Prepared for



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

# 2022 SEMIANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

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

Prepared by



engineers | scientists | innovators

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#### **CERTIFICATION STATEMENT**

This 2022 Semiannual Groundwater Monitoring and Corrective Action Report, 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. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).



Whitney B. Law Georgia Professional Engineer No. 36641 February 28, 2023
Date

#### **SUMMARY**

This summary of the 2022 Semiannual Groundwater Monitoring and Corrective Action Report provides the status of groundwater monitoring and corrective action program for the reporting period of July through December 2022 (referred herein as the reporting period) 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 United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal 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. AP-3 is located on the northeastern corner of the Plant Hammond property. 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



Plant Hammond and the Site

the pond with a low-permeability cover system was completed in the second quarter of 2018.

Groundwater at the Site is monitored using a comprehensive monitoring network that meets federal and state monitoring requirements. Groundwater monitoring-related activities have been performed at AP-3 since August 2016. During the reporting period, Geosyntec conducted one groundwater sampling event in August 2022. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Groundwater data for this event were evaluated in accordance with the certified statistical methods. Statistically significant increases of Appendix III<sup>2</sup> constituents above background were

<sup>&</sup>lt;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

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



observed in select monitoring wells following the August 2022 event, as summarized in the table below.

Appendix III Constituent <sup>2</sup>	August 2022
Boron	HGWC-120, HGWC-121A,
Bolon	HGWC-125
Calcium	HGWC-120, HGWC-121A,
Calcium	HGWC-125, HGWC-126
Sulfate	HGWC-120, HGWC-121A,
Surfate	HGWC-125
Total dissolved solids	HGWC-121A, HGWC-125

No statistically significant levels (SSLs) were identified for Appendix IV groundwater data from the August 2022 event<sup>3</sup>.

Groundwater at AP-3 will continue to be managed under the assessment monitoring program. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be posted to Georgia Power's CCR Rule Compliance website and provided to GA EPD semiannually.

<sup>&</sup>lt;sup>3</sup> Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228. A federal SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's maximum contaminant level (MCL), if available, the USEPA Rule Specified Level, if no MCL is available, or the calculated background interwell tolerance limit.



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#### LIST OF ACRONYMS AND ABBREVIATIONS

ACM assessment of corrective measures

AP-3 Ash Pond 3

CCR coal combustion residuals
CFR Code of Federal Regulations

cm/sec centimeters per second

DO dissolved oxygen ft/day feet per day ft/ft feet per foot

GA EPD Georgia Environmental Protection Division

Georgia Power Georgia Power Company
Geosyntec Geosyntec Consultants, Inc.
GSC Groundwater Stats Consulting
GWPS Groundwater Protection Standard
HAR Hydrogeologic Assessment Report

 $\begin{array}{lll} HDPE & high density polyethylene \\ i & horizontal hydraulic gradient \\ K_h & horizontal hydraulic conductivity \\ MCL & Maximum Contaminant Level \\ \end{array}$ 

mg/L milligram per liter  $n_e$  effective porosity

NELAP National Environmental Laboratory Accreditation Program

NTU Nephelometric turbidity units
ORP oxidation-reduction potential
Pace Analytical Pace Analytical Services, LLC.

PE professional engineer
PL prediction limit

QA/QC Quality Assurance/Quality Control SSI statistically significant increase SSL statistically significant level

s.u. standard unit

TDS total dissolved solids

Unified Guidance Statistical Analysis of Groundwater Data at RCRA Facilities Unified

Guidance

USEPA United States Environmental Protection Agency

#### 1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (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, Inc. (Geosyntec) has prepared this 2022 Semiannual Groundwater Monitoring and 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 July 2022 through December 2022 (referred herein as the reporting period). This report includes the results of the semiannual assessment monitoring event conducted in August 2022.

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 federal CCR Rule. For ease of reference, the federal CCR rules are cited within this report, in lieu of citing both sets of regulations.

AP-3 ceased receiving waste prior to the effective date of the federal 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 Georgia Power'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 federal CCR Rule (August 5, 2016). Pursuant to § 257.96(b), Georgia Power monitors groundwater associated with AP-3 in accordance with the assessment monitoring program established for the unit in 2019, including semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the federal CCR Rule.

#### 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 was a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were retired on July 29, 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-millimeter-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 and Hydrogeologic Setting

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

#### 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. The Valley and Ridge 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 units: (i) fill material; (ii) terrace alluvium; (iii) residuum; (iv) highly weathered/fractured limestone bedrock; and (v) unweathered limestone bedrock.

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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 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 consists of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring

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wells were selected based on the characterization of site-specific hydrogeologic conditions.

The current on-site network of piezometers is used to gauge water levels to define groundwater flow direction and gradients. The locations of the detection monitoring 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 groundwater monitoring-related activities performed during the reporting period and discusses any change in status of the monitoring program. Groundwater sampling was performed in accordance with § 257.93.

#### 2.1 <u>Monitoring Well Installation and Maintenance</u>

No additional detection monitoring wells or piezometers were installed during this reporting period.

The well and piezometer networks are inspected semiannually to evaluate if any repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In August 2022, the networks were inspected and necessary corrective actions were identified and subsequently completed, as documented in **Appendix A**. This documentation was prepared under the direction of a professional geologist or engineer registered in the State of Georgia.

#### 2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-3 in August 2019. No SSLs of Appendix IV constituents were identified during the current reporting period. Groundwater at AP-3 will continue to be managed under the assessment monitoring program stipulated by § 257.95.

For the current reporting period, one semiannual assessment monitoring event was conducted in August 2022. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-3 during the reporting period are 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 Evaluations

Supplemental groundwater samples were collected from the entire AP-3 detection monitoring well network during the August 2022 monitoring event and were analyzed for major cations (calcium, magnesium, potassium, and sodium) and major anions (chloride, sulfate, and alkalinity (bicarbonate, carbonate, total) as well as iron, manganese, and sulfide. The data were collected in support of evaluating, as necessary, the geochemical

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composition of the groundwater at the Site. The laboratory reports associated with the data are provided in **Appendix B**.

In response to GA EPD comments received on January 26, 2021, Georgia Power added three surface water sampling locations to the stormwater outfalls at AP-3. Upon issuance of the Hammond AP-3 solid waste permit, these locations will be sampled semiannually for the full Appendix IV constituent list.

#### 3.0 SAMPLING METHODOLOGY AND 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 and Surface Water Level Measurement

A synoptic round of depth-to-groundwater-level measurements was recorded from the AP-3 wells and piezometers during the August 2022 assessment monitoring event and used to calculate corresponding groundwater elevations, which are presented in **Table 3**. The August 2022 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

Surface water elevations were recorded from two surveyed gauging points located along Cabin Creek east of AP-3, as shown on **Figure 2**. One gauging location, referenced in **Table 3** as "Cabin Creek (Hwy 20)", is located midway across the bridge along GA-20 Alabama Highway spanning Cabin Creek. The second Cabin Creek gauging location is along the railroad bridge southeast of AP-3; this location is referred to in **Table 3** as "Cabin Creek (Railroad Bridge)".

The groundwater and surface water elevation data presented in **Table 3** were used to prepare a potentiometric surface contour map for the August 2022 event, which is presented on **Figure 3**. 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 toward 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 horizontal groundwater hydraulic gradient within the uppermost aquifer beneath AP-3 was calculated using the groundwater elevation data from the August 2022 semiannual sampling event. The hydraulic gradient is commonly calculated along the groundwater flow path perpendicular to groundwater elevation contours. Ideally, this flow path originates and concludes with groundwater elevations reported for two wells, but this may not be feasible and still remain perpendicular to the contours. The hydraulic gradient in this report has been calculated between an upgradient and downgradient well pair selected to provide the most accurate alignment possible relative to the interpreted

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groundwater flow path (i.e., between HGWA-45D and MW-32). The hydraulic gradient calculation is presented in **Table 4**. The general trajectory of the flow path for the August 2022 semiannual sampling event is shown on **Figure 3**. The average hydraulic gradient for this reporting period across AP-3 is 0.0090 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. The calculation is provided in **Table 4**.

$$V = \frac{K_h * i}{n_e}$$

where:

V = Groundwater flow velocity  $\left(\frac{feet}{day}\right)$   $K_h =$  Horizontal Hydraulic Conductivity  $\left(\frac{feet}{day}\right)$ i = Horizontal hydraulic gradient  $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$ 

 $h_1$  and  $h_2$  = Groundwater elevation at location 1 and 2

L = distance between location 1 and 2

 $n_e$  = Effective porosity

Aquifer testing was conducted by LETCO in 1977, Southern Company Services in 2014, and Geosyntec in 2017 to evaluate horizontal hydraulic conductivity (K<sub>h</sub>) of the water bearing units in the vicinity of AP-3. Slug testing was performed to estimate the K<sub>h</sub> for units above the top of bedrock, while single packer testing was used to estimate the K<sub>h</sub> for the bedrock intervals. Additional details are presented in the HAR Rev 01 (Geosyntec, 2020).

The groundwater flow velocity calculation was performed using the geometric mean value for  $K_h$  of the highly weathered/fractured rock of 9.8 x  $10^{-4}$  centimeters per second (cm/sec) or 2.76 feet per day (ft/day). An estimated effective porosity ( $n_e$ ) 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 assigned, and

accounting for the hydraulic gradient discussed above, the 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 using low-flow sampling procedures in accordance with § 257.93(a). Purging and sampling was performed using dedicated bladder pumps with dedicated tubing, non-dedicated bladder pumps, or peristaltic pumps. For wells sampled with non-dedicated bladder pumps, the pump intake was lowered to the midpoint of the well screen (or as appropriate based on the groundwater level). Non-dedicated bladder pump samples were collected using new disposable polyethylene tubing; all non-dedicated tubing was disposed of following the sampling event. All non-disposable equipment was decontaminated before use and between well locations.

An in-situ water quality field meter (Aqua TROLL 400) was used to monitor and record field water quality parameters [i.e., pH, conductivity, dissolved oxygen (DO), temperature, and oxidation reduction potential (ORP)] during well purging to verify stabilization prior to sampling. Turbidity was monitored using a LaMotte 2020we portable turbidity meter. Groundwater samples were collected once the following stabilization criteria were met:

- pH  $\pm$  0.1 standard units (s.u.).
- Conductivity  $\pm$  5%.
- $\pm 0.2$  mg/L  $\pm 10\%$ , whichever is greater, for DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L, record only.
- Turbidity measured less than 5 nephelometric turbidity units (NTU) or measured between 5 and 10 NTU following three hours of purging.

Following purging, and once stabilization was achieved, unfiltered 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 Peachtree Corners, Georgia, following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the reporting period are provided in **Appendix B**.

#### 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 and the geochemical parameters analyzed for this project. Analytical methods used for groundwater sample analysis, and the associated results, are listed in the analytical laboratory reports included in **Appendix B**. The groundwater analytical results from the August 2022 semiannual sampling event are summarized in **Tables 5** and **6**.

#### 3.5 Quality Assurance and Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring event 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 appropriately preserved laboratory-provided containers and submitted under the same chain of custody as the primary samples for analysis of the same constituents 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 reports are provided in **Appendix B**, 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 constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the reporting period. The data were analyzed by Groundwater Stats Consulting (GSC); the report generated from the analyses are provided in **Appendix C**.

#### 4.1 Statistical Methods

Groundwater data from the reporting period were statistically analyzed in accordance with the Professional Engineer-certified (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 constituents were evaluated to assess if concentrations statistically exceeded the established GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix C** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and are presented in **Table 7**.

#### 4.1.1 Appendix III Statistical Methods

Based on guidance from GA EPD, statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits (PLs) combined with a 1-of-2 verification resample plan for each of the Appendix III constituents. Interwell 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 detection monitoring well exceeds the constituent's associated PL. The 1-

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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 each downgradient detection monitoring well with a minimum of four samples. 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.

The confidence intervals are compared to the 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 defined by the below criteria. These criteria were adopted into the GA EPD Rules for Solid Waste Management 391-3-4-.10 on February 22, 2022.

- (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 0.100 mg/L.
- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.



Following the above requirements, GWPS have been established for statistical comparison of Appendix IV constituents and are presented in **Table 7**.

#### 4.2 Statistical Analyses Results

Based on review of the Appendix III statistical analysis discussion presented in **Appendix C**, groundwater conditions have not returned to background and assessment monitoring should continue. However, no SSLs of Appendix IV constituents were identified following statistical analyses of the August 2022 data set.



#### 5.0 MONITORING PROGRAM STATUS

Based on the statistical evaluation results presented for the reporting period, SSIs of Appendix III constituents have not returned to background levels; and therefore, Georgia Power will continue to monitor groundwater at AP-3 in accordance with the assessment monitoring program regulations of § 257.95.



#### 6.0 CONCLUSIONS AND FUTURE ACTIONS

This 2022 Semiannual Groundwater Monitoring and Corrective Action Report for Plant Hammond AP-3 was prepared to fulfill the requirements of the federal CCR Rule and the GA EPD Rules for Solid Waste Management 391-3-4-.10.

Statistical analyses of the groundwater monitoring data for AP-3 for the reporting period did not identify any SSLs of Appendix IV constituents and the site will remain in Assessment Monitoring.

The next routine semiannual assessment monitoring event for AP-3 is scheduled to begin January 2023.



#### 7.0 REFERENCES

- Geosyntec, 2020. *Hydrogeologic Assessment Report (Revision 01) Plant Hammond Ash Pond 3 (AP-3)*. November 2020.
- Geosyntec, 2021. *Groundwater Monitoring Plan Plant Hammond Ash Pond 3 (AP-3)*. September 2019, revised January 2021.
- Golder Associates, 2018. Geologic and Hydrogeologic Report Plant Hammond. November 2018.
- Sanitas: Groundwater Statistical Software, v. 9.6.05, 2018. Sanitas Technologies<sup>©</sup>, Boulder, CO.
- 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, 2011. *Region IV Data Validation Standard Operating Procedures*. Science and Ecosystem Support Division. Region IV. Athens, GA. September 2011.
- USEPA, 2017. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA-540-R-2017-001]. Washington, DC. January 2017.

## **TABLES**

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

Well ID	Hydraulic Location	Installation Date	Northing (1)	Easting (1)	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 (ft)
Detection Monitoring Well		•							
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	Downgradient	11/25/2019	1550422.03	1942689.40	611.24	552.72	542.72	68.52	10
Piezometer									
MW-21	Upgradient	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-32	Downgradient	11/22/2019	1551092.83	1943021.47	585.46	559.30	549.30	36.16	10
MW-39	Downgradient	3/16/2020	1551111.45	1943089.26	580.42	564.93	554.93	25.82	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	1551056.478	1942929.10	605.72	513.92	503.92	102.05	10

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 by GEL Solutions May 19, 2020. Survey data for HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D certified by GEL Solutions September 10, 2020.
- (2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions May 19, 2020. Survey data for HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D certified by GEL Solutions September 10, 2020.
- (3) Total well depth accounts for sump if sump depth data was provided on well construction logs.

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

Well ID	Hydraulic Location	August 2-4, 2022	Status of Monitoring
Purpose	e of Sampling Event:	Assessment	Well
Detection Monitoring Well			
HGWA-1	Upgradient	X	Assessment
HGWA-2	Upgradient	X	Assessment
HGWA-3	Upgradient	X	Assessment
HGWA-43D	Upgradient	X	Assessment
HGWA-44D	Upgradient	X	Assessment
HGWA-45D	Upgradient	X	Assessment
HGWA-122	Upgradient	X	Assessment
HGWC-120	Downgradient	X	Assessment
HGWC-121A	Downgradient	X	Assessment
HGWC-124	Downgradient	X	Assessment
HGWC-125	Downgradient	X	Assessment
HGWC-126	Downgradient	X	Assessment

Table 3
Summary of Groundwater and Surface Water Elevations
Plant Hammond AP-3, Floyd County, Georgia

	Torrest Contra	Augus	t 1, 2022
Well ID	Top of Casing Elevation (ft) <sup>(1)</sup>	Depth to Water (ft BTOC)	Groundwater Elevation (ft) <sup>(1)</sup>
Detection Monitoring Well	-		
HGWA-1	595.21	18.59	576.62
HGWA-2	587.92	10.71	577.21
HGWA-3	587.74	10.45	577.29
HGWA-43D	595.08	18.47	576.61
HGWA-44D	594.79	18.01	576.78
HGWA-45D	586.95	11.50	575.45
HGWA-122	587.90	12.55	575.35
HGWC-120	605.82	40.44	565.38
HGWC-121A	584.69	17.65	567.04
HGWC-124	582.52	14.02	568.50
HGWC-125	608.89	43.76	565.13
HGWC-126	611.24	40.90	570.34
Piezometer			
MW-21	586.27	8.43	577.84
MW-23	584.91	12.65	572.26
MW-32	585.46	20.09	565.37
MW-39	580.42	15.10	565.32
MW-41	577.25	12.05	565.20
MW-46D	605.72	40.22	565.50
Surface Water Gauging Location			
Cabin Creek (Hwy 20)	594.46	30.20	564.26
Cabin Creek (Railroad bridge)	586.60	22.54	564.06

ft = feet

ft BTOC = feet below top of casing

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

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

	August 1, 2022						
Flow Path Direction <sup>(1)</sup>	h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	L (ft)	i (ft/ft)			
Easterly Flow Path (HGWA-45D to MW-32)	575.45	565.37	1,120	0.0090			

Flow Path Direction (1)	K <sub>h</sub> (ft/day)	n <sub>e</sub>	i (ft/ft)	V (ft/day) <sup>(2)</sup>
Easterly Flow Path (HGWA-45D to MW-32)	2.76	0.15	0.0090	0.17

ft = feet

ft/day = feet per day

ft/ft = feet per foot

 $h_1$  and  $h_2$  = groundwater elevation at location 1 and 2

 $i = h_1 - h_2/L = horizontal hydraulic gradient$ 

 $K_h$  = horizontal hydraulic conductivity

L = distance between location 1 and 2 along the flow path

 $n_e$  = effective porosity

V = groundwater flow velocity

- (1) Flow path direction relative to the orientation of AP-3 and illustrated on Figure 3 of associated report.
- (2) Groundwater flow velocity equation:  $V = [K_h * i] / n_e$

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

	Well ID:	HGWA-1	HGWA-2	HGWA-3	HGWA-43D	HGWA-44D	HGWA-45D	HGWA-122	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
	Sample Date:	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/4/2022	8/4/2022	8/4/2022	8/4/2022	8/4/2022
	Parameter (1,2)												
	Boron	0.012 J	0.047	< 0.0086	0.043	0.31	0.14	0.18	1.0	1.8	0.36	1.4	0.023 J
■	Calcium	117	31.2	84.6	54.1	20.9	49.9	69.5	173	160	103	170	141
	Chloride	14.1	7.8	5.9	4.3	19.8	3.9	2.7	2.7	15.4	2.6	11.6	8.7
	Fluoride	0.090 J	0.053 J	0.067 J	0.22	0.80	0.21	0.10	0.38	0.18	0.074 J	0.15	0.50
APPENDIX	pH <sup>(3)</sup>	7.03	4.57	7.02	7.15	7.90	7.39	6.67	6.93	6.80	7.15	6.09	6.99
AP	Sulfate	58.1	86.9	43.5	37.0	13.2	2.1	41.5	230	162	73.1	331	68.3
	TDS	400	196	287	278	311	261	217	632	640	334	706	510
	Antimony	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.0016 J	< 0.00078	< 0.00078	< 0.00078
	Arsenic	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022
	Barium	0.039	0.11	0.16	0.35	0.37	0.64	0.038	0.048	0.060	0.068	0.037	0.24
	Beryllium	< 0.000054	0.00019 J	< 0.000054	< 0.000054	< 0.000054	< 0.000054	< 0.000054	< 0.000054	< 0.000054	< 0.000054	< 0.000054	< 0.000054
	Cadmium	< 0.00011	0.00023 J	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00057	< 0.00011	< 0.00011	< 0.00011	< 0.00011
<u> </u>	Chromium	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011
X	Cobalt	0.00054 J	0.024	< 0.00039	< 0.00039	< 0.00039	< 0.00039	< 0.00039	0.0058	< 0.00039	< 0.00039	0.014	< 0.00039
APPENDIX	Fluoride	0.090 J	0.053 J	0.067 J	0.22	0.80	0.21	0.10	0.38	0.18	0.074 J	0.15	0.50
PF	Lead	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089
■ F	Lithium	< 0.00073	0.0013 J	0.0030 J	0.0019 J	0.041	0.0045 J	< 0.00073	0.023 J	0.0069 J	0.0011 J	0.0035 J	0.0034 J
	Mercury	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013
	Molybdenum	< 0.00074	< 0.00074	< 0.00074	0.0042 J	0.0020 J	< 0.00074	0.0042 J	0.032	< 0.00074	< 0.00074	0.0023 J	< 0.00074
	Comb. Radium 226/228	0.203 U	0.861 U	0.400 U	0.662 U	0.952 U	0.509 U	0.573 U	0.687 U	1.16 U	0.160 U	0.971 U	1.34 U
	Selenium	< 0.0014	0.0014 J	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014
	Thallium	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018

#### Notes:

TDS = Total dissolved solids

<sup>&</sup>lt; = Indicates the parameter was not detected above the analytical method detection limit (MDL).

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

U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228).

<sup>(1)</sup> 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).

<sup>(2)</sup> Metals were analyzed by EPA Method 6010D, 6020B, and 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C-2015, and combined radium 226/228 by EPA Methods 9315/9320.

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

Table 6
Summary of Geochemical Analytical Data
Plant Hammond AP-3, Floyd County, Georgia

	Well ID:	HGWA-1	HGWA-2	HGWA-3	HGWA-43D	HGWA-44D	HGWA-45D	HGWA-122	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
	Sample Date:	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/2/2022	8/4/2022	8/4/2022	8/4/2022	8/4/2022	8/4/2022
	Parameter (1,2)												
	Bicarbonate Alkalinity	266	12.8	179	203	263	238	155	291	352	239	189	434
	Carbonate Alkalinity	< 5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0
Z	Total Alkalinity	266	12.8	179	203	263	238	155	291	352	239	189	434
HE	Iron	0.21	0.72	1.0	0.31	0.24	0.26	0.81	0.65	0.086	0.26	0.10	1.5
CE	Magnesium	4.4	4.0	5.2	17.2	12.2	18.7	5.2	23.3	23.8	9.5	27.3	26.5
EO	Manganese	0.48	0.80	0.24	0.019 J	0.013 J	0.015 J	0.66	1.4	0.73	0.38	2.3	0.19
_ 5	Potassium	0.28	1.0	0.37	0.80	3.9	1.8	1.8	7.2	1.1	0.83	3.4	0.78
	Sodium	28.5	11.2	5.7	24.8	94.6	24.6	9.5	8.7	34.3	5.6	16.2	31.3
	Sulfide	0.062 J	< 0.050	< 0.050	< 0.050	0.058 J	0.16	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

- (1) Ions were analyzed by EPA Method 6010D, alkalinity was analyzed by SM2320B-2011, and sulfide was analyzed by SM4500-S2D-2011.
- (2) Calcium, chloride, and sulfate are considered major ions, but are reported as Appendix III constituents on Table 5.

Page 1 of 1 February 2023

<sup>&</sup>lt;= Indicates the parameter was not detected above the analytical method detection limit (MDL).

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

#### Table 7

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

Analyte	Units	MCL	CCR-Rule Specified <sup>(1)</sup>	Background (2)	GWPS <sup>(3,4)</sup>
Antimony	mg/L	0.006	N/A	0.003	0.006
Arsenic	mg/L	0.01	N/A	0.005	0.01
Barium	mg/L	2	N/A	0.64	2
Beryllium	mg/L	0.004	N/A	0.0005	0.004
Cadmium	mg/L	0.005	N/A	0.0005	0.005
Chromium	mg/L	0.1	N/A	0.0079	0.1
Cobalt	mg/L	N/A	0.006	0.038	0.038
Fluoride	mg/L	4	N/A	0.96	4
Lead	mg/L	N/A	0.015	0.001	0.015
Lithium	mg/L	N/A	0.040	0.048	0.048
Mercury	mg/L	0.002	N/A	0.0002	0.002
Molybdenum	mg/L	N/A	0.10	0.01	0.10
Selenium	mg/L	0.05	N/A	0.005	0.05
Thallium	mg/L	0.002	N/A	0.001	0.002
Combined Radium-226/228	pCi/L	5	N/A	1.65	5

Notes:

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

MCL = Maximum Contaminant Level

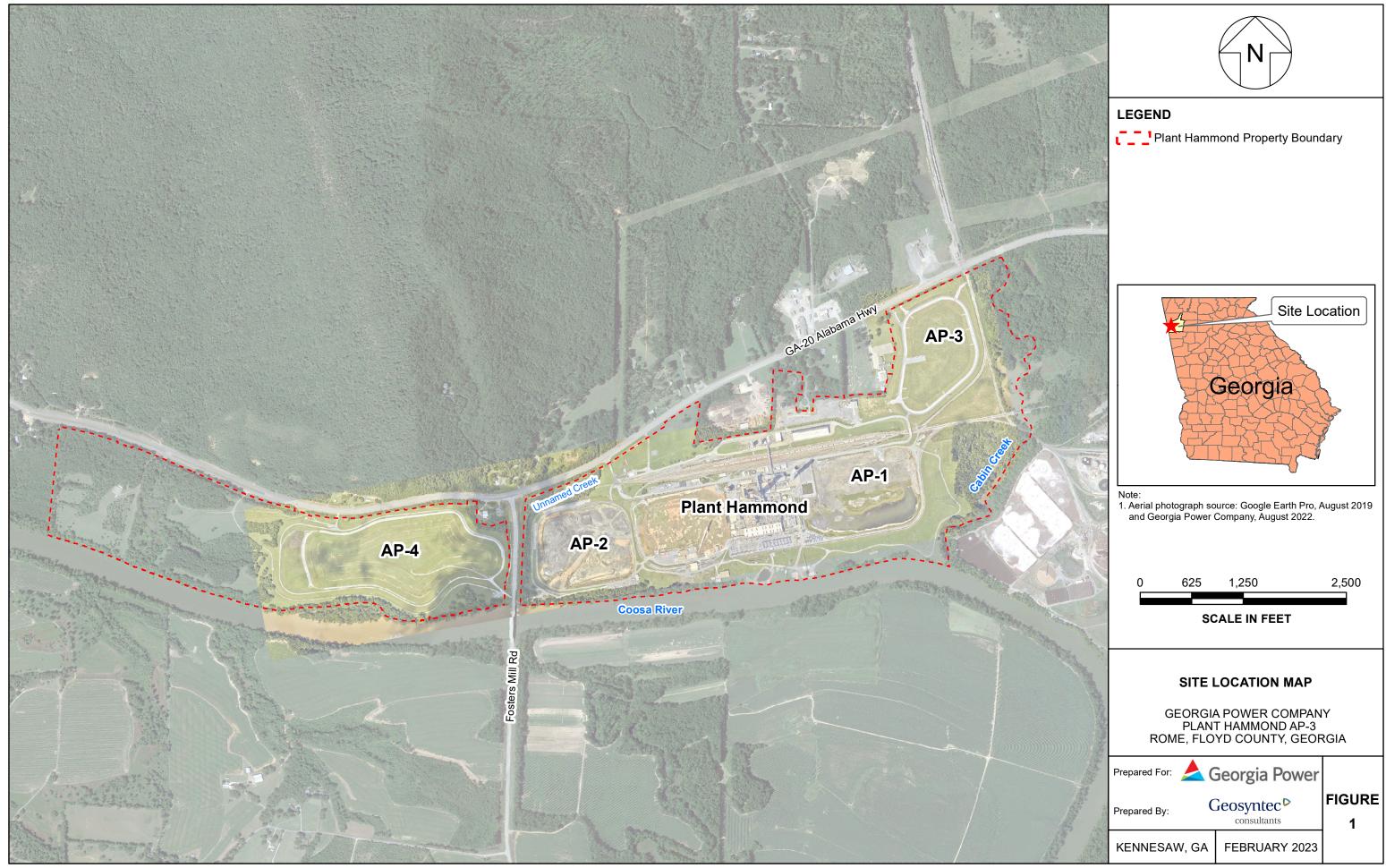
mg/L = milligrams per liter

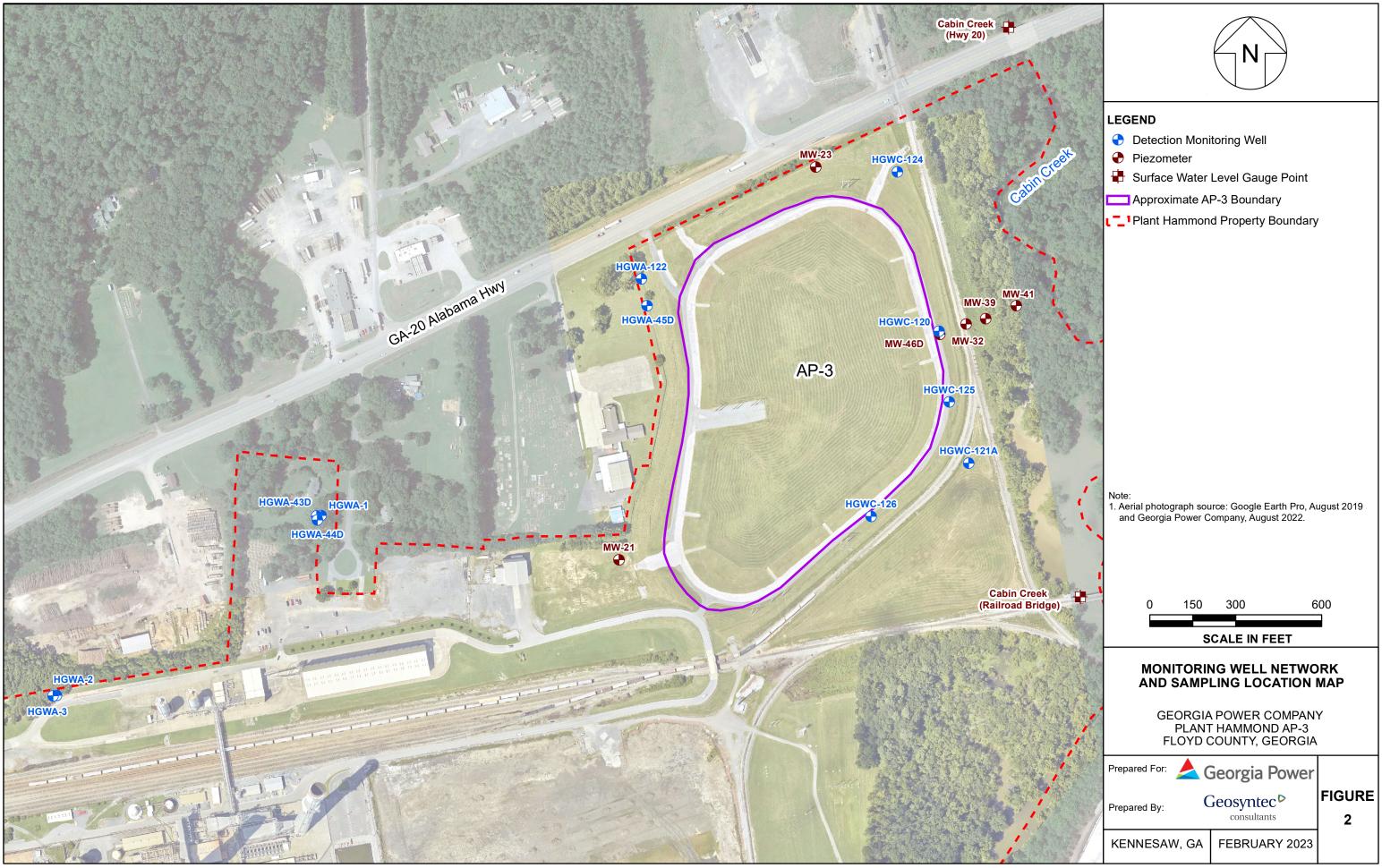
N/A = Not Applicable

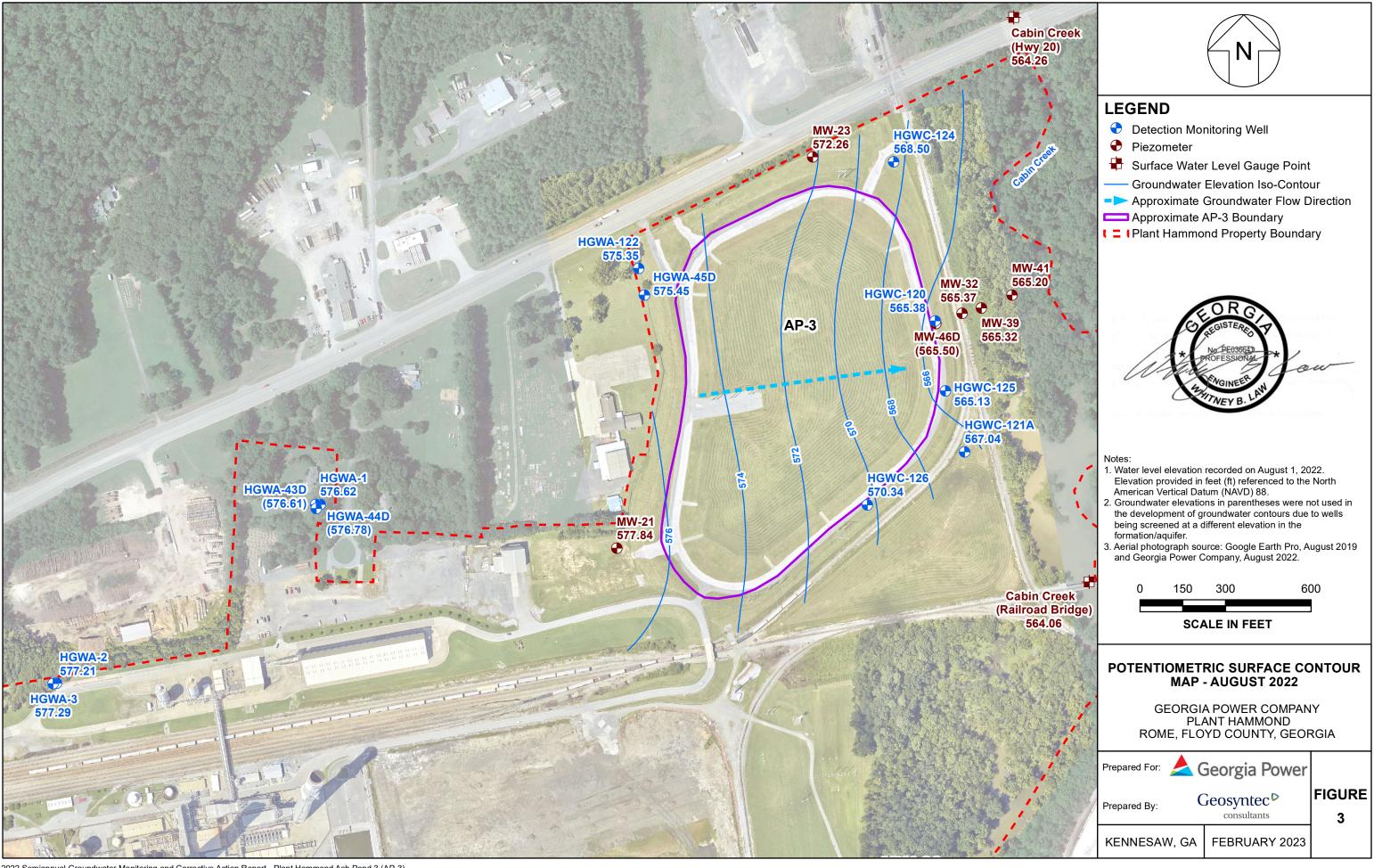
pCi/L = picocuries per liter

- (1) On February 22, 2022, the Georgia Environmental Protection Division (GA EPD) adopted the federally promulgated GWPS for cobalt, lithium, lead, and molybdenum.
- (2) The background limits were used when determining the GWPS under 40 CFR 257.95(h) and GA EPD Rule 391-3-4-.10(6)(a).
- (3) 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; or (iii) background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.
- (4) The GWPS apply to the August 2022 sampling event.

## **FIGURES**







## APPENDIX A

Well Maintenance and Repair Documentation Memorandum

August 2022



#### **MEMORANDUM**

**DATE:** December 6, 2022

**TO:** Kristen Jurinko, P.G., Southern Company Services, Inc.

CC: Ben Hodges, P.G. Georgia Power Company

**FROM:** Geosyntec Consultants

SUBJECT: Plant Hammond Ash Pond 3 (AP-3) - Well Maintenance and Repair

**Documentation, Georgia Power Company** 

Geosyntec Consultants has prepared this memorandum to provide documentation of groundwater monitoring well maintenance and/or repair performed at Plant Hammond AP-3 during the 2022 semiannual reporting period. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells. Documentation of the well inspections are provided as an attachment to this memorandum.

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Hammond/AP-3	8/1/2022	All Wells	Checked and cleared weep holes of debris.
Hammond/AP-3	8/1/2022	HGWC-121A	Crack was observed in well protective cover lid. Well integrity was not impacted and remains lockable and secured.

# **ATTACHMENT**

ant Na	ame/Unit Name Plant Hammon, JP-1/2/3	Date (r	nm/dd/yy	(yy) 0810112022
	chnician Thomas Lessier	Field C	conditions	Sunny, 80°
טו ווי	HG101 A-1			, J
		Yes	No	Comments
	tion/Identification	-		
a	Is the well visible and accessible?			(r <u></u>
b	Is the well properly identified with the correct well ID?			8
C	Is the well in a high traffic area?			12
d	Are appropriate measures in place to protect the well (e.g., bollards)?			×
е	Is the drainage around the well acceptable? (no standing water, nor		_	
	is well located in obvious drainage flow path)			2
Prote	ective Casing			
а	Is the protective casing free from apparent damage and able to be			
	secured?			
b	Is the casing free of degradation or deterioration?			N <u></u>
С	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?			
е	Is the well locked?	_		-
f	If locked, is the well lock in good condition?			
g	Is the well lid in good condition?			
Surfs	ice Pad			
a	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	_	-	
c 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)?			
е	Is the pad surface clean (not covered with sediment or debris)?	-		
			===0	
	nal Casing			
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)?	$\overline{}$		
c d	Is the well properly vented for equilibration of air pressure?		-	<u> </u>
	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)	_		
	couplings in constituction)	_		
<u>Sam</u>	oling and Data Collection Equipment			
а	Indicate if the well is equipped with <b>dedicated sampling equipment</b> ,			
	a dedicated water quality sonde, and/or dedicated water level		DI	
L	data logger.		Isluc	De r
b	If equipped with dedicated sampling equipment, is it in good			
	operational condition?			
С	If equipped with a dedicated water quality sonde, is it in good		XD	1/1
	operational condition?		<u> </u>	WIA
d	Does the desiccant need to be replaced on the water quality sonde?			NIA
е	If equipped with a water level data logger, is it in good operational			<b>,</b> ₹ 18 181
	condition?			$\mathcal{N}\mathcal{M}$
f	Does the well recharge adequately when purged?	1		
g	Does the well require redevelopment (low flow, excess turbidity)?			
	ective Actions			
Corr				
<u>Corr</u> a	Are corrective actions needed?			

Plant N	Jame/Unit Name Plant Hammond 1 AP-1/2/3	Date (ı	mm/dd/yyyy)	06 10 17077
Field T Well ID	echnician Thomas Resolut	Field C	Conditions _	Sumy, 80
		V		•
1 Loca	ation/Identification	Yes	No	Comments
a	Is the well visible and accessible?	_		
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area?			
d	Are appropriate measures in place to protect the well (e.g., bollards)?			
е	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)		-	
2 Prof	tective Casing			
а <u></u>	Is the protective casing free from apparent damage and able to be			
ū	secured?		*	
b	Is the casing free of degradation or deterioration?	_	-	
С	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?	_		
е	is the well locked?	_		
f	If locked, is the well lock in good condition?	_		
g	Is the well lid in good condition?			
3 Surf	face Pad			
a	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?		- //	
С	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)?			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Inte	rnal Casing			
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)?		-	
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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)	$\leq$		
5 <u>San</u>	npling and Data Collection Equipment			
а	Indicate if the well is equipped with dedicated sampling equipment,			
	a dedicated water quality sonde, and/or dedicated water level		21 11	
L	data logger.		1510000	l.
b	If equipped with dedicated sampling equipment, is it in good operational condition?	_		
С	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/4
d	Does the desiccant need to be replaced on the water quality sonde?			Whi
е	If equipped with a water level data logger, is it in good operational condition?			NIL
f	Does the well recharge adequately when purged?			x 14-10
g	Does the well require redevelopment (low flow, excess turbidity)?			
6 <u>Co</u> r	rective Actions			
a	Are corrective actions needed?	د		
If ye	es, indicate here:	-		

nant Na	ame/Unit Name Plant Hammond/12-1/213	Date (mm/dd	l/yyyy)	08/01/2022		
Field Technician thomas K.  Nell ID +16 W A-3		Field Condition	ons	3 cmnj, 80°		
		Voc. No.		Comments		
1. Loca	tion/Identification	Yes No		Comments		
a	Is the well visible and accessible?	-				
b	Is the well properly identified with the correct well ID?	_				
С	Is the well in a high traffic area?					
d	Are appropriate measures in place to protect the well (e.g., bollards)?					
е	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)					
2 Prote	ective Casing		-			
а а	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?					
е	Is the well locked?					
f	If locked, is the well lock in good condition?					
g	Is the well lid in good condition?		-			
9	to the well lid in good condition:					
Surfa	ace Pad					
а	Is the well pad in good condition (not cracked or broken)?	$\leq$				
b	Is the well pad sloped away from the protective casing?					
С	Is the well pad in complete contact with the protective casing?					
d	Is the well pad in complete contact with the ground surface and		- 0			
	stable (not undermined by erosion, animal burrows, and does not					
	move when stepped on)?					
е	Is the pad surface clean (not covered with sediment or debris)?					
1 Inter	nal Casing					
4 <u>шкен</u> а	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					
U	objects (such as bailers)?	a .				
С	Is the well properly vented for equilibration of air pressure?					
d	Is the survey point clearly marked on the inner casing?	=	- 1: <del></del>			
e	Is the depth of the well consistent with the original well log?	<u> </u>	- 1			
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)	<u> </u>				
5 Sam	pling and Data Collection Equipment					
а	Indicate if the well is equipped with dedicated sampling equipment,					
	a dedicated water quality sonde, and/or dedicated water level	)	1 4 1	· · ·-		
	data logger.	131	acch			
b	If equipped with dedicated sampling equipment, is it in good					
	operational condition?					
С	If equipped with a dedicated water quality sonde, is it in good	<del></del>	-0 F			
	operational condition?			1/4		
d	Does the desiccant need to be replaced on the water quality sonde?			V/4		
е	If equipped with a water level data logger, is it in good operational condition?		9 10 E	VIA		
f	Does the well recharge adequately when purged?	$\overline{}$		1111		
	Does the well require redevelopment (low flow, excess turbidity)?			4/1 E,		
g						
g	ective Actions		_			
g	ective Actions Are corrective actions needed?	_	_			

Plant Name/Unit Name Plant Hammon / AP-123 Field Technician Themas K. Well ID + Law a - 43 D	Date (mm/dd/yyyy)_ Field Conditions	08/01/2022 Suny 80.
Location/Identification     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?     d    Are appropriate measures in place to protect the well (e.g., bollards)?     e    Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)		Comments
2 Protective Casing  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?  f If locked, is the well lock in good condition?  g Is the well lid in good condition?	<u> </u>	
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)?		
4 Internal Casing 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)		
5 Sampling and Data Collection Equipment a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger. b If equipped with dedicated sampling equipment, is it in good operational condition? c If equipped with a dedicated water quality sonde, is it in good operational condition? d Does the desiccant need to be replaced on the water quality sonde? e If equipped with a water level data logger, is it in good operational condition? f Does the well recharge adequately when purged? g Does the well require redevelopment (low flow, excess turbidity)?		VIS NIS NIS
a Are corrective actions needed?  If yes, indicate here:		

