         | 5           | No 6          | 1.158          | 0.4637          | 16.67    | Kaplan-Meier | No        | 0.01          | Param.                |
| Combined Radium 226 + 228 (pCi/L) | HGWC-126        | 1.82           | 0.837          | 5           | No 6          | 1.4            | 0.4854          | 0        | None         | No        | 0.0155        | NP (normality)        |
| Fluoride (mg/L)                   | HGWC-120        | 0.8531         | 0.4277         | 4           | No 16         | 0.6925         | 0.3863          | 0        | None         | ln(x)     | 0.01          | Param.                |
| Fluoride (mg/L)                   | HGWC-121A       | 0.23           | 0.14           | 4           | No 14         | 0.2682         | 0.2942          | 0        | None         | No        | 0.01          | NP (normality)        |
| Fluoride (mg/L)                   | HGWC-124        | 0.15           | 0.05           | 4           | No 14         | 0.1091         | 0.08582         | 28.57    | None         | No        | 0.01          | NP (normality)        |
| Fluoride (mg/L)                   | HGWC-125        | 0.1869         | 0.08305        | 4           | No 6          | 0.135          | 0.03782         | 0        | None         | No        | 0.01          | Param.                |
| Fluoride (mg/L)                   | HGWC-126        | 0.5116         | 0.4184         | 4           | No 6          | 0.465          | 0.03391         | 0        | None         | No        | 0.01          | Param.                |
| Fluoride (mg/L)                   | MW-32           | 0.3721         | 0.3079         | 4           | No 4          | 0.34           | 0.01414         | 0        | None         | No        | 0.01          | Param.                |
| Lead (mg/L)                       | HGWC-120        | 0.005          | 0.00009        | 0.005       | No 13         | 0.003875       | 0.002139        | 76.92    | None         | No        | 0.01          | NP (NDs)              |
| Lead (mg/L)                       | HGWC-121A       | 0.005          | 0.00036        | 0.005       | No 13         | 0.004264       | 0.001798        | 84.62    | None         | No        | 0.01          | NP (NDs)              |
| Lead (mg/L)                       | HGWC-124        | 0.005          | 0.000075       | 0.005       | No 13         | 0.003104       | 0.002497        | 61.54    | None         | No        | 0.01          | NP (normality)        |
| Lead (mg/L)                       | HGWC-125        | 0.005          | 0.000047       | 0.005       | No 6          | 0.002553       | 0.002681        | 50       | None         | No        | 0.0155        | NP (normality)        |
| Lead (mg/L)                       | HGWC-126        | 0.005          | 0.000042       | 0.005       | No 6          | 0.003348       | 0.00256         | 66.67    | None         | No        | 0.0155        | NP (normality)        |
| Lithium (mg/L)                    | HGWC-120        | 0.03385        | 0.0279         | 0.03        | No 13         | 0.03058        | 0.004517        | 0        | None         | x^3       | 0.01          | Param.                |
| Lithium (mg/L)                    | HGWC-121A       | 0.009335       | 0.007773       | 0.03        | No 13         | 0.008554       | 0.00105         | 0        | None         | No        | 0.01          | Param.                |
| Lithium (mg/L)                    | HGWC-124        | 0.025          | 0.0011         | 0.03        | No 13         | 0.0103         | 0.0121          | 38.46    | None         | No        | 0.01          | NP (normality)        |
| Lithium (mg/L)                    | HGWC-125        | 0.0055         | 0.0037         | 0.03        | No 6          | 0.00455        | 0.0008643       | 0        | None         | No        | 0.0155        | NP (normality)        |
| Lithium (mg/L)                    | HGWC-126        | 0.00468        | 0.002787       | 0.03        | No 6          | 0.003733       | 0.000689        | 0        | None         | No        | 0.01          | Param.                |
| <b>Molybdenum (mg/L)</b>          | <b>HGWC-120</b> | <b>0.03897</b> | <b>0.02407</b> | <b>0.01</b> | <b>Yes 13</b> | <b>0.03152</b> | <b>0.01002</b>  | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.01</b>   | <b>Param.</b>         |
| Molybdenum (mg/L)                 | HGWC-124        | 0.01           | 0.00091        | 0.01        | No 13         | 0.004532       | 0.004503        | 38.46    | None         | No        | 0.01          | NP (normality)        |
| Molybdenum (mg/L)                 | HGWC-125        | 0.009948       | -0.00304       | 0.01        | No 6          | 0.007782       | 0.005226        | 50       | Kaplan-Meier | No        | 0.01          | Param.                |
| <b>Molybdenum (mg/L)</b>          | <b>MW-32</b>    | <b>0.06546</b> | <b>0.05774</b> | <b>0.01</b> | <b>Yes 5</b>  | <b>0.0616</b>  | <b>0.002302</b> | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.01</b>   | <b>Param.</b>         |
| <b>Molybdenum (mg/L)</b>          | <b>MW-39</b>    | <b>0.064</b>   | <b>0.012</b>   | <b>0.01</b> | <b>Yes 4</b>  | <b>0.05</b>    | <b>0.02535</b>  | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.0625</b> | <b>NP (normality)</b> |