Plant N	Name/Unit Name Plant Hummond /AP-1/2/3	Date (mm/dd/yyyy)	08/01/2022
rieia i Well IC	echnician The mes K	Field Conditions	Sunny, 80°
VVCII IL			
		Yes No	Comments
	ation/Identification	-	
a	Is the well visible and accessible?		
b	Is the well properly identified with the correct well ID?	$\leq$ $_{-}$ $_{-}$	
C	Is the well in a high traffic area?		
d e	Are appropriate measures in place to protect the well (e.g., bollards)? Is the drainage around the well acceptable? (no standing water, nor		
е	is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)		
	is well located in obvious drainage now patin)	-	
2 Pro	tective Casing		
а	Is the protective casing free from apparent damage and able to be		
	secured?		
b	Is the casing free of degradation or deterioration?	=	
С	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?		
е	Is the well locked?		
f	If locked, is the well lock in good condition?		
g	Is the well lid in good condition?		
3 <u>Sur</u>	face Pad		
а	Is the well pad in good condition (not cracked or broken)?	$\leq$	
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)?	- $-$	
е	Is the pad surface clean (not covered with sediment or debris)?		
4 Inte	rnal Casing	_	
а	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?	$\leq$ $_{-}$	
d	Is the survey point clearly marked on the inner casing?		
e f	Is the depth of the well consistent with the original well log?	-	
1	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)	_	
		-	
	npling and Data Collection Equipment		
а	Indicate if the well is equipped with dedicated sampling equipment,		
	a dedicated water quality sonde, and/or dedicated water level data logger.		
b	If equipped with dedicated sampling equipment, is it in good		H
J	operational condition?		11/16
С	If equipped with a dedicated water quality sonde, is it in good		00/11
Ū	operational condition?		1111
d	Does the desiccant need to be replaced on the water quality sonde?		00 18
e	If equipped with a water level data logger, is it in good operational		V- //L
	condition?		WIL
f	Does the well recharge adequately when purged?	$\overline{}$ $\overline{}$ $\overline{}$	
g	Does the well require redevelopment (low flow, excess turbidity)?		
_			
6 Cor	rective Actions  Are corrective actions needed?		
	es, indicate here:	— <del>–</del> –	
, ,			

lant Na	ame/Unit Name Plant Harmmond 1+23	Date (r	mm/dd/yyyy)	08/01/2700 C
ield Te	chnician thomas Massi-		conditions	Sunny, 80°
Vell ID	F16W A- 45D			,
		Yes	No	Comments
1 Loca	tion/Identification	res	INO	Comments
a	Is the well visible and accessible?	_	9.50	
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area?			
d	Are appropriate measures in place to protect the well (e.g., bollards)?			
е	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	_		
O Desta				
	to the protective position from the protect description and able to be			
а	Is the protective casing free from apparent damage and able to be secured?			
b		_		
С	Is the casing free of degradation or deterioration?  Does the casing have a functioning weep hole?			
ď	Is the annular space between casings clear of debris and water, or	_		
u				
•	filled with pea gravel/sand?  Is the well locked?	_		
e f	If locked, is the well lock in good condition?			
-		_		
g	Is the well lid in good condition?	<u> </u>		
3 Surfa	ice Pad			
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)?			
е	Is the pad surface clean (not covered with sediment or debris)?			
Lintor				
a a	nal Casing  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			
D	objects (such as bailers)?	7.754		
С	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)	_		
Sam	pling and Data Collection Equipment			
a <u>Sam</u>	Indicate if the well is equipped with dedicated sampling equipment,			
u	a dedicated water quality sonde, and/or dedicated water level			
	data logger.		Blucky	_
b	If equipped with dedicated sampling equipment, is it in good	7	13.4004	
	operational condition?		_	
С				
-	If equipped with a dedicated water quality sonde, is it in good operational condition?			211
٨		\		14
d	Does the desiccant need to be replaced on the water quality sonde?			V/A
е	If equipped with a water level data logger, is it in good operational condition?			ak
f	Does the well recharge adequately when purged?		.— 🚣	
g	Does the well require redevelopment (low flow, excess turbidity)?	$\stackrel{\sim}{-}$	<del>_</del> -	
-				
3 Corre	ective Actions		,	
	Ara corrective estima acaded?		/	
a	Are corrective actions needed? s, indicate here:			

lant Na	ame/Unit Name Plant Harrimond 14P-3	Date (n	nm/dd/yyyy)	08/01/2027	
ield Technician    Thomas   14   tell ID		Field Conditions		Suriny, 80	
		Yes	No	Comments	
1 Loca	tion/Identification				
а	Is the well visible and accessible?				
b	Is the well properly identified with the correct well ID?				
С	Is the well in a high traffic area?				
d	Are appropriate measures in place to protect the well (e.g., bollards)?				
e	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)				
Prote	ective Casing				
а	Is the protective casing free from apparent damage and able to be				
-	secured?				
b	Is the casing free of degradation or deterioration?	<del></del>			
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?	_			
е	Is the well locked?	_			
f	If locked, is the well lock in good condition?	;			
g	Is the well lid in good condition?				
_					
	ace Pad				
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)?				
е	Is the pad surface clean (not covered with sediment or debris)?				
Inter	nal Casing				
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)?	_			
С	Is the well properly vented for equilibration of air pressure?				
d	Is the survey point clearly marked on the inner casing?				
е	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)				
Sam	pling and Data Collection Equipment				
a	Indicate if the well is equipped with dedicated sampling equipment,				
	a dedicated water quality sonde, and/or dedicated water level				
	data logger.	7.	2/2.1.1		
b	If equipped with dedicated sampling equipment, is it in good		ellio o a	~	
	operational condition?				
С	If equipped with a dedicated water quality sonde, is it in good				
•	operational condition?			u w.P.	
d	Does the desiccant need to be replaced on the water quality sonde?	_		N/A	
e	If equipped with a water level data logger, is it in good operational	_		NIG	
-	condition?			1///	
f	Does the well recharge adequately when purged?			NA	
g	Does the well require redevelopment (low flow, excess turbidity)?				
9					
_	ective Actions		_		
	a la la la la				
а	Are corrective actions needed? s, indicate here:		<u> </u>		

Plant N	ame/Unit Name Plant Hammond/AP-3	Date (mm/dd/yyyy)	08101/2027
	echnician Thomas K	Field Conditions	Sunny, so
Well ID	+16WC-170		
		Yes No	Comments
1 Loca	ation/Identification	169 140	Comments
а	Is the well visible and accessible?	_	
b	Is the well properly identified with the correct well ID?		
С	Is the well in a high traffic area?		
d	Are appropriate measures in place to protect the well (e.g., bollards)?		
e	Is the drainage around the well acceptable? (no standing water, nor		
Ū	is well located in obvious drainage flow path)		
	is well located in obvious drainage now patity	<u> </u>	
2 Prote	ective Casing		
а	Is the protective casing free from apparent damage and able to be		
	secured?		
b	Is the casing free of degradation or deterioration?	<del></del>	
c	Does the casing have a functioning weep hole?		
ď	Is the annular space between casings clear of debris and water, or	-	
u	filled with pea gravel/sand?		
_	Is the well locked?	$\leftarrow$ $-$	
e			
f	If locked, is the well lock in good condition?	<u> </u>	
g	Is the well lid in good condition?	$\leq$ $-$	
3 Surf	ace Pad		
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		
u			
	stable (not undermined by erosion, animal burrows, and does not		
	move when stepped on)?	<u> </u>	
е	Is the pad surface clean (not covered with sediment or debris)?		
4 Inter	nal Casing		
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	- $ -$	
J	objects (such as bailers)?		
	Is the well properly vented for equilibration of air pressure?		
C			
d	Is the survey point clearly marked on the inner casing?	<u> </u>	
е	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)		
5 Sam	pling and Data Collection Equipment		
a oan	Indicate if the well is equipped with dedicated sampling equipment,		
а	a dedicated water quality sonde, and/or dedicated water level		
		2/ 11	
1	data logger.	151400	47
b	If equipped with dedicated sampling equipment, is it in good		
	operational condition?		
С	If equipped with a dedicated water quality sonde, is it in good		
	operational condition?		wit
d	Does the desiccant need to be replaced on the water quality sonde?		114
e	If equipped with a water level data logger, is it in good operational		471
•	condition?		. 11
£			NA
f	Does the well recharge adequately when purged?		
g	Does the well require redevelopment (low flow, excess turbidity)?		
	ective Actions		
6 Carr			
	Are corrective actions needed?		
а	Are corrective actions needed? s, indicate here:		

Field Technician The must. Field Conditions Sunny, 80	Plant N	ame/Unit Name Plant Hammes ne) / 4P-3	Date (	mm/dd/yy	yy) 08101/2022
Location/Identification   Yes   No   Comments	Field Te	echnician the mers (1.			Sunny, so
Location/dentification   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?   d   Are appropriate measures in place to protect the well (e.g., bollardy)?   e   Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	Well ID	HERE C-120-1214			J .
Location/dentification   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?   d   Are appropriate measures in place to protect the well (e.g., bollardy)?   e   Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)		e i			
a is the well visible and accessible?  b Is the well in a high traffic area?  d Are appropriate measures in place to protect the well (e.g., bollards)?  e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  2 Protective Casing  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 the casing have a functioning weep hole?  e Is the well locked?  f If locked, is the well lock in good condition?  g Is the well in good condition (not cracked or broken)?  b Is the well pad in good condition (not cracked or broken)?  b Is the well pad in good condition (not cracked or broken)?  b Is the well pad in good condition (not cracked or broken)?  b Is the well pad in complete contact with the protective casing?  d Is the well pad in complete contact with the protective casing?  d Is the well pad in complete contact with the protective casing?  d Is the well pad in complete contact with the protective casing?  d Is the well pad in complete contact with the protective casing?  d Is the well pad in complete contact with the protective casing?  d Is the well pad in complete contact with the protective casing?  d 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)?  b Is the casing tead in this 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)?  b Is the casing tree of kinks or bends, or any obstructions from foreign objects (such as baliers)?  c Is the well properly wented for equilibration of air pressure?  d Is the depth of the well consistent with the original well log?  Is the casing free from application equipment, is it in good operational cond	1   000	stian (I dantification	Yes	No	Comments
b Is the well properly identified with the correct well ID? c Is the well in a high traffic area? d Are appropriate measures in place to protect the well (e.g., bollards)? e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  2 Protective Casing 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 gravelisans? If I flooked, is the well lock in good condition? If I flooked, is the well lock in good condition? If I flooked, is the well lock in good condition? Is the well pad in good condition (not cracked or broken)? Is the well pad in complete contact with the protective casing? c Is the well pad in complete contact with the ground surface and stable (not undermined by erasion, animal burrows, and does not move when stepped on)? Is the pad surface clean (not covered with sediment or debris)? Is the well pad an order that the protective casing? Is the example of the well pad surface clean (not covered with sediment or debris)? Is the pad surface clean (not covered with sediment or debris)? Is the pad surface clean (not covered with sediment or debris)? Is the casing free of kinks or bends, or any obstructions from foreign objects (such as baliers?) Is the well properly vented for equilibration of air pressure? Is the depth of the well consistent with the original well incovered or an it be taken apart by hand due to lack of grout or use of slip couplings in construction)  5 Sampling and Data Collection Equipment, a dedicated water quality sonde, is it in good operational condition?  If equipped with a dedicated sampling equipment, is it in good operational condition?  If equipped with a dedicated sampling equipment, is it in good operational condition?  Obes the well recharge adequately when purged? Corrective Actions Are corrective actions ne				É	
c Is the well in a high traffic area?  A Are appropriate measures in place to protect the well (e.g., bollards)?  Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)  2 Protective Casing  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?  Is the well locked?  If Is docked, is the well lock in good condition?  Is the well lock in good condition?  Is the well lad in good condition?  Is the well lad in good condition (not cracked or broken)?  Is the well pad in good condition (not cracked or broken)?  Is the well pad in good condition (not cracked or broken)?  Is the well pad in good condition (not cracked or broken)?  Is the well pad in complete contact with the protective casing?  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?)  Is the pad surface clean (not covered with sediment or debris)?  4 Internal Casing  Does the cap prevent entry of foreign material into the well?  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?)  Is the pad surface clean (not covered with sediment or debris)?  Internal Casing  Does the cap prevent entry of foreign material into the well?  Is the caping free of kinks or bends, or any obstructions from foreign objects (such as baliers)?  Is the depth of the well consistent with the original well log?  Is the depth of the well consistent with the original well log?  Is the depth of the well consistent with the original well log?  Is the depth of the well consistent with the original well log?  Is the depth of the well consistent with the original well log?  Is the depth of the well consistent with the original well log?  Is the depth of the well consistent with the original well log?  Is the depth					
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C If equipped with a dedicated water quality sonde, is it in good operational condition?  d Does the desiccant need to be replaced on the water quality sonde?  e If equipped with a water level data logger, is it in good operational condition?  f Does the well recharge adequately when purged?  g Does the well require redevelopment (low flow, excess turbidity)?  6 Corrective Actions a Are corrective actions needed?	٥				
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condition?  f Does the well recharge adequately when purged? g Does the well require redevelopment (low flow, excess turbidity)?  6 Corrective Actions a Are corrective actions needed?			_		_ N / L
f Does the well recharge adequately when purged? g Does the well require redevelopment (low flow, excess turbidity)?  6 Corrective Actions a Are corrective actions needed?	C				101
g Does the well require redevelopment (low flow, excess turbidity)?  6 Corrective Actions a Are corrective actions needed?	f			·	_ N/A
6 Corrective Actions a Are corrective actions needed?				_	
a Are corrective actions needed?	Э	2000 the well require redevelopment (low now, excess turbidity)?	-		
	6 Corr				
If yes, indicate here:	-				
	If ye	s, indicate here:			
	-		_		

Plant N	Name/Unit Name	Plant Hammon J/4P.3	Date (	mm/dd/vv	yy) U & 101/3077	
Field Technician		thomas K	Field Conditions Sunny, 80			
Well ID	)	+16WC-174			3/4-	
			V	NI-	C	
1 Loc	ation/Identification	1	Yes	No	Comments	
а		e and accessible?	_			
b		erly identified with the correct well ID?	_			
С	Is the well in a h			_		
d	Are appropriate	measures in place to protect the well (e.g., bollards)?				
е		around the well acceptable? (no standing water, nor novinous drainage flow path)		( <del>,</del> /)		
2 Prof	tective Casing	. concao diamago non pani,		:		
		and the second s				
а	secured?	casing free from apparent damage and able to be				
b		e of degradation or deterioration?	_			
C		have a functioning weep hole?				
d		pace between casings clear of debris and water, or				
	filled with pea g					
е	Is the well locke					
f	If locked, is the	well lock in good condition?	_			
g	Is the well lid in					
2 5	face Pad					
a <u>Sur</u>		n good condition (not cracked or broken)?	_			
b		loped away from the protective casing?	_			
c	Is the well pad in	n complete contact with the protective casing?				
d		n complete contact with the ground surface and				
		rmined by erosion, animal burrows, and does not				
	move when step	oped on)?				
е		ce clean (not covered with sediment or debris)?				
4 1-4-		(				
	rnal Casing	event autor of fearing material into the could				
a b		event entry of foreign material into the well? e of kinks or bends, or any obstructions from foreign				
b	objects (such as		_			
С	- '	erly vented for equilibration of air pressure?	_			
d		int clearly marked on the inner casing?	-			
e		ne well consistent with the original well log?	—	<del></del>		
f		ble? (or does the pvc move easily when touched or				
		apart by hand due to lack of grout or use of slip				
	couplings in con		_			
5 San	npling and Data C	ollection Equipment				
а	Indicate if the w	ell is equipped with dedicated sampling equipment,				
		ter quality sonde, and/or dedicated water level	12953			
	data logger.		7	3/4000		
b	If equipped with operational cond	dedicated sampling equipment, is it in good dition?				
С	If equipped with	a dedicated water quality sonde, is it in good	_	).		
d	operational cond				N/J	
e		ant need to be replaced on the water quality sonde?		-	J. 1	
C	condition?	a water level data logger, is it in good operational			11/1	
f		charge adequately when purged?			1.40	
g	Does the well re	quire redevelopment (low flow, excess turbidity)?				
6 Cor	rective Actions					
a	Are corrective a	ctions needed?				
If y∈	es, indicate here:					

Plant N	lame/Unit Name	Dlant Hammond AP.3	Date (r	mm/dd/yyyy)	08/01/2022
	echnician	Thomas K	Field C	conditions	Sunny &.
Well ID	1	HGWC-125			0,
1 1 000	ation/Identificatio	0	Yes	No	Comments
a		ule and accessible?	-		
b		erly identified with the correct well ID?	_		
C		high traffic area?			
d		e measures in place to protect the well (e.g., bollards)?	_		
e		around the well acceptable? (no standing water, nor	-		
C		in obvious drainage flow path)			
	is well located	in obvious drainage now path)			
2 Prot	ective Casing				
a		e casing free from apparent damage and able to be			
а	secured?	e casing free from apparent damage and able to be	1		
b		ee of degradation or deterioration?			
		g have a functioning weep hole?			
C					
d		space between casings clear of debris and water, or			
_	filled with pea of		_		
e	Is the well lock				
f		well lock in good condition?	=		
g	is the well lid in	good condition?			
3 Surf	ace Pad				
a		in good condition (not cracked or broken)?			
b		sloped away from the protective casing?			
С		in complete contact with the protective casing?			
d		in complete contact with the ground surface and			
_		ermined by erosion, animal burrows, and does not			
	move when ste				
е		ace clean (not covered with sediment or debris)?			
C	is the pad sun	ace clean (not covered with sediment of debris)?			
4 Inter	rnal Casing				
а	Does the cap p	revent entry of foreign material into the well?	-		
b		ee of kinks or bends, or any obstructions from foreign		S = 2	
	objects (such a	s bailers)?	_		
С	Is the well prop	erly vented for equilibration of air pressure?			
d	Is the survey p	oint clearly marked on the inner casing?		X	
е		the well consistent with the original well log?			
f		table? (or does the pvc move easily when touched or	===		
		apart by hand due to lack of grout or use of slip			
	couplings in co		_		
- 0					
		Collection Equipment			
а		vell is equipped with dedicated sampling equipment,			
		ater quality sonde, and/or dedicated water level	D.		
	data logger.		_1510	war	
b		h dedicated sampling equipment, is it in good			
	operational cor	ndition?	_		
С	If equipped wit	h a dedicated water quality sonde, is it in good			
	operational cor	ndition?			NIA
d	Does the design	cant need to be replaced on the water quality sonde?			NIL
е		h a water level data logger, is it in good operational			W.T.
	condition?	and the second s			NI
f		recharge adequately when purged?			
g		require redevelopment (low flow, excess turbidity)?			
У	DOGS THE WELL	equite redevelopment (low now, excess turbialty)?	-	-	
6 Corr	rective Actions				
а		actions needed?			
If ye	s, indicate here:				

Plant Na Field Te Well ID	ame/Unit Name Plant Hammond / AP-3 Thomas K. Hawa-126	Date (i	mm/dd/yy Conditions	Sunuy, Se
1 1 000	tion/Identification	Yes	No	Comments
a	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
		=	( <del></del>	
c d	Is the well in a high traffic area?  Are appropriate managers in place to protect the well (e.g., hellesde)?	-		
	Are appropriate measures in place to protect the well (e.g., bollards)?	-		
е	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)			
2 Prote	ective Casing			
а <u></u>	Is the protective casing free from apparent damage and able to be			
а	secured?			
b	Is the casing free of degradation or deterioration?			
C			( <del></del>	
d	Does the casing have a functioning weep hole?			<del></del>
u	Is the annular space between casings clear of debris and water, or			
•	filled with pea gravel/sand? Is the well locked?			,=
e			·	
f	If locked, is the well lock in good condition?			
g	Is the well lid in good condition?			
3 Surfa	ace Pad			
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)?	_		
е	Is the pad surface clean (not covered with sediment or debris)?		-	
4 Inton				
	nal Casing  Doos the cap provent entry of foreign meterial into the well?			
a b	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)?			
С	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			<del></del>
1	can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)		40	
	couplings in construction)			
5 <u>Sam</u>	pling and Data Collection Equipment			
а	Indicate if the well is equipped with dedicated sampling equipment,			
	a dedicated water quality sonde, and/or dedicated water level			
	data logger	$\mathbb{R}$	lado.	
b	If equipped with dedicated sampling equipment, is it in good			
С	operational condition?	=		
Ü	If equipped with a dedicated water quality sonde, is it in good operational condition?			NIS
d	Does the desiccant need to be replaced on the water quality sonde?			ield-
е	If equipped with a water level data logger, is it in good operational condition?			1.11
f	Does the well recharge adequately when purged?	_		NI
g	Does the well require redevelopment (low flow, excess turbidity)?			
6 Corr	ective Actions			
a	Are corrective actions needed?			
-	s, indicate here:			
, ,				

Plant N Field Te Well ID	ame/Unit Name Plant tlammond / 17-3 echnician thomas k  ww-zi	Date ( Field (	mm/dd/yyyy) Conditions	5001/2022 Sinny, 80'
	( ) · · · · · · · · · · · · · · · · · ·			=
		Yes	No	Comments
-	ntion/Identification			
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?	_		
c d	Is the well in a high traffic area?  Are appropriate measures in place to protect the well (e.g., bollards)?		<u> </u>	
e	Is the drainage around the well acceptable? (no standing water, nor			
Ü	is well located in obvious drainage flow path)			
	The state of the s			
2 Prote	ective Casing			
а	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? Is the well locked?	_		
e f	If locked, is the well lock in good condition?	_		
g	Is the well lid in good condition?	_		
_	-	10		
	ace Pad			
а	Is the well pad in good condition (not cracked or broken)?	_		
b	Is the well pad sloped away from the protective casing?	_=	<del></del>	
c d	Is the well pad in complete contact with the protective casing?			
u	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)?			
е	Is the pad surface clean (not covered with sediment or debris)?			
	nal Casing			
a	Does the cap prevent entry of foreign material into the well?			
Ь	Is the casing free of kinks or bends, or any obstructions from foreign			
С	objects (such as bailers)? 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)			
5 Sam	pling and Data Collection Equipment	-		
a <u>Jaiii</u>	Indicate if the well is equipped with dedicated sampling equipment,			
-	a dedicated water quality sonde, and/or dedicated water level			
	data logger.		11)/ll	
b	If equipped with dedicated sampling equipment, is it in good	9	100	
	operational condition?			1/10
С	If equipped with a dedicated water quality sonde, is it in good operational condition?	-	-	1771
d	Does the desiccant need to be replaced on the water quality sonde?	<u> </u>		NA
e	If equipped with a water level data logger, is it in good operational	-		NIA
	condition?			11/1
f	Does the well recharge adequately when purged?			and a
g	Does the well require redevelopment (low flow, excess turbidity)?			NIA
•		-	-	~ / c=
6 Corn	ective Actions Are corrective actions needed?		_	
	s, indicate here:		<u> </u>	
ii ye:	o, maioate fiere.			
				——————————————————————————————————————

Plant Nar Field Tec Well ID	hnician Plant Hammond / +P-3  Mur-23	Date ( Field (	mm/dd/yy Conditions	Sunny, &c
ven ib				
	on/Identification s the well visible and accessible?	Yes	No -	Comments
b I c I	s the well properly identified with the correct well ID? s the well in a high traffic area?	1		
e I	Are appropriate measures in place to protect the well (e.g., bollards)? s the drainage around the well acceptable? (no standing water, nor s well located in obvious drainage flow path)	<u> </u>		
2 Protec	tive Casing		,	
a	s the protective casing free from apparent damage and able to be secured?	_		
c [	s the casing free of degradation or deterioration? Does the casing have a functioning weep hole? s the annular space between casings clear of debris and water, or	$\equiv$		
f e I	illed with pea gravel/sand? s the well locked?	=	_	
	f locked, is the well lock in good condition? s the well lid in good condition?	_		
	se Pad s the well pad in good condition (not cracked or broken)? s the well pad sloped away from the protective casing?	<u>_</u>		
c I d I	s the well pad in complete contact with the protective casing?  s the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not	=	_	
r	nove when stepped on)? s the pad surface clean (not covered with sediment or debris)?	=		
4 Interna	al Casing			
a [ b [	Does the cap prevent entry of foreign material into the well? s the casing free of kinks or bends, or any obstructions from foreign		_	
c I d I	objects (such as bailers)? s the well properly vented for equilibration of air pressure? s the survey point clearly marked on the inner casing?			
f I	s the depth of the well consistent with the original well log? s 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)			
5 <u>Samp</u> a I	ling and Data Collection Equipment  ndicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			7
b l	f equipped with dedicated sampling equipment, is it in good operational condition?		VO /v	4/1
	f equipped with a dedicated water quality sonde, is it in good operational condition?			NI
e I	Does the desiccant need to be replaced on the water quality sonde? fequipped with a water level data logger, is it in good operational condition?	_		NI4
	Does the well recharge adequately when purged? Does the well require redevelopment (low flow, excess turbidity)?	_		NIA NIA
a /	ctive Actions Are corrective actions needed? indicate here:	-	_/	

Plant N	ame/Unit Name Plant Hammond (AP.3	Date (ı	mm/dd/yyy	N) 081011505 =
	echnician thornes It.	Field (	Conditions	Sunny, &d
Well ID				ď
		V	Ma	Comments
11000	ation/Identification	Yes	No	Comments
a	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
C				
d	Is the well in a high traffic area?			
	Are appropriate measures in place to protect the well (e.g., bollards)?			
е	Is the drainage around the well acceptable? (no standing water, nor			
	is well located in obvious drainage flow path)			
2 Prote	ective Casing			
_	<del></del>			
а	Is the protective casing free from apparent damage and able to be	20		
	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?	_		
е	Is the well locked?			
f	If locked, is the well lock in good condition?	_		
g	Is the well lid in good condition?	_		
2 Surf	ace Pad			
a	Is the well pad in good condition (not cracked or broken)?	=		
b	Is the well pad sloped away from the protective casing?	_		
С	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)?	_		
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Inter	nal Casing		27 T	
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	_		
D	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)			
5 Sam	pling and Data Collection Equipment			
a	Indicate if the well is equipped with dedicated sampling equipment,			
	a dedicated water quality sonde, and/or dedicated water level			
	data logger.		1/1/	4
b	If equipped with dedicated sampling equipment, is it in good		00100	
	operational condition?			NIA
С				
•	If equipped with a dedicated water quality sonde, is it in good			
_	operational condition?			50/14
d	Does the desiccant need to be replaced on the water quality sonde?			NIA
е	If equipped with a water level data logger, is it in good operational			1/1/
	condition?			NIA
f	Does the well recharge adequately when purged?			WIA.
g	Does the well require redevelopment (low flow, excess turbidity)?			WIA
6 00-	active Actions			
	ective Actions			-
a If you	Are corrective actions needed?		:	
ir yes	s, indicate here:			
-				

Plant Name/Unit Name Thomas Messler Field Technician Well ID  Thomas Messler  Thomas Messler	Date (mm/dd/yyyy) らをくの 1 / 20マア Field Conditions Sunny, といっ
1 Location/Identification 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? d Are appropriate measures in place to protect the well (e.g., bollards)? e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	Yes No Comments
2 Protective Casing 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? f If locked, is the well lock in good condition? g Is the well lid in good condition?	
3 Surface Pad  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)?	
<ul> <li>4 Internal Casing         <ul> <li>Does the cap prevent entry of foreign material into the well?</li> <li>Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?</li> <li>Is the well properly vented for equilibration of air pressure?</li> <li>Is the survey point clearly marked on the inner casing?</li> <li>Is the depth of the well consistent with the original well log?</li> <li>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)</li> </ul> </li> </ul>	
5 Sampling and Data Collection Equipment a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger. b If equipped with dedicated sampling equipment, is it in good operational condition? c If equipped with a dedicated water quality sonde, is it in good operational condition? d Does the desiccant need to be replaced on the water quality sonde? e If equipped with a water level data logger, is it in good operational condition? f Does the well recharge adequately when purged? g Does the well require redevelopment (low flow, excess turbidity)?	
6 <u>Corrective Actions</u> a Are corrective actions needed? If yes, indicate here:	

Plant N Field Te Well ID	ame/Unit Name Plant Hammond (AP-3 thomas IX.	Date (i	mm/dd/yyyy <u>)</u> Conditions	0810112022 Sunry, 80°
a b c d	ation/Identification Is the well visible and accessible? Is the well properly identified with the correct well ID? Is the well in a high traffic area? Are appropriate measures in place to protect the well (e.g., bollards)?	Yes		Comments
е	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	_		
2 Prote	ective Casing			
а	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?		· ·	
е	Is the well locked?			
f	If locked, is the well lock in good condition?			
g g	Is the well lid in good condition?	_		
-	•	_		
· · · · · · · · · · · · · · · · · · ·	ace Pad			
a	Is the well pad in good condition (not cracked or broken)?	-		
b	Is the well pad sloped away from the protective casing?	$\underline{}$		
c d	Is the well pad in complete contact with the protective casing?	_		
u	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)?			
е	Is the pad surface clean (not covered with sediment or debris)?			
	,			
	nal Casing			
a b	Does the cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstructions from foreign	$\leq$		
	objects (such as bailers)?			
С	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)	_		
5 <u>Sam</u> a	pling and Data Collection Equipment Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.		.1/1 A	•
b	If equipped with dedicated sampling equipment, is it in good operational condition?	8	No / V	- .1)1
С	If equipped with a dedicated water quality sonde, is it in good operational condition?	( <del></del>		111
d	Does the desiccant need to be replaced on the water quality sonde?			100
e	If equipped with a water level data logger, is it in good operational		· ·	W/VI
f	condition?  Does the well recharge adequately when purged?			NV
g	Does the well require redevelopment (low flow, excess turbidity)?			NIL
6 Corr	ective Actions			5
a	Are corrective actions needed?			
	s, indicate here:	2		
_				

Plant Name/Unit Name Plant   Lummond   17-3 Field Technician Well ID  WWW-46D	Pield Conditions Sunny, 80°
1 Location/Identification 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? d Are appropriate measures in place to protect the well (e.g., bollards)? e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	Yes No Comments
2 Protective Casing 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? f If locked, is the well lock in good condition? g Is the well lid in good condition?	
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)?	
<ul> <li>4 Internal Casing         <ul> <li>Does the cap prevent entry of foreign material into the well?</li> <li>Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?</li> <li>Is the well properly vented for equilibration of air pressure?</li> <li>Is the survey point clearly marked on the inner casing?</li> <li>Is the depth of the well consistent with the original well log?</li> <li>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)</li> </ul> </li> </ul>	
5 Sampling and Data Collection Equipment a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger. b If equipped with dedicated sampling equipment, is it in good operational condition? c If equipped with a dedicated water quality sonde, is it in good operational condition? d Does the desiccant need to be replaced on the water quality sonde? e If equipped with a water level data logger, is it in good operational condition? f Does the well recharge adequately when purged? g Does the well require redevelopment (low flow, excess turbidity)?  6 Corrective Actions a Are corrective actions needed?	N/4
If yes, indicate here:	

# APPENDIX B

# Laboratory Analytical and Field Sampling Reports





August 19, 2022

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

RE: Project: HAMMOND AP-3

Pace Project No.: 92618823

#### Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 04, 2022 and August 05, 2022. 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,

Micole D'oles

Nicole D'Oleo nicole.d'oleo@pacelabs.com (704)875-9092 Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Laura Midkiff, Georgia Power
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power

Anthony Szwast, Geosyntec Nardos Tilahun, GeoSyntec Dawit Yifru, Geosyntec Consultants, Inc.





#### **CERTIFICATIONS**

Project: HAMMOND AP-3

Pace Project No.: 92618823

**Pace Analytical Services Charlotte** 

South Carolina Laboratory ID: 99006 South Carolina Certification #: 99006001

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 South Carolina Drinking Water Cert. #: 99006003

North Carolina Drinking Water Certification #: 37706 Florida/NELAP Certification #: E87627 North Carolina Field Services Certification #: 5342 Kentucky UST Certification #: 84 North Carolina Wastewater Certification #: 12 Louisiana DoH Drinking Water #: LA029

South Carolina Laboratory ID: 99006

**Pace Analytical Services Asheville** 

2225 Riverside Drive, Asheville, NC 28804 South 6
Florida/NELAP Certification #: E87648 South 6

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030 South Carolina Certification #: 99030001 Virginia/VELAP Certification #: 460222

Virginia/VELAP Certification #: 460221

**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



#### **SAMPLE SUMMARY**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92618823001	HGWA-45D	Water	08/02/22 12:30	08/04/22 12:30
92618823002	HGWA-122	Water	08/02/22 13:57	08/04/22 12:30
92618823003	HGWC-120	Water	08/04/22 15:55	08/05/22 14:15
92618823004	HGWC-121A	Water	08/04/22 13:16	08/05/22 14:15
92618823005	HGWC-124	Water	08/04/22 11:19	08/05/22 14:15
92618823006	HGWC-125	Water	08/04/22 15:40	08/05/22 14:15
92618823007	HGWC-126	Water	08/04/22 16:46	08/05/22 14:15
92618823008	DUP-3	Water	08/04/22 00:00	08/05/22 14:15
92618823009	EB-3	Water	08/04/22 17:25	08/05/22 14:15
92618823010	FB-3	Water	08/04/22 17:05	08/05/22 14:15



#### **SAMPLE ANALYTE COUNT**

Project: HAMMOND AP-3

Pace Project No.: 92618823

92618823001 92618823002	HGWA-45D	EPA 6010D EPA 6020B EPA 7470A SM 2540C-2015 SM 2320B-2011 SM 4500-S2D-2011 EPA 300.0 Rev 2.1 1993 EPA 6010D EPA 6020B	KH CW1 VB BTS SMS JP1 CDC KH	6 13 1 1 3 1 3
92618823002	HGWA-122	EPA 7470A  SM 2540C-2015  SM 2320B-2011  SM 4500-S2D-2011  EPA 300.0 Rev 2.1 1993  EPA 6010D	VB BTS SMS JP1 CDC	1 1 3 1 3
92618823002	HGWA-122	SM 2540C-2015 SM 2320B-2011 SM 4500-S2D-2011 EPA 300.0 Rev 2.1 1993 EPA 6010D	BTS SMS JP1 CDC	1 3 1 3
92618823002	HGWA-122	SM 2320B-2011 SM 4500-S2D-2011 EPA 300.0 Rev 2.1 1993 EPA 6010D	SMS JP1 CDC	3 1 3
92618823002	HGWA-122	SM 4500-S2D-2011 EPA 300.0 Rev 2.1 1993 EPA 6010D	JP1 CDC	1
92618823002	HGWA-122	EPA 300.0 Rev 2.1 1993 EPA 6010D	CDC	3
92618823002	HGWA-122	EPA 6010D		
92618823002	HGWA-122		KH	6
		EPA 6020B		Ö
			CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618823003	HGWC-120	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	DMN	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618823004	HGWC-121A	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	DMN	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618823005	HGWC-124	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	DMN	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618823006	HGWC-125	EPA 6010D	KH	6
		EPA 6020B	CW1	13

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

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#### **SAMPLE ANALYTE COUNT**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Lab ID	Sample ID	Method	Analysts	Analytes Reported	
		EPA 7470A		1	
		SM 2540C-2015	BTS	1	
		SM 2320B-2011	DMN	3	
		SM 4500-S2D-2011	JP1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
92618823007	HGWC-126	EPA 6010D	KH	6	
		EPA 6020B	CW1	13	
		EPA 7470A	VB	1	
		SM 2540C-2015	BTS	1	
		SM 2320B-2011	DMN	3	
		SM 4500-S2D-2011	JP1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
2618823008	DUP-3	EPA 6010D	KH	6	
		EPA 6020B	CW1	13	
		EPA 7470A	VB	1	
		SM 2540C-2015	BTS	1	
		SM 2320B-2011	KDF1	3	
		SM 4500-S2D-2011	JP1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
2618823009	EB-3	EPA 6010D	KH	6	
		EPA 6020B	CW1	13	
		EPA 7470A	VB	1	
		SM 2540C-2015	BTS	1	
		SM 2320B-2011	KDF1	3	
		SM 4500-S2D-2011	JP1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
2618823010	FB-3	EPA 6010D	KH	6	
		EPA 6020B	CW1	13	
		EPA 7470A	VB	1	
		SM 2540C-2015	BTS	1	
		SM 2320B-2011	KDF1	3	
		SM 4500-S2D-2011	JP1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
		2171000.011012.11000	020	•	

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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



Project: HAMMOND AP-3

Pace Project No.: 92618823

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifier
92618823001	HGWA-45D					
	Performed by	Customer			08/05/22 12:39	
	рН	7.39	Std. Units		08/05/22 12:39	
EPA 6010D	Iron	0.26	mg/L	0.040	08/11/22 14:57	
EPA 6010D	Manganese	0.015J	mg/L	0.040	08/11/22 14:57	
EPA 6010D	Potassium	1.8	mg/L	0.20	08/11/22 14:57	
PA 6010D	Sodium	24.6	mg/L	1.0	08/11/22 14:57	
PA 6010D	Calcium	49.9	mg/L	1.0	08/11/22 14:57	
PA 6010D	Magnesium	18.7	mg/L	0.050	08/11/22 14:57	
PA 6020B	Barium	0.64	mg/L	0.0050	08/10/22 19:33	
PA 6020B	Boron	0.14	mg/L	0.040	08/10/22 19:33	
PA 6020B	Lithium	0.0045J	mg/L	0.030	08/10/22 19:33	
M 2540C-2015	Total Dissolved Solids	261	mg/L	10.0	08/09/22 10:23	
M 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	238	mg/L	5.0	08/10/22 08:57	
M 2320B-2011	Alkalinity, Total as CaCO3	238	mg/L	5.0	08/10/22 08:57	
M 4500-S2D-2011	Sulfide	0.16	mg/L	0.10	08/06/22 03:38	
PA 300.0 Rev 2.1 1993	Chloride	3.9	mg/L	1.0	08/12/22 16:05	
PA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	08/12/22 16:05	
PA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	08/12/22 16:05	
2618823002	HGWA-122		•			
	Performed by	Customer			08/05/22 12:40	
	pH	6.67	Std. Units		08/05/22 12:40	
PA 6010D	Iron	0.81	mg/L	0.040	08/11/22 15:02	
PA 6010D	Manganese	0.66	mg/L	0.040	08/11/22 15:02	
PA 6010D	Potassium	1.8	mg/L	0.20	08/11/22 15:02	
PA 6010D	Sodium	9.5	mg/L	1.0	08/11/22 15:02	
PA 6010D	Calcium	69.5	mg/L	1.0	08/11/22 15:02	
PA 6010D	Magnesium	5.2	mg/L	0.050	08/11/22 15:02	
PA 6020B	Barium	0.038	mg/L	0.0050	08/10/22 19:39	
PA 6020B	Boron	0.030	mg/L	0.040	08/10/22 19:39	
PA 6020B	Molybdenum	0.0042J	•	0.040	08/10/22 19:39	
	-		mg/L			
M 2540C-2015	Total Dissolved Solids	217	mg/L	10.0	08/09/22 10:23	
SM 2320B-2011 SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	155 155	mg/L mg/L	5.0 5.0	08/09/22 22:33 08/09/22 22:33	
	Alkalinity, Total as CaCO3 Chloride	2.7	mg/L		08/09/22 22:33	
PA 300.0 Rev 2.1 1993			mg/L	1.0		
PA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	08/12/22 16:47	
PA 300.0 Rev 2.1 1993	Sulfate	41.5	mg/L	1.0	08/12/22 16:47	
2618823003	HGWC-120	_				
	Performed by	Customer	Ctd Haita		08/08/22 10:11	
'DA 0040D	pH	6.93	Std. Units	2.2.2	08/08/22 10:11	
PA 6010D	Iron	0.65	mg/L	0.040	08/11/22 16:04	
PA 6010D	Manganese	1.4	mg/L	0.040	08/11/22 16:04	
PA 6010D	Potassium	7.2	mg/L	0.20	08/11/22 16:04	
PA 6010D	Sodium	8.7	mg/L	1.0	08/11/22 16:04	
PA 6010D	Calcium	173	mg/L	1.0	08/11/22 16:04	
PA 6010D	Magnesium	23.3	mg/L	0.050	08/11/22 16:04	
EPA 6020B	Barium	0.048	mg/L	0.0050	08/11/22 16:52	

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

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Project: HAMMOND AP-3

Pace Project No.: 92618823

Lab Sample ID	Client Sample ID					
Method	Parameters —	Result _	Units	Report Limit	Analyzed	Qualifiers
92618823003	HGWC-120					
EPA 6020B	Boron	1.0	mg/L	0.040	08/11/22 16:52	
EPA 6020B	Cobalt	0.0058	mg/L	0.0050	08/11/22 16:52	
EPA 6020B	Lithium	0.023J	mg/L	0.030	08/11/22 16:52	
EPA 6020B	Molybdenum	0.032	mg/L	0.010	08/11/22 16:52	
SM 2540C-2015	Total Dissolved Solids	632	mg/L	20.0	08/09/22 10:27	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	291	mg/L	5.0	08/17/22 10:53	
SM 2320B-2011	Alkalinity, Total as CaCO3	291	mg/L	5.0	08/17/22 10:53	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	08/17/22 09:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.38	mg/L	0.10	08/17/22 09:14	
EPA 300.0 Rev 2.1 1993	Sulfate	230	mg/L	5.0	08/18/22 01:23	
2618823004	HGWC-121A					
	Performed by	Customer			08/08/22 10:12	
	pН	6.80	Std. Units		08/08/22 10:12	
EPA 6010D	Iron	0.086	mg/L	0.040	08/11/22 16:19	
EPA 6010D	Manganese	0.73	mg/L	0.040	08/11/22 16:19	
EPA 6010D	Potassium	1.1	mg/L	0.20	08/11/22 16:19	
EPA 6010D	Sodium	34.3	mg/L	1.0	08/11/22 16:19	
EPA 6010D	Calcium	160	mg/L	1.0	08/11/22 16:19	
EPA 6010D	Magnesium	23.8	mg/L	0.050	08/11/22 16:19	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	08/11/22 17:16	
EPA 6020B	Barium	0.060	mg/L	0.0050	08/11/22 17:16	
EPA 6020B	Boron	1.8	mg/L	0.040	08/11/22 17:16	
EPA 6020B	Lithium	0.0069J	mg/L	0.030	08/11/22 17:16	
SM 2540C-2015	Total Dissolved Solids	640	mg/L	20.0	08/09/22 10:27	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	352	mg/L	5.0	08/17/22 11:02	
SM 2320B-2011	Alkalinity, Total as CaCO3	352	mg/L	5.0	08/17/22 11:02	
EPA 300.0 Rev 2.1 1993	Chloride	15.4	mg/L	1.0	08/17/22 09:59	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	08/17/22 09:59	
EPA 300.0 Rev 2.1 1993	Sulfate	162	mg/L	3.0	08/18/22 02:07	
2618823005	HGWC-124					
	Performed by	Customer			08/08/22 10:12	
	рН	7.15	Std. Units		08/08/22 10:12	
EPA 6010D	Iron	0.26	mg/L	0.040	08/11/22 16:23	
EPA 6010D	Manganese	0.38	mg/L	0.040	08/11/22 16:23	
EPA 6010D	Potassium	0.83	mg/L	0.20	08/11/22 16:23	
EPA 6010D	Sodium	5.6	mg/L	1.0	08/11/22 16:23	
EPA 6010D	Calcium	103	mg/L	1.0	08/11/22 16:23	
EPA 6010D	Magnesium	9.5	mg/L	0.050	08/11/22 16:23	
EPA 6020B	Barium	0.068	mg/L	0.0050	08/11/22 17:21	
EPA 6020B	Boron	0.36	mg/L	0.040	08/11/22 17:21	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	08/11/22 17:21	
SM 2540C-2015	Total Dissolved Solids	334	mg/L	10.0	08/09/22 10:01	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	239	mg/L	5.0	08/17/22 11:11	
SM 2320B-2011	Alkalinity, Total as CaCO3	239	mg/L	5.0	08/17/22 11:11	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/17/22 10:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.10	08/17/22 10:13	



Project: HAMMOND AP-3

Pace Project No.: 92618823

Lab Sample ID Method	Client Sample ID  Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618823005	HGWC-124		<u> </u>			
EPA 300.0 Rev 2.1 1993	Sulfate	73.1	mg/L	1.0	08/17/22 10:13	
92618823006	HGWC-125	70.1	mg/L	1.0	00/11/22 10:10	
52010020000	Performed by	Customer			08/08/22 10:13	
	pH	6.09	Std. Units		08/08/22 10:13	
EPA 6010D	Iron	0.10	mg/L	0.040	08/11/22 16:28	
EPA 6010D	Manganese	2.3	mg/L	0.040	08/11/22 16:28	
EPA 6010D	Potassium	3.4	mg/L	0.20	08/11/22 16:28	
EPA 6010D	Sodium	16.2	mg/L	1.0	08/11/22 16:28	M1
EPA 6010D	Calcium	170	mg/L	1.0	08/11/22 16:28	M1
EPA 6010D	Magnesium	27.3	mg/L	0.050	08/11/22 16:28	M1
EPA 6020B	Barium	0.037	mg/L	0.0050	08/11/22 17:27	
EPA 6020B	Boron	1.4	mg/L	0.040	08/11/22 17:27	
EPA 6020B	Cobalt	0.014	mg/L	0.0050	08/11/22 17:27	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	08/11/22 17:27	
EPA 6020B	Molybdenum	0.0023J	mg/L	0.010	08/11/22 17:27	
SM 2540C-2015	Total Dissolved Solids	706	mg/L	20.0	08/09/22 10:02	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	189	mg/L	5.0	08/17/22 03:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	189	mg/L	5.0	08/17/22 03:32	
EPA 300.0 Rev 2.1 1993	Chloride	11.6	mg/L	1.0	08/17/22 10:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	08/17/22 10:28	
EPA 300.0 Rev 2.1 1993	Sulfate	331	mg/L	7.0	08/18/22 02:22	
2618823007	HGWC-126	001	g/ <u></u>	7.0	00/10/22 02:22	
2010023001	Performed by	Customer			08/08/22 10:13	
	pH	6.99	Std. Units		08/08/22 10:13	
EPA 6010D	Iron	1.5	mg/L	0.040	08/11/22 16:47	
EPA 6010D	Manganese	0.19	mg/L	0.040	08/11/22 16:47	
EPA 6010D	Potassium	0.78	mg/L	0.20	08/11/22 16:47	
EPA 6010D	Sodium	31.3	mg/L	1.0	08/11/22 16:47	
EPA 6010D	Calcium	141	mg/L	1.0	08/11/22 16:47	
EPA 6010D	Magnesium	26.5	mg/L	0.050	08/11/22 16:47	
EPA 6020B	Barium	0.24	mg/L	0.0050	08/11/22 17:33	
EPA 6020B	Boron	0.023J	mg/L	0.040	08/11/22 17:33	
EPA 6020B	Lithium	0.0233 0.0034J	mg/L	0.030	08/11/22 17:33	
SM 2540C-2015	Total Dissolved Solids	510	mg/L	20.0	08/09/22 10:02	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	434	mg/L	5.0	08/17/22 11:19	
SM 2320B-2011	Alkalinity, Total as CaCO3	434			08/17/22 11:19	
EPA 300.0 Rev 2.1 1993	Chloride	8.7	mg/L mg/L		08/17/22 10:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.50	mg/L	0.10	08/17/22 10:43	
EPA 300.0 Rev 2.1 1993	Sulfate	68.3	mg/L	1.0	08/17/22 10:43	
		00.0	mg/L	1.0	00/11/22 10.40	
2618823008 EDA 6010D	DUP-3	0.059	ma/l	0.040	09/11/22 16:52	
EPA 6010D	Iron	0.058	mg/L	0.040	08/11/22 16:52	
EPA 6010D	Manganese	0.74	mg/L	0.040	08/11/22 16:52	
EPA 6010D	Potassium	1.1	mg/L	0.20	08/11/22 16:52	
EPA 6010D	Sodium	34.8	mg/L	1.0	08/11/22 16:52	
EPA 6010D	Calcium	162	mg/L	1.0	08/11/22 16:52	
EPA 6010D	Magnesium	23.9	mg/L	0.050	08/11/22 16:52	

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

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Project: HAMMOND AP-3

Pace Project No.: 92618823

Lab Sample ID	Client Sample ID					Qualifiers	
Method	Parameters	Result	Units	Report Limit	Analyzed		
92618823008	DUP-3						
EPA 6020B	Barium	0.059	mg/L	0.0050	08/11/22 17:55		
EPA 6020B	Boron	1.8	mg/L	0.040	08/11/22 17:55		
EPA 6020B	Lithium	0.0069J	mg/L	0.030	08/11/22 17:55		
SM 2540C-2015	Total Dissolved Solids	628	mg/L	20.0	08/09/22 10:02		
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	366	mg/L	5.0	08/17/22 19:54		
SM 2320B-2011	Alkalinity, Total as CaCO3	366	mg/L	5.0	08/17/22 19:54		
EPA 300.0 Rev 2.1 1993	Chloride	15.3	mg/L	1.0	08/17/22 10:58		
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	08/17/22 10:58		
EPA 300.0 Rev 2.1 1993	Sulfate	164	mg/L	3.0	08/18/22 02:37		
92618823009	EB-3						
EPA 6020B	Boron	0.012J	mg/L	0.040	08/11/22 18:01		



Date: 08/19/2022 02:05 PM

#### **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWA-45D	<b>Lab ID: 92618823001</b> Collected: 08/02/22 12:30 Received: 08/04/22 12:30 Mat							atrix: Water	
			Report						
Parameters	Results -	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	Customer				1		08/05/22 12:39		
рН	7.39	Std. Units			1		08/05/22 12:39		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	€A				
Iron	0.26	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 14:57	7439-89-6	
Manganese	0.015J	mg/L	0.040	0.0043	1	08/11/22 10:02	08/11/22 14:57	7439-96-5	
Potassium	1.8	mg/L	0.20	0.15	1	08/11/22 10:02	08/11/22 14:57	7440-09-7	
Sodium	24.6	mg/L	1.0	0.58	1	08/11/22 10:02	08/11/22 14:57	7440-23-5	
Calcium	49.9	mg/L	1.0	0.12	1		08/11/22 14:57		
Magnesium	18.7	mg/L	0.050	0.012	1		08/11/22 14:57		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	-	lytical Services							
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 19:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37	08/10/22 19:33	7440-38-2	
Barium	0.64	mg/L	0.0050	0.00067	1	08/09/22 14:37	08/10/22 19:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/09/22 14:37	08/10/22 19:33	7440-41-7	
Boron	0.14	mg/L	0.040	0.0086	1	08/09/22 14:37	08/10/22 19:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/09/22 14:37	08/10/22 19:33	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/09/22 14:37	08/10/22 19:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1		08/10/22 19:33		
Lead	ND	mg/L	0.0010	0.00089	1		08/10/22 19:33		
_ithium	0.0045J	mg/L	0.030	0.00073	1	08/09/22 14:37			
Molybdenum	ND	mg/L	0.010	0.00074	1		08/10/22 19:33		
Selenium	ND	mg/L	0.0050	0.0014	1	08/09/22 14:37			
Thallium	ND	mg/L	0.0010	0.00018	1		08/10/22 19:33		
7470 Mercury	Analytical	Method: EPA 7	470A Prei	paration Met	hod: EF	PA 7470A			
	-	lytical Services							
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:23	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C-2015						
	,	lytical Services		e Corners, C	SA.				
Total Dissolved Solids	261	mg/L	10.0	10.0	1		08/09/22 10:23		
2320B Alkalinity	Analytical	Method: SM 2	320B-2011						
	Pace Ana	lytical Services	- Asheville						
Alkalinity,Bicarbonate (CaCO3)	238	mg/L	5.0	5.0	1		08/10/22 08:57		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 08:57		
Alkalinity, Total as CaCO3	238	mg/L	5.0	5.0	1		08/10/22 08:57		



#### **ANALYTICAL RESULTS**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWA-45D	Lab ID:	92618823001	Collecte	d: 08/02/22	12:30	Received: 08	/04/22 12:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	,	Method: SM 45 ytical Services		11					
Sulfide	0.16	mg/L	0.10	0.050	1		08/06/22 03:38	18496-25-8	
300.0 IC Anions 28 Days		Method: EPA 3 ytical Services		.1 1993					
Chloride	3.9	mg/L	1.0	0.60	1		08/12/22 16:05	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		08/12/22 16:05	16984-48-8	
Sulfate	2.1	mg/L	1.0	0.50	1		08/12/22 16:05	14808-79-8	



Date: 08/19/2022 02:05 PM

#### **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWA-122	<b>Lab ID: 92618823002</b> Collected: 08/02/22 13:57 Received: 08/04/22 12:30 Matrix: Water								
	<b>5</b>		Report					0.10.11	
Parameters	Results -	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	Customer				1		08/05/22 12:40		
oH.	6.67	Std. Units			1		08/05/22 12:40		
6010D ATL ICP	Analytical	Method: EPA 6	010D Prei	paration Met	hod: EF	PA 3010A			
	-	lytical Services							
ron	0.81	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:02	7439-89-6	
Manganese	0.66	mg/L	0.040	0.0043	1	08/11/22 10:02	08/11/22 15:02	7439-96-5	
Potassium	1.8	mg/L	0.20	0.15	1		08/11/22 15:02		
Sodium	9.5	mg/L	1.0	0.58	1		08/11/22 15:02		
Calcium	69.5	mg/L	1.0	0.12	1		08/11/22 15:02		
Magnesium	5.2	mg/L	0.050	0.012	1		08/11/22 15:02		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pro	naration Met	hod: FE	2Δ 3005Δ			
7020 INCT 101 INO	-	lytical Services				71000071			
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 19:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37			
Barium	0.038	mg/L	0.0050	0.00067	1		08/10/22 19:39		
Beryllium	ND	mg/L	0.00050	0.000054	1		08/10/22 19:39		
Boron	0.18	mg/L	0.040	0.0086	1		08/10/22 19:39		
Cadmium	ND	mg/L	0.00050	0.00011	1		08/10/22 19:39		
Chromium	ND	mg/L	0.0050	0.0011	1	08/09/22 14:37			
Cobalt	ND	mg/L	0.0050	0.00039	1		08/10/22 19:39		
_ead	ND	mg/L	0.0030	0.00089	1		08/10/22 19:39		
Lithium	ND	mg/L	0.030	0.00073	1	08/09/22 14:37			
Molybdenum	0.0042J	mg/L	0.030	0.00073	1		08/10/22 19:39		
Selenium	0.00423 ND	mg/L	0.0050	0.00074	1	08/09/22 14:37			
Fhallium	ND ND	mg/L	0.0030	0.0014	1		08/10/22 19:39		
		Ü					00, 10, 22 10.00	20 0	
7470 Mercury	-	Method: EPA 7  lytical Services				A 7470A			
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:31	7/130-07-6	
•		-		0.00013	'	00,11,22 01.10	00/11/22 12.01	1-100-01-0	
2540C Total Dissolved Solids	•	Method: SM 28 lytical Services		e Corners, C	ΘA				
Total Dissolved Solids	217	mg/L	10.0	10.0	1		08/09/22 10:23		
2320B Alkalinity	Analytical	Method: SM 23	320B-2011						
	Pace Ana	lytical Services	- Asheville						
Alkalinity,Bicarbonate (CaCO3)	155	mg/L	5.0	5.0	1		08/09/22 22:33		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/09/22 22:33		
Alkalinity, Total as CaCO3	155	mg/L	5.0	5.0	1		08/09/22 22:33		



#### **ANALYTICAL RESULTS**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWA-122	Lab ID: 92	2618823002	Collecte	d: 08/02/22	13:57	Received: 08	/04/22 12:30 Ma	atrix: Water			
			Report								
Parameters	Results	Units	Limit	MDL .	DF	Prepared	Analyzed	CAS No.	Qual		
4500S2D Sulfide Water	Analytical Me Pace Analytic			11							
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:39	18496-25-8			
300.0 IC Anions 28 Days	•	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride Fluoride Sulfate	2.7 0.10 41.5	mg/L mg/L mg/L	1.0 0.10 1.0	0.60 0.050 0.50	1 1 1		08/12/22 16:47 08/12/22 16:47 08/12/22 16:47	16887-00-6 16984-48-8 14808-79-8			



Date: 08/19/2022 02:05 PM

#### **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWC-120	Lab ID:	92618823003	Collecte	d: 08/04/2	2 15:55	Received: 08/	05/22 14:15	Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical								
	Pace Ana	llytical Services	- Charlotte						
Performed by	Customer				1		08/08/22 10:1	1	
Н	6.93	Std. Units			1		08/08/22 10:1	1	
6010D ATL ICP	-	Method: EPA 6				PA 3010A			
ron	0.65	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 16:0	4 7439-89-6	
Manganese	1.4	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 16:0		
Potassium	7.2	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 16:0		
Sodium	8.7	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 16:0		
Calcium	173	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 16:0		
Magnesium	23.3	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 16:0		
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Prep	aration Met	hod: EF	A 3005A			
,,,,,,,	-	lytical Services							
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 16:5	2 7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 16:5	2 7440-38-2	
Barium	0.048	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 16:5	2 7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/11/22 16:5	2 7440-41-7	
Boron	1.0	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 16:5	2 7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00057	5	08/10/22 08:00	08/12/22 13:5	6 7440-43-9	D3
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 16:5	2 7440-47-3	
Cobalt	0.0058	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 16:5	2 7440-48-4	
_ead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/11/22 16:5	2 7439-92-1	
_ithium	0.023J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 16:5	2 7439-93-2	
Molybdenum	0.032	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 16:5	2 7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 16:5	2 7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 16:5	2 7440-28-0	
7470 Mercury	-	Method: EPA 7				A 7470A			
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:3	3 7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 25	540C-2015						
	Pace Ana	lytical Services	- Peachtree	e Corners, 0	3A				
Total Dissolved Solids	632	mg/L	20.0	20.0	1		08/09/22 10:2	7	
2320B Alkalinity	Analytical	Method: SM 23	320B-2011						
	Pace Ana	lytical Services	- Asheville						
Alkalinity,Bicarbonate (CaCO3)	291	mg/L	5.0	5.0	1		08/17/22 10:5	3	
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/17/22 10:5	3	
Alkalinity, Total as CaCO3	291	mg/L	5.0	5.0	1		08/17/22 10:5		



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWC-120	Lab ID:	92618823003	Collecte	d: 08/04/22	15:55	Received: 08	3/05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	•	Method: SM 45 tical Services		11					
Sulfide	ND	mg/L	0.10	0.050	1		08/10/22 03:57	18496-25-8	
300.0 IC Anions 28 Days	•	Method: EPA 3 /tical Services		.1 1993					
Chloride	2.7	mg/L	1.0	0.60	1		08/17/22 09:14	16887-00-6	
Fluoride	0.38	mg/L	0.10	0.050	1		08/17/22 09:14	16984-48-8	
Sulfate	230	mg/L	5.0	2.5	5		08/18/22 01:23	14808-79-8	



Date: 08/19/2022 02:05 PM

# **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWC-121A	Lab ID:	92618823004	Collecte	ed: 08/04/2	2 13:16	Received: 08/	/05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Pace Ana	Method: lytical Services	- Charlotte						
Performed by pH	Customer 6.80	Std. Units			1 1		08/08/22 10:12 08/08/22 10:12		
6010D ATL ICP	-	Method: EPA 6 lytical Services				PA 3010A			
Iron Manganese Potassium Sodium Calcium Magnesium	0.086 0.73 1.1 34.3 160 23.8	mg/L mg/L mg/L mg/L mg/L mg/L	0.040 0.040 0.20 1.0 1.0 0.050	0.025 0.0043 0.15 0.58 0.12 0.012	1 1 1 1 1	08/11/22 09:30 08/11/22 09:30 08/11/22 09:30 08/11/22 09:30 08/11/22 09:30 08/11/22 09:30		7439-96-5 7440-09-7 7440-23-5 7440-70-2	
6020 MET ICPMS	-	Method: EPA 6 lytical Services				PA 3005A			
Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Lead Lithium Molybdenum Selenium Thallium 7470 Mercury  Mercury  2540C Total Dissolved Solids	Pace Ana ND	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	- Peachtre 0.00020	e Corners, 0 0.00013		08/10/22 08:00 08/10/22 08:00 08/10/22 08:00 08/10/22 08:00 08/10/22 08:00 08/10/22 08:00 08/10/22 08:00 08/10/22 08:00 08/10/22 08:00	08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16 08/11/22 17:16	7440-38-2 7440-39-3 7440-41-7 7440-42-8 7440-43-9 7440-47-3 7440-48-4 7439-92-1 7439-98-7 7782-49-2 7440-28-0	
Total Dissolved Solids	,	lytical Services mg/L			GA 1		08/09/22 10:27		
2320B Alkalinity	Analytical	Method: SM 23 lytical Services	320B-2011		•				
Alkalinity, Bicarbonate (CaCO3) Alkalinity, Carbonate (CaCO3) Alkalinity, Total as CaCO3	<b>352</b> ND <b>352</b>	mg/L mg/L mg/L	5.0 5.0 5.0	5.0 5.0 5.0	1 1 1		08/17/22 11:02 08/17/22 11:02 08/17/22 11:02		



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWC-121A	Lab ID: 92618	3823004 Collecte	ed: 08/04/22	2 13:16	Received: 08	/05/22 14:15 Ma	atrix: Water	
		Report						
Parameters	Results Un	its Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	,	od: SM 4500-S2D-2 Services - Asheville						
Sulfide	ND mg	y/L 0.10	0.050	1		08/10/22 03:57	18496-25-8	
300.0 IC Anions 28 Days	•	od: EPA 300.0 Rev 2 Services - Asheville						
Chloride Fluoride Sulfate	<b>15.4</b> mg <b>0.18</b> mg <b>162</b> mg	/L 0.10	0.60 0.050 1.5	1 1 3		08/17/22 09:59 08/17/22 09:59 08/18/22 02:07	16984-48-8	



Date: 08/19/2022 02:05 PM

# **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWC-124	Lab ID:	92618823005	Collecte	d: 08/04/22	2 11:19	Received: 08/	05/22 14:15 N	latrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytica	Method:	Charlotto						
		llytical Services	- Chanolle						
Performed by	Customer				1		08/08/22 10:12		
ρΗ	7.15	Std. Units			1		08/08/22 10:12	2	
6010D ATL ICP		l Method: EPA 6 llytical Services				PA 3010A			
Iron	0.26	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 16:23	7439-89-6	
Manganese	0.38	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 16:23		
Potassium	0.83	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 16:23		
Sodium	5.6	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 16:23		
Calcium	103	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 16:23		
Magnesium	9.5	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 16:23		
•	Analytica	•	COOOD Drop		had.	NA 2005 A			
6020 MET ICPMS		l Method: EPA 6 llytical Services				A 3005A			
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 17:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 17:21		
Barium	0.068	mg/L	0.0050	0.00067	1	08/10/22 08:00			
Beryllium	ND	mg/L		0.000054	1	08/10/22 08:00			
Boron	0.36	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 17:21		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00			
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00			
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 17:21		
_ead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00			
_ithium	0.0011J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 17:21		
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 17:21		
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 17:21		
Γhallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00			
7470 Mercury		l Method: EPA 7				A 7470A			
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:39	7439-97-6	
2540C Total Dissolved Solids	Analytica	Method: SM 25	540C-2015						
10400 Total Dissolved Collas	•	lytical Services		Corners, C	€A				
Total Dissolved Solids	334	mg/L	10.0	10.0	1		08/09/22 10:01		
2320B Alkalinity	•	Method: SM 23							
	Pace Ana	llytical Services	- Asheville						
Alkalinity,Bicarbonate (CaCO3)	239	mg/L	5.0	5.0	1		08/17/22 11:11		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/17/22 11:11		
Alkalinity, Total as CaCO3	239	mg/L	5.0	5.0	1		08/17/22 11:11		



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWC-124	Lab ID: 9	92618823005	Collecte	d: 08/04/22	11:19	Received: 08	3/05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	•	/lethod: SM 45 tical Services		)11					
Sulfide	ND	mg/L	0.10	0.050	1		08/10/22 03:57	18496-25-8	
300.0 IC Anions 28 Days	•	Method: EPA 3 tical Services		.1 1993					
Chloride	2.6	mg/L	1.0	0.60	1		08/17/22 10:13	16887-00-6	
Fluoride	0.074J	mg/L	0.10	0.050	1		08/17/22 10:13	16984-48-8	
Sulfate	73.1	mg/L	1.0	0.50	1		08/17/22 10:13	14808-79-8	



Date: 08/19/2022 02:05 PM

# **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWC-125	Lab ID:	92618823006	Collecte	ed: 08/04/22	2 15:40	Received: 08/	05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	Customer				1		08/08/22 10:13		
рН	6.09	Std. Units			1		08/08/22 10:13		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Me	thod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	βA				
Iron	0.10	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 16:28	7439-89-6	
Manganese	2.3	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 16:28	7439-96-5	
Potassium	3.4	mg/L	0.20	0.15	1	08/11/22 09:30			
Sodium	16.2	mg/L	1.0	0.58	1	08/11/22 09:30			M1
Calcium	170	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 16:28		M1
Magnesium	27.3	mg/L	0.050	0.012	1	08/11/22 09:30			M1
6020 MET ICPMS	Analytical	Method: EPA 6	020B Prei	paration Met	hod: EF	A 3005A			
	-	lytical Services							
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 17:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00			
Barium	0.037	mg/L	0.0050	0.00067	1		08/11/22 17:27		
Beryllium	ND	mg/L	0.00050	0.000054	1		08/11/22 17:27		
Boron	1.4	mg/L	0.040	0.0086	1		08/11/22 17:27		
Cadmium	ND	mg/L	0.00050	0.00011	1		08/11/22 17:27		
Chromium	ND	mg/L	0.0050	0.0011	1		08/11/22 17:27		
Cobalt	0.014	mg/L	0.0050	0.0011	1		08/11/22 17:27		
_ead	ND	mg/L	0.0030	0.00039	1		08/11/22 17:27		
_eau _ithium	0.0035J	mg/L	0.030	0.0003	1		08/11/22 17:27		
	0.0033J	-	0.030	0.00073	1		08/11/22 17:27		
Molybdenum		mg/L		0.00074			08/11/22 17:27		
Selenium Fhallium	ND ND	mg/L mg/L	0.0050 0.0010	0.0014	1 1	08/10/22 08:00 08/10/22 08:00	08/11/22 17:27		
7470 Mercury	Analytical	Method: EPA 7	'470∆ Pr⊝r	naration Met	hod: FF	νΔ 7470Δ			
1470 Mercury	•	lytical Services				71141071			
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:41	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 25	540C-2015						
	•	lytical Services		e Corners, 0	βA				
Total Dissolved Solids	706	mg/L	20.0	20.0	1		08/09/22 10:02		
2320B Alkalinity	Analytical	Method: SM 23	320B-2011						
	Pace Ana	lytical Services	- Asheville						
Alkalinity,Bicarbonate (CaCO3)	189	mg/L	5.0	5.0	1		08/17/22 03:32		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/17/22 03:32		
Alkalinity, Total as CaCO3	189	mg/L	5.0	5.0	1		08/17/22 03:32		



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWC-125	Lab ID: 92	618823006	Collecte	d: 08/04/22	15:40	Received: 08	/05/22 14:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Me Pace Analytic			11					
Sulfide	ND	mg/L	0.10	0.050	1		08/10/22 03:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Me Pace Analytic			.1 1993					
Chloride Fluoride Sulfate	11.6 0.15 331	mg/L mg/L mg/L	1.0 0.10 7.0	0.60 0.050 3.5	1 1 7		08/17/22 10:28 08/17/22 10:28 08/18/22 02:22	16984-48-8	



Date: 08/19/2022 02:05 PM

# **ANALYTICAL RESULTS**

Project: HAMMOND AP-3
Pace Project No.: 92618823

Sample: HGWC-126	Lab ID:	92618823007	Collecte	ed: 08/04/22	2 16:46	Received: 08/	05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
		<del></del>				·	·	-	-
Field Data	Analytical		<b>0</b> 1 1						
	Pace Ana	lytical Services	- Charlotte						
Performed by	Customer				1		08/08/22 10:13		
PΗ	6.99	Std. Units			1		08/08/22 10:13		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	€A				
ron	1.5	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 16:47	7439-89-6	
Manganese	0.19	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 16:47	7439-96-5	
Potassium	0.78	mg/L	0.20	0.15	1	08/11/22 09:30			
Sodium	31.3	mg/L	1.0	0.58	1	08/11/22 09:30		7440-23-5	
Calcium	141	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 16:47		
Magnesium	26.5	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 16:47		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pro	naration Met	hod: FF	2Δ 3005Δ			
JUZU WIET ICEWIS	-	lytical Services				A 3003A			
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 17:33	7440-36-0	
Arsenic	ND ND	mg/L	0.0050	0.00076	1	08/10/22 08:00			
Barium	0.24	mg/L	0.0050	0.0022	1		08/11/22 17:33		
Beryllium	ND	mg/L	0.0050	0.00007	1		08/11/22 17:33		
Boron	0.023J	mg/L	0.00030	0.0086	1		08/11/22 17:33		
Cadmium	ND	mg/L	0.00050	0.00011	1		08/11/22 17:33		
Chromium	ND	mg/L	0.0050	0.00011	1	08/10/22 08:00			
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00			
_ead	ND	mg/L	0.0030	0.00089	1	08/10/22 08:00			
Lithium	0.0034J	mg/L	0.030	0.00073	1	08/10/22 08:00			
Molybdenum	ND	mg/L	0.030	0.00073	1	08/10/22 08:00			
Selenium	ND	mg/L	0.0050	0.00074	1	08/10/22 08:00			
Fhallium	ND	mg/L	0.0030	0.0014	1	08/10/22 08:00			
		ŭ			L				
7470 Mercury		Method: EPA 7 lytical Services				A 7470A			
		•		·		00/44/00 07 45	00/44/00 40 44	7400 07 0	
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:44	7439-97-6	
2540C Total Dissolved Solids	•	Method: SM 25 lytical Services		e Corners, C	<b>S</b> A				
Total Dissolved Solids	510	mg/L	20.0	20.0	1		08/09/22 10:02		
2320B Alkalinity	Analytical	Method: SM 23	320B-2011						
	-	lytical Services							
Alkalinity, Bicarbonate (CaCO3)	434	mg/L	5.0	5.0	1		08/17/22 11:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/17/22 11:19		
Alkalinity, Total as CaCO3	434	mg/L	5.0	5.0	1		08/17/22 11:19		



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: HGWC-126	Lab ID:	92618823007	Collecte	d: 08/04/22	16:46	Received: 08	3/05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	•	Method: SM 45 ytical Services		)11					
Sulfide	ND	mg/L	0.10	0.050	1		08/10/22 04:01	18496-25-8	M1
300.0 IC Anions 28 Days	•	Method: EPA 3 ytical Services		.1 1993					
Chloride Fluoride	8.7 0.50	mg/L mg/L	1.0 0.10	0.60 0.050	1 1		08/17/22 10:43 08/17/22 10:43		
Sulfate	68.3	mg/L	1.0	0.50	1		08/17/22 10:43	14808-79-8	



Date: 08/19/2022 02:05 PM

# **ANALYTICAL RESULTS**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Sample: DUP-3	Lab ID:	92618823008	Collecte	ed: 08/04/22	00:00	Received: 08/	05/22 14:15 N	latrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL .	DF	Prepared	Analyzed	CAS No.	Qua
6010D ATL ICP	Analytical I	Method: EPA 60	010D Pre	paration Met	hod: EF	A 3010A			
	Pace Analy	tical Services -	Peachtre	e Corners, G	iΑ				
ron	0.058	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 16:52	7439-89-6	
Manganese	0.74	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 16:52	7439-96-5	
Potassium	1.1	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 16:52	7440-09-7	
Sodium	34.8	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 16:52	7440-23-5	
Calcium	162	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 16:52	7440-70-2	
/lagnesium	23.9	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 16:52	7439-95-4	
6020 MET ICPMS	Analytical I	Method: EPA 60	020B Pre	paration Met	nod: EF	A 3005A			
	Pace Analy	tical Services -	Peachtre	e Corners, G	iΑ				
antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 17:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 17:55	7440-38-2	
Barium	0.059	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 17:55	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/11/22 17:55	7440-41-7	
Boron	1.8	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 17:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/11/22 17:55	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 17:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 17:55	7440-48-4	
ead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/11/22 17:55	7439-92-1	
ithium	0.0069J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 17:55	7439-93-2	
Nolybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 17:55	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 17:55	7782-49-2	
hallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 17:55	7440-28-0	
470 Mercury	Analytical I	Method: EPA 74	470A Pre	paration Metl	nod: EP	A 7470A			
	Pace Analy	tical Services -	Peachtre	e Corners, G	iΑ				
Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:47	7439-97-6	
2540C Total Dissolved Solids	Analytical I	Method: SM 25	40C-2015						
		tical Services -			iΑ				
Total Dissolved Solids	628	mg/L	20.0	20.0	1		08/09/22 10:02	2	
2320B Alkalinity	Analytical I	Method: SM 23	20B-2011						
- · · · ·	•	tical Services -							
Alkalinity,Bicarbonate (CaCO3)	366	mg/L	5.0	5.0	1		08/17/22 19:54	ļ	
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/17/22 19:54		
Alkalinity, Total as CaCO3	366	mg/L	5.0	5.0	1		08/17/22 19:54		
1500S2D Sulfide Water	Analytical I	Method: SM 45	00-S2D-2	011					
JOSEP Gamao Hatel	-	tical Services -							
Sulfide	ND	mg/L	0.10	0.050	1		08/10/22 04:03	18496-25-8	
300 0 IC Anione 28 Days		Method: EPA 30							
300.0 IC Anions 28 Days	•	/tical Services -							
Chloride	15.3	mg/L	1.0	0.60	1		08/17/22 10:58	3 16887-00-6	
ALIOHUC	13.3	mg/L	1.0	0.00	1		00/11/22 10.00	0-00-10001	



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: DUP-3	Lab ID:	92618823008	Collected	d: 08/04/22	00:00	Received: 08	3/05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	•	Method: EPA 3		1 1993					
Fluoride	0.18	mg/L	0.10	0.050	1		08/17/22 10:58		
Sulfate	164	mg/L	3.0	1.5	3		08/18/22 02:37	14808-79-8	



Project: HAMMOND AP-3

Date: 08/19/2022 02:05 PM

Analytical Method: EPA 6010D Preparation Method: EPA 3010A   Paca Analytical Services   Peachtree Corners, GA	Sample: EB-3	Lab ID:	92618823009	Collecte	d: 08/04/22	2 17:25	Received: 08/	05/22 14:15 Ma	atrix: Water	
Pace Analytical Services - Peachtree Comers, GA	Parameters	Results	Units	•	MDL	DF	Prepared	Analyzed	CAS No.	Qua
ND mg/L	6010D ATL ICP	Analytical	Method: EPA 6	010D Prep	aration Met	hod: EF	PA 3010A			
Manganese   ND mg/L   0.040   0.0043   1   08/11/22 (9:30   08/11/22 (16:57   7439-96-5   Pelesasium   ND mg/L   1.0   0.58   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Sodium   ND mg/L   1.0   0.15   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Sodium   ND mg/L   0.050   0.012   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Solicium   ND mg/L   0.050   0.012   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Solicium   ND mg/L   0.050   0.012   1   08/11/22 (9:30   08/11/22 (16:57   7440-70-2   Manganesium   ND mg/L   0.0030   0.00078   1   08/10/22 08:00   08/11/22 (16:57   7440-70-2   Manganesium   ND mg/L   0.0030   0.00078   1   08/10/22 08:00   08/11/22 (16:07   7440-36-0   Manganesium   ND mg/L   0.0050   0.00078   1   08/10/22 08:00   08/11/22 (18:01   7440-36-0   Manganesium   ND mg/L   0.0050   0.00078   1   08/10/22 08:00   08/11/22 (18:01   7440-36-0   Manganesium   ND mg/L   0.0050   0.00064   1   08/10/22 08:00   08/11/22 (18:01   7440-36-0   Manganesium   ND mg/L   0.0050   0.00064   1   08/10/22 08:00   08/11/22 (18:01   7440-43-9   Manganesium   ND mg/L   0.0050   0.00011   1   08/10/22 08:00   08/11/22 (18:01   7440-43-9   Manganesium   ND mg/L   0.0050   0.00011   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00011   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00039   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00074   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND		Pace Ana	ytical Services	- Peachtree	e Corners, C	βA				
Manganese   ND mg/L   0.040   0.0043   1   08/11/22 (9:30   08/11/22 (16:57   7439-96-5   Pelesasium   ND mg/L   1.0   0.58   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Sodium   ND mg/L   1.0   0.15   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Sodium   ND mg/L   0.050   0.012   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Solicium   ND mg/L   0.050   0.012   1   08/11/22 (9:30   08/11/22 (16:57   7440-03-7   Solicium   ND mg/L   0.050   0.012   1   08/11/22 (9:30   08/11/22 (16:57   7440-70-2   Manganesium   ND mg/L   0.0030   0.00078   1   08/10/22 08:00   08/11/22 (16:57   7440-70-2   Manganesium   ND mg/L   0.0030   0.00078   1   08/10/22 08:00   08/11/22 (16:07   7440-36-0   Manganesium   ND mg/L   0.0050   0.00078   1   08/10/22 08:00   08/11/22 (18:01   7440-36-0   Manganesium   ND mg/L   0.0050   0.00078   1   08/10/22 08:00   08/11/22 (18:01   7440-36-0   Manganesium   ND mg/L   0.0050   0.00064   1   08/10/22 08:00   08/11/22 (18:01   7440-36-0   Manganesium   ND mg/L   0.0050   0.00064   1   08/10/22 08:00   08/11/22 (18:01   7440-43-9   Manganesium   ND mg/L   0.0050   0.00011   1   08/10/22 08:00   08/11/22 (18:01   7440-43-9   Manganesium   ND mg/L   0.0050   0.00011   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00011   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00039   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00074   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND mg/L   0.0050   0.00073   1   08/10/22 08:00   08/11/22 (18:01   7440-47-3   Manganesium   ND	ron	ND	ma/l	0.040	0.025	1	08/11/22 09:30	08/11/22 16:57	7439-89-6	
Page Statium			-							
Sodium	Potassium		-							
ND mg/L   1.0   0.12   1   0.8/11/22 09:30   0.8/11/22 16:57   7440-70-2   Magnesium   ND mg/L   0.050   0.012   1   0.8/11/22 09:30   0.8/11/22 16:57   7439-95-4   Magnesium   ND mg/L   0.050   0.012   1   0.8/11/22 09:30   0.8/11/22 16:57   7439-95-4   Magnesium   ND mg/L   0.0030   0.0078   1   0.8/10/22 08:00   0.8/11/22 18:01   7440-36-0   0.8/11/22 18:01   7440-36-0   0.8/11/22 18:01   7440-36-0   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-38-2   0.8/11/22 18:01   7440-43-3   0.8/11/22 18:01			-				08/11/22 09:30			
Magnesium   ND   mg/L   0.050   0.012   1   08/11/22 09:30   08/11/22 16:57   7439-95-4	Calcium	ND	-	1.0		1			7440-70-2	
Pace Analytical Services - Peachtree Corners, GA	Magnesium	ND	-	0.050		1		08/11/22 16:57	7439-95-4	
Antimony Ant	6020 MET ICPMS	Analytical	Method: EPA 6	020B Prep	aration Met	hod: EF	A 3005A			
Arsenic ND mg/L 0.0050 0.0022 1 08/10/22 08:00 08/11/22 18:01 7440-38-2 ladrium ND mg/L 0.0050 0.00067 1 08/10/22 08:00 08/11/22 18:01 7440-39-3 desprillium ND mg/L 0.0050 0.00067 1 08/10/22 08:00 08/11/22 18:01 7440-39-3 desprillium ND mg/L 0.00050 0.000054 1 08/10/22 08:00 08/11/22 18:01 7440-41-7 0.00060 0.0006 1 08/10/22 08:00 08/11/22 18:01 7440-42-8 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-48-9 0.00060 0.00080 1 08/10/22 08:00 08/11/22 18:01 7440-48-9 0.0006		Pace Ana	ytical Services	- Peachtree	e Corners, C	<b>S</b> A				
Arsenic ND mg/L 0.0050 0.0022 1 08/10/22 08:00 08/11/22 18:01 7440-38-2 ladrium ND mg/L 0.0050 0.00067 1 08/10/22 08:00 08/11/22 18:01 7440-39-3 desprillium ND mg/L 0.0050 0.00067 1 08/10/22 08:00 08/11/22 18:01 7440-39-3 desprillium ND mg/L 0.00050 0.000054 1 08/10/22 08:00 08/11/22 18:01 7440-41-7 0.00060 0.0006 1 08/10/22 08:00 08/11/22 18:01 7440-42-8 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-43-9 0.00060 0.00011 1 08/10/22 08:00 08/11/22 18:01 7440-48-9 0.00060 0.00080 1 08/10/22 08:00 08/11/22 18:01 7440-48-9 0.0006	Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 18:01	7440-36-0	
ND mg/L   0.0050   0.00067   1   08/10/22 08:00   08/11/22 18:01   7440-39-3   0.00070   0.000	Arsenic		-	0.0050	0.0022	1	08/10/22 08:00	08/11/22 18:01	7440-38-2	
No	Barium	ND	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 18:01	7440-39-3	
ND mg/L   0.0050   0.00011   1   0.8/10/22 08:00   0.8/11/22 18:01   7440-43-9   7440-43	Beryllium	ND	-	0.00050	0.000054	1	08/10/22 08:00	08/11/22 18:01	7440-41-7	
Chromium	Boron	0.012J	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 18:01	7440-42-8	
Chromium	Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/11/22 18:01	7440-43-9	
ND mg/L   0.0010   0.00089   1   08/10/22 08:00   08/11/22 18:01   7439-92-1   7439-92-1   7439-92-1   7439-92-1   7439-92-2   7439-93-2   7439-33-2   7439-33-2   7439-33-2   7439-33-2   7439-33-2	Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 18:01	7440-47-3	
ND   mg/L   0.0010   0.00089   1   08/10/22 08:00   08/11/22 18:01   7439-92-1   7439-92-1   7439-92-1   7439-92-1   7439-93-2   7439-93	Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 18:01	7440-48-4	
ND mg/L   0.030   0.00073   1   08/10/22 08:00   08/11/22 18:01   7439-93-2   7440-28-0	.ead	ND	-	0.0010	0.00089	1	08/10/22 08:00	08/11/22 18:01	7439-92-1	
Molybdenum	ithium	ND	-	0.030	0.00073	1	08/10/22 08:00	08/11/22 18:01	7439-93-2	
ND mg/L   0.0050   0.0014   1   08/10/22 08:00   08/11/22 18:01   7782-49-2   7440-28-0	/lolvbdenum	ND	-			1				
ND   mg/L   0.0010   0.00018   1   08/10/22 08:00   08/11/22 18:01   7440-28-0	Selenium	ND	-			1				
Pace Analytical Services - Peachtree Corners, GA	Thallium	ND	•			1	08/10/22 08:00	08/11/22 18:01	7440-28-0	
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA  Fotal Dissolved Solids  ND mg/L 10.0 10.0 1  O8/09/22 10:02  Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville  Alkalinity, Bicarbonate (CaCO3)  ND mg/L 5.0 5.0 1  O8/17/22 12:51  Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  O8/17/22 12:51  Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  O8/17/22 12:51  Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  O8/17/22 12:51  O8/17/22 12:51  O8/17/22 12:51  Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville  Sulfide  ND mg/L 0.10 0.050 1  O8/10/22 04:04 18496-25-8  Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville	7470 Mercury	-					A 7470A			
Pace Analytical Services - Peachtree Corners, GA  Total Dissolved Solids  ND mg/L 10.0 10.0 1 08/09/22 10:02  2320B Alkalinity  Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville  Alkalinity, Bicarbonate (CaCO3)  ND mg/L 5.0 5.0 1 08/17/22 12:51  Alkalinity, Carbonate (CaCO3)  ND mg/L 5.0 5.0 1 08/17/22 12:51  Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1 08/17/22 12:51  Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1 08/17/22 12:51  Stoos2D Sulfide Water  Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville  Sulfide  ND mg/L 0.10 0.050 1 08/10/22 04:04 18496-25-8  300.0 IC Anions 28 Days  Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville	Mercury	ND	mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:49	7439-97-6	
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville  Alkalinity, Bicarbonate (CaCO3)  ND mg/L 5.0 5.0 1  Alkalinity, Carbonate (CaCO3)  ND mg/L 5.0 5.0 1  Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  NB/17/22 12:51	2540C Total Dissolved Solids	•			e Corners, C	SA.				
Pace Analytical Services - Asheville  Alkalinity, Bicarbonate (CaCO3)  ND mg/L 5.0 5.0 1  Alkalinity, Carbonate (CaCO3)  ND mg/L 5.0 5.0 1  NBAlkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  NBAlkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  NBAlkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  NBAlkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  NBAltical Method: SM 4500-S2D-2011  Pace Analytical Services - Asheville  ND mg/L 0.10 0.050 1  NBAltical Method: EPA 300.0 Rev 2.1 1993  Pace Analytical Services - Asheville	Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/09/22 10:02		
Alkalinity, Carbonate (CaCO3)  ND mg/L 5.0 5.0 1 08/17/22 12:51  Alkalinity, Total as CaCO3 ND mg/L 5.0 5.0 1 08/17/22 12:51  State of the process of the pr	2320B Alkalinity	•								
Alkalinity, Carbonate (CaCO3)  ND mg/L 5.0 5.0 1 08/17/22 12:51  Alkalinity, Total as CaCO3 ND mg/L 5.0 5.0 1 08/17/22 12:51  State of the process of the pr	Alkalinity, Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/17/22 12:51		
Alkalinity, Total as CaCO3  ND mg/L 5.0 5.0 1  4500S2D Sulfide Water  Analytical Method: SM 4500-S2D-2011  Pace Analytical Services - Asheville  ND mg/L 0.10 0.050 1  08/17/22 12:51  08/17/22 12:51  08/10/22 04:04 18496-25-8  300.0 IC Anions 28 Days  Analytical Method: EPA 300.0 Rev 2.1 1993  Pace Analytical Services - Asheville										
Pace Analytical Services - Asheville  Sulfide  ND mg/L  0.10 0.050 1  08/10/22 04:04 18496-25-8  300.0 IC Anions 28 Days  Analytical Method: EPA 300.0 Rev 2.1 1993  Pace Analytical Services - Asheville						1				
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville	I500S2D Sulfide Water	-			)11					
Pace Analytical Services - Asheville	Sulfide	ND	mg/L	0.10	0.050	1		08/10/22 04:04	18496-25-8	
	300.0 IC Anions 28 Days	•			.1 1993					
	Chloride	ND	mg/L	1.0	0.60	1		08/17/22 11:13	16887-00-6	

# **REPORT OF LABORATORY ANALYSIS**

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Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: EB-3	Lab ID:	92618823009	Collecte	Collected: 08/04/22 17:25			05/22 14:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	•	Method: EPA 3 llytical Services		.1 1993					
Fluoride	ND	mg/L	0.10	0.050	1		08/17/22 11:13	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/17/22 11:13	14808-79-8	



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: FB-3	Lab ID: 9261882301	Collect	ed: 08/04/2	2 17:05	Received: 08/	/05/22 14:15 <b>I</b>	Matrix: Water	
		Report						
Parameters	Results Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
6010D ATL ICP	Analytical Method: EPA	6010D Pre	paration Me	thod: EF	PA 3010A			
	Pace Analytical Service		•					
ron	ND mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 17:0	2 7439-89-6	
Manganese	ND mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 17:0	2 7439-96-5	
Potassium	ND mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 17:0	2 7440-09-7	
Sodium	ND mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 17:0	2 7440-23-5	
Calcium	ND mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 17:0		
Magnesium	ND mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 17:0		
6020 MET ICPMS	Analytical Method: EPA	6020B Pre	paration Me	thod: EF	PA 3005A			
	Pace Analytical Service							
Antimony	ND mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 18:0	7 7440-36-0	
Arsenic	ND mg/L	0.0050	0.0022	1	08/10/22 08:00			
Barium	ND mg/L	0.0050	0.00067	1	08/10/22 08:00			
Beryllium	ND mg/L	0.00050	0.000054	1	08/10/22 08:00			
Boron	ND mg/L	0.040	0.0086	1	08/10/22 08:00		-	
Cadmium	ND mg/L	0.00050	0.00011	1	08/10/22 08:00			
Chromium	ND mg/L	0.0050	0.0011	1	08/10/22 08:00			
Cobalt	ND mg/L	0.0050	0.00011	1	08/10/22 08:00			
ead	ND mg/L	0.0030	0.00039	1	08/10/22 08:00			
	_							
ithium Askabataan	ND mg/L	0.030	0.00073	1	08/10/22 08:00			
Molybdenum	ND mg/L	0.010	0.00074	1	08/10/22 08:00			
Selenium 	ND mg/L	0.0050	0.0014	1	08/10/22 08:00			
<sup>-</sup> hallium	ND mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 18:0	7 7440-28-0	
470 Mercury	Analytical Method: EPA	7470A Pre	paration Met	thod: EF	A 7470A			
	Pace Analytical Service	s - Peachtre	ee Corners, 0	GΑ				
Mercury	ND mg/L	0.00020	0.00013	1	08/11/22 07:15	08/11/22 12:5	2 7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2	2540C-2015	5					
	Pace Analytical Service	s - Peachtre	ee Corners, (	GΑ				
Total Dissolved Solids	ND mg/L	10.0	10.0	1		08/09/22 10:0	2	
2320B Alkalinity	Analytical Method: SM 2	2320B-2011						
·	Pace Analytical Service							
Alkalinity,Bicarbonate (CaCO3)	ND mg/L	5.0	5.0	1		08/17/22 13:0	6	
Alkalinity, Carbonate (CaCO3)	ND mg/L	5.0	5.0	1		08/17/22 13:0	6	
Alkalinity, Total as CaCO3	ND mg/L	5.0	5.0	1		08/17/22 13:0	6	
1500S2D Sulfide Water	Analytical Method: SM	1500-S2D-2	011					
130002D Guillac Water	Pace Analytical Service							
Sulfide	ND mg/L	0.10	0.050	1		08/10/22 04:0	4 18496-25-8	
300.0 IC Anions 28 Davs	Analytical Method: FPA	300.0 Rev	2.1 1993					
20 Eujo	Pace Analytical Service							
Chloride	ND ma/L	1.0	0.60	1		08/17/22 11:5	8 16887-00-6	
300.0 IC Anions 28 Days Chloride	Analytical Method: EPA Pace Analytical Service ND mg/L			1		08/17/22 11:5	8 16887-00-6	



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Sample: FB-3	Lab ID:	92618823010	Collecte	Collected: 08/04/22 17:05			3/05/22 14:15 Ma	atrix: Water		
Parameters	Results	Units	Report 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									
Fluoride Sulfate	ND ND	mg/L mg/L	0.10 1.0	0.050 0.50	1 1		08/17/22 11:58 08/17/22 11:58			



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716032 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618823001, 92618823002

METHOD BLANK: 3732776 Matrix: Water

Associated Lab Samples: 92618823001, 92618823002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/11/22 13:20	
Iron	mg/L	ND	0.040	0.025	08/11/22 13:20	
Magnesium	mg/L	ND	0.050	0.012	08/11/22 13:20	
Manganese	mg/L	ND	0.040	0.0043	08/11/22 13:20	
Potassium	mg/L	ND	0.20	0.15	08/11/22 13:20	
Sodium	mg/L	ND	1.0	0.58	08/11/22 13:20	

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Calcium	mg/L		1.0	104	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Manganese	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.1	109	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SI	PIKE DUPLIC	CATE: 3732	-		3732779							
	9	2618820002	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Calcium	mg/L	153	1	1	150	153	-362	-50	75-125	2	20	M1
Iron	mg/L	0.053	1	1	1.1	1.1	107	108	75-125	1	20	
Magnesium	mg/L	21.3	1	1	21.8	22.2	57	96	75-125	2	20	M1
Manganese	mg/L	0.31	1	1	1.4	1.4	105	106	75-125	1	20	
Potassium	mg/L	7.7	1	1	8.6	8.8	92	109	75-125	2	20	
Sodium	mg/L	9.4	1	1	10.2	10.4	79	96	75-125	2	20	

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716036 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, 92618823008, 92618823009,

92618823010

METHOD BLANK: 3732817 Matrix: Water

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, 92618823008, 92618823009,

92618823010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND .	1.0	0.12	08/11/22 15:55	
Iron	mg/L	ND	0.040	0.025	08/11/22 15:55	
Magnesium	mg/L	ND	0.050	0.012	08/11/22 15:55	
Manganese	mg/L	ND	0.040	0.0043	08/11/22 15:55	
Potassium	mg/L	ND	0.20	0.15	08/11/22 15:55	
Sodium	mg/L	ND	1.0	0.58	08/11/22 15:55	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L		1.1	106	80-120	
Iron	mg/L	1	1.1	106	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Manganese	mg/L	1	1.1	108	80-120	
Potassium	mg/L	1	1.0	105	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX	SPIKE DUPL	ICATE: 3732			3732820							
Parameter	Units	92618823006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	170	1	1	171	166	120	-307	75-125	3	20	M1
Iron	mg/L	0.10	1	1	1.2	1.2	109	107	75-125	2	20	
Magnesium	mg/L	27.3	1	1	28.6	27.7	123	41	75-125	3	20	M1
Manganese	mg/L	2.3	1	1	3.4	3.3	109	100	75-125	3	20	
Potassium	mg/L	3.4	1	1	4.6	4.4	120	99	75-125	5	20	
Sodium	mg/L	16.2	1	1	17.5	16.8	125	62	75-125	4	20	M1

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 715918 Analysis Method:
QC Batch Method: EPA 3005A Analysis Description:

Laboratory: Pace Analytical Services - Peachtree Corners, GA

EPA 6020B

6020 MET

Associated Lab Samples: 92618823001, 92618823002

METHOD BLANK: 3732042 Matrix: Water

Associated Lab Samples: 92618823001, 92618823002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers	
Antimony	mg/L	ND ND	0.0030	0.00078	08/10/22 17:46		
Arsenic	mg/L	ND	0.0050	0.0022	08/10/22 17:46		
Barium	mg/L	ND	0.0050	0.00067	08/10/22 17:46		
Beryllium	mg/L	ND	0.00050	0.000054	08/10/22 17:46		
Boron	mg/L	ND	0.040	0.0086	08/10/22 17:46		
Cadmium	mg/L	ND	0.00050	0.00011	08/10/22 17:46		
Chromium	mg/L	ND	0.0050	0.0011	08/10/22 17:46		
Cobalt	mg/L	ND	0.0050	0.00039	08/10/22 17:46		
_ead	mg/L	ND	0.0010	0.00089	08/10/22 17:46		
_ithium	mg/L	ND	0.030	0.00073	08/10/22 17:46		
Molybdenum	mg/L	ND	0.010	0.00074	08/10/22 17:46		
Selenium	mg/L	ND	0.0050	0.0014	08/10/22 17:46		
Thallium	mg/L	ND	0.0010	0.00018	08/10/22 17:46		

LABORATORY CONTROL SAMPLE:	3732043					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Antimony	mg/L	0.1	0.12	120	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SP		3732045										
			MS	MSD								
	9	92618820002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.12	0.13	123	128	75-125	4	20	M1
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

MATRIX SPIKE & MATRIX S	SPIKE DUPLIC	CATE: 3732	044		3732045							
Parameter	g Units	2618820002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.060	0.1	0.1	0.18	0.19	120	126	75-125	3	20	M1
Beryllium	mg/L	0.000056J	0.1	0.1	0.089	0.087	89	87	75-125	2	20	
Boron	mg/L	1.5	1	1	2.3	2.3	80	82	75-125	1	20	
Cadmium	mg/L	0.00017J	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.098	0.097	97	97	75-125	1	20	
Cobalt	mg/L	0.0024J	0.1	0.1	0.097	0.098	95	95	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.097	96	97	75-125	1	20	
Lithium	mg/L	0.0026J	0.1	0.1	0.090	0.090	88	87	75-125	0	20	
Molybdenum	mg/L	0.29	0.1	0.1	0.41	0.43	116	138	75-125	5	20	M1
Selenium	mg/L	ND	0.1	0.1	0.10	0.099	99	98	75-125	0	20	
Thallium	mg/L	0.00018J	0.1	0.1	0.097	0.097	97	97	75-125	0	20	

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716035 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, 92618823008, 92618823009,

92618823010

METHOD BLANK: 3732802 Matrix: Water

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, 92618823008, 92618823009,

92618823010

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/11/22 16:40	_
Arsenic	mg/L	ND	0.0050	0.0022	08/11/22 16:40	
Barium	mg/L	ND	0.0050	0.00067	08/11/22 16:40	
Beryllium	mg/L	ND	0.00050	0.000054	08/11/22 16:40	
Boron	mg/L	ND	0.040	0.0086	08/11/22 16:40	
Cadmium	mg/L	ND	0.00050	0.00011	08/11/22 16:40	
Chromium	mg/L	ND	0.0050	0.0011	08/11/22 16:40	
Cobalt	mg/L	ND	0.0050	0.00039	08/11/22 16:40	
Lead	mg/L	ND	0.0010	0.00089	08/11/22 16:40	
Lithium	mg/L	ND	0.030	0.00073	08/11/22 16:40	
Molybdenum	mg/L	ND	0.010	0.00074	08/11/22 16:40	
Selenium	mg/L	ND	0.0050	0.0014	08/11/22 16:40	
Thallium	mg/L	ND	0.0010	0.00018	08/11/22 16:40	

LABORATORY CONTROL SAME	PLE:	3732803	Cmiles	1.0	<b>`</b>	1.00	0/ 5					
Parameter		Units	Spike Conc.			LCS % Rec	% F Lim		Qualifiers			
Antimony		mg/L		 .1	0.10	10:	3	80-120				
Arsenic		mg/L	0	.1	0.098	98	8	80-120				
Barium		mg/L	0	.1	0.094	9	4	80-120				
Beryllium		mg/L	0	.1	0.097	9	7	80-120				
Boron		mg/L		1	1.0	10	2	80-120				
Cadmium		mg/L	0	.1	0.097	9	7	80-120				
Chromium		mg/L	0	.1	0.10	10	2	80-120				
Cobalt		mg/L	0	.1	0.10	10	1	80-120				
Lead		mg/L	0	.1	0.10	10	3	80-120				
Lithium		mg/L	0	.1	0.099	9:	9	80-120				
Molybdenum		mg/L	0	.1	0.096	9	6	80-120				
Selenium		mg/L	0	.1	0.095	9:	5	80-120				
Thallium		mg/L	0	.1	0.10	10	3	80-120				
MATRIX SPIKE & MATRIX SPIKI	E DUPI	LICATE: 3732	804		3732805	;						
			MS	MSD								
		92618823003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L		0.1	0.1	0.10	0.10	102	102	75-125	0	20	

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3732	804 MS	MCD	3732805							
Parameter	9 Units	2618823003 Result	Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.099	0.092	98	91	75-125	7	20	
Barium	mg/L	0.048	0.1	0.1	0.15	0.16	105	110	75-125	3	20	
Beryllium	mg/L	ND	0.1	0.1	0.086	0.079	86	79	75-125	8	20	
Boron	mg/L	1.0	1	1	2.0	2.0	99	90	75-125	4	20	
Cadmium	mg/L	ND	0.1	0.1	0.095	0.088	95	88	75-125	7	20	
Chromium	mg/L	ND	0.1	0.1	0.099	0.091	98	90	75-125	9	20	
Cobalt	mg/L	0.0058	0.1	0.1	0.10	0.095	95	89	75-125	6	20	
Lead	mg/L	ND	0.1	0.1	0.096	0.090	96	90	75-125	6	20	
Lithium	mg/L	0.023J	0.1	0.1	0.11	0.10	88	79	75-125	8	20	
Molybdenum	mg/L	0.032	0.1	0.1	0.12	0.13	91	98	75-125	6	20	
Selenium	mg/L	ND	0.1	0.1	0.095	0.089	95	89	75-125	7	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.091	96	91	75-125	6	20	

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.