### Non-Parametric Confidence Interval

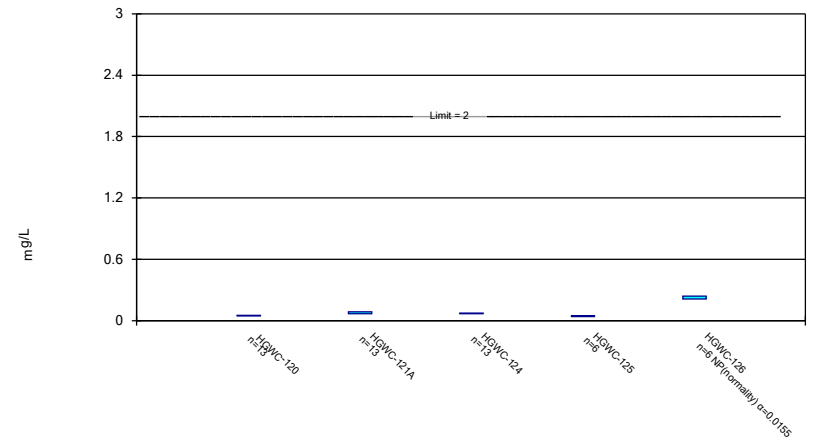
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

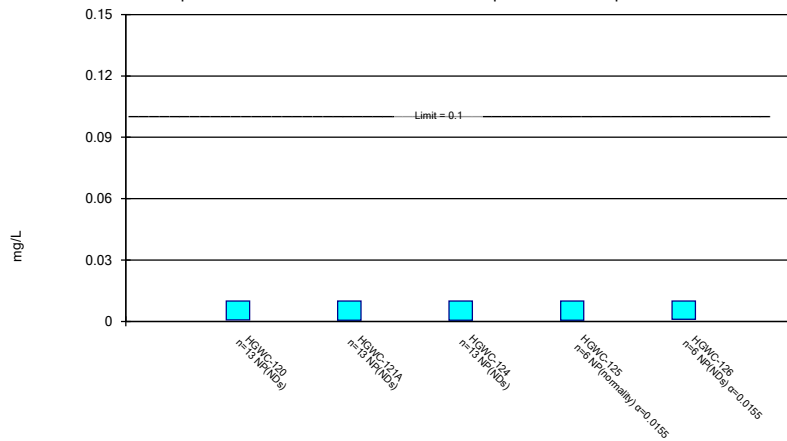
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Non-Parametric Confidence Interval

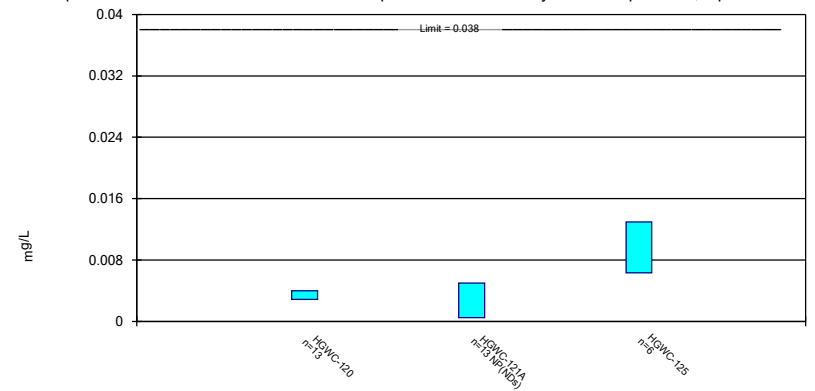
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

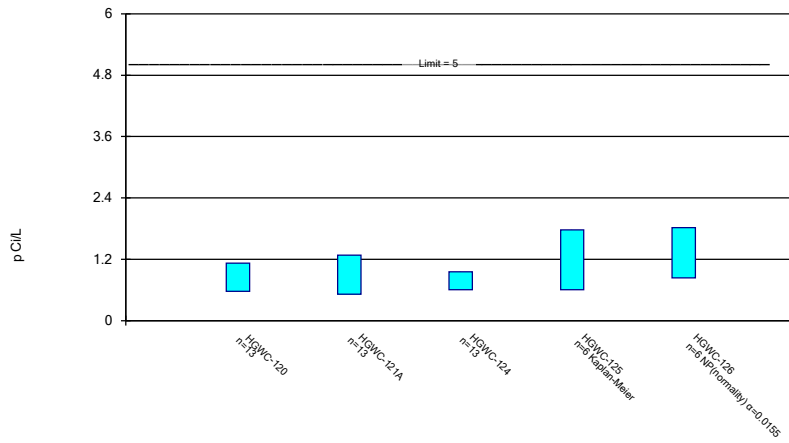
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

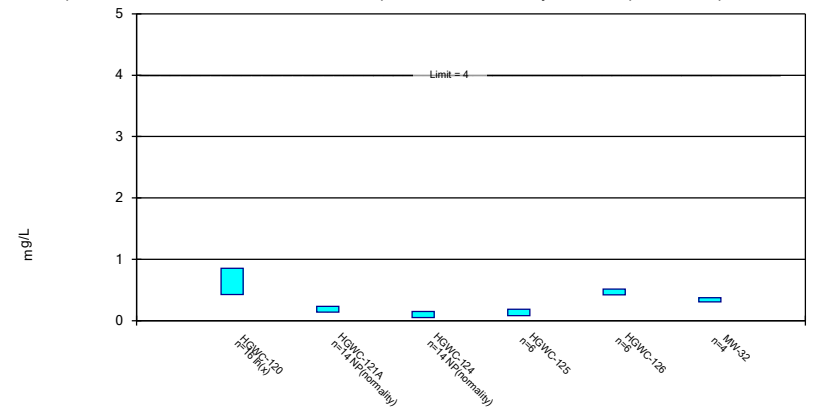
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

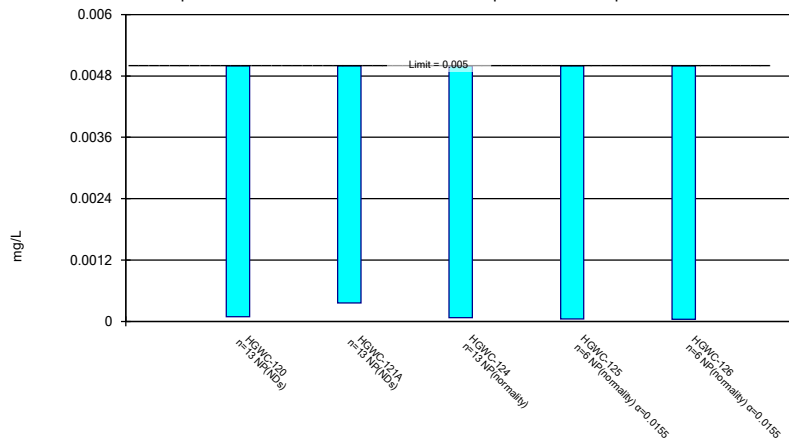
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Non-Parametric Confidence Interval

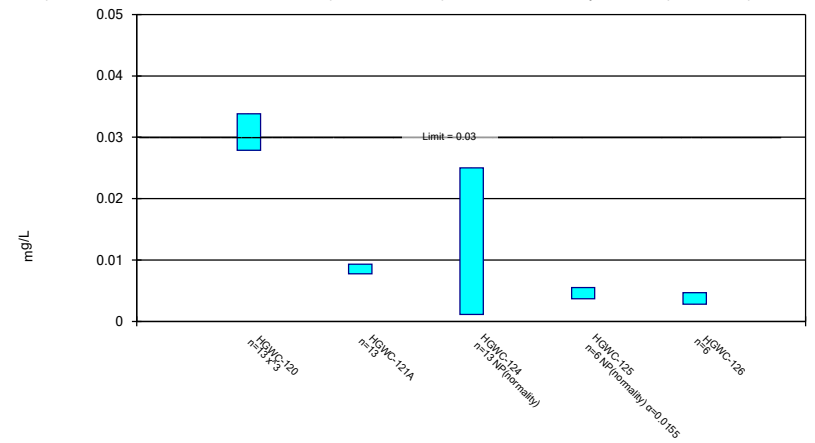
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

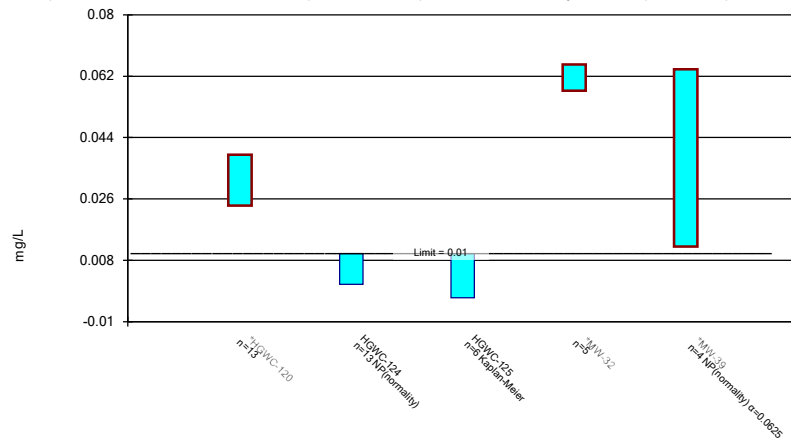
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum    Analysis Run 2/16/2021 1:06 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-3