HAMMOND AP-3 Project:

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716252 Analysis Method: EPA 7470A QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury

> Pace Analytical Services - Peachtree Corners, GA Laboratory:

Associated Lab Samples: 92618823001, 92618823002, 92618823003, 92618823004, 92618823005, 92618823006, 92618823007,

92618823008, 92618823009, 92618823010

METHOD BLANK: 3733717 Matrix: Water

92618823001, 92618823002, 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, Associated Lab Samples:

92618823008, 92618823009, 92618823010

Blank Reporting Parameter Units MDL Qualifiers Result Limit Analyzed mg/L Mercury ND 0.00020 0.00013 08/11/22 11:59

LABORATORY CONTROL SAMPLE: 3733718

LCS LCS % Rec Spike Units Result % Rec Limits Qualifiers Parameter Conc. 83 Mercury mg/L 0.0025 0.0021 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733719 3733720

MSD MS

92618822001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual ND 0.0025 0.0021 75 20 Mercury 0.0025 0.0019 84 75-125 10 mg/L

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

QC Batch: 715874 Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618823001, 92618823002, 92618823003, 92618823004

METHOD BLANK: 3731839 Matrix: Water

Associated Lab Samples: 92618823001, 92618823002, 92618823003, 92618823004

Blank Reporting

ParameterUnitsResultLimitMDLAnalyzedQualifiersTotal Dissolved Solidsmg/LND10.010.008/09/22 10:22

LABORATORY CONTROL SAMPLE: 3731840

Spike LCS LCS % Rec Conc. % Rec Limits Qualifiers Parameter Units Result **Total Dissolved Solids** 400 390 98 80-120 mg/L

SAMPLE DUPLICATE: 3731841

92618822001 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 48.0 **Total Dissolved Solids** 47.0 2 mg/L 25

SAMPLE DUPLICATE: 3731990

Date: 08/19/2022 02:05 PM

92618829005 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 311 mg/L 341 9 25

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

QC Batch: 715879 Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618823005, 92618823006, 92618823007, 92618823008, 92618823009, 92618823010

METHOD BLANK: 3731855 Matrix: Water

Associated Lab Samples: 92618823005, 92618823006, 92618823007, 92618823008, 92618823009, 92618823010

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 08/09/22 10:01

LABORATORY CONTROL SAMPLE: 3731856

Spike LCS LCS % Rec Conc. % Rec Limits Qualifiers Parameter Units Result **Total Dissolved Solids** 400 384 96 80-120 mg/L

SAMPLE DUPLICATE: 3731857

92618823005 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 334 **Total Dissolved Solids** 0 mg/L 334 25

SAMPLE DUPLICATE: 3731858

Date: 08/19/2022 02:05 PM

92618820016 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 302 335 mg/L 10 25

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.

Qualifiers



#### **QUALITY CONTROL DATA**

Project: HAMMOND AP-3

Pace Project No.: 92618823

QC Batch Method:

QC Batch: 716055

Analysis Method:

SM 2320B-2011

Analysis Description:

2320B Alkalinity

Laboratory:

Pace Analytical Services - Asheville

Associated Lab Samples: 92618823001, 92618823002

SM 2320B-2011

METHOD BLANK: 3732994

Matrix: Water

Associated Lab Samples: 92618823001, 92618823002

Blank Reporting MDL Parameter Units Result Limit Analyzed Alkalinity, Total as CaCO3 mg/L ND 5.0 5.0 08/09/22 21:00 Alkalinity, Bicarbonate (CaCO3) mg/L ND 5.0 5.0 08/09/22 21:00 Alkalinity, Carbonate (CaCO3) mg/L ND 5.0 5.0 08/09/22 21:00

LABORATORY CONTROL SAMPLE: 3732995

Spike LCS LCS % Rec Qualifiers Units Conc. Result % Rec Limits Parameter Alkalinity, Total as CaCO3 50 51.0 102 80-120 mg/L

LABORATORY CONTROL SAMPLE: 3732996

Date: 08/19/2022 02:05 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Alkalinity, Total as CaCO3 mg/L 50 52.5 105 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732997 3732998

MS MSD 92618216031 MS MSD MS MSD Spike Spike % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual 55.8 Alkalinity, Total as CaCO3 50 50 107 108 103 104 80-120 25 mg/L

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 717515 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007

METHOD BLANK: 3740358 Matrix: Water

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007

		103, 9261662300	Blar		Reporting							
Parameter		Units	Res	ult	Limit	MDL	-	Analyze	d Q	ualifiers	;	
Alkalinity, Total as CaCO3		mg/L		ND	5	.0	5.0	08/16/22 2	3:08			
Alkalinity, Bicarbonate (CaCO3	3)	mg/L		ND	5	.0	5.0	08/16/22 2	3:08			
Alkalinity, Carbonate (CaCO3)		mg/L		ND	5	.0	5.0	08/16/22 2	3:08			
LABORATORY CONTROL SA	MPLE:	3740359										
			Spike	LC	CS	LCS	%	Rec				
Parameter		Units	Conc.	Re	sult	% Rec	L	imits	Qualifiers			
Alkalinity, Total as CaCO3		mg/L	5	60	51.9	104	1	80-120				
LABORATORY CONTROL SA	MPLE:	3740360										
			Spike	LC		LCS		Rec				
Parameter		Units	Conc.	Re	sult —————	% Rec	L	imits	Qualifiers	_		
Alkalinity, Total as CaCO3		mg/L	5	50	49.8	100	)	80-120				
MATRIX SPIKE & MATRIX SF	PIKE DUPI	LICATE: 3740	361		3740362	2						
			MS	MSD								
Damasatas	11-26-	92618505017	Spike	Spike	MS	MSD	MS	MSD	% Rec	000	Max	01
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec			RPD	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	44.2	50	50	93.9	94.7	9	99 10	1 80-120	1	25	
MATRIX SPIKE & MATRIX SF	PIKE DUPI	LICATE: 3740	363		374036	4						
			MS	MSD								
		92618505018	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
_			_ '	_ '			_	_				_
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 717728 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92618823008, 92618823009, 92618823010

METHOD BLANK: 3741339 Matrix: Water

		Matrix: W	ater							
3008, 9261882300	9, 9261882	3010								
	Blan	ık	Reporting							
Units	Resu	ult	Limit	MDI		Analyze	d Q	ualifiers		
mg/L		ND _	5.	0	5.0	08/17/22 12	2:09			
mg/L		ND	5.	0	5.0	08/17/22 12	2:09			
mg/L		ND	5.	0	5.0	08/17/22 12	2:09			
3741340										
	Spike	LC	S	LCS	%	Rec				
Units	Conc.	Res	sult	% Rec	L	imits	Qualifiers			
mg/L	5	0	51.6	10:	3	80-120		_		
3741341										
	Spike	LC	S	LCS	%	Rec				
Units	Conc.	Res	sult	% Rec	L	imits	Qualifiers			
mg/L	5	0	51.3	103	3	80-120		_		
PLICATE: 3741	344		3741345	5						
	MS	MSD								
	•	•				_				_
s Result	Conc.	Conc.	Result	Result	% Rec	: % Rec 	_ Limits		RPD	Qual
									~-	
L ND	50	50	52.3	51.5	10	04 10	3 80-120	1	25	
L ND PLICATE: 3742		50	3742569			04 10	3 80-120			
		50 MSD				04 10	3 80-120			
	2568				MS	04 10	3 80-120 % Rec	1	25 Max	
PLICATE: 3742	2568 MS	MSD	3742569	)		MSD		RPD		Qual
	Units mg/L mg/L mg/L 3741340 Units mg/L  3741341 Units mg/L	3008, 92618823009, 9261882    Blan     Units   Rest     mg/L     mg/L     mg/L     3741340     Spike     Conc.     mg/L     5    PLICATE: 3741344     MS     92618823009     Spike     Conc.     Result     Conc.     Co	3008, 92618823009, 92618823010    Blank   Result	3008, 92618823009, 92618823010    Units   Result   Limit	Units	ND   Solution   Solu	No	Units   Result   Limit   MDL   Analyzed   Qt	ND   Solid   Solid	ND   Solid   Solid

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.



HAMMOND AP-3 Project:

Pace Project No.: 92618823

QC Batch: 715461

QC Batch Method:

SM 4500-S2D-2011

Analysis Method:

SM 4500-S2D-2011

Analysis Description:

4500S2D Sulfide Water

MDL

Laboratory:

Pace Analytical Services - Asheville

Associated Lab Samples: 92618823001, 92618823002

METHOD BLANK: 3730179 Matrix: Water

Associated Lab Samples: 92618823001, 92618823002

Blank

Parameter Units Result

Reporting Limit

Analyzed Qualifiers

Sulfide ND 0.10 0.050 08/06/22 03:29 mg/L

LABORATORY CONTROL SAMPLE: 3730180

Parameter

Units

Spike Conc.

LCS Result

LCS % Rec

MSD

Result

0.48

% Rec Limits

Qualifiers

Sulfide 0.5 0.48 97 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

3730181

MSD

92618725005 Parameter Units Result

mg/L

Units

mg/L

MS Spike Spike Conc. Conc.

0.5

MS Result

0.44

3730184

3730182

MS % Rec

MSD % Rec

% Rec Max **RPD** RPD Limits

Qual

Parameter

Date: 08/19/2022 02:05 PM

Sulfide

Sulfide

3730183

ND

ND

92618728001

Result

Spike Conc.

0.5

MS MSD MS MSD

86

% Rec

80-120

Max Qual

8 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

MS

MSD

Spike Conc.

0.5

0.5

Result Result 0.53

% Rec 0.53 104 % Rec 105

Limits

**RPD** RPD 10 80-120

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716114 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: 92618823003, 92618823004, 92618823005, 92618823006

METHOD BLANK: 3733262 Matrix: Water

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006

Blank Reporting

Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfide mg/L ND 0.10 0.050 08/10/22 03:40

LABORATORY CONTROL SAMPLE: 3733263

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits Qualifiers

Sulfide mg/L 0.5 0.50 99 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733264 3733265

MS MSD

92618767003 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Result **RPD** RPD Result Conc. Conc. % Rec % Rec Limits Qual Sulfide mg/L ND 0.5 0.5 0.57 0.57 107 108 80-120 0 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733266 3733267

PLICATE: 3/33200

MS MSD 92618767015 MS MSD MS MSD % Rec Spike Spike Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD Qual Sulfide 0.5 71 ND 0.5 0.36 0.33 66 8 10 M1 mg/L 80-120

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716115 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: 92618823007, 92618823008, 92618823009, 92618823010

METHOD BLANK: 3733268 Matrix: Water

Associated Lab Samples: 92618823007, 92618823008, 92618823009, 92618823010

Blank Reporting

Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfide mg/L ND 0.10 0.050 08/10/22 04:00

LABORATORY CONTROL SAMPLE: 3733269

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits Qualifiers

Sulfide mg/L 0.5 0.51 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733270 3733271

MSD MS 92618823007 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Result **RPD** RPD Result Conc. Conc. % Rec % Rec Limits Qual

Sulfide mg/L ND 0.5 0.5 0.33 0.33 60 60 80-120 0 10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733272 3733273

MS MSD 92618820018 MS MSD MS MSD % Rec Spike Spike Max **RPD** Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD Qual Sulfide 0.5 4.7 4.7 3.9 0.5 164 169 0 10 M1 mg/L 80-120

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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 716707 Analysis Method:

QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

EPA 300.0 Rev 2.1 1993

Associated Lab Samples: 92618823001, 92618823002

METHOD BLANK: 3736371 Matrix: Water

Associated Lab Samples: 92618823001, 92618823002

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/12/22 10:25	
Fluoride	mg/L	ND	0.10	0.050	08/12/22 10:25	
Sulfate	mg/L	ND	1.0	0.50	08/12/22 10:25	

LABORATORY CONTROL SAMPLE: 3736372 LCS Spike LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Chloride 50 106 90-110 mg/L 53.1 Fluoride 2.5 106 mg/L 2.6 90-110 Sulfate 51.7 mg/L 50 103 90-110

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3736		3736374								
			MS	MSD								
		92618820001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	37.9	50	50	94.8	94.7	114	114	90-110	0	10	M1
Fluoride	mg/L	0.11	2.5	2.5	2.8	2.8	107	109	90-110	1	10	
Sulfate	mg/L	105	50	50	152	150	94	90	90-110	1	10	

MATRIX SPIKE & MATRIX SP												
			MS	MSD								
		92618820011	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	63.5	50	50	101	100	74	74	90-110	0	10 N	<b>Л</b> 1
Fluoride	mg/L	0.069J	2.5	2.5	2.8	2.7	108	106	90-110	2	10	
Sulfate	mg/L	140	50	50	186	187	92	93	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.



Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

QC Batch: 717488 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: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, 92618823008, 92618823009,

92618823010

METHOD BLANK: 3740180 Matrix: Water

Associated Lab Samples: 92618823003, 92618823004, 92618823005, 92618823006, 92618823007, 92618823008, 92618823009,

92618823010

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/17/22 08:09	
Fluoride	mg/L	ND	0.10	0.050	08/17/22 08:09	
Sulfate	mg/L	ND	1.0	0.50	08/17/22 08:09	

LABORATORY CONTROL SAMPLE:	3740181					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	49.9	100	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SP		3740183										
			MS	MSD								
		92618823003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	2.7	50	50	54.9	54.4	104	104	90-110	1	10	
Fluoride	mg/L	0.38	2.5	2.5	2.8	2.8	97	96	90-110	1	10	
Sulfate	mg/L	230	50	50	276	276	93	93	90-110	0	10	

MATRIX SPIKE & MATRIX SP	3740185											
			MS	MSD								
		92618820014	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	11.3	50	50	63.6	63.4	105	104	90-110	0	10	
Fluoride	mg/L	0.18	2.5	2.5	2.6	2.6	97	97	90-110	0	10	
Sulfate	mg/L	412	50	50	465	460	106	96	90-110	1	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.



#### **QUALIFIERS**

Project: HAMMOND AP-3

Pace Project No.: 92618823

#### **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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

#### **ANALYTE QUALIFIERS**

Date: 08/19/2022 02:05 PM

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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



# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytic Batch
92618823001	HGWA-45D			_	
2618823002	HGWA-122				
2618823003	HGWC-120				
2618823004	HGWC-121A				
2618823005	HGWC-124				
2618823006	HGWC-125				
2618823007	HGWC-126				
2618823001	HGWA-45D	EPA 3010A	716032	EPA 6010D	716586
2618823002	HGWA-122	EPA 3010A	716032	EPA 6010D	716586
2618823003	HGWC-120	EPA 3010A	716036	EPA 6010D	716583
2618823004	HGWC-121A	EPA 3010A	716036	EPA 6010D	716583
2618823005	HGWC-124	EPA 3010A	716036	EPA 6010D	716583
2618823006	HGWC-125	EPA 3010A	716036	EPA 6010D	716583
2618823007	HGWC-126	EPA 3010A	716036	EPA 6010D	716583
2618823008	DUP-3	EPA 3010A	716036	EPA 6010D	716583
2618823009	EB-3	EPA 3010A	716036	EPA 6010D	716583
2618823010	FB-3	EPA 3010A	716036	EPA 6010D	716583
2618823001	HGWA-45D	EPA 3005A	715918	EPA 6020B	716063
2618823002	HGWA-122	EPA 3005A	715918	EPA 6020B	716063
2618823003	HGWC-120	EPA 3005A	716035	EPA 6020B	716280
2618823004	HGWC-121A	EPA 3005A	716035	EPA 6020B	716280
2618823005	HGWC-124	EPA 3005A	716035	EPA 6020B	716280
2618823006	HGWC-125	EPA 3005A	716035	EPA 6020B	716280
2618823007	HGWC-126	EPA 3005A	716035	EPA 6020B	716280
2618823008	DUP-3	EPA 3005A	716035	EPA 6020B	716280
2618823009	EB-3	EPA 3005A	716035	EPA 6020B	716280
2618823010	FB-3	EPA 3005A	716035	EPA 6020B	716280
2618823001	HGWA-45D	EPA 7470A	716252	EPA 7470A	716491
2618823002	HGWA-122	EPA 7470A	716252	EPA 7470A	716491
2618823003	HGWC-120	EPA 7470A	716252	EPA 7470A	716491
2618823004	HGWC-121A	EPA 7470A	716252	EPA 7470A	716491
2618823005	HGWC-124	EPA 7470A	716252	EPA 7470A	716491
2618823006	HGWC-125	EPA 7470A	716252	EPA 7470A	716491
2618823007	HGWC-126	EPA 7470A	716252	EPA 7470A	716491
2618823008	DUP-3	EPA 7470A	716252	EPA 7470A	716491
2618823009	EB-3	EPA 7470A	716252	EPA 7470A	716491
2618823010	FB-3	EPA 7470A	716252	EPA 7470A	716491
2618823001	HGWA-45D	SM 2540C-2015	715874		
2618823002	HGWA-122	SM 2540C-2015	715874		
2618823003	HGWC-120	SM 2540C-2015	715874		
2618823004	HGWC-121A	SM 2540C-2015	715874		
2618823005	HGWC-124	SM 2540C-2015	715879		
2618823006	HGWC-125	SM 2540C-2015	715879		
2618823007	HGWC-126	SM 2540C-2015	715879		
2618823008	DUP-3	SM 2540C-2015	715879		

# **REPORT OF LABORATORY ANALYSIS**

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# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND AP-3

Pace Project No.: 92618823

Date: 08/19/2022 02:05 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618823009	EB-3	SM 2540C-2015	715879		
92618823010	FB-3	SM 2540C-2015	715879		
92618823001	HGWA-45D	SM 2320B-2011	716055		
92618823002	HGWA-122	SM 2320B-2011	716055		
92618823003	HGWC-120	SM 2320B-2011	717515		
92618823004	HGWC-121A	SM 2320B-2011	717515		
92618823005	HGWC-124	SM 2320B-2011	717515		
92618823006	HGWC-125	SM 2320B-2011	717515		
92618823007	HGWC-126	SM 2320B-2011	717515		
92618823008	DUP-3	SM 2320B-2011	717728		
92618823009	EB-3	SM 2320B-2011	717728		
92618823010	FB-3	SM 2320B-2011	717728		
92618823001	HGWA-45D	SM 4500-S2D-2011	715461		
92618823002	HGWA-122	SM 4500-S2D-2011	715461		
92618823003	HGWC-120	SM 4500-S2D-2011	716114		
92618823004	HGWC-121A	SM 4500-S2D-2011	716114		
92618823005	HGWC-124	SM 4500-S2D-2011	716114		
92618823006	HGWC-125	SM 4500-S2D-2011	716114		
92618823007	HGWC-126	SM 4500-S2D-2011	716115		
92618823008	DUP-3	SM 4500-S2D-2011	716115		
92618823009	EB-3	SM 4500-S2D-2011	716115		
92618823010	FB-3	SM 4500-S2D-2011	716115		
92618823001	HGWA-45D	EPA 300.0 Rev 2.1 1993	716707		
92618823002	HGWA-122	EPA 300.0 Rev 2.1 1993	716707		
92618823003	HGWC-120	EPA 300.0 Rev 2.1 1993	717488		
92618823004	HGWC-121A	EPA 300.0 Rev 2.1 1993	717488		
92618823005	HGWC-124	EPA 300.0 Rev 2.1 1993	717488		
92618823006	HGWC-125	EPA 300.0 Rev 2.1 1993	717488		
92618823007	HGWC-126	EPA 300.0 Rev 2.1 1993	717488		
92618823008	DUP-3	EPA 300.0 Rev 2.1 1993	717488		
92618823009	EB-3	EPA 300.0 Rev 2.1 1993	717488		
92618823010	FB-3	EPA 300.0 Rev 2.1 1993	717488		

Pace
DIVIDATE ASSAU

DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

	heville Ede		nwood	Huntersvil	ما	Raleigh		Mechanicsville Atlanta Kornara IIIa		
Sample Condition Upon Receipt  Co A			Power	ower -		Proje	MO#: 92618823			
Courier:   Fed Ex   UPS   Commercial   Pace				S USPS Other:		ent	92618823			
Custody Seal Present? Yes No Se		Seals Intact?	als Intact? Tes			Date/Initials Person Examining Contents:				
Packing Material: Bubble Wrap Bu				Bubble Bags	bble Bags None			Biological Tissue Frozen?		
Thermometer:					: • • • • • • • • • • • • • • • • • • •	Vet □8	luo	☐Yes ☐No ☐√√A		
Coo	oler Temp: 2	Factor: 0.0 3.3				Temp should be above freezing to 6°C  Samples out of temp criteria. Samples on ice, cooling process has begun				
	Did samples originate (check maps)? Yes	in a quarantine	zone withi	in the United States:	CA, NY, o	r SC		Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Tyes Tyes		
				-			I	Comments/Discrepancy:		
	Chain of Custody Pre			<b>□</b> Ves	□No	□N/A	1.			
	Samples Arrived wit			Yes	□No	□N/A	2,			
	Short Hold Time An			□Yes	No	□N/A	3.			
	Rush Turn Around T	ime Requested	?	□Yes	□N <sub>0</sub>	□N/A	4.	•		
	Sufficient Volume?			∰ Yes	□No	□N/A	5.			
	Correct Containers L  Pace Containers			☐Yes □Ywr	□no □no	□N/A □N/A	6.			
	Containers Intact?			₽r€s	□No	□N/A	7.			
	Dissolved analysis: S	amples Field Fi	tered?	□Yes	□No	□N/A	8			
İ	Sample Labels Match			Yes	□N <sub>0</sub>	□N/A	9.			
	-Includes Date/Tir	me/ID/Analysis	Matrix	W						
	Headspace in VOA V	ials (>5-6mm)?		□Yes	1NO	DINIA	10	•		
ĺ	Trip Blank Present?			□Yes	□No	DAIN	11.			
.	Trip Blank Custody S			□Yes	DND	□N/A				
	MENTS/SAMPLE DISCR	EPANCY						Field Data Required? ☐Yes ☐No		
CLIENT	NOTIFICATION/RESOL	UTION					ot ID	of split containers:		
Perso	on contacted:					Date/Time				
Pi	roject Manager SCU							Date:		
Project Manager SRF Review:				Date:						

Qualtrax ! : 69614



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

\*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

Project #

WO#:92618823

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

\*\*Bottom half of box is to list number of bottles

\*\*\*Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP47-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG1S+1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2504 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T 40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S 40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	130,11	BP3R-250 mL Plastic (NH2)2504 (9.3-9.7)	AGOU+100 mL Amber Unpreserved (N/A) (CI-)	VSGU420 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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	рН Ас	<b>Justment Log for Pres</b>	erved Samples		
Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #
	Type of Preservative			Time preservation	Type of Preservative pH upon receipt Date preservation adjusted Time preservation Amount of Preservative

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR 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 Require	n A d Client Information:	Section B Required Pr	roject Info	rmation.						ion C	mation													Page	:		1	<b>x</b> 1	-
Compan	GA Power	Report To: 5	SCS Co	ntacts					Attent	ion;	So	then	Co.	1												-			
Address	Atlanta, GA	Copy To: (	Geosyn	tec Contac	cts		15.60	_	Comp	any N	ame:	+-	_	+-					-	FGI	ΙΙ ΔΤ	ORY	AGI	ENCY				+-	
		1	HIII.						Addre	55:	-	+-	-		No.		_	-	_		E COLUMN			ROUN	D 14	/ATE	<u></u>	DOM IVAN	3 WATER
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Phone:	Fax:	Project Nam	e: Ha	mmond AF	2-3				Refere Pace P	nce:	Nie	ole D	Olor	-	-	_			_	_	ST	_	Э Н	CRA	_		<b>E</b> (	THER	
Request	ted Due Date/TAT: 19 Day	Project Num		illiona Ai				_	Manag		0,044	_	Olec	4_					4	Site	Locat			GA					
		1 raject realit					***************************************			TO HAS W	108	39									STAT		_						
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	Section D Valid Matrix Required Client Information MATRIX	CODE	(see valid codes to left)	1	COLL	ECTED					Pres	serva	ives		Z	N	N	N	N	ı N	П	-			ı				
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	Sample IDs MUST BE UNIQUE TIRALIS	OT TS	CODE					EMP	IAI	8		11			10	oride	and IV	_	i	are.				11	ı	悥			
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ITEM#			MATRIX COD SAMPLE TYPE					SAMPLE TEMP AT COLLECTION	# OF	Unpreserved	HNO	NaOH E	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Other	Analysis	Chloride, Fluoride, Sulfate	oll App	tAD 226/228	DS faior long	ukalinity, Bicarbonate					1	Residual Chlorine (Y/N)	201	23 70 872	
1	HGWA-45D			DATE	TIME	DATE	TIME 8/2/2022	-	_		_	Ŧ	긷	10	1	-	-		- 2	40	+-	+	+	++	-	-	Pace	-	No./ Lab I.D.
2	HGWA-122		wg g	8/2/2022	12:30		8/2/2022	21	7	3	3	₩	Н	1	-	×	×	-	× >	_	Н	+	+	+	-	N		pH = 7	
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				1	ı	PRINT Nam	e of SAMPL	ER:	The	one	51	446	4	, ,	1115	He .	7	01	nc	Vrs	U				Temp in		S (Y.)	YNV VNV	Y.P.
						SIGNATUR	E of SAMPL	ER:	1	2	. (	Fe		1		D/	ATE S	igne	ď	81	2/2	ひて	2		Terr		Received on Ice (Y/N)	Sealed Coo (Y/N)	Samples intact (Y/N)

Page 52 of 55



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

	shevilleEdenGreenwood	Huntersy	ال مالة	Raleigh		
	Sample Condition Upon Receipt  Client Name:	w.	e [		roje	ct #: WO#: 92618823
	ourier: Fed Ex UPS Commercial Pace	USP:		□cii	ient	PM: NMG Due Date: 08/18/22 CLIENT: GA-GA Power
Cı	ustody Seal Present? Yes No Seals	Intact?	Yes	□No		Date/Initials Person Examining Contents: \$\\\ 5\\\ 5\\\ 22\\\
	IR Gun ID: 230	ble Bags Type of I	None	e 🗆 O	ther	Biological Tissue Frozen?  Yes No N/A
Co	oler Temp:  Soler Temp Corrected (°C):  DA Regulated Soil (  N/A, water sample)  Did samples originate in a quarantine zone within the light of the			or SC		Temp should be above freezing to 6°C  Samples out of temp criteria. Samples on ice, cooling process has begun  Did samples originate from a foreign source (internationally,
	(check maps)? Yes No				,	including Hawaii and Puerto Rico)?  Yes  No
	Chain of Custody Present?	——————————————————————————————————————			-	Comments/Discrepancy:
	Samples Arrived within Hold Time?	Tyes	ПNо	N/A	1.	
	Short Hold Time Analysis (<72 hr.)?	■Yes	□No	□N/A	2.	
	Rush Turn Around Time Requested?	Yes	EN <sub>0</sub>	□N/A	3.	
		□Yes	No	□N/A	4.	
	Sufficient Volume?	Yes	□No	□N/A	5.	
	Correct Containers Used?	Yes	□No	□N/A	6.	
	-Pace Containers Used?	Pres	□No	_ □N/A		
	Containers Intact?		□No	□N/A	7.	
	Dissolved analysis: Samples Field Filtered?	□Yes	□No	DN/A	8.	
	Sample Labels Match COC?  -Includes Date/Time/ID/Analysis   Matrix:	₩ W	□No	□N/A	9.	
		77	=			
	Headspace in VOA Vials (>5-6mm)? Trip Blank Present?	Yes	No	DN/A	10.	
	11	Yes	□No	1 AIN	11.	
COM	Trip Blank Custody Seals Present?  MENTS/SAMPLE DISCREPANCY	□Yes	□No	ØN/A		
	INICATS/SMAFEE DISCREPANCY					Field Data Required? ☐Yes ☐No
CLIEN'	T NOTIFICATION/RESOLUTION			Lo	ot ID o	f split containers:
Pers	on contacted:					
	roject Manager SCURE Review			Date/Time:	*****	Date:
p	roject Manager SRF Review:					Date:
	ologe manager out, veniem:					Date:



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

\*Check mark top half of box if pH and/or dechlorination is verified and Project 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
- \*\*\*Check all unpreserved Nitrates for chlorine

WO#: 92618823

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

ltem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP48-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HC! (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG95-40 mt VOA H2SO4 (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)	M/ds	BP3R-250 mL Plastic (NH2)2504 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (CI-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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12										Ì				7	7					1				1		$\dashv$		

		erved Samples	ljustment Log for Pres	pH Ad		
Lot#	Amount of Preservative added	Time preservation adjusted	Date preservation adjusted	pH upon receipt	Type of Preservative	Sample ID
						102.00 1111 34
				-		
_		-				-61

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

## CHAIN-OF-CUSTODY / Analytical Request Document

Face Analytical

SAUTHLER NAME AND SIGNATURE nul SIMI Mary Freunt / 6205 50 tel 8/5/2022 Cathery Sourcet / Georgalet 0521 1201/5/8 KPIER PS 81 SAMPLE CONDITIONS 27,011 STAG MOCEPHED BY I AFFLATION 374LL DATE MOLTALEFIA I VE GENE DISTRIBU VDOLLONYT CORRENLS 15 TK 8/4/2022 11 10 Sigmes 186J 2-60 2202 8 A\N N XXX XXX 3 21 12 50.71 SHUZOZZ 9 WG WA F8-3 . AW Y X XX 3 21 17:25 8/4/2022 WQ 46 6 E-83 1 AW XXXXXX u ε 12 1 00:00 Z202/h/8 MC C DUP-3 \$ 69.8 = Hq XXXXXX 3 3 99:9L 844/2022 MC C HCMC-158 9 60.3 = Hq XXX XXX 3 2 3 21 12:40 8442022 D DW HGMC-152 -CL.Y = Hq N X XX 3 OZ 4 81:11 844/2022 9 DM HCMC-154 2 08.8 = HqXX X × X 13 L ız 13.16 SY472022 9 DM HCWC-121A Z £6.8 = Hq N XXXX XX 3 4 TK 8/4/2022 21 15.55 ZZ0Z7/9 MC C HGMC-150 ŀ Pace Project No. Lab I.D. Methanol Other NaOH "uli App. Ill and IV metate 유 Analysis SAMPLE TEMP AT COLLECTION TIME **BTAG** MATRIX SAMPLE TYPE ITEM # CONTAINERS Chlorine (CODE 302501 Sample 10s MUST BE UNIQUE 7.A TO **ВЭНТО** (-18-0 Z-V) (C=GRAB SHIM SAMPLE ID (N/Y) 70 Off DBDICS 48 TOUGORY 3UFOdROD ASTAW STAM 31MD-mon C=COMP) MICH WALLES CHEMING NNNNN Y N SEATIBALIES COLLECTED 3000 MATTER pulmed Clant Information 3 Valid Matrix Codes Quegou D (MNY) benetili aleyisnA betsauped STATE 10B39 AD क स्थातान करन roject Number; 400 Os :TATutad and betemped Site Location NIFOIR D'OIRO son Project 6-9A bnommeH semail bejord X .onariq A3HT( L RCRA - 833 ROOM BOOK ... oN hotnO sessitzia SCS Contacts DRINKING WATER MPDES 📋 GROUND WATER 🗍 oT bem3 TERRIDOTY REGULATORY AGENCY сошрвиу Мата Copy To: Geosyntec Contacts Atlanta, GA TELLOO Southern Co. Report To SCS Contacts Ausduo ועוסוכים ועומעוויפי Required Project Information. Section C Regulated Clant Intomission Section B 2ecgou y

FALL-C-020mvD7, 1 Feb-2007

Received on Ice (Y/N)

Cuntody aled Cooler (Y/N) Temp in

å

2202/h/8

Drake Creek

JUUDO/RR)

\*Important Note: By eigning this form you are accepting Pear's NET 30 day payment terms and agreeing to late charges of 1,5% por month lock any involves not pail within 30 days.

SICHATURE of SAMPLER:

PHONT Huma of SAMPLER: Therapy





September 22, 2022

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

RE: Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

#### Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 04, 2022 and August 05, 2022. 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,

Micole D'oles

Nicole D'Oleo nicole.d'oleo@pacelabs.com (704)875-9092 Project Manager

**Enclosures** 

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Laura Midkiff, Georgia Power
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Anthony Szwast, Geosyntec

Dawit Yifru, Geosyntec Consultants, Inc.



(770)734-4200



#### **CERTIFICATIONS**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

#### 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

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 #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



## **SAMPLE SUMMARY**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92618780001	HGWA-45D	Water	08/02/22 12:30	08/04/22 12:30
92618780002	HGWA-122	Water	08/02/22 13:57	08/04/22 12:30
92618780003	HGWC-120	Water	08/04/22 15:55	08/05/22 14:15
92618780004	HGWC-121A	Water	08/04/22 13:16	08/05/22 14:15
92618780005	HGWC-124	Water	08/04/22 11:19	08/05/22 14:15
92618780006	HGWC-125	Water	08/04/22 15:40	08/05/22 14:15
92618780007	HGWC-126	Water	08/04/22 16:46	08/05/22 14:15
92618780008	DUP-3	Water	08/04/22 00:00	08/05/22 14:15
92618780009	EB-3	Water	08/04/22 17:25	08/05/22 14:15
92618780010	FB-3	Water	08/04/22 17:05	08/05/22 14:15



## **SAMPLE ANALYTE COUNT**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92618780001	HGWA-45D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780002	HGWA-122	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780003	HGWC-120	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780004	HGWC-121A	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2618780005	HGWC-124	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780006	HGWC-125	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780007	HGWC-126	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780008	DUP-3	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2618780009	EB-3	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618780010	FB-3	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



## **SUMMARY OF DETECTION**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618780001	HGWA-45D					
EPA 9315	Radium-226	0.292 ± 0.176 (0.262)	pCi/L	09/	05/22 08:49	
EPA 9320	Radium-228	C:95% T:NA 0.217 ± 0.434 (0.958) C:68%	pCi/L	08/3	26/22 18:43	
Total Radium Calculation	Total Radium	T:89% 0.509 ± 0.610 (1.22)	pCi/L	09/	06/22 15:25	
2618780002	HGWA-122					
EPA 9315	Radium-226	0.142 ± 0.145 (0.280) C:93% T:NA	pCi/L	09/	05/22 08:49	
EPA 9320	Radium-228	0.431 ± 0.473 (0.982) C:68%	pCi/L	08/:	26/22 18:43	
Total Radium Calculation	Total Radium	T:89% 0.573 ± 0.618 (1.26)	pCi/L	09/	06/22 15:25	
2618780003	HGWC-120	,				
EPA 9315	Radium-226	0.0821 ± 0.174 (0.407) C:93% T:NA	pCi/L	09/	07/22 08:43	
EPA 9320	Radium-228	0.605 ± 0.309 (0.519) C:74% T:95%	pCi/L	08/:	30/22 12:40	
Total Radium Calculation	Total Radium	0.687 ± 0.483 (0.926)	pCi/L	09/	08/22 18:24	
2618780004	HGWC-121A					
EPA 9315	Radium-226	0.104 ± 0.135 (0.269) C:88% T:NA	pCi/L	09/	07/22 08:28	
EPA 9320	Radium-228	1.06 ± 0.548 (0.978) C:81% T:93%	pCi/L	08/	30/22 15:47	
Total Radium Calculation	Total Radium	1.16 ± 0.683 (1.25)	pCi/L	09/	08/22 18:24	

## **REPORT OF LABORATORY ANALYSIS**

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## **SUMMARY OF DETECTION**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618780005	HGWC-124					
EPA 9315	Radium-226	0.0130 ± 0.120 (0.326) C:92% T:NA	pCi/L		09/07/22 11:06	
EPA 9320	Radium-228	0.147 ± 0.431 (0.965) C:74% T:101%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.160 ± 0.551 (1.29)	pCi/L		09/08/22 18:24	
92618780006	HGWC-125					
EPA 9315	Radium-226	0.213 ± 0.188 (0.344) C:93% T:NA	pCi/L		09/07/22 11:06	
EPA 9320	Radium-228	0.758 ± 0.527 (1.03) C:77% T:94%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.971 ± 0.715 (1.37)	pCi/L		09/08/22 18:24	
92618780007	HGWC-126					
EPA 9315	Radium-226	0.703 ± 0.305 (0.357) C:87% T:NA	pCi/L		09/07/22 11:06	
EPA 9320	Radium-228	0.638 ± 0.620 (1.28) C:73% T:83%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	1.34 ± 0.925 (1.64)	pCi/L		09/08/22 18:24	
92618780008	DUP-3					
EPA 9315	Radium-226	0.0507 ± 0.154 (0.381) C:81% T:NA	pCi/L		09/07/22 11:06	
EPA 9320	Radium-228	0.152 ± 0.491 (1.10) C:71% T:91%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.203 ± 0.645 (1.48)	pCi/L		09/08/22 18:24	

## **REPORT OF LABORATORY ANALYSIS**

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## **SUMMARY OF DETECTION**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618780009	EB-3					
EPA 9315	Radium-226	-0.0276 ± 0.0971 (0.312) C:92% T:NA	pCi/L		09/07/22 11:06	
EPA 9320	Radium-228	0.227 ± 0.435 (0.955) C:78% T:96%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.227 ± 0.532 (1.27)	pCi/L		09/08/22 18:24	
92618780010	FB-3					
EPA 9315	Radium-226	-0.0584 ± 0.113 (0.370) C:89% T:NA	pCi/L		09/07/22 11:06	
EPA 9320	Radium-228	0.754 ± 0.525 (1.01) C:76% T:86%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.754 ± 0.638 (1.38)	pCi/L		09/08/22 18:24	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWA-45D PWS:	<b>Lab ID: 9261878</b> Site ID:	0001 Collected: 08/02/22 12:30 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Ser	vices - Greensburg				
Radium-226	EPA 9315	0.292 ± 0.176 (0.262) C:95% T:NA	pCi/L	09/05/22 08:49	13982-63-3	
	Pace Analytical Ser	vices - Greensburg				
Radium-228	EPA 9320	0.217 ± 0.434 (0.958) C:68% T:89%	pCi/L	08/26/22 18:43	3 15262-20-1	
	Pace Analytical Ser	vices - Greensburg				
Total Radium	Total Radium Calculation	0.509 ± 0.610 (1.22)	pCi/L	09/06/22 15:25	7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWA-122 PWS:	Lab ID: 9261 Site ID:	<b>8780002</b> Collected: 08/02/22 13:57 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.142 ± 0.145 (0.280) C:93% T:NA	pCi/L	09/05/22 08:49	9 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.431 ± 0.473 (0.982) C:68% T:89%	pCi/L	08/26/22 18:43	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.573 ± 0.618 (1.26)	pCi/L	09/06/22 15:29	5 7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWC-120 PWS:	<b>Lab ID: 92618</b> 7 Site ID:	<b>780003</b> Collected: 08/04/22 15:55 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 9315	0.0821 ± 0.174 (0.407) C:93% T:NA	pCi/L	09/07/22 08:43	3 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 9320	0.605 ± 0.309 (0.519) C:74% T:95%	pCi/L	08/30/22 12:40	15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.687 ± 0.483 (0.926)	pCi/L	09/08/22 18:24	7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWC-121A PWS:	<b>Lab ID:</b> 926187 Site ID:	<b>780004</b> Collected: 08/04/22 13:16 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 9315	0.104 ± 0.135 (0.269) C:88% T:NA	pCi/L	09/07/22 08:28	3 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 9320	1.06 ± 0.548 (0.978) C:81% T:93%	pCi/L	08/30/22 15:47	7 15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.16 ± 0.683 (1.25)	pCi/L	09/08/22 18:24	7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWC-124 PWS:	<b>Lab ID: 926187</b> Site ID:	80005 Collected: 08/04/22 11:19 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 9315	0.0130 ± 0.120 (0.326) C:92% T:NA	pCi/L	09/07/22 11:06	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 9320	0.147 ± 0.431 (0.965) C:74% T:101%	pCi/L	08/30/22 15:48	3 15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.160 ± 0.551 (1.29)	pCi/L	09/08/22 18:24	4 7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWC-125 PWS:	Lab ID: 9261 Site ID:	<b>8780006</b> Collected: 08/04/22 15:40 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.213 ± 0.188 (0.344) C:93% T:NA	pCi/L	09/07/22 11:06	6 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.758 ± 0.527 (1.03) C:77% T:94%	pCi/L	08/30/22 15:48	8 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.971 ± 0.715 (1.37)	pCi/L	09/08/22 18:24	4 7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: HGWC-126 PWS:	<b>Lab ID: 92618</b> Site ID:	<b>780007</b> Collected: 08/04/22 16:46 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 9315	0.703 ± 0.305 (0.357) C:87% T:NA	pCi/L	09/07/22 11:06	6 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 9320	0.638 ± 0.620 (1.28) C:73% T:83%	pCi/L	08/30/22 15:48	8 15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.34 ± 0.925 (1.64)	pCi/L	09/08/22 18:24	4 7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: DUP-3 PWS:	Lab ID: 9261 Site ID:	<b>8780008</b> Collected: 08/04/22 00:00 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0507 ± 0.154 (0.381) C:81% T:NA	pCi/L	09/07/22 11:06	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.152 ± 0.491 (1.10) C:71% T:91%	pCi/L	08/30/22 15:48	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	$0.203 \pm 0.645  (1.48)$	pCi/L	09/08/22 18:24	4 7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: EB-3 PWS:	Lab ID: 9261 Site ID:	<b>8780009</b> Collected: 08/04/22 17:25 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.0276 ± 0.0971 (0.312) C:92% T:NA	pCi/L	09/07/22 11:06	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.227 ± 0.435 (0.955) C:78% T:96%	pCi/L	08/30/22 15:48	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.227 ± 0.532 (1.27)	pCi/L	09/08/22 18:24	7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Sample: FB-3 PWS:	Lab ID: 9261 Site ID:	<b>8780010</b> Collected: 08/04/22 17:05 Sample Type:	Received:	08/05/22 14:15	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.0584 ± 0.113 (0.370) C:89% T:NA	pCi/L	09/07/22 11:06	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.754 ± 0.525 (1.01) C:76% T:86%	pCi/L	08/30/22 15:48	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	$0.754 \pm 0.638  (1.38)$	pCi/L	09/08/22 18:24	4 7440-14-4	



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

QC Batch: 525976 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618780003, 92618780004, 92618780005, 92618780006, 92618780007, 92618780008, 92618780009,

92618780010

METHOD BLANK: 2551589 Matrix: Water

Associated Lab Samples: 92618780003, 92618780004, 92618780005, 92618780006, 92618780007, 92618780008, 92618780009,

92618780010

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.426 ± 0.331 (0.647) C:75% T:92%
 pCi/L
 08/30/22 16:38

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.



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

QC Batch: 525944 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618780001, 92618780002

METHOD BLANK: 2551549 Matrix: Water

Associated Lab Samples: 92618780001, 92618780002

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.832 ± 0.466 (0.842) C:68% T:92%
 pCi/L
 08/26/22 17:08

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.



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

QC Batch: 525508

QC Batch Method:

Analysis Method:

Analysis Description: 9315 Total Radium

EPA 9315

Laboratory:

Pace Analytical Services - Greensburg

Associated Lab Samples: 92618780001, 92618780002

EPA 9315

METHOD BLANK: 2549229 Matrix: Water

Associated Lab Samples: 92618780001, 92618780002

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.00507 ± 0.115 (0.309) C:93% T:NA
 pCi/L
 09/05/22 08:49

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.



Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

QC Batch: 525513 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618780003, 92618780004, 92618780005, 92618780006, 92618780007, 92618780008, 92618780009,

92618780010

METHOD BLANK: 2549243 Matrix: Water

Associated Lab Samples: 92618780003, 92618780004, 92618780005, 92618780006, 92618780007, 92618780008, 92618780009,

92618780010

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.0698 ± 0.211 (0.509) C:93% T:NA
 pCi/L
 09/07/22 08:49

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.



#### **QUALIFIERS**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

#### **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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 09/22/2022 07:35 AM

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.



## **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND AP-3 RAD

Pace Project No.: 92618780

Date: 09/22/2022 07:35 AM

Lab ID			QC Batch	Analytical Method	Analytical Batch
92618780001	HGWA-45D	EPA 9315	525508		
92618780002	HGWA-122	EPA 9315	525508		
92618780003	HGWC-120	EPA 9315	525513		
92618780004	HGWC-121A	EPA 9315	525513		
92618780005	HGWC-124	EPA 9315	525513		
92618780006	HGWC-125	EPA 9315	525513		
92618780007	HGWC-126	EPA 9315	525513		
92618780008	DUP-3	EPA 9315	525513		
92618780009	EB-3	EPA 9315	525513		
92618780010	FB-3	EPA 9315	525513		
92618780001	HGWA-45D	EPA 9320	525944		
92618780002	HGWA-122	EPA 9320	525944		
92618780003	HGWC-120	EPA 9320	525976		
92618780004	HGWC-121A	EPA 9320	525976		
92618780005	HGWC-124	EPA 9320	525976		
92618780006	HGWC-125	EPA 9320	525976		
92618780007	HGWC-126	EPA 9320	525976		
92618780008	DUP-3	EPA 9320	525976		
92618780009	EB-3	EPA 9320	525976		
2618780010	FB-3	EPA 9320	525976		
92618780001	HGWA-45D	Total Radium Calculation	530877		
92618780002	HGWA-122	Total Radium Calculation	530877		
92618780003	HGWC-120	Total Radium Calculation	531569		
92618780004	HGWC-121A	Total Radium Calculation	531569		
92618780005	HGWC-124	Total Radium Calculation	531569		
2618780006	HGWC-125	Total Radium Calculation	531569		
2618780007	HGWC-126	Total Radium Calculation	531569		
92618780008	DUP-3	Total Radium Calculation	531569		
92618780009	EB-3	Total Radium Calculation	531569		
92618780010	FB-3	Total Radium Calculation	531569		

Pace
Direction travers

DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

	sheville Eden Greenwood	Huntersvil		Raleigh		Mechanicsville Atlanta
-	Sample Condition Upon Receipt  Graph   Power Dusps	, 	,-	Projec	IJO#: 92618780	
	Commercial   Pace	Other				92618780
Cu	stody Seal Present? Yes No Si	eals Intact?	∐Yes	□No		Date/Initials Person Examining Contents:
Pa	cking Material: Bubble Wrap	Bubble Bags	None	□ o	ther	Biological Tissue Frozen?
Thermometer:  Type of Ice: Wet Blue Non				□Yes □No □√√A □None		
Co	oler Temp:  Oler Temp Corrected (°C):  DA Regulated Soil ( N/A, water sample)  Did samples originate in a quarantine zone within (cherk maps)?	1 (°C) <u>().0</u> 3.3	•	or SC		Temp should be above freezing to 6°C  Samples out of temp criteria. Samples on ice, cooling process has begun  Old samples originate from a foreign source (internationally,
	Check with the Class Class				T	including Hawaii and Puerto Rico)?
	Chain of Custody Present?	<b>⊘</b> ∕es	□No	□N/A	1.	Comments/Discrepancy.
	Samples Arrived within Hold Time?	Ves	□No	□N/A	2.	
	Short Hold Time Analysis (<72 hr.)?	□Yes		□N/A	3.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Rush Turn Around Time Requested?	□Yes	ŪN₀.	□N/A	4.	***************************************
	Sufficient Volume?	₽Ves	□No	□N/A	5.	
	Correct Containers Used? -Pace Containers Used?		□No □No	□N/A □N/A	6.	
	Containers Intact?	₽res	□No	□N/A	7.	
	Dissolved analysis: Samples Field Filtered?	□Yes	□No	□N/A	8	
	Sample Labels Match COC?	Yes	□No	□N/A	9.	
	-Includes Date/Time/ID/Analysis Matrix.	$\underline{\hspace{1cm}}$	<del>-</del>			
	Headspace in VOA Vials (>5-6mm)?	□Yes	□N0	DINIA	10	·
	Trip Blank Present?	□Yes	□No	DANK	11.	
	Trip Blank Custody Seals Present?	Yes	□ND	□N/A		
COIV	IMENTS/SAMPLE DISCREPANCY					Field Data Required? Yes No
CLIEN	T NOTIFICATION/RESOLUTION			ĺ	Lot ID c	of split containers:
Pers	on contacted:		[	Date/Time	::	
P	Project Manager SCURF Review:					Date:
P	Project Manager SRF Review:					Date:



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

\*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

PM

Project #

WO#:92618780

PM: NMG

Due Date: 08/25/22

CLIENT: GA-GA Power

\*\*Bottom half of box is to list number of bottles

\*\*\*Check all unpreserved Nitrates for chlorine

1 tem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	8P3U-250 mL Plastic Unpreserved (N/A)	BP24-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP42-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Ci-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T40 mL VOA Na2S203 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG95 40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-L25 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BPIN	BP3R-250 mL Plastic (NH2)2504 (9.3-9.7)	AG0U+100 mL Amber Unpreserved (N/A) (CI-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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	pH Ac	ljustment Log for Pres	erved Samples		
Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #
	Type of Preservative			Time preservation	Type of Preservative pH upon receipt Date preservation adjusted Time preservation Amount of Preservative

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

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SIGNATURE of SAMPLER:	PROVINCENCE OF GRAPPIERCE	ME AND	<u> </u>				L	L	_		L	L	L		Ļ	-		Ι,	교	3TA	COMPOSITE	ö									CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.
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San	nples (Y/I	s intact N)					SNC											57	39	Pace P <sub>f</sub> oject No <i>J</i> Lab I.D.						6	DRINKING WATER				Page 26 of 29

Important Note. By signing this form you are accepting Place's NET 30 day payment terms and agreeing to lake charges of 1.5% per month for any involves not paid which 30 days.

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

**→** Page 26 of 29

	1
1-	Pace
1	THEFT STREET

## DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:	
Asheville Eden Greenwood Huntersville Raleigh	WOH : 0264 0700
Sample Condition Client Name:	MOH - 32018/80
- (9/11/0WU)	CLIENT: GO_GO P
Courier: Fedex UPS USPS Clien Commercial Pace Other:	t Ch-CH Power
Custody Seal Present? Yes No Seals Intact? Yes No	Date/Initials Person Examining Contents: 3/5/22
Packing Material: Bubble Wrap Bubble Bags None Other	er Biological Tissue Frozen?
Thermometer: ☐ IR Gun ID: 230_ Type of Ice: ☐ Wet ☐ Blue	□Yes □No □N/A e □None
Cooler Temp: Correction Factor: Add/Subtract (°C) 0.0	
Cooler Temp Corrected (°C):  USDA Regulated Soil ( \sum N/A, water sample)	Temp should be above freezing to 6°C ☐ Samples out of temp criteria. Samples on ice, cooling process has begun
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
Chair of Council D	Comments/Discrepancy:
Chain of Custody Present?	1.
	2.
	3.
Rush Turn Around Time Requested? □Yes ☑NO □N/A	4.
Sufficient Volume?	5.
Correct Containers Head?	6.
-Pace Containers Used?	<b>.</b>
Containers Intent?	7.
Dissolved analysis: Samples Field Filtered?	8.
Sample Labels Match COC3	9.
-Includes Date/Time/ID/Analysis Matrix: W	
Headspace in VOA Vials (>5-6mm)? □Yes □No □N/A 1	10.
Trip Blank Occeant?	11.
Trip Blank Custody Seals Present? ☐Yes ☐No ☐N/A  COMMENTS/SAMPLE DISCREPANCY	
	Field Data Required? ☐Yes ☐No
CLIENT NOTIFICATION/RESOLUTION	ID of split containers:
Person contacted: Date/Time:	
Project Manager SCURF Review:	Date:
Project Manager SRF Review:	Date:



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

\*Check mark top half of box if pH and/or dechlorination is verified and Project 1 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

\*\*\*Check all unpreserved Nitrates for chlorine

WO#: 92618780

PM: NMG

Due Date: 08/19/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	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 2N Acetate & NaOH (>9)	BP48-125 mL Plastic NaOH (pH > 12) (CI-)	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)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG95-40 mL VOA H2504 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BPIN	BP3R-250 mL Plastic (NH2)2504 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (CI-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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		pH Ac	ljustment Log for Pres	erved 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 DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

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Important Note: By signing this form you are accepting Pacific NET 30 day payment terms and agreeing in less changes of 1.5% per month for any sirrologs not pail within 30 days.

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:





November 03, 2022

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

RE: Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

#### Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 04, 2022. 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

Revision 1: Issued on 11/3/22 to update the collection time for sample HGWA-3.

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

Sincerely,

Micole D'oles

Nicole D'Oleo nicole.d'oleo@pacelabs.com (704)875-9092 Project Manager

**Enclosures** 

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Laura Midkiff, Georgia Power
Noelia Muskus, Geosyntec Consultants

Ms. Lauren Petty, Southern Company Michael Smilley, Georgia Power Tina Sullivan, ERM Anthony Szwast, Geosyntec Nardos Tilahun, GeoSyntec Dawit Yifru, Geosyntec Consultants, Inc.





#### **CERTIFICATIONS**

HAMMOND POOLED UPGRADIENT Project:

Pace Project No.: 92618829

**Pace Analytical Services Charlotte** 

South Carolina Laboratory ID: 99006 South Carolina Certification #: 99006001

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 South Carolina Drinking Water Cert. #: 99006003

North Carolina Drinking Water Certification #: 37706 Florida/NELAP Certification #: E87627 North Carolina Field Services Certification #: 5342 Kentucky UST Certification #: 84 North Carolina Wastewater Certification #: 12 Louisiana DoH Drinking Water #: LA029 Virginia/VELAP Certification #: 460221

South Carolina Laboratory ID: 99006

**Pace Analytical Services Asheville** 

2225 Riverside Drive, Asheville, NC 28804 South Carolina Laboratory ID: 99030 Florida/NELAP Certification #: E87648 South Carolina Certification #: 99030001

North Carolina Drinking Water Certification #: 37712 Virginia/VELAP Certification #: 460222 North Carolina Wastewater Certification #: 40

**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



## **SAMPLE SUMMARY**

Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92618829001	HGWA-1	Water	08/02/22 09:44	08/04/22 12:30
92618829002	HGWA-2	Water	08/02/22 12:28	08/04/22 12:30
92618829003	HGWA-3	Water	08/02/22 14:08	08/04/22 12:30
92618829004	HGWA-43D	Water	08/02/22 09:33	08/04/22 12:30
92618829005	HGWA-44D	Water	08/02/22 10:42	08/04/22 12:30



## **SAMPLE ANALYTE COUNT**

Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92618829001	HGWA-1	EPA 6010D	— ——— КН	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618829002	HGWA-2	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618829003	HGWA-3	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2618829004	HGWA-43D	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618829005	HGWA-44D	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville PASI-C = Pace Analytical Services - Charlotte





## **SAMPLE ANALYTE COUNT**

Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Lab ID Sample ID Method Analysts Reported

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



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Lab Sample ID Method	Client Sample ID  Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
	HGWA-1		<b></b>			
92618829001	Performed by	CUSTOME			08/05/22 12:45	
	Performed by	R			06/05/22 12:45	
	рН	7.03	Std. Units		08/05/22 12:45	
EPA 6010D	Iron	0.21	mg/L	0.040	08/11/22 15:26	
EPA 6010D	Manganese	0.48	mg/L	0.040	08/11/22 15:26	
EPA 6010D	Potassium	0.28	mg/L	0.20	08/11/22 15:26	
EPA 6010D	Sodium	28.5	mg/L	1.0	08/11/22 15:26	
EPA 6010D	Calcium	117	mg/L	1.0	08/11/22 15:26	
EPA 6010D	Magnesium	4.4	mg/L	0.050	08/11/22 15:26	
EPA 6020B	Barium	0.039	mg/L	0.0050	08/10/22 20:09	
EPA 6020B	Boron	0.012J	mg/L	0.040	08/10/22 20:09	
EPA 6020B	Cobalt	0.00054J	mg/L	0.0050	08/10/22 20:09	
SM 2540C-2015	Total Dissolved Solids	400	mg/L	10.0	08/09/22 10:23	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	266	mg/L	5.0	08/10/22 13:04	
SM 2320B-2011	Alkalinity, Total as CaCO3	266	mg/L	5.0	08/10/22 13:04	
SM 4500-S2D-2011	Sulfide	0.062J	mg/L	0.10	08/06/22 03:40	
EPA 300.0 Rev 2.1 1993	Chloride	14.1	mg/L	1.0	08/12/22 17:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.090J	mg/L	0.10	08/12/22 17:33	
EPA 300.0 Rev 2.1 1993	Sulfate	58.1	mg/L	1.0	08/12/22 17:33	
2618829002	HGWA-2					
	Performed by	CUSTOME			08/05/22 12:45	
	рН	R 4.57	Std. Units		08/05/22 12:45	
EPA 6010D	Iron	0.72	mg/L	0.040	08/11/22 15:31	
EPA 6010D	Manganese	0.80	mg/L	0.040	08/11/22 15:31	
EPA 6010D	Potassium	1.0	mg/L	0.20	08/11/22 15:31	
EPA 6010D	Sodium	11.2	mg/L	1.0	08/11/22 15:31	
EPA 6010D	Calcium	31.2	mg/L	1.0	08/11/22 15:31	
EPA 6010D	Magnesium	4.0	mg/L	0.050	08/11/22 15:31	
EPA 6020B	Barium	0.11	mg/L	0.0050	08/10/22 20:15	
EPA 6020B	Beryllium	0.00019J	mg/L	0.00050	08/10/22 20:15	
EPA 6020B	Boron	0.047	mg/L	0.040	08/10/22 20:15	
EPA 6020B	Cadmium	0.00023J	mg/L	0.00050	08/10/22 20:15	
EPA 6020B	Cobalt	0.024	mg/L	0.0050	08/10/22 20:15	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	08/10/22 20:15	
EPA 6020B	Selenium	0.0014J	mg/L	0.0050	08/10/22 20:15	
SM 2540C-2015	Total Dissolved Solids	196	mg/L	10.0	08/09/22 10:23	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	12.8	mg/L	5.0	08/10/22 11:59	
SM 2320B-2011	Alkalinity, Total as CaCO3	12.8	mg/L	5.0	08/10/22 11:59	
EPA 300.0 Rev 2.1 1993	Chloride	7.8	mg/L	1.0	08/12/22 17:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	08/12/22 17:49	
EPA 300.0 Rev 2.1 1993	Sulfate	86.9	mg/L	1.0	08/12/22 17:49	
92618829003	HGWA-3					
	Performed by	CUSTOME			08/05/22 12:45	
	•					
	pH	R 7.02	Std. Units		08/05/22 12:45	

## **REPORT OF LABORATORY ANALYSIS**

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Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

_ab Sample ID	Client Sample ID					
Method	Parameters	Result _	Units	Report Limit	Analyzed	Qualifiers
2618829003	HGWA-3					
EPA 6010D	Manganese	0.24	mg/L	0.040	08/11/22 15:35	
EPA 6010D	Potassium	0.37	mg/L	0.20	08/11/22 15:35	
PA 6010D	Sodium	5.7	mg/L	1.0	08/11/22 15:35	
PA 6010D	Calcium	84.6	mg/L	1.0	08/11/22 15:35	
PA 6010D	Magnesium	5.2	mg/L	0.050	08/11/22 15:35	
PA 6020B	Barium	0.16	mg/L	0.0050	08/10/22 20:21	
PA 6020B	Lithium	0.0030J	mg/L	0.030	08/10/22 20:21	
M 2540C-2015	Total Dissolved Solids	287	mg/L	10.0	08/09/22 10:23	
M 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	179	mg/L	5.0	08/10/22 12:16	
M 2320B-2011	Alkalinity, Total as CaCO3	179	mg/L	5.0	08/10/22 12:16	
PA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	08/12/22 18:35	
PA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	08/12/22 18:35	
PA 300.0 Rev 2.1 1993	Sulfate	43.5	mg/L	1.0	08/12/22 18:35	
2618829004	HGWA-43D					
	Performed by	CUSTOME			08/05/22 12:45	
	рН	R 7.15	Std. Units		08/05/22 12:45	
PA 6010D	Iron	0.31	mg/L	0.040	08/11/22 15:40	
PA 6010D	Manganese	0.019J	mg/L	0.040	08/11/22 15:40	
PA 6010D	Potassium	0.80	mg/L	0.20	08/11/22 15:40	
PA 6010D	Sodium	24.8	mg/L	1.0	08/11/22 15:40	
PA 6010D	Calcium	54.1	mg/L	1.0	08/11/22 15:40	
PA 6010D	Magnesium	17.2	mg/L	0.050	08/11/22 15:40	
PA 6020B	Barium	0.35	mg/L	0.0050	08/10/22 20:27	
PA 6020B	Boron	0.043	mg/L	0.040	08/10/22 20:27	
PA 6020B	Lithium	0.0019J	mg/L	0.030	08/10/22 20:27	
PA 6020B	Molybdenum	0.0042J	mg/L	0.010	08/10/22 20:27	
M 2540C-2015	Total Dissolved Solids	278	mg/L	10.0	08/09/22 10:23	
M 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	203	mg/L	5.0	08/10/22 13:13	
M 2320B-2011	Alkalinity, Total as CaCO3	203	mg/L	5.0	08/10/22 13:13	
PA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	08/12/22 18:50	
PA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	08/12/22 18:50	
PA 300.0 Rev 2.1 1993	Sulfate	37.0	mg/L	1.0	08/12/22 18:50	
618829005	HGWA-44D		· ·			
	Performed by	CUSTOME			08/05/22 12:45	
	рН	R 7.90	Std. Units		08/05/22 12:45	
PA 6010D	Iron	0.24	mg/L	0.040		
PA 6010D	Manganese	0.013J	mg/L	0.040	08/11/22 15:45	
PA 6010D	Potassium	3.9	mg/L	0.20	08/11/22 15:45	
PA 6010D	Sodium	94.6	mg/L	1.0	08/11/22 15:45	
PA 6010D	Calcium	20.9	mg/L	1.0	08/11/22 15:45	
PA 6010D	Magnesium	12.2	mg/L	0.050	08/11/22 15:45	
PA 6020B	Barium	0.37	mg/L	0.0050	08/10/22 20:33	
PA 6020B	Boron	0.31	mg/L	0.040	08/10/22 20:33	
PA 6020B	Lithium	0.041	mg/L	0.030	08/10/22 20:33	
PA 6020B	Molybdenum	0.0020J	g/ L	0.030	08/10/22 20:33	

## **REPORT OF LABORATORY ANALYSIS**

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Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618829005	HGWA-44D					
SM 2540C-2015	Total Dissolved Solids	311	mg/L	10.0	08/09/22 10:27	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	263	mg/L	5.0	08/10/22 13:21	
SM 2320B-2011	Alkalinity, Total as CaCO3	263	mg/L	5.0	08/10/22 13:21	M1
SM 4500-S2D-2011	Sulfide	0.058J	mg/L	0.10	08/06/22 03:44	
EPA 300.0 Rev 2.1 1993	Chloride	19.8	mg/L	1.0	08/17/22 03:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.80	mg/L	0.10	08/17/22 03:36	
EPA 300.0 Rev 2.1 1993	Sulfate	13.2	mg/L	1.0	08/17/22 03:36	



Project: HAMMOND POOLED UPGRADIENT

Date: 11/03/2022 02:22 PM

Complex LICWA 4	I ala IN	0064000004	Callery	4. 00/00/0	0.00:44	Descinate 00	04/00 40:00 \$4	otrisc. \\/	
Sample: HGWA-1	Lab ID:	92618829001		d: 08/02/22	2 09:44	Received: 08/	04/22 12:30 M	atrix: Water	
_			Report					0.0	_
Parameters	Results -	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	CUSTOME				1		08/05/22 12:45		
r enormed by	R				•		00/03/22 12.43		
ρΗ	7.03	Std. Units			1		08/05/22 12:45		
6010D ATL ICP	Analytical	Method: EPA 6	010D Prep	aration Met	hod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtree	Corners, C	SA.				
ron	0.21	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:26	7439-89-6	
Manganese	0.48	mg/L	0.040	0.0043	1	08/11/22 10:02	08/11/22 15:26	7439-96-5	
Potassium	0.28	mg/L	0.20	0.15	1	08/11/22 10:02	08/11/22 15:26	7440-09-7	
Sodium	28.5	mg/L	1.0	0.58	1		08/11/22 15:26		
Calcium	117	mg/L	1.0	0.12	1	08/11/22 10:02			
Magnesium	4.4	mg/L	0.050	0.012	1		08/11/22 15:26		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Prep	aration Met	hod: EF	PA 3005A			
		lytical Services							
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 20:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37			
Barium	0.039	mg/L	0.0050	0.00022	1	08/09/22 14:37			
Beryllium	0.039 ND	mg/L		0.00007	1		08/10/22 20:09		
Boron	0.012J	-	0.00030	0.00034	1		08/10/22 20:09		
Cadmium	0.0123 ND	mg/L	0.00050	0.0000	1		08/10/22 20:09		
	ND ND	mg/L							
Chromium		mg/L	0.0050	0.0011	1		08/10/22 20:09		
Cobalt	0.00054J	mg/L	0.0050	0.00039	1	08/09/22 14:37			
_ead	ND	mg/L	0.0010	0.00089	1		08/10/22 20:09		
_ithium	ND	mg/L	0.030	0.00073	1	08/09/22 14:37			
Molybdenum	ND	mg/L	0.010	0.00074	1		08/10/22 20:09		
Selenium	ND	mg/L	0.0050	0.0014	1	08/09/22 14:37			
Thallium	ND	mg/L	0.0010	0.00018	1	08/09/22 14:37	08/10/22 20:09	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Prep	aration Met	hod: EF	A 7470A			
	Pace Ana	lytical Services	- Peachtree	Corners, C	€A				
Mercury	ND	mg/L	0.00020	0.00013	1	08/10/22 15:15	08/11/22 11:40	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C-2015						
		lytical Services		Corners, C	SA.				
Total Dissolved Solids	400	mg/L	10.0	10.0	1		08/09/22 10:23		
2320B Alkalinity	Analytical	Method: SM 23	320B-2011						
	•	lytical Services							
Alkalinity, Bicarbonate (CaCO3)	266	mg/L	5.0	5.0	1		08/10/22 13:04		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 13:04		
Alkalinity, Total as CaCO3	266	mg/L	5.0	5.0	1		08/10/22 13:04		



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-1	Lab ID:	92618829001	Collecte	d: 08/02/22	09:44	Received: 08	/04/22 12:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	,	Method: SM 45 ytical Services		)11					
Sulfide	0.062J	mg/L	0.10	0.050	1		08/06/22 03:40	18496-25-8	
300.0 IC Anions 28 Days		Method: EPA 3 ytical Services		.1 1993					
Chloride	14.1	mg/L	1.0	0.60	1		08/12/22 17:33	16887-00-6	
Fluoride	0.090J	mg/L	0.10	0.050	1		08/12/22 17:33	16984-48-8	
Sulfate	58.1	mg/L	1.0	0.50	1		08/12/22 17:33	14808-79-8	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-2	Lab ID:	92618829002	Collecte	ed: 08/02/2	2 12:28	Received: 08/	04/22 12:30 I	Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytica	Method:					,		
Telu Dala	-	llytical Services	- Charlotte						
Porformed by	CUSTOME	,	O. a. rous		1		08/05/22 12:4	E	
Performed by	R				'		06/05/22 12.4	5	
Н	4.57	Std. Units			1		08/05/22 12:4	5	
6010D ATL ICP	Analytica	Method: EPA 6	010D Pre	paration Me	thod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, (	GA				
ron	0.72	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:3	1 7439-89-6	
Manganese	0.80	mg/L	0.040	0.0043	1	08/11/22 10:02			
Potassium	1.0	mg/L	0.20	0.15	1	08/11/22 10:02			
Sodium	11.2	mg/L	1.0	0.58	1	08/11/22 10:02			
Calcium	31.2	mg/L	1.0	0.12	1	08/11/22 10:02			
Magnesium	4.0	mg/L	0.050	0.012	1	08/11/22 10:02			
6020 MET ICPMS	Analytica	Method: EPA 6	020B Prei	paration Me	thod: FF	PA 3005A			
	-	lytical Services							
antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 20:1	5 7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37			
Barium	0.11	mg/L	0.0050	0.00067	1	08/09/22 14:37			
Beryllium	0.00019J	mg/L	0.00050	0.000054	1	08/09/22 14:37			
Boron	0.047	mg/L	0.040	0.0086	1	08/09/22 14:37		-	
Cadmium	0.00023J	mg/L	0.00050	0.00011	1	08/09/22 14:37			
Chromium	ND	mg/L	0.0050	0.0011	1	08/09/22 14:37			
Cobalt	0.024	mg/L	0.0050	0.00011	1	08/09/22 14:37			
ead.	0.024 ND	•		0.00039	1	08/09/22 14:37			
ithium	0.0013J	mg/L	0.0010	0.00039		08/09/22 14:37			
	0.00133 ND	mg/L	0.030	0.00073	1 1	08/09/22 14:37			
Molybdenum		mg/L							
Selenium	0.0014J	mg/L	0.0050	0.0014	1	08/09/22 14:37			
Thallium	ND	mg/L	0.0010	0.00018	1	08/09/22 14:37	06/10/22 20:1	5 7440-26-0	
7470 Mercury	•	Method: EPA 7				'A 7470A			
		llytical Services	- Peachtre		ĿΑ				
Mercury	ND	mg/L	0.00020	0.00013	1	08/10/22 15:15	08/11/22 11:4	3 7439-97-6	
2540C Total Dissolved Solids	Analytica	Method: SM 25	540C-2015						
	Pace Ana	lytical Services	- Peachtre	e Corners, (	GA				
Total Dissolved Solids	196	mg/L	10.0	10.0	1		08/09/22 10:2	3	
2320B Alkalinity	Analytica	Method: SM 23	320B-2011						
-	-	lytical Services							
Alkalinity, Bicarbonate (CaCO3)	12.8	mg/L	5.0	5.0	1		08/10/22 11:5	9	
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 11:5		
Alkalinity, Total as CaCO3	12.8	mg/L	5.0	5.0	1		08/10/22 11:5		



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-2	Lab ID:	92618829002	Collecte	d: 08/02/22	12:28	Received: 08	/04/22 12:30 Ma	atrix: Water	•
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	,	Method: SM 45 ytical Services		)11					
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:41	18496-25-8	
300.0 IC Anions 28 Days		Method: EPA 3 ytical Services		.1 1993					
Chloride Fluoride	7.8 0.053J	mg/L mg/L	1.0 0.10	0.60 0.050	1 1		08/12/22 17:49 08/12/22 17:49		
Sulfate	86.9	mg/L	1.0	0.50	1		08/12/22 17:49	14808-79-8	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-3	Lab ID:	92618829003	Collecte	ed: 08/02/2	2 14:08	Received: 08/	/04/22 12:30 N	latrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytica	Method:							
	Pace Ana	alytical Services	- Charlotte						
Performed by	CUSTOME				1		08/05/22 12:45	5	
. chemica sy	R				•		00/00/22 12.10	•	
ρΗ	7.02	Std. Units			1		08/05/22 12:45	5	
6010D ATL ICP	Analytica	l Method: EPA 6	010D Pre	paration Me	thod: EF	PA 3010A			
	•	alytical Services							
ron	1.0	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:35	7/30-80-6	
Manganese	0.24	mg/L	0.040	0.023	1	08/11/22 10:02			
Potassium	0.24	mg/L	0.20	0.0043	1	08/11/22 10:02			
Sodium	5.7	Ū	1.0	0.13	1		08/11/22 15:35		
Calcium	84.6	mg/L	1.0	0.36	1	08/11/22 10:02			
		mg/L		0.12	1				
Magnesium	5.2	mg/L	0.050	0.012	'	08/11/22 10:02	06/11/22 15:35	7439-95-4	
6020 MET ICPMS	Analytica	l Method: EPA 6	020B Pre	paration Met	thod: EF	PA 3005A			
	Pace Ana	alytical Services	- Peachtre	e Corners, 0	GΑ				
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 20:2	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37			
Barium	0.16	mg/L	0.0050	0.00067	1	08/09/22 14:37			
Beryllium	ND	mg/L	0.00050	0.000054	1	08/09/22 14:37			
Boron	ND	mg/L	0.040	0.0086	1		08/10/22 20:2		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/09/22 14:37			
Chromium	ND	mg/L	0.0050	0.0011	1	08/09/22 14:37			
Cobalt	ND	mg/L	0.0050	0.00039	1	08/09/22 14:37			
_ead	ND	mg/L	0.0010	0.00089	1	08/09/22 14:37			
Lithium	0.0030J	mg/L	0.030	0.00073	1		08/10/22 20:2		
Molybdenum	0.00303 ND	mg/L	0.030	0.00073	1	08/09/22 14:37			
Selenium	ND ND	mg/L	0.0050	0.0014	1	08/09/22 14:37			
Fhallium	ND ND	•	0.0030	0.0014	1	08/09/22 14:37			
Hallium	ND	mg/L	0.0010	0.00018	'	00/09/22 14.37	00/10/22 20.2	7440-26-0	
7470 Mercury	Analytica	l Method: EPA 7	'470A Pre	paration Met	thod: EP	A 7470A			
	Pace Ana	alytical Services	- Peachtre	e Corners, (	GΑ				
Mercury	ND	mg/L	0.00020	0.00013	1	08/10/22 15:15	08/11/22 11:45	7439-97-6	
2540C Total Dissolved Solids	Analytica	l Method: SM 2	540C-2015						
	Pace Ana	alytical Services	- Peachtre	e Corners, (	GΑ				
Total Dissolved Solids	287	mg/L	10.0	10.0	1		08/09/22 10:23	3	
2320B Alkalinity	Analytica	I Method: SM 23	320B-2011						
•	•	alytical Services							
Alkalinity, Bicarbonate (CaCO3)	179	mg/L	5.0	5.0	1		08/10/22 12:16	3	
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 12:16		
		-							
Alkalinity, Total as CaCO3	179	mg/L	5.0	5.0	1		08/10/22 12:16	5	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-3	Lab ID:	92618829003	Collecte	d: 08/02/22	14:08	Received: 08	/04/22 12:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	,	Method: SM 45 ytical Services		)11					
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:41	18496-25-8	
300.0 IC Anions 28 Days		Method: EPA 3 ytical Services		.1 1993					
Chloride	5.9	mg/L	1.0	0.60	1		08/12/22 18:35	16887-00-6	
Fluoride	0.067J	mg/L	0.10	0.050	1		08/12/22 18:35	16984-48-8	
Sulfate	43.5	mg/L	1.0	0.50	1		08/12/22 18:35	14808-79-8	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-43D	Lab ID:	92618829004	Collecte	ed: 08/02/2	2 09:33	Received: 08/	04/22 12:30 N	latrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytica	Method:							
	Pace Ana	alytical Services	- Charlotte	<b>:</b>					
Performed by	CUSTOME				1		08/05/22 12:45	5	
ρΗ	R 7.15	Std. Units			1		08/05/22 12:45	5	
							00,00,22 .2		
6010D ATL ICP	•	l Method: EPA 6 alytical Services				A 3010A			
ron	0.31	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:40	7439-89-6	
Manganese	0.019J	mg/L	0.040	0.0043	1	08/11/22 10:02	08/11/22 15:40	7439-96-5	
Potassium	0.80	mg/L	0.20	0.15	1	08/11/22 10:02	08/11/22 15:40	7440-09-7	
Sodium	24.8	mg/L	1.0	0.58	1	08/11/22 10:02	08/11/22 15:40	7440-23-5	
Calcium	54.1	mg/L	1.0	0.12	1	08/11/22 10:02	08/11/22 15:40	7440-70-2	
Magnesium	17.2	mg/L	0.050	0.012	1	08/11/22 10:02			
6020 MET ICPMS	Analytica	l Method: EPA 6	020B Pre	paration Me	thod: EF	A 3005A			
	Pace Ana	alytical Services	- Peachtre	e Corners, (	GA				
antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 20:27	7 7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37	08/10/22 20:27	7 7440-38-2	
Barium	0.35	mg/L	0.0050	0.00067	1	08/09/22 14:37	08/10/22 20:27	7 7440-39-3	
seryllium	ND	mg/L	0.00050	0.000054	1	08/09/22 14:37	08/10/22 20:27	7 7440-41-7	
Boron	0.043	mg/L	0.040	0.0086	1	08/09/22 14:37	08/10/22 20:27	7 7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/09/22 14:37			
Chromium	ND	mg/L	0.0050	0.0011	1	08/09/22 14:37			
Cobalt	ND	mg/L	0.0050	0.00039	1	08/09/22 14:37			
_ead	ND	mg/L	0.0010	0.00089	1	08/09/22 14:37			
ithium	0.0019J	mg/L	0.030	0.00073	1	08/09/22 14:37			
Molybdenum	0.0042J	mg/L	0.010	0.00074	1	08/09/22 14:37			
Selenium	ND	mg/L	0.0050	0.0014	1	08/09/22 14:37			
Thallium	ND	mg/L	0.0010	0.00014	1	08/09/22 14:37			
7470 Mercury	Analytica	l Method: EPA 7	470A Prep	paration Me	thod: EP	A 7470A			
	Pace Ana	alytical Services	- Peachtre	e Corners, (	GA				
Mercury	ND	mg/L	0.00020	0.00013	1	08/10/22 15:15	08/11/22 11:48	7439-97-6	
2540C Total Dissolved Solids	Analytica	l Method: SM 25	540C-2015						
	Pace Ana	alytical Services	- Peachtre	e Corners, 0	GA				
Total Dissolved Solids	278	mg/L	10.0	10.0	1		08/09/22 10:23	3	
2320B Alkalinity	Analytica	Method: SM 23	320B-2011						
	Pace Ana	alytical Services	- Asheville						
Alkalinity,Bicarbonate (CaCO3)	203	mg/L	5.0	5.0	1		08/10/22 13:13	3	
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 13:13	3	
Alkalinity, Total as CaCO3	203	mg/L	5.0	5.0	1		08/10/22 13:13	3	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-43D	Lab ID:	92618829004	Collecte	d: 08/02/22	09:33	Received: 08	/04/22 12:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	,	Method: SM 45 ytical Services		)11					
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:44	18496-25-8	
300.0 IC Anions 28 Days		Method: EPA 3 ytical Services		.1 1993					
Chloride	4.3	mg/L	1.0	0.60	1		08/12/22 18:50	16887-00-6	
Fluoride	0.22	mg/L	0.10	0.050	1		08/12/22 18:50	16984-48-8	
Sulfate	37.0	mg/L	1.0	0.50	1		08/12/22 18:50	14808-79-8	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-44D	Lab ID:	92618829005	Collecte	d: 08/02/22	2 10:42	Received: 08/	04/22 12:30 M	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytica	Method:							
		lytical Services	- Charlotte						
Parformed by	CUSTOME	•			1		08/05/22 12:45		
Performed by	R				'		06/05/22 12.45		
ρΗ	7.90	Std. Units			1		08/05/22 12:45		
6010D ATL ICP	Analytica	Method: EPA 6	010D Prep	paration Me	thod: EF	A 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	3A				
ron	0.24	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:45	7439-89-6	
Manganese	0.013J	mg/L	0.040	0.0043	1		08/11/22 15:45		
Potassium	3.9	mg/L	0.20	0.15	1		08/11/22 15:45		
Sodium	94.6	mg/L	1.0	0.58	1		08/11/22 15:45		
Calcium	20.9	mg/L	1.0	0.12	1	08/11/22 10:02			
Magnesium	12.2	mg/L	0.050	0.012	1	08/11/22 10:02	08/11/22 15:45		
6020 MET ICPMS	Analytica	Method: EPA 6	020B Prer	paration Met	hod: FF	A 3005A			
	-	llytical Services							
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 20:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37			
Barium	0.37	mg/L	0.0050	0.00067	1		08/10/22 20:33		
Beryllium	ND	mg/L	0.0050	0.00007	1		08/10/22 20:33		
Boron	0.31	mg/L	0.040	0.0086	1		08/10/22 20:33		
Cadmium	ND	mg/L	0.00050	0.00011	1		08/10/22 20:33		
Chromium	ND	mg/L	0.0050	0.0011	1		08/10/22 20:33		
Cobalt	ND	mg/L	0.0050	0.00039	1		08/10/22 20:33		
_ead	ND	mg/L	0.0030	0.00089	1		08/10/22 20:33		
Lithium	0.041	mg/L	0.030	0.00073	1		08/10/22 20:33		
Molybdenum	0.0020J	mg/L	0.010	0.00073	1		08/10/22 20:33		
Selenium	ND	mg/L	0.0050	0.0014	1	08/09/22 14:37			
Fhallium	ND	mg/L	0.0010	0.00014	1		08/10/22 20:33		
7470 Mercury	Analytica	Method: EPA 7	470A Prer	paration Met	hod: FF	A 7470A			
		lytical Services							
Mercury	ND	mg/L	0.00020	0.00013	1	08/10/22 15:15	08/11/22 11:51	7439-97-6	
2540C Total Dissolved Solids	Analytica	Method: SM 2	540C-2015						
		lytical Services		e Corners, 0	3A				
Total Dissolved Solids	311	mg/L	10.0	10.0	1		08/09/22 10:27		
2320B Alkalinity	Analytica	Method: SM 23	320B-2011						
•	•	lytical Services							
Alkalinity, Bicarbonate (CaCO3)	263	mg/L	5.0	5.0	1		08/10/22 13:21		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 13:21		
Alkalinity, Total as CaCO3	263	mg/L	5.0	5.0	1		08/10/22 13:21		M1



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Sample: HGWA-44D	Lab ID:	92618829005	Collecte	d: 08/02/22	10:42	Received: 08	/04/22 12:30 Ma	atrix: Water	•
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	•	Method: SM 45 ytical Services		111					
Sulfide	0.058J	mg/L	0.10	0.050	1		08/06/22 03:44	18496-25-8	
300.0 IC Anions 28 Days		Method: EPA 3 ytical Services		.1 1993					
Chloride	19.8	mg/L	1.0	0.60	1		08/17/22 03:36	16887-00-6	
Fluoride	0.80	mg/L	0.10	0.050	1		08/17/22 03:36	16984-48-8	
Sulfate	13.2	mg/L	1.0	0.50	1		08/17/22 03:36	14808-79-8	



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 716032 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

METHOD BLANK: 3732776 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/11/22 13:20	
Iron	mg/L	ND	0.040	0.025	08/11/22 13:20	
Magnesium	mg/L	ND	0.050	0.012	08/11/22 13:20	
Manganese	mg/L	ND	0.040	0.0043	08/11/22 13:20	
Potassium	mg/L	ND	0.20	0.15	08/11/22 13:20	
Sodium	mg/L	ND	1.0	0.58	08/11/22 13:20	

LABORATORY CONTROL SAMPLE:	3732777	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Calcium	mg/L		1.0	104	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Manganese	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.1	109	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX S	SPIKE DUPL	ICATE: 3732			3732779							
Parameter	Units	92618820002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Falailletei	Units			Conc.		Resuit	70 KeC	70 KeC	LIIIIII	KFD	KPD	
Calcium	mg/L	153	1	1	150	153	-362	-50	75-125	2	20	M1
Iron	mg/L	0.053	1	1	1.1	1.1	107	108	75-125	1	20	
Magnesium	mg/L	21.3	1	1	21.8	22.2	57	96	75-125	2	20	M1
Manganese	mg/L	0.31	1	1	1.4	1.4	105	106	75-125	1	20	
Potassium	mg/L	7.7	1	1	8.6	8.8	92	109	75-125	2	20	
Sodium	mg/L	9.4	1	1	10.2	10.4	79	96	75-125	2	20	

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 715918 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

METHOD BLANK: 3732042 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/10/22 17:46	
Arsenic	mg/L	ND	0.0050	0.0022	08/10/22 17:46	
Barium	mg/L	ND	0.0050	0.00067	08/10/22 17:46	
Beryllium	mg/L	ND	0.00050	0.000054	08/10/22 17:46	
Boron	mg/L	ND	0.040	0.0086	08/10/22 17:46	
Cadmium	mg/L	ND	0.00050	0.00011	08/10/22 17:46	
Chromium	mg/L	ND	0.0050	0.0011	08/10/22 17:46	
Cobalt	mg/L	ND	0.0050	0.00039	08/10/22 17:46	
Lead	mg/L	ND	0.0010	0.00089	08/10/22 17:46	
Lithium	mg/L	ND	0.030	0.00073	08/10/22 17:46	
Molybdenum	mg/L	ND	0.010	0.00074	08/10/22 17:46	
Selenium	mg/L	ND	0.0050	0.0014	08/10/22 17:46	
Thallium	mg/L	ND	0.0010	0.00018	08/10/22 17:46	

LABORATORY CONTROL SAMPLE:	3732043					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Antimony	mg/L	0.1	0.12	120	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPLI	CATE: 3732	044		3732045							
			MS	MSD								
		92618820002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.12	0.13	123	128	75-125	4	20 N	<i>I</i> 11
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3732	•		3732045							
Parameter	g Units	2618820002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.060	0.1	0.1	0.18	0.19	120	126	75-125	3	20	M1
Beryllium	mg/L	0.000056J	0.1	0.1	0.089	0.087	89	87	75-125	2	20	
Boron	mg/L	1.5	1	1	2.3	2.3	80	82	75-125	1	20	
Cadmium	mg/L	0.00017J	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.098	0.097	97	97	75-125	1	20	
Cobalt	mg/L	0.0024J	0.1	0.1	0.097	0.098	95	95	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.097	96	97	75-125	1	20	
Lithium	mg/L	0.0026J	0.1	0.1	0.090	0.090	88	87	75-125	0	20	
Molybdenum	mg/L	0.29	0.1	0.1	0.41	0.43	116	138	75-125	5	20	M1
Selenium	mg/L	ND	0.1	0.1	0.10	0.099	99	98	75-125	0	20	
Thallium	mg/L	0.00018J	0.1	0.1	0.097	0.097	97	97	75-125	0	20	

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 716247 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

METHOD BLANK: 3733695 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Mercury mg/L ND 0.00020 0.00013 08/11/22 10:22

LABORATORY CONTROL SAMPLE: 3733696

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Mercury mg/L 0.0025 0.0021 86 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733697 3733698

MS MSD

92618820001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result **RPD** RPD Qual Result % Rec % Rec Limits 0.0025 Mercury mg/L ND 0.0025 0.0021 0.0020 82 82 75-125 20

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

QC Batch: 715874 Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

METHOD BLANK: 3731839 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 08/09/22 10:22

LABORATORY CONTROL SAMPLE: 3731840

Spike LCS LCS % Rec Conc. % Rec Limits Qualifiers Parameter Units Result **Total Dissolved Solids** 400 390 98 80-120 mg/L

SAMPLE DUPLICATE: 3731841

92618822001 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 48.0 **Total Dissolved Solids** mg/L 47.0 2 25

SAMPLE DUPLICATE: 3731990

Date: 11/03/2022 02:22 PM

92618829005 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 311 mg/L 341 9 25

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 716212 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

METHOD BLANK: 3733541 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004, 92618829005

Parameter		Units	Blan Resu		Reporting Limit	9	MDL		Anal	yzed	Qı	ualifiers		
Alkalinity, Total as CaCO3		mg/L		ND		5.0		5.0	08/10/2	_	_			
Alkalinity,Bicarbonate (CaCO3) Alkalinity,Carbonate (CaCO3)		mg/L mg/L		ND ND		5.0 5.0		5.0 5.0	08/10/2 08/10/2	_	_			
LABORATORY CONTROL SAMP	LE:	3733542												
<b>5</b>		11.5	Spike		.CS		LCS		6 Rec		0 ""			
Parameter		Units	Conc.	R	esult ———— –	%	Rec		imits	'	Qualifiers	_		
Alkalinity, Total as CaCO3		mg/L	50	)	48.1		96		80-12	)				
LABORATORY CONTROL SAMP	LE:	3733543												
			Spike		.CS		LCS		6 Rec					
Parameter		Units	Conc.	_ Re	esult ————————————————————————————————————	<u>%</u>	Rec		imits	'	Qualifiers	_		
Alkalinity, Total as CaCO3		mg/L	50	)	48.5		97		80-12	)				
MATRIX SPIKE & MATRIX SPIKE	DUPL	LICATE: 3733	_		37335	45								
		92618829005	MS Spike	MSD Spike	MS		MSD	MS	MS	חי	% Rec		Max	
			Spike	•	Result		Result	% Re			% Rec	RPD	RPD	Qual
Parameter	Units	Result	Conc.	Conc.	Result	r	\esuit	/0 IXE	/01	160	LIIIIII	IXI D	INI D	Quui

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 715461 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: 92618829001, 92618829002, 92618829003

METHOD BLANK: 3730179 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfide mg/L ND 0.10 0.050 08/06/22 03:29

LABORATORY CONTROL SAMPLE: 3730180

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Sulfide 0.5 0.48 97 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730181 3730182

MSD MS 92618725005 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Result Result **RPD** RPD Result Conc. % Rec % Rec Limits Qual ND Sulfide mg/L 0.5 0.5 0.44 0.48 86 94 80-120 8 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730183 3730184

MS MSD 92618728001 MS MSD MS MSD % Rec Spike Spike Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Sulfide 0.5 ND 0.5 0.53 0.53 104 105 10 mg/L 80-120

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 715462 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: 92618829004, 92618829005

METHOD BLANK: 3730185 Matrix: Water

Associated Lab Samples: 92618829004, 92618829005

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfide mg/L ND 0.10 0.050 08/06/22 03:43

LABORATORY CONTROL SAMPLE: 3730186

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Sulfide 0.5 0.50 100 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730187 3730188

MSD MS 92618494001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Result Result % Rec **RPD** RPD Result Conc. % Rec Limits Qual ND Sulfide mg/L 0.5 0.5 0.52 0.55 101 108 80-120 6 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730189 3730190

MS MSD 92618607002 MS MSD MS MSD % Rec Spike Spike Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Sulfide 0.5 92 ND 0.5 0.49 0.49 92 0 10 mg/L 80-120

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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 716707 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: 92618829001, 92618829002, 92618829003, 92618829004

METHOD BLANK: 3736371 Matrix: Water

Associated Lab Samples: 92618829001, 92618829002, 92618829003, 92618829004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/12/22 10:25	
Fluoride	mg/L	ND	0.10	0.050	08/12/22 10:25	
Sulfate	mg/L	ND	1.0	0.50	08/12/22 10:25	

LABORATORY CONTROL SAMPLE: 3736372 LCS Spike LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Chloride mg/L 50 53.1 106 90-110 Fluoride 2.5 mg/L 2.6 106 90-110 Sulfate 51.7 mg/L 50 103 90-110

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3736	373		3736374							
		92618820001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	37.9	50	50	94.8	94.7	114	114	90-110	0	10	M1
Fluoride	mg/L	0.11	2.5	2.5	2.8	2.8	107	109	90-110	1	10	
Sulfate	mg/L	105	50	50	152	150	94	90	90-110	1	10	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3736	375		3736376							
			MS	MSD								
		92618820011	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	63.5	50	50	101	100	74	74	90-110	0	10	M1
Fluoride	mg/L	0.069J	2.5	2.5	2.8	2.7	108	106	90-110	2	10	
Sulfate	mg/L	140	50	50	186	187	92	93	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.



Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

QC Batch: 717487

QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description:

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

EPA 300.0 Rev 2.1 1993

Associated Lab Samples: 92618829005

METHOD BLANK: 3740162 Matrix: Water

Associated Lab Samples: 92618829005

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/16/22 23:47	
Fluoride	mg/L	ND	0.10	0.050	08/16/22 23:47	
Sulfate	mg/L	ND	1.0	0.50	08/16/22 23:47	

Analysis Method:

LABORATORY CONTROL SAMPLE:	3740163					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	49.5	99	90-110	
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	50	49.8	100	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3740	164		3740165							
			MS	MSD								
		92619836001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	10.2	50	50	65.3	63.6	110	107	90-110	3	10	
Fluoride	mg/L	0.80	2.5	2.5	3.4	3.2	105	98	90-110	5	10	
Sulfate	mg/L	11.0	50	50	67.7	64.3	113	107	90-110	5	10	M1

MATRIX SPIKE & MATRIX SF	IKE DUPL	ICATE: 3740	166		3740167							
			MS	MSD								
		92619486001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	61.1	50	50	108	109	93	95	90-110	1	10	
Fluoride	mg/L	0.35	2.5	2.5	2.8	2.9	99	100	90-110	1	10	
Sulfate	mg/L	367	50	50	352	349	-32	-37	90-110	1	10	M1

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.



#### **QUALIFIERS**

Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

#### **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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### **ANALYTE QUALIFIERS**

Date: 11/03/2022 02:22 PM

M1

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



## **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND POOLED UPGRADIENT

Pace Project No.: 92618829

Date: 11/03/2022 02:22 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618829001	HGWA-1				
92618829002	HGWA-2				
2618829003	HGWA-3				
2618829004	HGWA-43D				
2618829005	HGWA-44D				
2618829001	HGWA-1	EPA 3010A	716032	EPA 6010D	716586
2618829002	HGWA-2	EPA 3010A	716032	EPA 6010D	716586
2618829003	HGWA-3	EPA 3010A	716032	EPA 6010D	716586
2618829004	HGWA-43D	EPA 3010A	716032	EPA 6010D	716586
2618829005	HGWA-44D	EPA 3010A	716032	EPA 6010D	716586
2618829001	HGWA-1	EPA 3005A	715918	EPA 6020B	716063
2618829002	HGWA-2	EPA 3005A	715918	EPA 6020B	716063
2618829003	HGWA-3	EPA 3005A	715918	EPA 6020B	716063
2618829004	HGWA-43D	EPA 3005A	715918	EPA 6020B	716063
2618829005	HGWA-44D	EPA 3005A	715918	EPA 6020B	716063
2618829001	HGWA-1	EPA 7470A	716247	EPA 7470A	716490
2618829002	HGWA-2	EPA 7470A	716247	EPA 7470A	716490
2618829003	HGWA-3	EPA 7470A	716247	EPA 7470A	716490
2618829004	HGWA-43D	EPA 7470A	716247	EPA 7470A	716490
2618829005	HGWA-44D	EPA 7470A	716247	EPA 7470A	716490
2618829001	HGWA-1	SM 2540C-2015	715874		
2618829002	HGWA-2	SM 2540C-2015	715874		
2618829003	HGWA-3	SM 2540C-2015	715874		
2618829004	HGWA-43D	SM 2540C-2015	715874		
2618829005	HGWA-44D	SM 2540C-2015	715874		
2618829001	HGWA-1	SM 2320B-2011	716212		
2618829002	HGWA-2	SM 2320B-2011	716212		
2618829003	HGWA-3	SM 2320B-2011	716212		
2618829004	HGWA-43D	SM 2320B-2011	716212		
2618829005	HGWA-44D	SM 2320B-2011	716212		
2618829001	HGWA-1	SM 4500-S2D-2011	715461		
2618829002	HGWA-2	SM 4500-S2D-2011	715461		
2618829003	HGWA-3	SM 4500-S2D-2011	715461		
2618829004	HGWA-43D	SM 4500-S2D-2011	715462		
2618829005	HGWA-44D	SM 4500-S2D-2011	715462		
2618829001	HGWA-1	EPA 300.0 Rev 2.1 1993	716707		
2618829002	HGWA-2	EPA 300.0 Rev 2.1 1993	716707		
2618829003	HGWA-3	EPA 300.0 Rev 2.1 1993	716707		
2618829004	HGWA-43D	EPA 300.0 Rev 2.1 1993	716707		
2618829005	HGWA-44D	EPA 300.0 Rev 2.1 1993	717487		

/	Pace
1-	1 400
1	THE STITUTE DESCRIPTION

DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

	heville Eden Greenwood	Huntersvill	le 🗀	Raleigh		Mechanicsville Atlanta Kernersville
	Sample Condition Client Name: Upon Receipt	Power	_		roject	LIN# · 02618820
	urier:	☐USPS ☐Other:		Clie	ent	92618829
Cus	stody Seal Present? Yes No Sea	als Intact?	□Yes	□No		Date/Initials Person Examining Contents:
		Bubble Bags	None	Ot	her	Biological Tissue Frozen?
The	TR Gun ID: 2-30	Type of Ice	: <b>.</b>	vet □BI	ue	□Yes □No ☑N/A □None
Cod	oler Temp: 3, 3 Correction Fact				T	emp should be above freezing to 6°C
USE	oler Temp Corrected (°C):  DA Regulated Soil (  N/A, water sample)	5.3				Samples out of temp criteria Samples on ice, cooling process has begun
	Did samples originate in a quarantine zone within the	ie United States:	CA, NY, o	r SC	D	id samples originate from a foreign source (internationally, seleding Hawaii and Puerto Rico)? Yes No
						Comments/Discrepancy:
	Chain of Custody Present?	□ Pres	□No	□N/A	1.	
	Samples Arrived within Hold Time?	Yes	□No	□N/A	2.	
	Short Hold Time Analysis (<72 hr.)?	□Yes	□N <sub>0</sub>	□N/A	3.	
	Rush Turn Around Time Requested?	□Yes	□ No	□N/A	4.	
	Sufficient Volume?	Pes	□No	□N/A	5.	
	Correct Containers Used?	Yes	□No	□N/A	6.	
	-Pace Containers Used?		□No	□N/A		
	Containers Intact?	□ Pres	□No	□N/A	7.	
	Dissolved analysis: Samples Field Filtered?	□Yes	□No	□N/A	8.	
	Sample Labels Match COC?	Yes	□No	□n/a	9.	
	-Includes Date/Time/ID/Analysis Matrix:	W	•			
	Headspace in VOA Vials (>5-6mm)?	□Yes	□ No	DINIA	10.	•
	Trip Blank Present?	□Yes	□No	BAIK	11.	
.	Trip Blank Custody Seals Present?	Yes	□No	□N/A		
COM	MENTS/SAMPLE DISCREPANCY		***			Field Data Required? Yes No
CLIENT	NOTIFICATION/RESOLUTION			L	ot ID of	split containers:
Perso	on contacted:		τ	)ate/Time:		
						Date:
P	roject Manager SRF Review:					Date:

Qualtrax I:69614



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

\*Check mark top half of box if pH and/or dechlorination is verified and Project # 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
- \*\*\*Check <u>all</u> unpreserved Nitrates for chlorine

WO#: 92618829

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

1 tem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)		BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4\$-125 mL Plastic H2SO4 (pH < 2) (CI-)	BP3fir-250 mL plastic HNO3 (pH < 2)	BP44-125 mL Plastic ZN Acetate & NaOH (>9)	BP48-125 mL Plastic NaOH (pH > 12) (CI-)	WGRU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1M-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG3\$-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG981-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG99-40 mL VOA H2504 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BPIN	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (CI-)	VSGU-20 mL Scintillation vials {N/A}	DG9L-40 mL Amber Unpreserved vials (N/A)
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		pH Ad	ljustment Log for Pres	erved 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 DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

						ž	=	: :		, 00	7	6	55	4	3	2	-	ITEM#			Γ	Request	Phone	Email To		Address	Company:	Section
					ADDITIONAL COMMENTS								HGWA-44D	HGWA-43D	HGWA-3	HGWA-2	HGWA-1	SAMPLE ID  (A-Z, 0-9 i -)  (A-		Section D  Valid M  Required Clerk information MATRIX		Requested Due Data/TAT: 10 Day		SCS Contacts	1	1	Required Client Information.  Company: GA Power	Pace Analytical
			Kynn	Somon	R								wg	wg	wg	wg	wG	WASTE WATER WATER WATER WATER WATER WATER WATER WATER WATER AND AND AND AND AND AND AND AND AND AND		-	-	Project Number	Project Name	Purchase Order No.	copy id G	1,	Required Project Information	
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ealed Cook (Y/N) amples Into	Her				SAMPLE CONDITIONS		TK 8/2/2022					21 7.00	PH = 7.13	ph = 7.02	PH = 700	DH = 4.57	nH = 7 03						CTHER CER-	RINKING WATER			-	

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

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September 08, 2022

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

RE: Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

### Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 04, 2022. 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,

Micole D'oles

Nicole D'Oleo nicole.d'oleo@pacelabs.com (704)875-9092 Project Manager

### **Enclosures**

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Laura Midkiff, Georgia Power
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Anthony Szwast, Geosyntec
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.



(770)734-4200



#### **CERTIFICATIONS**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

### 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 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

Missouri Certification #: 235

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 #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



## **SAMPLE SUMMARY**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92618785001	HGWA-1	Water	08/02/22 09:44	08/04/22 12:30
92618785002	HGWA-2	Water	08/02/22 12:28	08/04/22 12:30
92618785003	HGWA-3	Water	08/02/22 14:08	08/04/22 12:30
92618785004	HGWA-43D	Water	08/02/22 09:33	08/04/22 12:30
92618785005	HGWA-44D	Water	08/02/22 10:42	08/04/22 12:30



## **SAMPLE ANALYTE COUNT**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92618785001	HGWA-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618785002	HGWA-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618785003	HGWA-3	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618785004	HGWA-43D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618785005	HGWA-44D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Lab Sample ID	Client Sample ID					
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
2618785001	HGWA-1					
EPA 9315	Radium-226	0.106 ± 0.204	pCi/L	09/06/22 08:53		
	D. II. 222	(0.469) C:79% T:NA	0.4			
EPA 9320	Radium-228	0.0966 ± 0.281 (0.632) C:81% T:87%	pCi/L	(	08/29/22 11:34	
otal Radium Calculation	Total Radium	0.203 ± 0.485 (1.10)	pCi/L	(	09/06/22 15:52	
2618785002	HGWA-2	, ,				
EPA 9315	Radium-226	0.119 ±	pCi/L	(	09/06/22 08:55	
		0.196	F = " =	·		
		(0.434) C:83% T:NA				
EPA 9320	Radium-228	0.742 ±	pCi/L	(	08/29/22 11:34	
		0.357 (0.601)				
		C:80%				
		T:88%				
Total Radium Calculation	Total Radium	0.861 ± 0.553	pCi/L	(	09/06/22 15:52	
		(1.04)				
2618785003	HGWA-3					
EPA 9315	Radium-226	-0.0471 ±	pCi/L	(	09/06/22 08:55	
		0.162				
		(0.494) C:87% T:NA				
EPA 9320	Radium-228	0.400 ±	pCi/L	(	08/29/22 11:34	
		0.346 (0.699)				
		C:78%				
Taral Davidson Oalandadaa	Total Darkham	T:87%	·· O://	,	20/00/00 45 50	
Total Radium Calculation	Total Radium	0.400 ± 0.508	pCi/L	(	09/06/22 15:52	
		(1.19)				
2618785004	HGWA-43D					
EPA 9315	Radium-226	0.297 ±	pCi/L	(	09/06/22 08:55	
		0.256 (0.460)				
		C:86% T:NA				
EPA 9320	Radium-228	0.365 ±	pCi/L	(	08/29/22 12:28	
		0.318 (0.636)				
		C:82%				
Fatal Dadium Caladada	Tatal Dadious	T:87%	O://	,	20/00/20 45 50	
Total Radium Calculation	Total Radium	0.662 ± 0.574	pCi/L	(	09/06/22 15:52	
		(1.10)				

## **REPORT OF LABORATORY ANALYSIS**

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#### **SUMMARY OF DETECTION**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Lab Sample ID	Client Sample ID	Decult	I I a Ya	Dan and Lincit	A a l a -l	Over lift a ma
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
92618785005	HGWA-44D					
EPA 9315	Radium-226	0.0642 ± 0.408 (1.04) C:45% T:NA	pCi/L		09/06/22 08:56	
EPA 9320	Radium-228	0.888 ± 0.367 (0.564) C:80% T:90%	pCi/L		08/29/22 11:34	
Total Radium Calculation	Total Radium	0.952 ± 0.775 (1.60)	pCi/L		09/06/22 15:52	



Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Sample: HGWA-1 PWS:	Lab ID: 9261 Site ID:	8785001 Collected: 08/02/22 09:44 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.106 ± 0.204 (0.469) C:79% T:NA	pCi/L	09/06/22 08:53	3 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.0966 ± 0.281 (0.632) C:81% T:87%	pCi/L	08/29/22 11:34	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.203 ± 0.485 (1.10)	pCi/L	09/06/22 15:52	2 7440-14-4	



Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Sample: HGWA-2 PWS:	Lab ID: 9261 Site ID:	8785002 Collected: 08/02/22 12:28 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.119 ± 0.196 (0.434) C:83% T:NA	pCi/L	09/06/22 08:55	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.742 ± 0.357 (0.601) C:80% T:88%	pCi/L	08/29/22 11:34	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.861 ± 0.553 (1.04)	pCi/L	09/06/22 15:52	2 7440-14-4	



Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Sample: HGWA-3 PWS:	Lab ID: 9261 Site ID:	8785003 Collected: 08/02/22 14:08 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.0471 ± 0.162 (0.494) C:87% T:NA	pCi/L	09/06/22 08:55	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.400 ± 0.346 (0.699) C:78% T:87%	pCi/L	08/29/22 11:34	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.400 ± 0.508 (1.19)	pCi/L	09/06/22 15:52	2 7440-14-4	



Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Sample: HGWA-43D PWS:	Lab ID: 9261 Site ID:	8785004 Collected: 08/02/22 09:33 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.297 ± 0.256 (0.460) C:86% T:NA	pCi/L	09/06/22 08:55	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.365 ± 0.318 (0.636) C:82% T:87%	pCi/L	08/29/22 12:28	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.662 ± 0.574 (1.10)	pCi/L	09/06/22 15:52	2 7440-14-4	



Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Sample: HGWA-44D PWS:	<b>Lab ID: 92618</b> Site ID:	3785005 Collected: 08/02/22 10:42 Sample Type:	Received:	08/04/22 12:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0642 ± 0.408 (1.04) C:45% T:NA	pCi/L	09/06/22 08:56	6 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.888 ± 0.367 (0.564) C:80% T:90%	pCi/L	08/29/22 11:34	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.952 ± 0.775 (1.60)	pCi/L	09/06/22 15:52	2 7440-14-4	



#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

QC Batch: 525510 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618785001, 92618785002, 92618785003, 92618785004, 92618785005

METHOD BLANK: 2549236 Matrix: Water

Associated Lab Samples: 92618785001, 92618785002, 92618785003, 92618785004, 92618785005

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.171 ± 0.214 (0.439) C:89% T:NA
 pCi/L
 09/06/22 09:26

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.



#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

QC Batch: 525947 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618785001, 92618785002, 92618785003, 92618785004, 92618785005

METHOD BLANK: 2551553 Matrix: Water

Associated Lab Samples: 92618785001, 92618785002, 92618785003, 92618785004, 92618785005

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.521 ± 0.305 (0.543) C:83% T:91%
 pCi/L
 08/29/22 12:28

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.



#### **QUALIFIERS**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

#### **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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 09/08/2022 09:01 AM

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.



#### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND POOLED UPGRADIENT RAD

Pace Project No.: 92618785

Date: 09/08/2022 09:01 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618785001	HGWA-1	EPA 9315	525510		
92618785002	HGWA-2	EPA 9315	525510		
92618785003	HGWA-3	EPA 9315	525510		
92618785004	HGWA-43D	EPA 9315	525510		
92618785005	HGWA-44D	EPA 9315	525510		
92618785001	HGWA-1	EPA 9320	525947		
92618785002	HGWA-2	EPA 9320	525947		
92618785003	HGWA-3	EPA 9320	525947		
92618785004	HGWA-43D	EPA 9320	525947		
92618785005	HGWA-44D	EPA 9320	525947		
92618785001	HGWA-1	Total Radium Calculation	530889		
92618785002	HGWA-2	Total Radium Calculation	530889		
92618785003	HGWA-3	Total Radium Calculation	530889		
92618785004	HGWA-43D	Total Radium Calculation	530889		
92618785005	HGWA-44D	Total Radium Calculation	530889		

/	2
1-	race
1	THE STATE OF THE PARTY

DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

	ory receiving samples:	-	_			
	rille Eden Greenwood	- Huntersvil	le 📙	Raleigh	<del>] M</del> e	chanicsville Allandon 705
	ple Condition Client Name:	Power		Pr	oject#	WO#: 92618785
Courier	- V	JPS DUSPS		Clien	-	
Con	nmercial Pace	Other	•	Cilen	it	92618785
Custody	Seal Present? Yes No	Seals Intact?	Yes	□No		2/11/12
				( <del>1 - 1</del> // 5)		Date/Initials Person Examining Contents:
Packing	Material: Bubble Wrap	Bubble Bags	None	Oth	er	Biological Tissue Frozen?
Thermo	meter:			/		□Yes □No □N/A
	Correction	Type of Ice	: 420	Vet □Blue	· 🗆	None
Cooler 1					Tem	up should be above freezing to 6°C
Cooler	emp Corrected (°C):	2 2			10.1	Samples out of temp criteria. Samples on ice, cooling process
	egulated Soil ( N/A, water sample)	2.5				has begun
Did s	amples originate in a quaranthe zone within	in the United States:	CA, NY, o	or SC	Did:	samples originate from a foreign source (internationally,
(che	ck maps)? Yes No				inch	uding Hawaii and Puerto Rico}?
Ch	ain of Custody Present?	Prés	□No		1.	Comments/Discrepancy:
	mples Arrived within Hold Time?	Ves Ves	□N <sub>0</sub>	□N/A	2.	
	ort Hold Time Analysis (<72 hr.)?	☐Yes	□N <sub>0</sub>	□N/A	3.	
	sh Turn Around Time Requested?	□Yes	DINO.	□N/A	4.	
	ficient Volume?				174	
	rect Containers Used?		□No	□N/A	5.	
	Pace Containers Used?	☐Yes ☐Yes		□N/A □N/A	6.	
	ntainers Intact?	⊒res	□No		7.	
Dis	solved analysis: Samples Field Filtered?	□Yes	□No		8.	***
Sar	nple Labels Match COC?	Yes	□No		9.	
-		. /				
	Includes Date/Time/ID/Analysis Matrix:	W	_			
Hea	adspace in VOA Vials (>5-6mm)?	□Yes	□No-	DAIA	10.	
	Blank Present?	Yes	□No		11.	
Trip	Blank Custody Seals Present?	Yes	□No	$\mathcal{U}$		
	S/SAMPLE DISCREPANCY		CINO	∐N/A		Field Data Required? Yes No
				Lat	ID of re	lit containers:
CLIENT NOT	IFICATION/RESOLUTION			COL	ib or sp	in containers:
						-
D						
FEISOIIC	ontacted:			Date/Time:		
Projec	et Manager SCURF Review:					Date:
Projec	t Manager SRF Review:					Date

Qualtrax I:69614



DC#\_Title: ENV-FRM-HUN1-0083 v01\_Sample Condition Upon Receipt

Effective Date: 05/12/2022

\*Check mark top half of box if pH and/or dechlorination is verified and

Project # WO#: 92618785

within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

PM: NMG Due Date: 08/25/22

\*\*Bottom half of box is to list number of bottles

CLIENT: GA-GA Power

\*\*\*Check all unpreserved Nitrates for chlorine

1 tem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	2	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4\$-125 mL Plastic H2SO4 (pH < 2) (CI-)	BP3M-250 mL plastic HNO3 (pH < 2)	BP44-125 mL Plastic ZN Acetate & NaOH (>9)	BP48-125 mL Plastic NaOH (pH > 12) (Ci-)	WGRU-Wide-mouthed Glass jar Unpreserved	AG10-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG3\$-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG91-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG95-40 mL VOA H2504 (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)	SABIN	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (CI-)	VSGL-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
2		2	Ĺ			Y	1				1		1	/							-			Z				
3		2	1			X	/						/		1									N.				-
4		2	1			1	Y						/	/										20	1			
5		2	8			X	1																	24				
6							/																		1			
7															V									7	1			
8														V	1									1	1			
9					1																			1	1			
10					7																			7	1			
11					1									1										1	1		1	
12				[																				1	1			

		pH Ad	ljustment Log for Pres	erved 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 DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

		Γ		Γ	Ī	ī	±	8	9	 7	on	4	ü	2	-	ITEM#			1	veden		Phone	Email To	000		Required Company:	Sectio	1	<u>_</u>	
					ADDITIONAL COMMENTS						HGWA-44D	HGWA-43D	HGWA-3	HGWA-2	HGWA-1	SAMPLE ID ON ONE (A-Z, D-9 / -) OTHER Sample IDs MUST BE UNIQUE TISSUE	WATER WATER PRODUCT	Required Clerk information WATRIX CODE		veducation one neglinian:	L	000000000000000000000000000000000000000	o SOS Contacts	Auditia, GA	1	윭	ňA	Face Analytical	3	
SIGNATU SIGNATU	SAMPLER NAME	,		Thomas Massler	RELINQUISHED BY / AFFILIATION							WG G 8/2/2022 09:33	G 8/2/2022		WG G 8/2/2022 08:44 \ TK 8/2	¤d <b>¥</b> €6,	® ₹ § §	CODE TO SORT)		Project Number	Plant Hammond Pooled Upgradient	1 3	Purples Order No.	Copy lo Geosyntec Contacts	10.35	Required Project Information	Section B	The Ch	CHA	
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"Important Note. By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to less that ges of 1.5% per month for any involces not paid within 30 days.

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

# **VALIDATION REPORTS**



180A Market Place Boulevard Knoxville, TN 37922 PH 865.330.0037 www.geosyntec.com

# Memorandum

Date: 14 December 2022

To: Christine Hug

From: Ashley Wilson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables - Pace

Analytical Project Nos.: 92618823 and 92618829

**SITE: CCR Plant Hammond AP-3** 

#### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twelve aqueous samples, one field blank, one equipment blank and one field duplicate, collected 2 and 4 August 2022, as part of the Plant Hammond sampling event.

The samples were analyzed at Pace Analytical Services – Peachtree Corners, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3005A/6020B
- Metals by US EPA Method 3010A/6010D
- Mercury by US EPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method (SM) 2540C-2015

The samples were analyzed at Pace Analytical Services - Asheville, Asheville, North Carolina, for the following analytical tests:

- Anions (chloride, fluoride and sulfate) by US EPA Method 300.0 Rev 2.1 1993
- Alkalinity as CaCO3 (total, bicarbonate and carbonate) by SM 2320B-2011
- Sulfide by SM 4500-S2D-2011

#### **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 supporting project objectives. Qualified data should be used within the limitation of the qualification.

DVR Plant Hammond AP-3 Final Review: K Henderson 12/21/2022

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- United States Environmental Protection Agency (US EPA) Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011) and
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 540-R-20-006).

The following samples were analyzed and reported in the laboratory report:

Laboratory IDs	Client IDs
92618823001	HGWA-45D
92618823002	HGWA-122
92618823003	HGWC-120
92618823004	HGWC-121A
92618823005	HGWC-124
92618823006	HGWC-125
92618823007	HGWC-126
92618823008	DUP-3

Laboratory IDs	Client IDs
92618823009	EB-3
92618823010	FB-3
92618829001	HGWA-1
92618829002	HGWA-2
92618829003	HGWA-3
92618829004	HGWA-43D
92618829005	HGWA-44D

The chain of custody (COC) indicates the samples were received between 0-6 °C. No preservation issues were noted by the laboratory.

The laboratory reported results for pH, however, those results were not validated in this report.

Radium 226/228 was requested on the COC. However, this data was reported separately.

#### 1.0 METALS

The samples were analyzed for metals by US EPA methods 3005A/6020B and 3010A/6010D.

The areas of data review are listed below. A leading check mark  $(\checkmark)$  indicates an area of review in which the data were acceptable. A preceding crossed circle  $(\otimes)$  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 Deliverable Review

# 1.1 Overall Assessment

The metals data reported in this data package are considered usable for supporting 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 dataset 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 for metals by US EPA method 6020B (batches 715918 and 716035), and two method blanks for metals by US EPA Method 6010D (batches 716032 and 716036). Metals were not detected in the method blanks at or 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). Sample set specific MS/MSD pairs were reported for metals by US EPA methods 6020B and 6010D, using samples HGWC-120 and HGWC-125, respectively. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

One or both recoveries of calcium, magnesium and sodium in the MS/MSD pair using sample HGWC-125 were low or high and outside of laboratory specified acceptance criteria. Since the calcium, magnesium and sodium concentrations in sample HGWC-125 were greater than four times the spiked concentrations, no qualifications were applied to the data based on the MS/MSD recovery results.

Batch MS/MSDs were also reported for both methods. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

DVR Plant Hammond AP-3 Final Review: K Henderson 12/21/2022

# 1.5 <u>Laboratory Control Sample (LCS)</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). LCSs were reported with each batch. The recovery results were within the laboratory specified acceptance criteria.

# 1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-3. Metals were not detected in the equipment blank at or above the MDLs, with the following exception.

Boron was detected at an estimated concentration greater than the MDL and less than the reporting limit (RL) in EB-3. Therefore, the estimated boron concentrations in the associated samples were U qualified as not detected at the RL.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWC-126	Boron	0.023	J	0.040	U	3
HGWA-1	Boron	0.012	J	0.040	U	3

mg/L- milligram per liter

#### 1.7 Field Blank

One field blank was collected with the sample set, FB-3. Metals were not detected in the field blank at or above the MDLs.

# 1.8 Field Duplicate

One field duplicate was collected with the sample set, DUP-3. Acceptable precision (RPD  $\leq$  30%) was demonstrated between the field duplicate and the original sample, HGWC-121A, with the following exceptions.

Antimony was not detected in DUP-3 and detected at an estimated concentration greater than the MDL and less than the RL in HGWC-121A, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the antimony concentration in HGWC-121A was J qualified as estimated and the non-detect result in DUP-3 was UJ qualified as estimated less than the MDL.

J-estimated concentration greater than the MDL and less than the RL

<sup>\*</sup> Validation qualifiers are defined in Attachment 1 at the end of this report

<sup>\*\*</sup>Reason codes are defined in Attachment 2 at the end of this report

The iron RPD for field duplicate pair HGWC-121A/DUP-3 was greater than 30%. Therefore, the concentrations of iron in HGWC-121A and DUP-3 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/l)	Laboratory Flag	RPD	Validation Result (mg/l)	Validation Qualifier	Reason Code
HGWC-121A	Antimony	0.0016	J	NC	0.0016	J	7
DUP-3	Antimony	0.00078	U		0.00078	UJ	7
HGWC-121A	Iron	0.086	NA	39	0.086	J	7
DUP-3	Iron	0.058	NA		0.058	J	7

mg/L- milligram per liter

NC-noncalculable

NA-not applicable

J-the result is less than RL but greater than the MDL and the concentration is an approximate value U-not detected at or above the MDL

# 1.9 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were reported for cadmium in sample HGWC-120 due to dilution because of matrix interference.

# 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 US EPA method 7470A.

The areas of data review are listed below. A leading check mark  $(\checkmark)$  indicates an area of review in which the data were acceptable. A preceding crossed circle  $(\otimes)$  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 Deliverable Review

# 2.1 Overall Assessment

The mercury data reported in this data package 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 dataset 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). Two method blanks were reported (batches 716252 and 716247). Mercury was not detected in the method blank at or 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 <u>Laboratory Control Sample</u>

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-3. Mercury was not detected in the equipment blank at or above the MDL.

#### 2.7 Field Blank

One field blank was collected with the sample set, FB-3. Mercury was not detected in the field blank at or above the MDL.

# 2.8 Field Duplicate

One field duplicate was collected with the sample set, DUP-3. Acceptable precision (RPD  $\leq$  30%) was demonstrated between the field duplicate and the original sample, HGWC-121A.

# 2.9 **Sensitivity**

The samples were reported to the MDL. Elevated non-detect 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 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 chloride, fluoride and sulfate by US EPA method 300.0 Rev 2.1 1993, TDS by SM 2540C-2015, alkalinity as CaCO3 (total, bicarbonate and carbonate) by SM 2320B-2011 and sulfide by SM 4500-S2D-2011.

The areas of data review are listed below. A leading check mark  $(\checkmark)$  indicates an area of review in which the data were acceptable. A preceding crossed circle  $(\otimes)$  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 Deliverable Review

# 3.1 Overall Assessment

The wet chemistry data reported in this data package are considered usable for supporting 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 dataset is 100%.

# 3.2 **Holding Times**

The holding times for water samples are listed below. The holding times were met for the sample analyses.

Analysis	Holding Time
Anions (fluoride, chloride and sulfate)	28 days from collection to analysis
TDS	7 days from collection to analysis
Alkalinity	14 days from collection to analysis
Sulfide	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). Two method blanks were reported for TDS (batches 715874 and 715879). Three method blanks were reported for chloride, fluoride and sulfate (batches 716707, 717488 and 717487). Four method blanks were reported for alkalinity (batches 716055, 717515, 717728 and 716212). Four method blanks were reported for sulfide (batches 715461, 715462, 716114 and 716115). The wet chemistry parameters were not detected in the method blanks at or above the MDLs.

# 3.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

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 chloride, fluoride and sulfate using sample HGWC-120. One sample set specific MS/MSD pair was reported for alkalinity using sample EB-3. One sample set specific MS/MSD pair was reported for sulfide using sample HGWC-126. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of sulfide in the MS/MSD pair using sample HGWC-126 were low and outside of laboratory specified acceptance criteria. Therefore, the nondetect result for sulfide in sample HGWC-126 was UJ qualified as estimated less than the RL.

The recoveries of alkalinity in the MS/MSD pair using sample HGWA-44D were low and outside of laboratory specified acceptance limits. However, since the sample concentration is greater than four times the spike amount, the recovery limits were not applicable. Therefore, no qualifications were applied to the data.

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.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-126	Sulfide	0.10	U M1	0.10	UJ	4

mg/L- milligram per liter

U-not detected at or above the MDL

M1-Matrix spike recovery exceeded QC limits

# 3.5 <u>Laboratory Control Sample</u>

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. The recovery results were within the laboratory specified acceptance criteria.

# 3.6 Laboratory Duplicate

Two laboratory duplicates were reported for TDS using samples HGWC-124 and HGWA-44D. The RPD result was within the laboratory specified acceptance criteria.

Four 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-3. The wet chemistry parameters were not detected in the equipment blank at or above the MDLs.

# 3.8 Field Blank

One field blank was collected with the sample set, FB-3. The wet chemistry parameters were not detected in the field blank at or above the MDLs.

#### 3.9 Field Duplicate

One field duplicate was collected with the sample set, DUP-3. Acceptable precision (RPD  $\leq$  30%) was demonstrated between the field duplicate and the original sample, HGWC-121A.

# 3.10 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were not reported.

# 3.11 <u>Electronic Data Deliverable Review</u>

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.

\* \* \* \* \*

# 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 at or 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.

DVR Plant Hammond AP-3 Final Review: K Henderson 12/21/2022

# **ATTACHMENT 2** DATA VALIDATION REASON CODES Assigned by Geosyntec's Data Validation Team

Valid Value	Description
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 recovery outside limits and 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 or modified: no validation qualification required

LCS - Laboratory Control Sample LCSD - Laboratory Control Sample duplicate RPD - Relative percent difference



Final Review: JK Caprio 01/10/2023



# Memorandum

Date: January 10, 2023

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables - Pace

**Analytical Services, LLC Project Numbers 92618780 and 92618785** 

SITE: Plant Hammond AP-3 and Plant Hammond Pooled Upgradient

#### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twelve aqueous samples, one field duplicate, one equipment blank and one field blank, collected August 2 and 4 2022, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, PA for the following analytical tests:

- Radium-226 by US EPA Method 9315
- Radium-228 by US EPA 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);
- 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 report:

Plant Hammond 10 January 2023 Page 2

Laboratory ID	Client ID
92618780001	HGWA-45D
92618780002	HGWA-122
92618780003	HGWC-120
92618780004	HGWC-121A
92618780005	HGWC-124
92618780006	HGWC-125
92618780007	HGWC-126
92618780008	DUP-3

Laboratory ID	Client ID
92618780009	EB-3
92618780010	FB-3
92618785001	HGWA-1
92618785002	HGWA-2
92618785003	HGWA-3
92618785004	HGWA-43D
92618785005	HGWA-44D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

#### 1.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by US EPA method 9315, radium-228 by US EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark  $(\checkmark)$  indicates an area of review in which the data were acceptable. A preceding crossed circle  $(\otimes)$  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

# 1.1 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%.

Final Review: JK Caprio 04/22/2022

# 1.2 **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.

#### 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). Three method blanks were reported for the radium-226 data (batches 525508, 525513 and 525510). Three method blanks were reported for the radium-228 data (batches 525976, 525944 and 525947). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

# 1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD pairs were not reported with the data.

# 1.5 <u>Laboratory Control Sample (LCS)</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCS/LCS duplicate (LCSD) pairs were reported for radium-226. One LCS and 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.

# 1.6 <u>Laboratory Duplicate</u>

One sample set specific laboratory duplicate was reported for radium-226 using sample FB-3. The RER result was within the laboratory specified acceptance criteria.

Two 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.

# 1.7 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.

# 1.8 Equipment Blank

One equipment blank was collected with the sample set, EB-4. Radium-226 and radium-228 were not detected in the equipment blank above the MDCs.

Final Review: JK Caprio 01/10/2023

Plant Hammond AP Site Data Validation 10 January 2023 Page 4

# 1.9 Field Blank

One field blank was collected with the sample set, FB-3. Radium-226 and radium-228 were not detected in the field blank above the MDCs.

# 1.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-3. Acceptable precision (RER  $(1\sigma) < 3$ ) was demonstrated between the field duplicate and the original sample, HGWC-121A.

# 1.11 **Sensitivity**

The samples were reported to the MDCs. No elevated non-detect results were reported.

#### 1.12 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.

\* \* \* \* \*

Final Review: JK Caprio 01/10/2023

# 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.

Final Review: JK Caprio 01/10/2023

# **ATTACHMENT 2** DATA VALIDATION REASON CODES Assigned by Geosyntec's Data Validation Team

Valid Value	Description
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

Final Review: JK Caprio 01/10/2023

LCS - Laboratory Control Sample LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

# FIELD SAMPLING REPORTS

# **Low-Flow Test Report:**

Test Date / Time: 8/2/2022 9:00:28 AM

**Project:** GP-Plant Hammond **Operator Name:** Tristan Orndorff

Location Name: HGWA-1
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 22.49 ft
Total Depth: 32.29 ft

Initial Depth to Water: 18.63 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 27.49 ft Estimated Total Volume Pumped:

8.6 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.46 ft Instrument Used: Aqua TROLL 400

Serial Number: 883546

**Test Notes:** 

Seven bottles: Full app. III and IV and Major lons

Weather Conditions: Overcast, 80 degrees F

# **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 9:00 AM	00:00	7.03 pH	20.95 °C	637.61 μS/cm	4.24 mg/L	1.20 NTU	-36.3 mV	18.63 ft	200.00 ml/min
8/2/2022 9:05 AM	05:00	7.03 pH	18.97 °C	652.98 μS/cm	1.65 mg/L	1.11 NTU	-52.7 mV	19.00 ft	200.00 ml/min
8/2/2022 9:09 AM	08:34	7.03 pH	18.58 °C	663.62 µS/cm	0.78 mg/L	1.06 NTU	-62.5 mV	19.03 ft	200.00 ml/min
8/2/2022 9:14 AM	13:34	7.03 pH	18.50 °C	671.01 μS/cm	0.27 mg/L	0.92 NTU	-71.9 mV	19.05 ft	200.00 ml/min
8/2/2022 9:19 AM	18:34	7.03 pH	18.50 °C	673.17 μS/cm	0.18 mg/L	0.83 NTU	-76.3 mV	19.06 ft	200.00 ml/min
8/2/2022 9:24 AM	23:34	7.03 pH	18.50 °C	675.48 μS/cm	0.16 mg/L	0.70 NTU	-78.1 mV	19.06 ft	200.00 ml/min
8/2/2022 9:29 AM	28:34	7.03 pH	18.55 °C	675.72 μS/cm	0.14 mg/L	0.65 NTU	-78.4 mV	19.06 ft	200.00 ml/min
8/2/2022 9:34 AM	33:34	7.03 pH	18.58 °C	675.56 μS/cm	0.14 mg/L	0.51 NTU	-76.1 mV	19.07 ft	200.00 ml/min
8/2/2022 9:39 AM	38:34	7.03 pH	18.65 °C	677.86 μS/cm	0.14 mg/L	0.40 NTU	-75.1 mV	19.09 ft	200.00 ml/min

#### **Samples**

Sample ID:	Description:
HGWA-1	Grab.

# **Low-Flow Test Report:**

Test Date / Time: 8/2/2022 11:54:00 AM

**Project:** GP-Plant Hammond **Operator Name:** Anthony Szwast

Location Name: HGWA-2
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft

Top of Screen: 17.95 ft Total Depth: 28.37 ft

Initial Depth to Water: 10.58 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 22.95 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft Instrument Used: Aqua TROLL 400

Serial Number: 843593

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

Weather Conditions:

Cloudy, 80-90 degrees F

# Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022	00:00	4.67 pH	20.80 °C	253.71 μS/cm	0.83 mg/L	53.70 NTU	127.8 mV	10.65 ft	200.00 ml/min
11:54 AM									
8/2/2022	05:00	4.62 pH	20.40 °C	261.39 μS/cm	0.39 mg/L	13.00 NTU	132.9 mV	10.65 ft	200.00 ml/min
11:59 AM									
8/2/2022	10:00	4.59 pH	20.33 °C	262.13 μS/cm	0.22 mg/L	11.90 NTU	161.7 mV	10.67 ft	200.00 ml/min
12:04 PM									
8/2/2022	15:00	4.59 pH	20.31 °C	263.18 μS/cm	0.17 mg/L	9.01 NTU	133.8 mV	10.67 ft	200.00 ml/min
12:09 PM	10.00								
8/2/2022	20:00	20:00 4.58 pH	20.30 °C	262.89 μS/cm	0.14 mg/L	6.98 NTU	162.5 mV	10.65 ft	200.00 ml/min
12:14 PM									
8/2/2022	25:00	4.57 pH	20.24 °C	262.79 μS/cm	0.13 mg/L	4.20 NTU	164.8 mV	10.67 ft	200.00 ml/min
12:19 PM									
8/2/2022	30:00	4.57 pH	20.30 °C	262.99 μS/cm	0.12 mg/L	3.10 NTU	165.6 mV	10.68 ft	200.00 ml/min
12:24 PM									

#### **Samples**

Sample ID:		Description:					
	HGWA-2	Grab.					

# **Low-Flow Test Report:**

Test Date / Time: 8/2/2022 1:33:03 PM

**Project:** GP-Plant Hammond **Operator Name:** Anthony Szwast

Location Name: HGWA-3
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 34.51 ft

Total Depth: 45.32 ft

Initial Depth to Water: 10.33 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 39.51 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 400

Serial Number: 843593

#### **Test Notes:**

Seven bottles: Full app. III and IV and Major Ions

#### Weather Conditions:

Cloudy, 80-90 degrees F

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 1:33 PM	00:00	6.87 pH	21.37 °C	449.26 μS/cm	0.69 mg/L	12.50 NTU	20.7 mV	10.33 ft	200.00 ml/min
8/2/2022 1:38 PM	05:00	6.99 pH	20.39 °C	459.07 μS/cm	0.40 mg/L	27.20 NTU	-18.6 mV	10.33 ft	200.00 ml/min
8/2/2022 1:43 PM	10:00	7.02 pH	20.13 °C	457.06 μS/cm	0.21 mg/L	68.90 NTU	-32.4 mV	10.33 ft	200.00 ml/min
8/2/2022 1:48 PM	15:00	7.03 pH	20.13 °C	455.59 μS/cm	0.11 mg/L	16.30 NTU	-42.4 mV	10.33 ft	200.00 ml/min
8/2/2022 1:53 PM	20:00	7.02 pH	20.05 °C	455.72 μS/cm	0.09 mg/L	8.89 NTU	-31.8 mV	10.33 ft	200.00 ml/min
8/2/2022 1:58 PM	25:00	7.02 pH	19.99 °C	454.96 μS/cm	0.08 mg/L	5.40 NTU	-51.4 mV	10.33 ft	200.00 ml/min
8/2/2022 2:03 PM	30:00	7.02 pH	19.97 °C	453.40 μS/cm	0.08 mg/L	2.86 NTU	-54.1 mV	10.33 ft	200.00 ml/min

#### **Samples**

Sample ID:		Description:					
	HGWA-3	Grab.					

Test Date / Time: 8/2/2022 8:58:46 AM

**Project:** GP-Plant Hammond **Operator Name:** Anthony Szwast

**Location Name: HGWA-43D** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.25 ft Total Depth: 61.75 ft

Initial Depth to Water: 18.46 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 56.25 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 3.22 ft Instrument Used: Aqua TROLL 400

Serial Number: 843593

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

Weather Conditions:

Cloudy, 80-90 degrees F

### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 8:58 AM	00:00	7.21 pH	18.79 °C	501.75 μS/cm	0.90 mg/L	3.87 NTU	6.6 mV	20.08 ft	200.00 ml/min
8/2/2022 9:03 AM	05:00	7.17 pH	18.45 °C	503.84 μS/cm	0.83 mg/L	2.32 NTU	-7.5 mV	20.58 ft	200.00 ml/min
8/2/2022 9:08 AM	10:00	7.15 pH	18.35 °C	501.27 μS/cm	0.66 mg/L	1.14 NTU	-22.5 mV	21.06 ft	200.00 ml/min
8/2/2022 9:13 AM	15:00	7.15 pH	18.35 °C	499.69 μS/cm	0.48 mg/L	0.98 NTU	-21.7 mV	21.34 ft	200.00 ml/min
8/2/2022 9:18 AM	20:00	7.14 pH	18.35 °C	498.70 μS/cm	0.39 mg/L	0.88 NTU	-31.6 mV	21.47 ft	200.00 ml/min
8/2/2022 9:23 AM	25:00	7.15 pH	18.39 °C	496.27 μS/cm	0.32 mg/L	0.64 NTU	-39.6 mV	21.60 ft	200.00 ml/min
8/2/2022 9:28 AM	30:00	7.15 pH	18.41 °C	493.24 μS/cm	0.28 mg/L	0.71 NTU	-60.8 mV	21.68 ft	200.00 ml/min

Sample ID:	Description:
HGWA-43D	Grab.

Test Date / Time: 8/2/2022 9:23:04 AM

**Project:** GP-Plant Hammond **Operator Name:** Thomas Kessler

**Location Name: HGWA-44D** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.5 ft Total Depth: 111.42 ft

Initial Depth to Water: 17.96 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 108.5 ft Estimated Total Volume Pumped:

17 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 4.4 ft Instrument Used: Aqua TROLL 400

Serial Number: 884186

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

**Weather Conditions:** 

Overcast, 80 degrees F

### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 9:23 AM	00:00	7.86 pH	19.86 °C	651.13 μS/cm	0.97 mg/L	11.77 NTU	49.4 mV	18.90 ft	200.00 ml/min
8/2/2022 9:28 AM	05:00	7.89 pH	19.36 °C	636.97 µS/cm	0.44 mg/L	8.91 NTU	35.2 mV	19.21 ft	200.00 ml/min
8/2/2022 9:33 AM	10:00	7.90 pH	19.24 °C	616.45 µS/cm	0.31 mg/L	4.71 NTU	30.1 mV	20.10 ft	200.00 ml/min
8/2/2022 9:38 AM	15:00	7.91 pH	19.19 °C	610.73 μS/cm	0.25 mg/L	6.74 NTU	22.9 mV	20.30 ft	200.00 ml/min
8/2/2022 9:43 AM	20:00	7.90 pH	19.24 °C	603.41 μS/cm	0.21 mg/L	6.71 NTU	14.6 mV	20.70 ft	200.00 ml/min
8/2/2022 9:48 AM	25:00	7.91 pH	19.17 °C	597.68 μS/cm	0.19 mg/L	5.76 NTU	7.4 mV	20.95 ft	200.00 ml/min
8/2/2022 9:53 AM	30:00	7.91 pH	19.19 °C	593.78 μS/cm	0.17 mg/L	9.05 NTU	-2.2 mV	21.20 ft	200.00 ml/min
8/2/2022 9:58 AM	35:00	7.91 pH	19.24 °C	590.84 μS/cm	0.15 mg/L	6.55 NTU	-11.3 mV	21.35 ft	200.00 ml/min
8/2/2022 10:03 AM	40:00	7.91 pH	19.28 °C	589.33 μS/cm	0.14 mg/L	6.24 NTU	-18.8 mV	21.60 ft	200.00 ml/min
8/2/2022 10:08 AM	45:00	7.91 pH	19.24 °C	585.61 μS/cm	0.13 mg/L	5.53 NTU	-30.2 mV	21.75 ft	200.00 ml/min
8/2/2022 10:13 AM	50:00	7.91 pH	19.27 °C	584.58 μS/cm	0.12 mg/L	5.10 NTU	-39.4 mV	21.90 ft	200.00 ml/min
8/2/2022 10:18 AM	55:00	7.91 pH	19.24 °C	584.97 μS/cm	0.11 mg/L	5.24 NTU	-45.3 mV	22.05 ft	200.00 ml/min
8/2/2022 10:23 AM	01:00:00	7.91 pH	19.19 °C	581.00 μS/cm	0.10 mg/L	2.61 NTU	-57.3 mV	22.10 ft	200.00 ml/min

8/2/2022	01:05:00	7.91 pH	19.24 °C	581.38 μS/cm	0.09 mg/L	4.98 NTU	-61.5 mV	22.25 ft	200.00 ml/min
10:28 AM	01.05.00	7.91 pm	19.24 C	361.36 μ3/011	0.09 mg/L	4.96 NTU	-61.51117	22.25 11	200.00 1111/111111
8/2/2022	01:10:00	7.91 pH	19.24 °C	577.68 µS/cm	0.08 mg/L	9.68 NTU	-75.0 mV	22.35 ft	200.00 ml/min
10:33 AM	01:10:00	7.91 pn	19.24 C	577.00 μ5/011	0.06 mg/L	9.00 1110	-75.0 1110	22.33 II	200.00 mi/min
8/2/2022	01:15:00	7.90 pH	19.23 °C	575.44 µS/cm	0.07 mg/L	2.99 NTU	-75.7 mV	22.36 ft	200.00 ml/min
10:38 AM	01.15.00	7.90 pm	19.23 C	575.44 μ5/611	0.07 Hig/L	2.99 NTO	-75.7 1110	22.30 II	200.00 1111/111111

### Samples

Sample ID:	Description:
HGWA-44D	Grab.

Created using VuSitu from In-Situ, Inc.

Test Date / Time: 8/2/2022 11:55:36 AM

**Project:** GP-Plant Hammond **Operator Name:** Thomas Kessler

**Location Name: HGWA-45D** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.87 ft Total Depth: 62.75 ft

Initial Depth to Water: 11.65 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 57.87 ft Estimated Total Volume Pumped:

8 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.75 ft Instrument Used: Aqua TROLL 400

Serial Number: 884186

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

**Weather Conditions:** 

Sunny, 85 degrees F

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 11:55 AM	00:00	7.46 pH	21.91 °C	513.43 μS/cm	0.18 mg/L	1.03 NTU	-76.5 mV	12.25 ft	200.00 ml/min
8/2/2022 12:00 PM	05:00	7.41 pH	21.12 °C	500.08 μS/cm	0.11 mg/L	0.96 NTU	-95.0 mV	12.35 ft	200.00 ml/min
8/2/2022 12:05 PM	10:00	7.39 pH	20.98 °C	487.94 μS/cm	0.09 mg/L	0.79 NTU	-113.5 mV	12.40 ft	200.00 ml/min
8/2/2022 12:10 PM	15:00	7.38 pH	20.91 °C	480.24 μS/cm	0.09 mg/L	0.78 NTU	-96.9 mV	12.40 ft	200.00 ml/min
8/2/2022 12:15 PM	20:00	7.38 pH	21.11 °C	474.45 μS/cm	0.09 mg/L	0.95 NTU	-95.5 mV	12.40 ft	200.00 ml/min
8/2/2022 12:20 PM	25:00	7.38 pH	21.15 °C	472.79 μS/cm	0.09 mg/L	0.83 NTU	-94.4 mV	12.40 ft	200.00 ml/min
8/2/2022 12:25 PM	30:00	7.39 pH	21.20 °C	469.32 μS/cm	0.10 mg/L	0.89 NTU	-93.8 mV	12.40 ft	200.00 ml/min

Sample ID:	Description:
HGWA-45D	Grab.

Test Date / Time: 8/2/2022 12:10:37 PM

**Project:** GP-Plant Hammond **Operator Name:** Tristan Orndorff

**Location Name: HGWA-122** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.76 ft Total Depth: 27.78 ft

Initial Depth to Water: 12.74 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 22.76 ft Estimated Total Volume Pumped:

22.5 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft Instrument Used: Aqua TROLL 400

Serial Number: 883546

#### **Test Notes:**

Seven bottles: Full app. III and IV and Major lons

#### **Weather Conditions:**

Partially cloudy, 90 degrees F

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 12:10 PM	00:00	6.56 pH	20.69 °C	351.43 μS/cm	1.81 mg/L	1.52 NTU	27.4 mV	12.74 ft	200.00 ml/min
8/2/2022 12:15 PM	05:00	6.57 pH	20.70 °C	355.27 μS/cm	2.08 mg/L	1.22 NTU	34.9 mV	12.75 ft	200.00 ml/min
8/2/2022 12:20 PM	10:00	6.58 pH	20.72 °C	358.15 μS/cm	2.20 mg/L	1.08 NTU	38.1 mV	12.75 ft	200.00 ml/min
8/2/2022 12:25 PM	15:00	6.59 pH	20.68 °C	360.36 μS/cm	2.01 mg/L	0.94 NTU	39.9 mV	12.75 ft	200.00 ml/min
8/2/2022 12:30 PM	20:00	6.60 pH	20.67 °C	361.22 μS/cm	2.02 mg/L	0.85 NTU	41.0 mV	12.75 ft	200.00 ml/min
8/2/2022 12:35 PM	25:14	6.61 pH	20.61 °C	363.21 μS/cm	1.97 mg/L	0.74 NTU	37.8 mV	12.75 ft	200.00 ml/min
8/2/2022 12:36 PM	26:22	6.61 pH	20.44 °C	364.59 μS/cm	1.91 mg/L	0.69 NTU	39.5 mV	12.75 ft	200.00 ml/min
8/2/2022 12:41 PM	31:22	6.61 pH	20.63 °C	365.35 μS/cm	1.68 mg/L	0.50 NTU	42.0 mV	12.75 ft	200.00 ml/min
8/2/2022 12:46 PM	36:22	6.62 pH	20.68 °C	366.50 μS/cm	1.68 mg/L	0.57 NTU	43.8 mV	12.75 ft	200.00 ml/min
8/2/2022 12:51 PM	41:22	6.63 pH	20.71 °C	366.57 μS/cm	1.83 mg/L	1.01 NTU	45.1 mV	12.75 ft	200.00 ml/min
8/2/2022 12:56 PM	46:22	6.63 pH	20.64 °C	365.32 μS/cm	1.75 mg/L	0.56 NTU	46.2 mV	12.75 ft	200.00 ml/min
B/2/2022 1:01 PM	51:22	6.64 pH	20.57 °C	365.57 μS/cm	1.96 mg/L	0.53 NTU	47.0 mV	12.75 ft	200.00 ml/min
B/2/2022 1:06 PM	56:22	6.65 pH	20.61 °C	366.66 μS/cm	1.89 mg/L	0.53 NTU	47.8 mV	12.75 ft	200.00 ml/min

8/2/2022 1:11 PM	01:01:22	6.64 pH	20.64 °C	365.63 μS/cm	1.95 mg/L	0.49 NTU	49.1 mV	12.75 ft	200.00 ml/min
8/2/2022 1:16 PM	01:06:22	6.65 pH	20.63 °C	365.89 μS/cm	1.92 mg/L	0.46 NTU	49.6 mV	12.75 ft	200.00 ml/min
8/2/2022 1:21 PM	01:11:22	6.65 pH	20.62 °C	364.53 μS/cm	1.68 mg/L	0.43 NTU	50.6 mV	12.75 ft	200.00 ml/min
8/2/2022 1:26 PM	01:16:22	6.65 pH	20.55 °C	366.85 μS/cm	1.56 mg/L	0.45 NTU	51.5 mV	12.75 ft	200.00 ml/min
8/2/2022 1:31 PM	01:21:22	6.67 pH	20.50 °C	373.67 μS/cm	1.89 mg/L	0.54 NTU	52.2 mV	12.75 ft	200.00 ml/min
8/2/2022 1:36 PM	01:26:22	6.66 pH	20.60 °C	372.82 μS/cm	2.44 mg/L	0.42 NTU	49.8 mV	12.76 ft	200.00 ml/min
8/2/2022 1:41 PM	01:31:22	6.66 pH	20.55 °C	374.00 μS/cm	1.92 mg/L	0.49 NTU	50.5 mV	12.76 ft	200.00 ml/min
8/2/2022 1:46 PM	01:36:22	6.66 pH	20.62 °C	373.64 μS/cm	1.78 mg/L	0.86 NTU	54.5 mV	12.76 ft	200.00 ml/min
8/2/2022 1:51 PM	01:41:22	6.67 pH	20.60 °C	373.65 μS/cm	1.92 mg/L	0.50 NTU	51.6 mV	12.76 ft	200.00 ml/min

### Samples

Sample ID:	Description:
HGWA-122	Grab.

Created using VuSitu from In-Situ, Inc.

Test Date / Time: 8/4/2022 3:12:07 PM

**Project:** GP-Plant Hammond **Operator Name:** Thomas Kessler

**Location Name: HGWC-120** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.0 ft Total Depth: 67.65 ft

Initial Depth to Water: 40.50 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 62.0 ft Estimated Total Volume Pumped:

9 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft Instrument Used: Aqua TROLL 400

Serial Number: 884186

**Test Notes:** 

Seven bottles: Full app. III and IV and Major lons

**Weather Conditions:** 

Partly cloudy, 93 degrees F

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/4/2022 3:12 PM	00:00	7.09 pH	23.77 °C	865.83 μS/cm	2.22 mg/L	0.99 NTU	-113.3 mV	40.54 ft	200.00 ml/min
8/4/2022 3:17 PM	05:00	6.92 pH	21.64 °C	910.41 μS/cm	0.75 mg/L	0.83 NTU	-61.1 mV	40.60 ft	200.00 ml/min
8/4/2022 3:22 PM	10:00	6.96 pH	21.48 °C	916.94 μS/cm	0.65 mg/L	0.68 NTU	-14.4 mV	40.60 ft	200.00 ml/min
8/4/2022 3:27 PM	15:00	6.95 pH	21.53 °C	917.32 μS/cm	0.50 mg/L	0.70 NTU	-1.8 mV	40.60 ft	200.00 ml/min
8/4/2022 3:32 PM	20:00	6.93 pH	21.38 °C	913.61 μS/cm	0.74 mg/L	0.73 NTU	-34.1 mV	40.60 ft	200.00 ml/min
8/4/2022 3:37 PM	25:00	6.93 pH	21.44 °C	918.33 μS/cm	0.64 mg/L	0.80 NTU	-10.8 mV	40.60 ft	200.00 ml/min
8/4/2022 3:42 PM	30:00	6.93 pH	21.11 °C	915.96 μS/cm	0.47 mg/L	0.87 NTU	-9.2 mV	40.60 ft	200.00 ml/min
8/4/2022 3:47 PM	35:00	6.93 pH	21.10 °C	917.58 μS/cm	0.43 mg/L	0.85 NTU	-8.8 mV	40.60 ft	200.00 ml/min
8/4/2022 3:52 PM	40:00	6.93 pH	21.07 °C	915.20 μS/cm	0.38 mg/L	0.62 NTU	-30.1 mV	40.60 ft	200.00 ml/min

Sample ID:	Description:
HGWC-120	Grab.

Test Date / Time: 8/4/2022 12:41:13 PM

**Project:** GP-Plant Hammond **Operator Name:** Anthony Szwast

**Location Name: HGWC-121A** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.98 ft Total Depth: 41.34 ft

Initial Depth to Water: 17.60 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 32.98 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.11 ft Instrument Used: Aqua TROLL 400

Serial Number: 843593

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

**Weather Conditions:** 

Sunny, 85 degrees F

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/4/2022 12:41 PM	00:00	6.79 pH	22.13 °C	880.67 μS/cm	1.11 mg/L	15.20 NTU	76.8 mV	17.68 ft	200.00 ml/min
8/4/2022 12:46 PM	05:00	6.74 pH	21.42 °C	913.74 μS/cm	0.60 mg/L	8.15 NTU	64.8 mV	17.71 ft	200.00 ml/min
8/4/2022 12:51 PM	10:00	6.77 pH	21.28 °C	920.25 μS/cm	0.45 mg/L	4.43 NTU	44.0 mV	17.71 ft	200.00 ml/min
8/4/2022 12:56 PM	15:00	6.78 pH	21.20 °C	925.77 μS/cm	0.38 mg/L	2.97 NTU	38.4 mV	17.71 ft	200.00 ml/min
8/4/2022 1:01 PM	20:00	6.79 pH	21.19 °C	923.64 μS/cm	0.29 mg/L	2.44 NTU	61.7 mV	17.71 ft	200.00 ml/min
8/4/2022 1:06 PM	25:00	6.80 pH	21.18 °C	925.16 μS/cm	0.23 mg/L	1.89 NTU	64.2 mV	17.71 ft	200.00 ml/min
8/4/2022 1:11 PM	30:00	6.80 pH	21.28 °C	927.94 μS/cm	0.18 mg/L	1.67 NTU	57.8 mV	17.71 ft	200.00 ml/min

Sample ID:	Description:
HGWC-121A	Grab.
Dup-3	Grab.

Test Date / Time: 8/4/2022 10:43:59 AM

**Project:** GP-Plant Hammond **Operator Name:** Anthony Szwast

**Location Name: HGWC-124** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.12 ft Total Depth: 35.22 ft

Initial Depth to Water: 15.62 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 30.12 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.39 ft Instrument Used: Aqua TROLL 400

Serial Number: 843593

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

**Weather Conditions:** 

Cloudy, 80 degrees F

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/4/2022 10:43 AM	00:00	7.21 pH	20.34 °C	535.11 μS/cm	0.89 mg/L	16.70 NTU	-23.6 mV	16.01 ft	200.00 ml/min
8/4/2022 10:48 AM	05:00	7.19 pH	19.78 °C	543.74 μS/cm	0.37 mg/L	4.33 NTU	4.6 mV	16.01 ft	200.00 ml/min
8/4/2022 10:53 AM	10:00	7.19 pH	19.88 °C	544.06 μS/cm	0.28 mg/L	4.06 NTU	-8.2 mV	16.01 ft	200.00 ml/min
8/4/2022 10:58 AM	15:00	7.19 pH	19.90 °C	545.13 μS/cm	0.22 mg/L	2.51 NTU	29.1 mV	16.01 ft	200.00 ml/min
8/4/2022 11:03 AM	20:00	7.18 pH	19.95 °C	543.30 μS/cm	0.20 mg/L	2.30 NTU	35.7 mV	16.01 ft	200.00 ml/min
8/4/2022 11:08 AM	25:00	7.16 pH	19.95 °C	541.14 μS/cm	0.21 mg/L	1.74 NTU	18.8 mV	16.01 ft	200.00 ml/min
8/4/2022 11:13 AM	30:00	7.15 pH	20.08 °C	541.55 μS/cm	0.19 mg/L	1.92 NTU	43.4 mV	16.01 ft	200.00 ml/min

Sample ID:	Description:
HGWC-124	Grab.

Test Date / Time: 8/4/2022 3:05:42 PM

**Project:** GP-Plant Hammond **Operator Name:** Tristan Orndorff

**Location Name: HGWC-125** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.19 ft Total Depth: 63.83 ft

Initial Depth to Water: 43.76 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 58.19 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft Instrument Used: Aqua TROLL 400

Serial Number: 883546

#### **Test Notes:**

Seven bottles: Full app. III and IV and Major lons

#### **Weather Conditions:**

Partly cloudy, 90 degrees F

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/4/2022 3:05 PM	00:00	6.03 pH	21.49 °C	937.43 μS/cm	1.43 mg/L	5.71 NTU	83.8 mV	43.81 ft	200.00 ml/min
8/4/2022 3:10 PM	05:00	5.98 pH	20.98 °C	938.27 μS/cm	0.64 mg/L	4.43 NTU	129.3 mV	43.81 ft	200.00 ml/min
8/4/2022 3:15 PM	10:00	5.99 pH	20.81 °C	950.47 μS/cm	0.40 mg/L	2.06 NTU	124.5 mV	43.81 ft	200.00 ml/min
8/4/2022 3:20 PM	15:00	6.03 pH	20.99 °C	968.68 μS/cm	0.33 mg/L	2.33 NTU	119.8 mV	43.81 ft	200.00 ml/min
8/4/2022 3:25 PM	20:00	6.06 pH	20.88 °C	981.26 μS/cm	0.29 mg/L	1.20 NTU	115.9 mV	43.81 ft	200.00 ml/min
8/4/2022 3:30 PM	25:00	6.08 pH	20.99 °C	987.65 μS/cm	0.28 mg/L	0.84 NTU	87.2 mV	43.81 ft	200.00 ml/min
8/4/2022 3:35 PM	30:00	6.09 pH	20.77 °C	992.44 μS/cm	0.27 mg/L	0.80 NTU	110.7 mV	43.81 ft	200.00 ml/min

Sample ID:	Description:
HGWC-125	Grab.

Test Date / Time: 8/4/2022 2:59:55 PM

**Project:** GP-Plant Hammond **Operator Name:** Anthony Szwast

**Location Name: HGWC-126** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.52 ft Total Depth: 68.44 ft

Initial Depth to Water: 40.79 ft

Pump Type: Bladder Tubing Type: Poly

Pump Intake From TOC: 63.52 ft Estimated Total Volume Pumped:

21.2 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.63 ft Instrument Used: Aqua TROLL 400

Serial Number: 843593

**Test Notes:** 

Seven bottles: Full app. III and IV and Major Ions

**Weather Conditions:** 

Cloudy, 85 degrees F

### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/4/2022 2:59 PM	00:00	6.59 pH	22.08 °C	841.13 μS/cm	2.31 mg/L	2.28 NTU	-15.3 mV	41.41 ft	200.00 ml/min
8/4/2022 3:04 PM	05:00	6.63 pH	22.89 °C	854.29 μS/cm	1.86 mg/L	2.32 NTU	-19.3 mV	41.43 ft	200.00 ml/min
8/4/2022 3:09 PM	10:00	6.68 pH	22.54 °C	841.25 μS/cm	1.29 mg/L	2.40 NTU	-18.3 mV	41.58 ft	200.00 ml/min
8/4/2022 3:14 PM	15:00	6.77 pH	22.40 °C	842.35 μS/cm	1.07 mg/L	2.42 NTU	-20.8 mV	41.68 ft	200.00 ml/min
8/4/2022 3:19 PM	20:00	6.83 pH	22.64 °C	843.94 μS/cm	0.84 mg/L	1.10 NTU	-23.1 mV	41.75 ft	200.00 ml/min
8/4/2022 3:24 PM	25:00	6.83 pH	23.76 °C	851.17 μS/cm	0.82 mg/L	1.67 NTU	-49.7 mV	41.60 ft	200.00 ml/min
8/4/2022 3:29 PM	30:00	6.84 pH	22.88 °C	865.35 μS/cm	0.71 mg/L	1.22 NTU	-51.6 mV	41.72 ft	200.00 ml/min
8/4/2022 3:34 PM	35:00	6.88 pH	22.31 °C	837.87 μS/cm	0.54 mg/L	0.81 NTU	-25.5 mV	41.83 ft	200.00 ml/min
8/4/2022 3:39 PM	40:00	6.89 pH	22.50 °C	847.18 μS/cm	0.55 mg/L	1.12 NTU	-28.9 mV	41.81 ft	200.00 ml/min
8/4/2022 3:45 PM	46:02	6.91 pH	22.22 °C	847.55 μS/cm	0.40 mg/L	0.52 NTU	-32.0 mV	41.93 ft	200.00 ml/min
8/4/2022 3:50 PM	51:02	6.93 pH	21.79 °C	848.41 µS/cm	0.34 mg/L	0.70 NTU	-28.5 mV	41.98 ft	200.00 ml/min
8/4/2022 3:55 PM	56:02	6.94 pH	22.62 °C	855.05 μS/cm	0.33 mg/L	0.62 NTU	-30.7 mV	42.00 ft	200.00 ml/min
8/4/2022 4:00 PM	01:01:02	6.94 pH	21.64 °C	846.35 μS/cm	0.30 mg/L	0.39 NTU	-29.8 mV	42.02 ft	200.00 ml/min

8/4/2022 4:05 PM	01:06:02	6.96 pH	22.54 °C	839.92 μS/cm	0.30 mg/L	1.12 NTU	-54.8 mV	41.99 ft	200.00 ml/min
8/4/2022 4:10 PM	01:11:02	7.00 pH	25.24 °C	855.04 μS/cm	0.38 mg/L	0.81 NTU	-60.7 mV	42.07 ft	200.00 ml/min
8/4/2022 4:15 PM	01:16:02	7.02 pH	21.59 °C	842.02 μS/cm	0.32 mg/L	0.34 NTU	-56.0 mV	42.14 ft	200.00 ml/min
8/4/2022 4:20 PM	01:21:02	7.00 pH	21.06 °C	845.53 μS/cm	0.29 mg/L	0.39 NTU	-54.3 mV	42.19 ft	200.00 ml/min
8/4/2022 4:25 PM	01:26:02	7.00 pH	21.24 °C	840.20 μS/cm	0.29 mg/L	0.33 NTU	-54.1 mV	42.29 ft	200.00 ml/min
8/4/2022 4:30 PM	01:31:02	7.00 pH	21.17 °C	842.37 μS/cm	0.28 mg/L	0.67 NTU	-28.3 mV	42.25 ft	200.00 ml/min
8/4/2022 4:35 PM	01:36:02	6.99 pH	20.88 °C	843.71 μS/cm	0.26 mg/L	0.34 NTU	-53.0 mV	42.35 ft	200.00 ml/min
8/4/2022 4:40 PM	01:41:02	6.99 pH	21.28 °C	845.72 μS/cm	0.23 mg/L	0.36 NTU	-28.4 mV	42.42 ft	200.00 ml/min

### Samples

Sample ID:	Description:
HGWC-126	Grab.

Created using VuSitu from In-Situ, Inc.

# **CALIBRATION REPORTS**

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION LO	OG				
Field TechnicianA & Ho	ny 5.			Date 8/W	2022		Time (start):	20	Time (finish): 735	
smarTroll SN843	593			Turbidity Meter Type _		SN: 1511 -	4111			
Weather Conditions Cloudy	80-90 °F			Facility and Unit Plant Hammond				Project No :GW6581		
				Calibr	ation 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)	21070193	24,03	4490	4589	4490	+/- 5 %	Yes No			
pH (4)	08/22	24.03	4.00	4.09	4.00	+/- 0 1 SU	Yes No			
Mid-Day pH (4) check	21070193	30.29	4.00	3.97	4.00	+/- 0 1 SU	Yes No			
pH (7)	21380102	24,26	7.00	7,38	7.00	+/- 0 1 SU	Yes No			
Mid-Day pH (7) check	21280102	30.26	7.00	6.77	7.00	+/- 0 1 SU	Yes No			
рН (10)	2 0080056	24,42	10.00	10.53	10.00	+/- 0 <sub>-</sub> 1 SU	No No			
Mid-Day pH (10) check	200 80056	29.74	10.00	9.72	10.00	+/- 0 1 SU	(Yes) No			
ORP (mV)	21140143	24,35	228	235.7	228.0	+/- 20 <b>m</b> V	(Yes) No			
DO (%) (1pt, 100% water saturated air cal)			100	104.59	100.0	+/- 6 % saturation	Yes No			
Turbidity 0 NTU			0	0.07		+/- 0.5 NTU	No No			
Turbidity 1 NTU			1.00	1.17	_	+/- 0 5 NTU	Ves No			
Turbidity 10 NTU			10.00	10.35		+/- 0.5 NTU	Yes No			

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION LO	OG			
Field Technician TVISTON	) ()			Date 8/2/2	2		Time (start):	18 Time (finish): 740	
smarTroll SN 88354	6			Turbidity Meter Type	LaMote 2020we	=	sn: 1403		
Weather Conditions:Cloud	14,80°			Facility and Unit P	ant Han	nmund	Project No :		
				Calibra	ation 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)	21470032	25°	4490	4291	4490	+/- 5 %	(Ves) No		
рН (4)	04/2005	70	4.00	4.16	4.00	+/- 0 1 SU	Yes No		
Mid-Day pH (4) check			4.00	4.08	4.00	+/- 0 1 SU	Yes No		
pH (7)	21380102	24.1	7.00	7.14	7.00	+/- 0 1 SU	Yes No		
Mid-Day pH (7) check			7.00	7.01	7,00	+/- 0 1 SU	Yes No		
pH (10)	2608 0056	23.9	10.00	10.47	10.00	+/- 0 <b>1 S</b> U	Yes No		
Mid-Day pH (10) check			10.00	9.95	10.00	+/- 0 1 SU	Yes No		
ORP (mV)	21140143	24.2	228	225.1	228	+/- 20mV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			100	101.54	100	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0.88	0.00	+/- 0.5 NTU	(Yes) No		
Turbidity 1 NTU			1.00	0,99	1.00	+/- 0 5 NTU	(Ves) No		
Turbidity 10 NTU			10.00	10.18	9.99	+/- 0 5 NTU	Yes No		

Geosyntec consultants			E	QUIPMENT CA	LIBRATION L	OG			
Field Technician 100 m	as hes	514		Date 8/2/2022			Time (start):	715 Time (finish): 273, 674	
smarTroll SN	1185	_,		Turbidity Meter Type	LaMote 2020we		2289.2672		
Weather Conditions Cloud	Jy,75°	_		Facility and Unit	ut Hamm	bro	Project No GW6	581	
				Calibr	ation 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)	21470032		4490	4837	4490	+/- 5 %	Yes No		
pH (4)	0-1123	25	4.00	4.07	4.0	+/- 0 1 SU	(Yes) No		
Mid-Day pH (4) check			4.00	4.05	/	+/- 0 1 SU	Yes No		
рН (7)	2138062	73.91	7.00	7.25	7.0	+/- 0 1 SU	Yes No		
Mid-Day pH (7) check			7.00	7.00		+/- 0 1 SU	Yes No		
pH (10)	100 80656	24.12	10.00	10.91	10.0	+/- 0 1 SU	Yes No		
Mid-Day pH (10) check		3434	10.00	9.96		+/- 0 1 SU	Yes No		
ORP (mV)	2114019	24.24	228	212	278	+/- 20mV	Yel No		
DO (%) (1pt, 100% water saturated air cal)			100	104.83	160	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0.94	Ø	+/- 0 5 NTU	Yes No		
Turbidity 1 NTU			1.00	0.96	0.98	+/- 0.5 NTU	Yes No		
Turbidity 10 NTU			10.00	6.85	10.01	+/- 0 5 NTU	Yes No		

Geosyntec consultants			E	QUIPMENT CA	LIBRATION L	OG				
Field Technician: Anthon	y 5.			Date 8/4/2	erz		Time (start): 7	35	Time (finish): 45 2	
smarTroll SN	93			Turbidity Meter Type	LaMote 2020we		sn: 1511-	4(11		
Weather Conditions 5unn				Facility and Unit			Project NoGW6:	581		
				Calibra	ation 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)	21070193	25,40	4490	4563.2	4490	+/- 5 %	Ves) No			-
рН (4)	08/2022	26.24	4.00	4.17	4.00	+/- 0 1 SU	Yes No			_
Mid-Day pH (4) check	21090193	33.41	4.00	4.05		+/- 0 1 SU	Yes No			
pH (7)	21380102	27.11	7.00	7.14	7.00	+/- 0 1 SU	Yes No			
Mid-Day pH (7) check	21380102	32.31	7.00	6.96		+/- 0 1 SU	Ves No			
рН (10)	20090056	27,43	10.00	10.06	10.00	+/- 0.1 SU	(Yes) No			
Mid-Day pH (10) check	20080056	31,75	10.00	9,94		+/- 0 1 SU	Yes No			
ORP (mV)	21140143	27.55	228	224.5	228.0	+/- 20mV	Yes No			
DO (%) (1pt, 100% water saturated air cal)			100	102.57	lvv.0	+/- 6 % saturation	Yes No			
Turbidity 0 NTU			0	0.07	0.00	+/- 0.5 NTU	No No			
Turbidity 1 NTU			1.00	1.17	1.00	+/- 0 5 NTU	No No			
Turbidity 10 NTU			10.00	9.64	10,00	+/- 0 5 NTU	(Yes) No			

Geosyntec Documents	WOULDWING ALIBRATION LOLD											
Field Technician TriStan	0.	-		Date 814127	L		Time (start):	35 Time (finish): 750				
smarTroll SN 88352	tle			Turbidity Meter Type _	LaMote 2020we	_	sn: 1603					
Weather Conditions Partly	cloudy, h	igh of (	91	Facility and Unit	ant Hamn	nund	Project NoGW6581					
1 3												
	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)	aH70032	22.91	4490	4467.3	4490	+/- 5 %	Yes No					
рН (4)	04/2023	22.1	4.00	3.97	4.00	+/- 0 1 SU	Yes No					
Mid-Day pH (4) check			4.00	4.12	4.00	+/- 0.1 SU	Yes No					
рН (7)	21360102	24.48	7.00	7.01	7.00	+/- 0.1 SU	Yes No					
Mid-Day pH (7) check			7.00	6.98	7-00	+/- 0 1 SU	Yes No					
pH (10)	20080056	a4.85	10.00	9,99	10.00	+/- 0.1 SU	Yes No					
Mid-Day pH (10) check			10.00	9.94	10.50	+/- 0 1 SU	Yes No					
ORP (mV)	2140143	25.21	228	a32.9	228	+/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			100	10.01	100	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	0.3	0	+/- 0.5 NTU	Yes No					
Turbidity 1 NTU			1.00	1.79	1.04	+/- 0 5 NTU	Yes No					
Turbidity 10 NTU			10.00	7.78	10.02	+/- 0 5 NTU	Yes No					

Geosyntec D consultants			E	QUIPMENT CA	LIBRATION LO	)G						
Field Technician Thomas	is Viess	.[-		Date 8/4/	22		Time (start): 0730 Time (finish): 0800					
smarTroll SN 8 4 4	1186			Turbidity Meter Type	LaMote 2020we		SN_77897672					
smarTroll SN 899	ust, 75°			Facility and Unit:		mmors	Project NoGW6581					
				Calibra	ation log		HELE TO THE THE TOTAL					
	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)	212170072		4490	41504.9	4490	+/- 5 %	(Yes) No					
pH (4)	04173	24.41	4.00	4.01	4.0	+/- 0 1 SU	Yes No	_				
Mid-Day pH (4) check			4.00	3.99	/	+/- 0 1 SU	Yes No					
pH (7)	21380102	75.40	7.00	6.97	7.00	+/- 0 1 SU	Yes No					
Mid-Day pH (7) check			7.00	7.02	/	+/- 0 1 SU	Yes No					
рН (10)	700 80636	25.84	10.00	9.94	10.00	+/- 0 1 SU	Yes No					
Mid-Day pH (10) check			10.00	10.05		+/- 0 1 SU	Yes No					
ORP (mV)	21146143	25.98	228	227.6	228	+/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			100	101.13	100	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	0.82	0.00	+/- 0.5 NTU	Yes No					
Turbidity 1 NTU			1.00	0.73	1.00	+/- 0 5 NTU	Yes No					
Turbidity 10 NTU			10.00	10.96	10.00	+/- 0 5 NTU	(Yes) No					

# APPENDIX C

Statistical Analysis Reports

# GROUNDWATER STATS CONSULTING

SWFPR

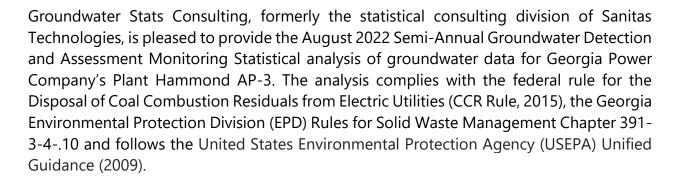
February 28, 2023

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)

August 2022 Statistical Analysis

Dear Ms. Jurinko,



Sampling began for the Coal Combustion Residuals (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 wells: 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

New upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D were first sampled in September 2020 and all available data are included in construction of interwell prediction limits. As requested by Southern Company Services, upgradient wells with 2 or more

samples will be incorporated into the statistical analyses. Sampling began at new downgradient wells HGWC-125 and HGWC-126 in May 2020 and also have at least 8 rounds of background sampling; therefore, they are statistically analyzed in this report with prediction limits and confidence intervals.

Assessment wells MW-32, MW-41, and MW-46D were reclassified as piezometers and, along with piezometer MW-39, are no longer sampled. Therefore, these piezometers are not included in this analysis.

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 downgradient Appendix IV well/constituent pairs containing 100% non-detects follows this letter. These well/constituent pairs 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 non-detect data. In the case of lithium, historical reporting limits vary among the wells. Therefore, 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 non-detects, 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% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, 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% non-detects.

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% non-detects 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 Analysis**

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. Those findings were submitted with the screening report.

While this was not the case during the background screening, when the most recent value is identified as an outlier, values are not flagged in the database 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 existed in the data sets and appeared on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values were observed trace values (i.e. measurements reported between the Method Detection Limit and the Practical Quantitation Limit) by the laboratory 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-112. All other values are similar to remaining measurements within a given well or neighboring wells or were reported non-detects. 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.

### <u>Seasonality</u>

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.

### **Trend Test Evaluation**

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.

### <u>Appendix III – Determination of Spatial Variation</u>

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 – August 2022

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**

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for each Appendix III parameter using all historical upgradient well data through August 2022 (Figure D). Interwell prediction limits use all available upgradient well data to establish a background limit for an individual constituent. The August 2022 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

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 confirms 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. Exceedances were identified for the following well/constituent pairs:

• Boron: HGWC-120, HGWC-121A, and HGWC-125

Calcium: HGWC-120, HGWC-121A, HGWC-125, and HGWC-126

Sulfate: HGWC-120, HGWC-121A, and HGWC-125

TDS: HGWC-121A and HGWC-125

### <u>Trend Test Evaluation – Appendix III</u>

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. 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)

• Calcium: HGWA-3 (upgradient) and HGWC-126

• Sulfate: HGWA-2 (upgradient)

### Decreasing trends:

• Boron: HGWA-122 (upgradient), HGWC-120, and HGWC-121A

Calcium: HGWA-121A

Sulfate: HGWA-122 (upgradient), HGWC-120, and HGWC-121A

TDS: 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 - August 2022

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 containing 100% non-detects do not require analyses. 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).

### **Interwell Upper Tolerance Limits**

First, interwell upper tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through August 2022 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% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

#### **Groundwater Protection Standards**

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). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, 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, Federal and State CCR Rules specify levels 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

Following Georgia EPD Rule requirements and the Federal CCR requirements, GWPS were established for statistical comparison of Appendix IV constituents for this sample event (Figure G).

### Confidence Intervals

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well with detections. Note that a GWPS is established for each Appendix IV constituent. However, since there are 100% non-detects for beryllium, cadmium, and thallium in downgradient wells, no confidence intervals were required for these constituents.

The Sanitas software was used to calculate both the tolerance limits and the confidence intervals. Confidence intervals were compared to the GWPS prepared as described above (Figure H). 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. A

summary of the confidence intervals follows this letter and no exceedances were identified.

### Trend Test Evaluation – Appendix IV

While this step was not necessary during this report, data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable. Upgradient wells are included in the trend analyses when a minimum of 5 samples are available to identify whether similar patterns exist upgradient of the site for the same constituents. When trends are present in upgradient trends, it is an indication of natural variability in groundwater quality unrelated to practices at the site.

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 us.

For Groundwater Stats Consulting,

Tristan Clark

**Groundwater Analyst** 

Tristan Clark

Andrew Collins
Project Manager

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Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

## 100% Non-Detects: Appendix IV Downgradient

Analysis Run 11/2/2022 12:37 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Antimony (mg/L) HGWC-124

Beryllium (mg/L)

HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126

Cadmium (mg/L)

HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126

Cobalt (mg/L)

HGWC-124, HGWC-126

Mercury (mg/L)

HGWC-121A, HGWC-125, HGWC-126

Molybdenum (mg/L)

HGWC-121A, HGWC-126

Selenium (mg/L)

HGWC-125, HGWC-126

Thallium (mg/L)

HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126

## Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 6:56 PM

Constituent	Well	Upper Lim.	Lower Lim.	<u>Date</u>	Observ.	Sig. Bg N%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-120	0.44	n/a	8/4/2022	1	Yes 100 5	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.44	n/a	8/4/2022	1.8	Yes 100 5	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.44	n/a	8/4/2022	1.4	Yes 100 5	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	n/a	8/4/2022	173	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	n/a	8/4/2022	160	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	n/a	8/4/2022	170	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-126	138	n/a	8/4/2022	141	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	n/a	8/4/2022	230	Yes 100 1	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	n/a	8/4/2022	162	Yes 100 1	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	n/a	8/4/2022	331	Yes 100 1	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	8/4/2022	640	Yes 99 0	n/a	n/a	0.0001978	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	8/4/2022	706	Yes 99 0	n/a	n/a	0.0001978	NP Inter (normality) 1 of 2

## Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 6:56 PM

Boron (mg/L)         HGWC-120         0.44         n/a         8/4/2022         1         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-121A         0.44         n/a         8/4/2022         1.8         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-124         0.44         n/a         8/4/2022         0.36         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-125         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         0.023J         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         173         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a
Boron (mg/L)         HGWC-124         0.44         n/a         8/4/2022         0.36         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-125         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         0.23J         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a
Boron (mg/L)         HGWC-125         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         0.023J         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         103         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a
Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         0.023J         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-126         44.8         n/a         8/4/2022         2.7         No 100 0         n/a<
Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         173         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         2.7         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-1214         44.8         n/a         8/4/2022         15.4         No 100 0         n/a<
Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         103         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-126         44.8         n/a         8/4/2022         2.7         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0         n/
Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         103         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-125         44.8         n/a         8/4/2022         16.6         No 100 0         n
Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-125         44.8         n/a         8/4/2022         11.6         N
Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-125         44.8         n/a         8/4/2022         11.6         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-120 44.8 n/a 8/4/2022 2.7 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-121A 44.8 n/a 8/4/2022 15.4 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-124 44.8 n/a 8/4/2022 2.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-125 44.8 n/a 8/4/2022 11.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L)
Chloride (mg/L) HGWC-121A 44.8 n/a 8/4/2022 15.4 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-124 44.8 n/a 8/4/2022 2.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-125 44.8 n/a 8/4/2022 11.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L)
Chloride (mg/L) HGWC-124 44.8 n/a 8/4/2022 2.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-125 44.8 n/a 8/4/2022 11.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-125 44.8 n/a 8/4/2022 11.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-126 44.8 n/a 8/4/2022 8.7 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-120 0.96 n/a 8/4/2022 0.38 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-121A 0.96 n/a 8/4/2022 0.18 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-124 0.96 n/a 8/4/2022 0.074J No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-125 0.96 n/a 8/4/2022 0.15 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-126 0.96 n/a 8/4/2022 0.5 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-120 8.25 4.57 8/4/2022 6.93 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-121A 8.25 4.57 8/4/2022 6.8 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-124 8.25 4.57 8/4/2022 7.15 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-125 8.25 4.57 8/4/2022 6.09 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-126 8.25 4.57 8/4/2022 6.99 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-120 88.2 n/a 8/4/2022 230 Yes 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-121A 88.2 n/a 8/4/2022 162 Yes 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-124 88.2 n/a 8/4/2022 73.1 No 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-125 88.2 n/a 8/4/2022 331 Yes 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-126 88.2 n/a 8/4/2022 68.3 No 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-120 632 n/a 8/4/2022 632 No 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-121A 632 n/a 8/4/2022 640 Yes 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-124 632 n/a 8/4/2022 334 No 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-125 632 n/a 8/4/2022 706 Yes 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-126 632 n/a 8/4/2022 510 No 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2

## Appendix III Trend Test - Significant Results

	Plant Hammond Client:	Southern Company	Data: Har	mmond AP-3	Print	ted 10/20	0/2022, 7	:00 PM			
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWA-122 (bg)	-0.02454	-84	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002545	111	74	Yes	19	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.04213	-73	-68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2499	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.436	99	81	Yes	20	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.681	-68	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-126	13.84	40	34	Yes	11	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.483	-76	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.619	101	74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-16.59	-98	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.95	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-121A	-52.05	-94	-63	Yes	17	5.882	n/a	n/a	0.01	NP

### Appendix III Trend Test - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 7:00 PM Constituent Well Slope Calc. Critical Sig. <u>N</u> <u>%NDs</u> <u>Normality</u> <u>Xform</u> <u>Alpha</u> Method HGWA-1 (bg) -0.0004303 -27 20 NP Boron (mg/L) -81 No 0 n/a n/a 0.01 HGWA-122 (bg) -0.02454 -84 NP Boron (mg/L) -63 Yes n/a 0.01 Boron (mg/L) HGWA-2 (bg) 0.002545 111 74 Yes 19 0 n/a n/a 0.01 NP HGWA-3 (bg) 0.0003378 22 NP 81 No 20 20 0.01 Boron (mg/L) n/a n/a Boron (mg/L) HGWA-43D (bg) -0.01038 -21 No NP Boron (mg/L) HGWA-44D (bg) 0.1016 13 21 No 8 12.5 n/a n/a 0.01 NP Boron (mg/L) HGWA-45D (bg) -0.01353 -11 -21 No 8 0 0.01 NP n/a n/a HGWC-120 Boron (mg/L) -0.04213 -73 Yes 18 n/a n/a 0.01 NΡ Boron (mg/L) HGWC-121A -0.2499 -96 -63 Yes 17 0 n/a n/a 0.01 NP HGWC-125 0 8 Nο 0 NP Boron (mg/L) 34 11 n/a n/a 0.01 Calcium (mg/L) HGWA-1 (bg) 2.653 61 81 No 20 0 n/a n/a 0.01 NΡ Calcium (mg/L) HGWA-122 (bg) -2.468 -40 -63 No 17 0 n/a 0.01 NP 0.7505 51 NP Calcium (mg/L) HGWA-2 (ba) 74 No 19 0 n/a n/a 0.01 Calcium (mg/L) HGWA-3 (bg) 2.436 99 0.01 NP 81 Yes 20 n/a n/a Calcium (mg/L) HGWA-43D (bg) -3.927 -14 -21 No 8 0 n/a n/a 0.01 NP 0 HGWA-44D (bg) -5.744 -14 No 8 NP Calcium (mg/L) -21 n/a n/a 0.01 HGWA-45D (bg) -3.572 -18 -21 No 8 0 0.01 ΝP Calcium (mg/L) n/a n/a Calcium (mg/L) HGWC-120 1.46 33 68 No 18 0 0.01 NP HGWC-121A -5.681 Calcium (mg/L) -68 -63 Yes 17 0 n/a n/a 0.01 NP Calcium (mg/L) HGWC-125 8.147 10 34 No 11 n/a n/a 0.01 NP Calcium (mg/L) HGWC-126 13.84 40 34 Yes 11 0 n/a n/a 0.01 NP 35 81 0 NP Sulfate (mg/L) HGWA-1 (bg) 1.779 Nο 20 n/a n/a 0.01 HGWA-122 (bg) -1.483 -76 -63 Yes 17 0 n/a 0.01 NP Sulfate (mg/L) n/a Sulfate (mg/L) HGWA-2 (bg) 1.619 101 74 Yes 19 0 0.01 NP Sulfate (mg/L) HGWA-3 (ba) 0.673 52 81 No 20 0 n/a n/a 0.01 NP Sulfate (mg/L) HGWA-43D (bg) -1.657 -20 -21 No 0.01 n/a n/a Sulfate (mg/L) HGWA-44D (bg) 4.085 8 21 No 8 12.5 n/a n/a 0.01 NP HGWA-45D (ba) Sulfate (mg/L) -4.804 -12 -21 No 8 0 n/a n/a 0.01 NP HGWC-120 -16.59 -98 -68 18 0 0.01 NP Sulfate (mg/L) Yes n/a Sulfate (mg/L) HGWC-121A -25.95 -96 -63 Yes 17 0 0.01 NP HGWC-125 -27 92 Sulfate (mg/L) -21 -34 Nο 11 0 n/a n/a 0.01 NP Total Dissolved Solids (mg/L) HGWA-1 (ba) 3.538 14 81 No 20 0 n/a n/a 0.01 NP Total Dissolved Solids (mg/L) HGWA-122 (bg) -11.75 -48 -58 No 0 0.01 NP 0 Total Dissolved Solids (mg/L) HGWA-2 (bg) 1.249 6 74 Nο 19 n/a n/a 0.01 NP Total Dissolved Solids (mg/L) 17 No 20 0 NP HGWA-3 (bg) 1.162 81 n/a n/a 0.01 Total Dissolved Solids (mg/L) HGWA-43D (bg) -11.77 -8 -21 No 8 0 0.01 NP Total Dissolved Solids (mg/L) HGWA-44D (bg) 59.96 18 21 No 8 0 n/a n/a 0.01 NP HGWA-45D (bg) NP Total Dissolved Solids (mg/L) -7.51 -8 -21 8 0.01 No 0 n/a n/a Total Dissolved Solids (mg/L) HGWC-121A -52.05 -94 Yes 17 n/a 0.01 ΝP Total Dissolved Solids (mg/L) HGWC-125 -12 NP -33 98 -34 Nο 11 n/a 0.01

## **Upper Tolerance Limits**

Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 7:13 PM Well Upper Lim. Date Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. Constituent Observ. <u>Alpha</u> Method 0.003 n/a 99 n/a 84.85 n/a 0.006232 NP Inter(NDs) Antimony (mg/L) n/a n/a n/a n/a n/a Arsenic (mg/L) 0.005 n/a 97 0.006905 NP Inter(NDs) Barium (mg/L) n/a 0.64 n/a n/a n/a 107 n/a n/a 0.9346 n/a n/a 0.004135 NP Inter(normality) 0.0005 82.83 0.006232 NP Inter(NDs) Beryllium (mg/L) n/a n/a n/a 99 n/a n/a n/a n/a n/a Cadmium (mg/L) 0.0005 n/a 97 n/a 88.66 0.006905 NP Inter(NDs) 0.0079 0.005625 NP Inter(NDs) Chromium (mg/L) n/a n/a n/a n/a 101 n/a n/a 78.22 n/a n/a 0.038 n/a 107 n/a 0.004135 NP Inter(NDs) Cobalt (mg/L) n/a n/a n/a n/a 77.57 n/a n/a Combined Radium 226 + 228 (pCi/L) n/a 1.648 n/a n/a 100 0.787 0.2581 None sqrt(x) 0.05 Fluoride (mg/L) 0.96 n/a n/a n/a 114 n/a n/a 24.56 n/a n/a 0.002887 NP Inter(normality) 0.001 0.005625 Lead (mg/L) n/a n/a n/a n/a 101 n/a n/a 67.33 n/a n/a NP Inter(NDs) Lithium (mg/L) n/a 0.048 n/a n/a 107 n/a 32.71 n/a 0.004135 NP Inter(normality) n/a n/a n/a 0.0002 0.01738 NP Inter(NDs) Mercury (mg/L) n/a n/a n/a n/a 79 n/a n/a 93.67 n/a n/a 0.01 n/a 109 n/a 66.97 0.003731 NP Inter(NDs) Molybdenum (mg/L) n/a n/a n/a n/a n/a n/a Selenium (mg/L) n/a 0.005 n/a 97 n/a 97.94 n/a 0.006905 NP Inter(NDs) Thallium (mg/L) n/a 0.001 n/a n/a n/a 97 n/a n/a 98.97 n/a n/a 0.006905 NP Inter(NDs)

PLANT HAMMOND AP-3 GWPS									
		CCR-Rule	Background						
Constituent Name	MCL	Specified	Limit	GWPS					
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		0.64	2					
Beryllium, Total (mg/L)	0.004		0.0005	0.004					
Cadmium, Total (mg/L)	0.005		0.0005	0.005					
Chromium, Total (mg/L)	0.1		0.0079	0.1					
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038					
Combined Radium, Total (pCi/L)	5		1.65	5					
Fluoride, Total (mg/L)	4		0.96	4					
Lead, Total (mg/L)	n/a	0.015	0.001	0.015					
Lithium, Total (mg/L)	n/a	0.04	0.048	0.048					
Mercury, Total (mg/L)	0.002		0.0002	0.002					
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1					
Selenium, Total (mg/L)	0.05		0.005	0.05					
Thallium, Total (mg/L)	0.002		0.001	0.002					

<sup>\*</sup>Grey cell indidcates background is higher than MCL or CCR-Rule

<sup>\*</sup>MCL = Maximum Contaminant Level

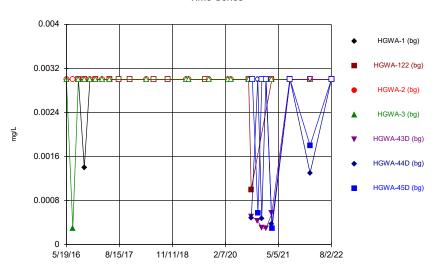
<sup>\*</sup>CCR = Coal Combustion Residuals

<sup>\*</sup>GWPS = Groundwater Protection Statard

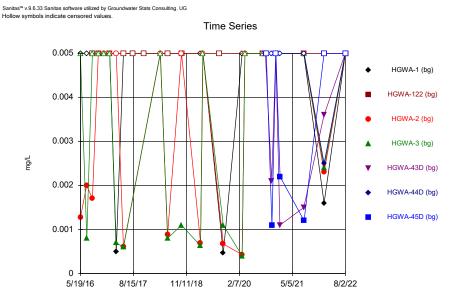
# Confidence Interval - All Results (No Significant) Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 11/1/2022, 9:54 AM

	Plant	Hammond	Client: Southern Co	mpany Data	a: Hamr	mond AP	-3 Printe	d 11/1/2022, 9:54 A	M	
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	%NDs	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	15	93.33	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-121A	0.003	0.0016	0.006	No	15	93.33	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-124	0.003	0.003	0.006	No	15	100	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00061	0.006	No	11	81.82	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.00043	0.006	No	11	81.82	No	0.006	NP (NDs)
Arsenic (mg/L)	HGWC-120	0.005	0.001	0.01	No	13	61.54	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-121A	0.005	0.0014	0.01	No	13	76.92	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-124	0.005	0.0006	0.01	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-125	0.005	0.0014	0.01	No	10	70	No	0.011	NP (NDs)
Arsenic (mg/L)	HGWC-126	0.005	0.00091	0.01	No	10	70	No	0.011	NP (NDs)
Barium (mg/L)	HGWC-120	0.05171	0.04652	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08026	0.06462	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.0728	0.06747	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04629	0.0408	2	No	11	0	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2562	0.2275	2	No	11	0	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	17	82.35	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	17	94.12	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	17	88.24	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00058	0.1	No	11	72.73	No	0.006	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.005	0.1	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.004435	0.002982	0.038	No	17	0	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	17	82.35	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-124	0.005	0.005	0.038	No	17	100	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01265	0.007679	0.038	No	11	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-126	0.005	0.005	0.038	No	11	100	No	0.006	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.087	0.6342	5	No	16	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.169	0.492	5	No	16	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.8959	0.5525	5	No	16	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.423	0.6226	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.687	0.9815	5	No	10	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-120	1	0.37	4	No	20	0	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.2	0.14	4	No	18	0	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.11	0.05	4	No	18	38.89	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1686	0.115	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.4938	0.4389	4	No	11	0	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.015	No	17	82.35	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.015	No	17	82.35	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.00008	0.015	No No	17	70.59	No No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125 HGWC-126	0.001 0.001	0.000047 0.000045	0.015 0.015	No	11	54.55 72.73	No	0.006 0.006	NP (NDs)
Lead (mg/L)					No	11 17	0	No		NP (NDs)
Lithium (mg/L) Lithium (mg/L)	HGWC-120 HGWC-121A	0.0337 0.00897	0.023 0.007677	0.048 0.048	No No	17	0	No No	0.01 0.01	NP (normality) Param.
Lithium (mg/L)	HGWC-121A	0.00537	0.007077	0.048	No	17	29.41	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.005757	0.00377	0.048	No	11	0	No	0.01	Param.
Lithium (mg/L)	HGWC-126	0.003737	0.00377	0.048	No	11	0	No	0.01	Param.
Mercury (mg/L)	HGWC-120	0.0002	0.000200	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-121A	0.0002	0.00007	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-124	0.0002	0.0002	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-125	0.0002	0.0002	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	HGWC-126	0.0002	0.0002	0.002	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	HGWC-120	0.03746	0.02651	0.1	No	17	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-121A	0.01	0.01	0.1	No	17	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.1	No	17	35.29	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.01036	-0.0001221	0.1	No	11	27.27	No	0.01	Param.
Molybdenum (mg/L)	HGWC-126	0.01030	0.01	0.1	No	11	100	No	0.006	NP (NDs)
Selenium (mg/L)	HGWC-120	0.005	0.002	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-121A	0.005	0.0011	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-124	0.005	0.0014	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-125	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
Selenium (mg/L)	HGWC-126	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
										. /

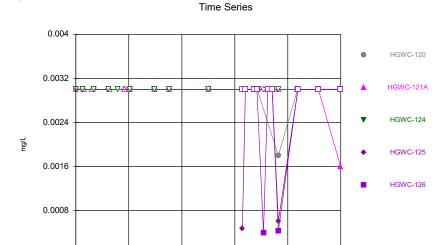
# FIGURE A.



Constituent: Antimony Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Arsenic Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Antimony Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

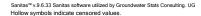
3/21/20

5/28/21

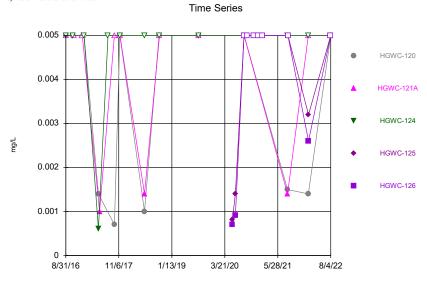
8/4/22

1/13/19

11/6/17

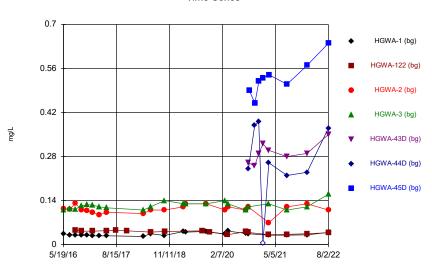


8/31/16



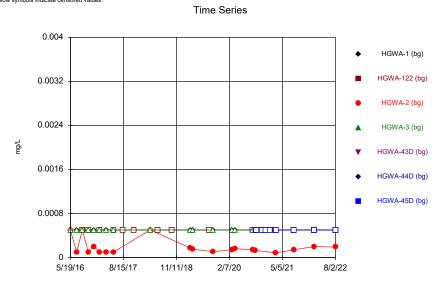
Constituent: Arsenic Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3





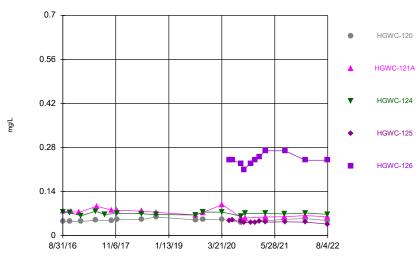
Constituent: Barium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

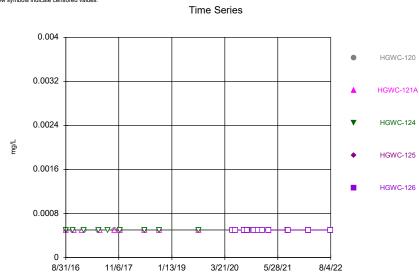


Constituent: Beryllium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

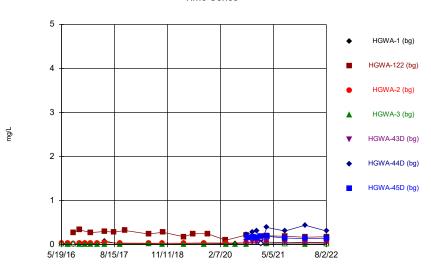
#### Time Series



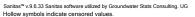
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Plant Hammond Client: Southern Company Data: Hammond AP-3

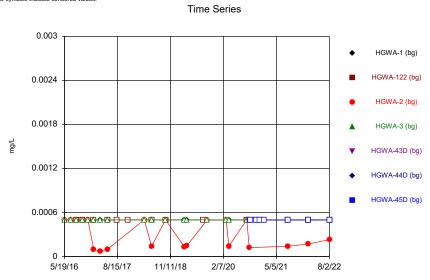


Constituent: Beryllium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



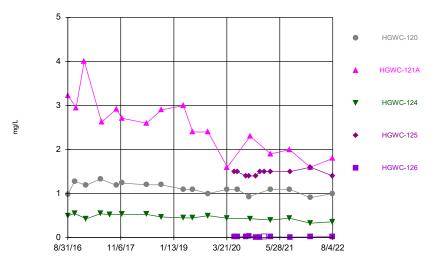
Constituent: Boron Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



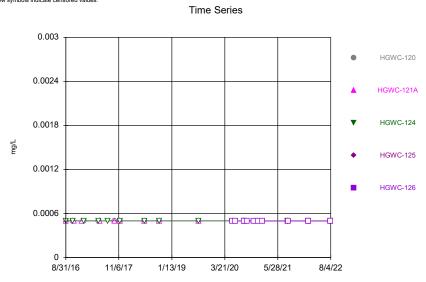


Constituent: Cadmium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

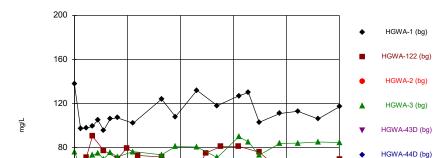




Constituent: Boron Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Cadmium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Calcium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

2/7/20

5/5/21

8/2/22

11/11/18

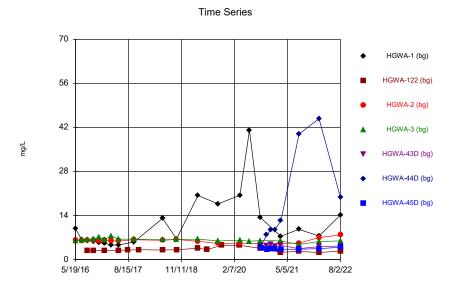
HGWA-45D (bg)

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

40

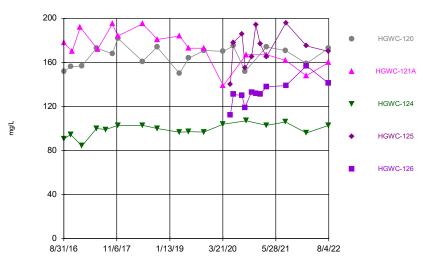
5/19/16

8/15/17



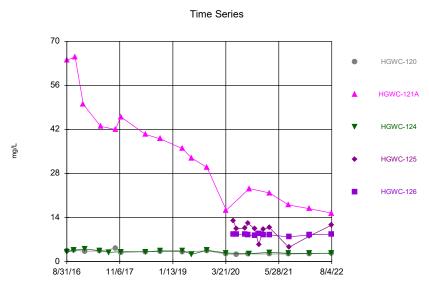
Constituent: Chloride Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Time Series



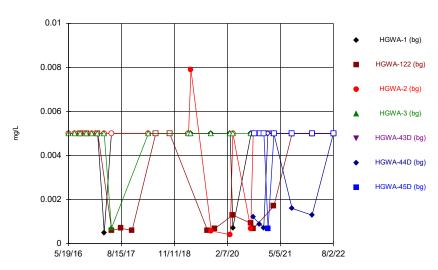
Constituent: Calcium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG



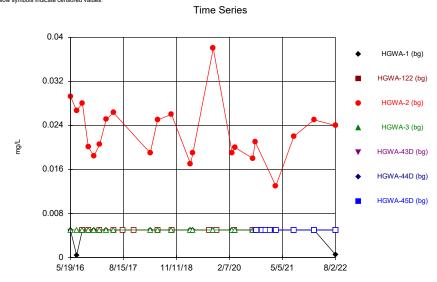
Constituent: Chloride Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3





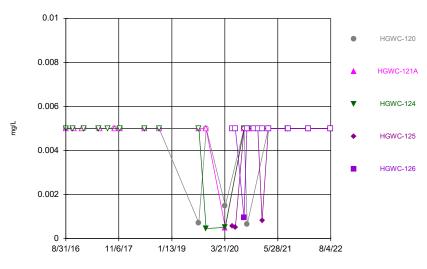
Constituent: Chromium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

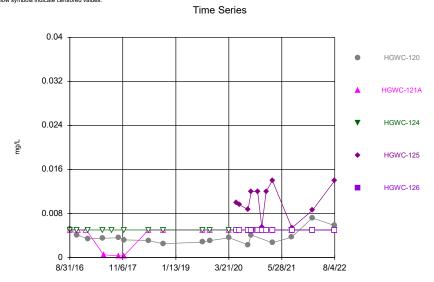


Constituent: Cobalt Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

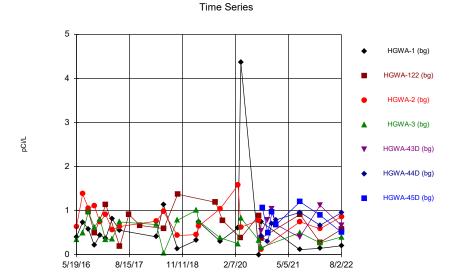
#### Time Series



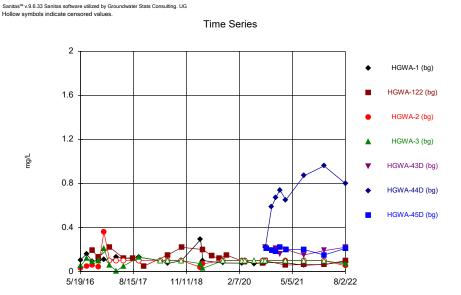
Constituent: Chromium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



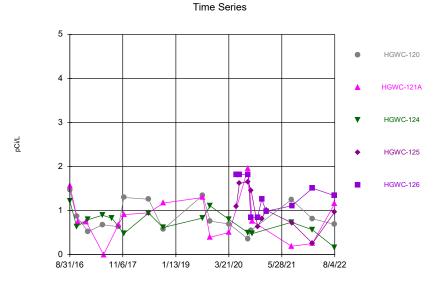
Constituent: Cobalt Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



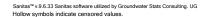
Constituent: Combined Radium 226 + 228 Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plo
Plant Hammond Client: Southern Company Data: Hammond AP-3

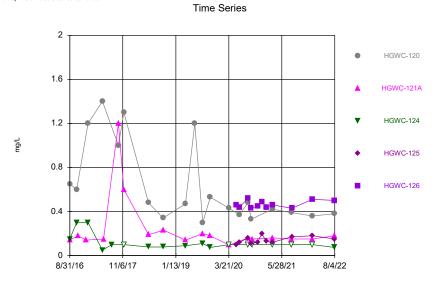


Constituent: Fluoride Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

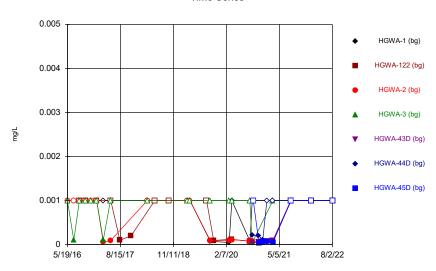


Constituent: Combined Radium 226 + 228 Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plo
Plant Hammond Client: Southern Company Data: Hammond AP-3



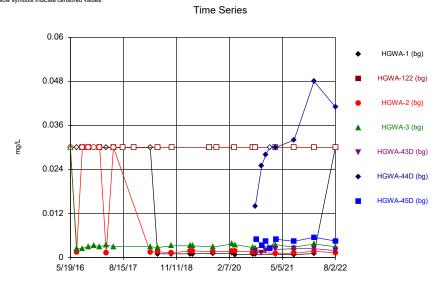


Constituent: Fluoride Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



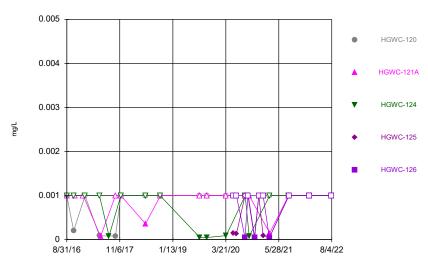
Constituent: Lead Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Lithium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Time Series

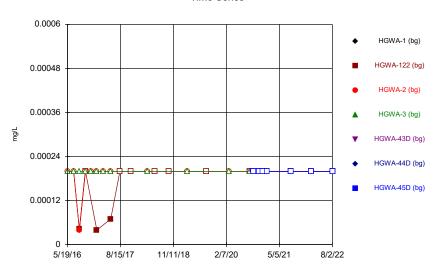


Constituent: Lead Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

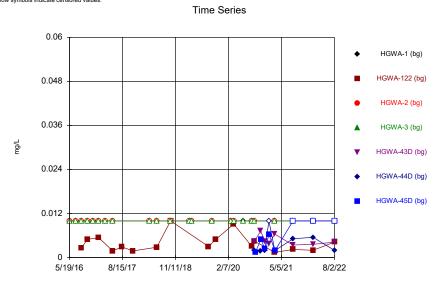
### Time Series 0.06 HGWC-120 0.048 HGWC-121A HGWC-124 0.036 HGWC-125 0.024 HGWC-126 0.012 8/31/16 11/6/17 1/13/19 3/21/20 5/28/21 8/4/22

Constituent: Lithium Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



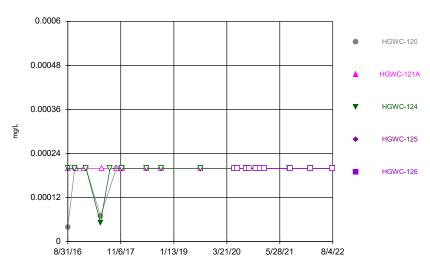
Constituent: Mercury Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

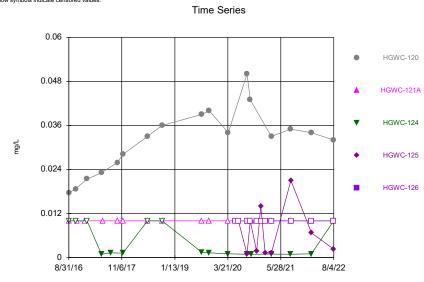


Constituent: Molybdenum Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Time Series

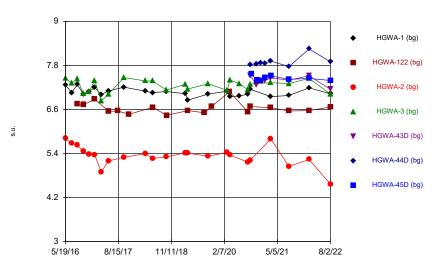


Constituent: Mercury Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



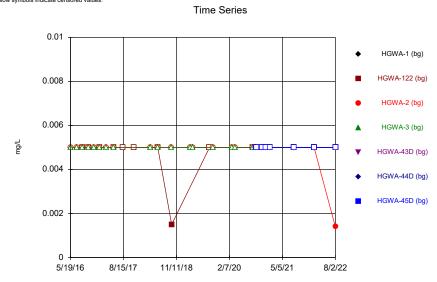
Constituent: Molybdenum Analysis Run 10/27/2022 5:08 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3





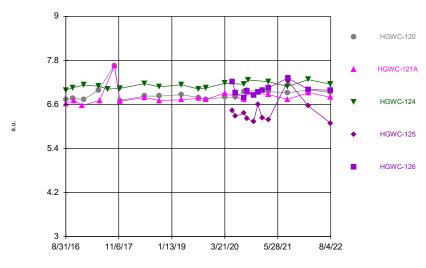
# Constituent: pH Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot Plant Hammond Client: Southern Company Data: Hammond AP-3

### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

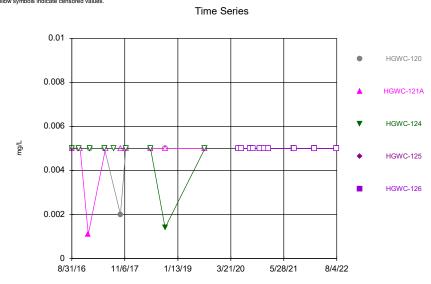


Constituent: Selenium Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

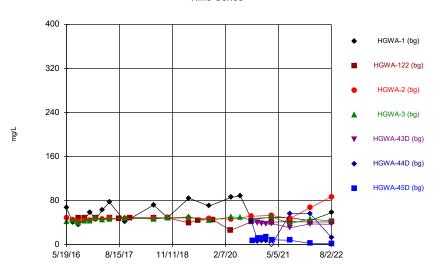
#### Time Series



Constituent: pH Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

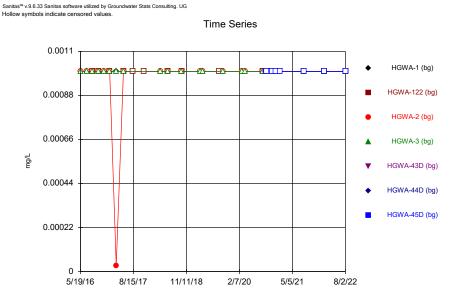


Constituent: Selenium Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



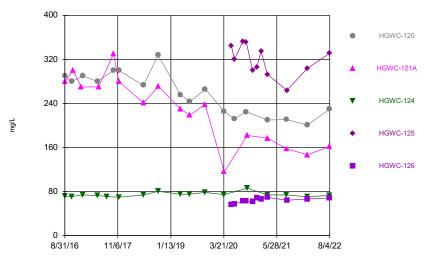
Constituent: Sulfate Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot

Plant Hammond Client: Southern Company Data: Hammond AP-3

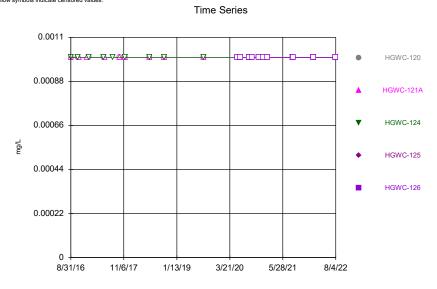


Constituent: Thallium Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Time Series



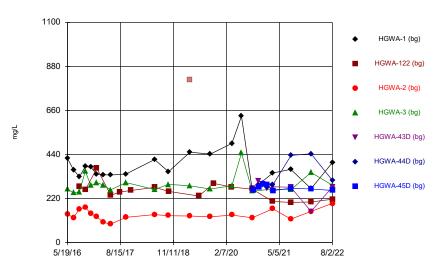
Constituent: Sulfate Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Thallium Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

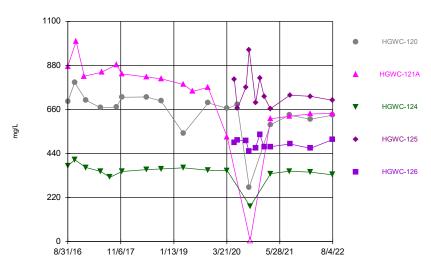
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG





Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

#### Time Series



Constituent: Total Dissolved Solids Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Constituent: Antimony (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
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			
10/19/2016	0.0014 (J)		<0.003	< 0.003			
10/20/2016		<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					
3/21/2017	<0.003		<0.003	<0.003			
5/22/2017	<0.003		<0.003	<0.003			
5/25/2017		<0.003					
8/11/2017		<0.003					
11/15/2017		<0.003					
4/2/2018	<0.003		<0.003				
4/3/2018				<0.003			
6/5/2018		<0.003					
10/2/2018		<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					
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			
8/28/2020	<0.003						
9/15/2020	<0.003	0.001 (J)	<0.003	<0.003			
9/16/2020					0.00051 (J)	0.00049 (J)	
9/25/2020							<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
1/19/2021					0.00029 (J)	<0.003	
1/20/2021							<0.003
3/10/2021	<0.003					0.00037 (J)	
3/11/2021		<0.003	<0.003	<0.003	0.00057 (J)		
3/12/2021							0.0003 (J)
8/11/2021	<0.003				<0.003		
8/12/2021			<0.003	<0.003			
8/13/2021		<0.003				<0.003	<0.003
2/1/2022	<0.003	<0.003	<0.003	<0.003	<0.003	0.0013 (J)	0.0018 (J)
8/2/2022	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003

Constituent: Antimony (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

					• •
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.003	<0.003	<0.003		
10/26/2016	<0.003		<0.003		
11/7/2016		<0.003			
1/13/2017		<0.003			
1/27/2017	<0.003		<0.003		
5/25/2017	<0.003		<0.003		
6/3/2017		<0.003			
8/11/2017			<0.003		
10/2/2017	<0.003	<0.003			
11/15/2017	<0.003	<0.003	<0.003		
6/5/2018	<0.003	<0.003	<0.003		
10/2/2018	<0.003		<0.003		
10/5/2018		<0.003			
8/22/2019	<0.003	<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	<0.003			
8/27/2020			<0.003		
9/18/2020					<0.003
9/21/2020	<0.003			<0.003	
9/28/2020		<0.003	<0.003		
11/11/2020					0.0004 (J)
11/12/2020				< 0.003	
12/16/2020				< 0.003	<0.003
1/20/2021				<0.003	<0.003
3/12/2021	0.0018 (J)			0.00061 (J)	0.00043 (J)
3/15/2021		<0.003	<0.003		
8/16/2021	<0.003	<0.003	<0.003		
8/19/2021				< 0.003	<0.003
2/2/2022	<0.003	<0.003	<0.003		
2/3/2022				< 0.003	<0.003
8/4/2022	<0.003	0.0016 (J)	<0.003	< 0.003	<0.003

Constituent: Arsenic (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
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			
10/19/2016	<0.005		<0.005	<0.005			
10/20/2016		<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					
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					
8/11/2017		<0.005					
11/15/2017		<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					
10/1/2018	<0.005		<0.005	0.0011 (J)			
10/2/2018		<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					
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			
8/28/2020	<0.005						
9/15/2020	<0.005		<0.005	<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
1/19/2021					0.0011 (J)	<0.005	
1/20/2021							0.0022 (J)
8/11/2021	<0.005				0.0015 (J)		
8/12/2021			<0.005	<0.005			
8/13/2021		<0.005				<0.005	0.0012 (J)
2/1/2022	0.0016 (J)	<0.005	0.0023 (J)	0.0024 (J)	0.0036 (J)	0.0025 (J)	<0.005
8/2/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Constituent: Arsenic (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	
8/31/2016	<0.005	<0.005	<0.005			
10/26/2016	<0.005		<0.005			
11/7/2016		<0.005				
1/13/2017		<0.005				
1/27/2017	<0.005		<0.005			
5/25/2017	0.0014 (J)		0.0006 (J)			
6/3/2017		0.001 (J)				
8/11/2017			<0.005			
10/2/2017	0.0007 (J)	<0.005				
11/15/2017	<0.005	<0.005	<0.005			
6/5/2018	0.001 (J)	0.0014 (J)	<0.005			
10/2/2018	<0.005		<0.005			
10/5/2018		<0.005				
8/22/2019	<0.005	<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				
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	
1/20/2021				<0.005	<0.005	
8/16/2021	0.0015 (J)	0.0014 (J)	<0.005			
8/19/2021				<0.005	<0.005	
2/2/2022	0.0014 (J)	<0.005	<0.005			
2/3/2022				0.0032 (J)	0.0026 (J)	
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005	

Constituent: Barium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	0.0346		0.114	0.111			
7/11/2016	0.0311		0.112				
7/12/2016				0.115			
8/30/2016	0.0293	0.0463	0.131	0.113			
10/19/2016	0.0293		0.111	0.123			
10/20/2016		0.0431					
12/6/2016	0.0304		0.108	0.127			
1/24/2017	0.028		0.102	0.126			
1/25/2017		0.0429					
3/21/2017	0.0275		0.095	0.12			
5/22/2017	0.0281		0.103	0.117			
5/25/2017		0.0447					
8/11/2017		0.0451					
11/15/2017		0.0439					
4/2/2018	0.026		0.099				
4/3/2018				0.11			
6/4/2018	0.035		0.11	0.12			
6/5/2018		0.04					
10/1/2018	0.029		0.11	0.14			
10/2/2018		0.042					
3/12/2019	0.042		0.12	0.13			
4/1/2019				0.13			
4/2/2019	0.04		0.13				
8/22/2019	0.01	0.044	0.10				
9/23/2019	0.042		0.13	0.13			
10/21/2019	0.0.2	0.04	0.10	00			
3/2/2020	0.034	0.0 .	0.11	0.14			
3/24/2020	0.00	0.032					
3/25/2020	0.043	0.002	0.12	0.13			
8/24/2020	0.043	0.041	0.12	0.15			
8/25/2020		0.041	0.11	0.11			
8/28/2020	0.036						
9/15/2020	0.035	0.039	0.12	0.12			
9/16/2020	0.033	0.033	0.12	0.12	0.26	0.24	
9/25/2020					0.20	0.24	0.49
11/10/2020					0.25	0.38	0.43
11/11/2020					0.23	0.50	0.45
12/15/2020					0.29	0.39	0.40
12/16/2020					0.23	0.00	0.52
1/19/2021					0.32	<0.01	V.02
					0.32	<b>~0.01</b>	0.52
1/20/2021 3/10/2021	0.03					0.26	0.53
	0.03	0.033	0.07	0.12	0.2	0.20	
3/11/2021 3/12/2021		0.032	0.07	0.13	0.3		0.54
8/11/2021	0.03				0.28		U.J <del>Y</del>
8/11/2021	0.03		0.12	0.11	0.20		
		0.033	0.12	0.11		0.22	0.51
8/13/2021 2/1/2022	0.021	0.033 0.035	0.12	0.12	0.20		0.51
8/2/2022	0.031 0.039	0.035	0.13 0.11	0.12 0.16	0.29 0.35	0.23 0.37	0.57 0.64
0,2,2022	0.009	0.030	0.11	0.10	0.00	0.37	U.UT

Constituent: Barium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.045	0.0782	0.0744		
10/26/2016	0.0462		0.0735		
11/7/2016		0.0764			
1/13/2017		0.0744			
1/27/2017	0.0451		0.0632		
5/25/2017	0.0488		0.0773		
6/3/2017		0.0933			
8/11/2017			0.0672		
10/2/2017	0.0479	0.0815			
11/15/2017	0.051	0.0807	0.0707		
6/5/2018	0.051	0.078	0.07		
10/2/2018	0.059		0.067		
10/5/2018		0.074			
8/22/2019	0.05	0.066			
8/23/2019			0.066		
10/21/2019		0.074	0.075		
10/22/2019	0.051				
3/24/2020			0.075		
3/25/2020	0.052	0.099			
5/22/2020				0.048	0.24
6/16/2020				0.049	0.24
8/25/2020				0.045	0.23
8/26/2020	0.041	0.057			
8/27/2020			0.062		
9/18/2020					0.21
9/21/2020	0.046			0.042	
9/28/2020		0.056	0.071		
11/11/2020					0.23
11/12/2020				0.042	
12/16/2020				0.041	0.24
1/20/2021				0.045	0.25
3/12/2021	0.047			0.043	0.27
3/15/2021		0.059	0.071		
8/16/2021	0.052	0.06	0.069		
8/19/2021				0.044	0.27
2/2/2022	0.054	0.064	0.072		
2/3/2022				0.043	0.24
8/4/2022	0.048	0.06	0.068	0.037	0.24

Constituent: Beryllium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

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	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
5/19/2016	<0.0005		<0.0005	<0.0005			
7/11/2016	<0.0005		0.0001 (J)				
7/12/2016				<0.0005			
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005			
10/19/2016	<0.0005		0.0001 (J)	<0.0005			
10/20/2016		<0.0005					
12/6/2016	<0.0005		0.0002 (J)	<0.0005			
1/24/2017	<0.0005		0.0001 (J)	<0.0005			
1/25/2017		<0.0005					
3/21/2017	<0.0005		0.0001 (J)	<0.0005			
5/22/2017	<0.0005		0.0001 (J)	<0.0005			
5/25/2017		<0.0005					
8/11/2017		<0.0005					
11/15/2017		<0.0005					
4/2/2018	<0.0005		<0.0005				
4/3/2018				<0.0005			
6/5/2018		<0.0005					
10/2/2018		<0.0005					
3/12/2019	<0.0005		0.00017 (J)	<0.0005			
4/1/2019				<0.0005			
4/2/2019	<0.0005		0.00015 (J)				
8/22/2019		<0.0005					
9/23/2019	<0.0005		0.00011 (J)	<0.0005			
3/2/2020	<0.0005		0.00014 (J)	<0.0005			
3/25/2020	<0.0005		0.00016 (J)	<0.0005			
8/24/2020		<0.0005					
8/25/2020			0.00014 (J)	<0.0005			
8/28/2020	<0.0005						
9/15/2020	<0.0005	<0.0005	0.00013 (J)	<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
1/19/2021					<0.0005	<0.0005	
1/20/2021							<0.0005
3/10/2021	<0.0005					<0.0005	
3/11/2021		<0.0005	8.6E-05 (J)	<0.0005	<0.0005		
3/12/2021							<0.0005
8/11/2021	<0.0005				<0.0005		
8/12/2021			0.00014 (J)	<0.0005			
8/13/2021		<0.0005				<0.0005	<0.0005
2/1/2022	<0.0005	<0.0005	0.0002 (J)	<0.0005	<0.0005	<0.0005	<0.0005
8/2/2022	<0.0005	<0.0005	0.00019 (J)	<0.0005	<0.0005	<0.0005	<0.0005

Constituent: Beryllium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

		HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8	3/31/2016	<0.0005	<0.0005	<0.0005		
1	0/26/2016	<0.0005		<0.0005		
1	1/7/2016		<0.0005			
1	/13/2017		<0.0005			
1	/27/2017	<0.0005		<0.0005		
5	5/25/2017	<0.0005		<0.0005		
6	5/3/2017		<0.0005			
8	3/11/2017			<0.0005		
1	0/2/2017	<0.0005	<0.0005			
1	1/15/2017	<0.0005	<0.0005	<0.0005		
6	6/5/2018	<0.0005	<0.0005	<0.0005		
1	0/2/2018	<0.0005		<0.0005		
1	0/5/2018		<0.0005			
8	3/22/2019	<0.0005	<0.0005			
8	3/23/2019			<0.0005		
5	5/22/2020				<0.0005	<0.0005
6	6/16/2020				<0.0005	<0.0005
8	3/25/2020				<0.0005	<0.0005
8	3/26/2020	<0.0005	<0.0005			
8	3/27/2020			<0.0005		
9	)/18/2020					<0.0005
	9/21/2020	<0.0005			<0.0005	
9	0/28/2020		<0.0005	<0.0005		
1	1/11/2020					<0.0005
1	1/12/2020				<0.0005	
1	2/16/2020				<0.0005	<0.0005
1	/20/2021				<0.0005	<0.0005
3	3/12/2021	<0.0005			<0.0005	<0.0005
3	3/15/2021		<0.0005	<0.0005		
8	3/16/2021	<0.0005	<0.0005	<0.0005		
8	3/19/2021				<0.0005	<0.0005
2	2/2/2022	<0.0005	<0.0005	<0.0005		
2	2/3/2022				<0.0005	<0.0005
8	3/4/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Constituent: Boron (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	LIC/M/A 42D /h-=)	LICMA AAD (ba)	1101114 (FD (L.)
	(-3)		TIGVVA-Z (bg)	TIGVVA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
5/19/2016	0.0214 (J)		0.0321 (J)	<0.04			
7/11/2016	0.0142 (J)		0.0337 (J)				
7/12/2016				0.0074 (J)			
8/30/2016	0.0074 (J)	0.277	0.0173 (J)	<0.04			
10/19/2016	0.0224 (J)		0.0341 (J)	0.0085 (J)			
10/20/2016		0.336					
12/6/2016	0.0211 (J)		0.0326 (J)	0.0085 (J)			
1/24/2017	0.0165 (J)		0.0365 (J)	0.01 (J)			
1/25/2017		0.274					
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					
8/11/2017		0.285					
10/3/2017	0.0198 (J)		0.0386 (J)	0.0097 (J)			
11/15/2017		0.322					
6/4/2018	0.02 (J)		0.036 (J)	0.017 (J)			
6/5/2018		0.24					
10/1/2018	0.013 (J)		0.035 (J)	0.0061 (J)			
10/2/2018		0.28					
4/1/2019				0.0066 (J)			
4/2/2019	0.016 (J)	0.18	0.034 (J)				
6/18/2019		0.25					
9/23/2019	0.021 (J)		0.04 (J)	0.0081 (J)			
10/21/2019		0.25					
3/24/2020		0.1					
3/25/2020	0.025 (J)		0.039 (J)	0.0096 (J)			
	0.021 (J)			0.01 (J)			
9/15/2020	0.017 (J)	0.22	0.044 (J)	0.0071 (J)			
					0.061 (J)	0.23	
							0.16
					0.057 (J)	0.29	
							0.17
					0.052 (J)	0.31	
							0.16
					0.049 (J)	<0.04	
							0.19
	0.015 (J)					0.39	
		0.2	0.056	U.U15 (J)	0.06		0.40
							0.19
	0.02 (J)		0.044	-0.04	0.042		
		0.10	U.U44	<0.04		0.21	0.15
	0.016 (1)		0.056	0.011 (1)	0.05		0.15
							0.14
01212022	0.01∠ (J)	U. 10	0.047	<b>\U.U4</b>	0.043	0.31	0.14
	7/11/2016 7/12/2016 8/30/2016 10/19/2016 10/20/2016 12/6/2016 1/24/2017 1/25/2017 3/21/2017 5/25/2017 8/11/2017 10/3/2017 11/15/2017 6/4/2018 6/5/2018 10/1/2018 10/2/2018 4/1/2019 4/2/2019 6/18/2019 9/23/2019 10/21/2019 3/24/2020	7/11/2016 7/12/2016 8/30/2016 0.0074 (J) 10/19/2016 0.0224 (J) 10/20/2016 12/6/2016 0.0211 (J) 1/24/2017 0.0165 (J) 1/25/2017 3/21/2017 0.0187 (J) 5/22/2017 0.0782 5/25/2017 8/11/2017 10/3/2017 0.0198 (J) 11/15/2017 6/4/2018 0.013 (J) 10/2/2018 10/1/2018 0.013 (J) 10/2/2018 4/1/2019 4/2/2019 0.016 (J) 6/18/2019 9/23/2019 0.021 (J) 10/21/2019 3/24/2020 3/25/2020 0.025 (J) 6/16/2020 9/25/2020 11/10/2020 11/11/2020 11/11/2020 11/11/2020 11/11/2020 11/19/2021 3/10/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 8/11/2021 8/13/2021 2/1/2022 1/19/2021 8/13/2021 2/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2022 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2021 1/1/2022	7/11/2016 7/12/2016 8/30/2016 0.0074 (J) 0.277 10/19/2016 0.00224 (J) 10/20/2016 0.0224 (J) 10/20/2016 0.0211 (J) 1/24/2017 0.0165 (J) 1/25/2017 0.0187 (J) 5/22/2017 0.0782 5/25/2017 0.0782 5/25/2017 0.0198 (J) 11/15/2017 0.0198 (J) 11/15/2018 0.02 (J) 6/5/2018 0.024 10/1/2018 0.013 (J) 10/2/2018 4/1/2019 4/2/2019 0.016 (J) 0.18 6/18/2019 0.025 9/23/2019 0.021 (J) 10/21/2019 3/24/2020 3/25/2020 11/10/2020 11/11/2020 12/15/2020 12/16/2020 1/19/2021 3/11/2021	7/11/2016       0.0142 (J)       0.0337 (J)         7/12/2016       0.0074 (J)       0.277       0.0173 (J)         8/30/2016       0.0024 (J)       0.0341 (J)         10/19/2016       0.0224 (J)       0.0346         12/6/2016       0.0211 (J)       0.0365 (J)         1/24/2017       0.0165 (J)       0.0349 (J)         1/25/2017       0.0187 (J)       0.0349 (J)         5/22/2017       0.0782       0.0475         5/25/2017       0.0198 (J)       0.0386 (J)         1/1/2017       0.0198 (J)       0.0386 (J)         1/1/2018       0.02 (J)       0.0386 (J)         6/4/2018       0.02 (J)       0.0349 (J)         6/5/2018       0.024       0.036 (J)         1/1/2018       0.02 (J)       0.035 (J)         1/1/2019       0.016 (J)       0.18       0.034 (J)         6/18/2019       0.021 (J)       0.25       0.044 (J)         9/23/2019       0.021 (J)       0.25       0.044 (J)         9/15/2020       0.025 (J)       0.039 (J)       0.039 (J)         6/16/2020       0.021 (J)       0.02       0.044 (J)         9/15/2020       0.017 (J)       0.22       0.044 (J)	7711/2016       0.0142 (J)       0.0337 (J)       0.0074 (J)         8/30/2016       0.0074 (J)       0.277       0.0173 (J)       <0.04	7/11/2016       0.0142 (J)       0.0337 (J)	7711/2016         0.0142 (J)         0.0337 (J)         0.0074 (J)         0.014 (J)         0.017 (J)         0.014 (J)         0.017 (J)         0.018 (J)         0.018 (J)         0.018 (J)         0.018 (J)         0.018 (J)         0.018 (J)         0.0085 (J)

Constituent: Boron (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.981	3.23	0.494		
10/26/2016	1.28		0.55		
11/7/2016		2.95			
1/13/2017		4.01			
1/27/2017	1.19		0.428		
5/25/2017	1.33		0.544		
6/3/2017		2.62			
8/11/2017			0.524		
10/2/2017	1.19	2.92			
11/15/2017	1.24	2.71	0.531		
6/5/2018	1.2	2.6	0.53		
10/2/2018	1.2		0.47		
10/5/2018		2.9			
4/2/2019	1.1				
4/3/2019		3	0.45		
6/17/2019	1.1	2.4			
6/18/2019			0.45		
10/21/2019		2.4	0.5		
10/22/2019	1				
3/24/2020			0.44		
3/25/2020	1.1	1.6			
5/22/2020				1.5	0.026 (J)
6/15/2020	1.1				
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	0.93			1.4	.,
9/28/2020		2.3	0.43		
11/11/2020					0.009 (J)
11/12/2020				1.4	.,
12/16/2020				1.5	0.011 (J)
1/20/2021				1.5	<0.04
3/12/2021	1.1			1.5	0.016 (J)
3/15/2021		1.9	0.4	-	- (-)
8/16/2021	1.1	2	0.44		
8/19/2021			-	1.5	0.011 (J)
2/2/2022	0.91	1.6	0.33		(-)
2/3/2022				1.6	0.016 (J)
8/4/2022	1	1.8	0.36	1.4	0.023 (J)
J J_L	•		0.00		3.323 (0)

Constituent: Cadmium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	<0.0005		<0.0005	<0.0005			
7/11/2016	<0.0005		<0.0005				
7/12/2016				<0.0005			
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005			
10/19/2016	<0.0005		<0.0005	<0.0005			
10/20/2016		<0.0005					
12/6/2016	<0.0005		<0.0005	<0.0005			
1/24/2017	<0.0005		0.0001 (J)	<0.0005			
1/25/2017		<0.0005					
3/21/2017	<0.0005		7E-05 (J)	<0.0005			
5/22/2017	<0.0005		0.0001 (J)	<0.0005			
5/25/2017		<0.0005					
8/11/2017		<0.0005					
11/15/2017		<0.0005					
4/2/2018	<0.0005		<0.0005				
4/3/2018				<0.0005			
6/4/2018	<0.0005		0.00014 (J)	<0.0005			
6/5/2018		<0.0005					
10/1/2018	<0.0005		<0.0005	<0.0005			
10/2/2018		<0.0005					
3/12/2019	<0.0005		0.00013 (J)	<0.0005			
4/1/2019				<0.0005			
4/2/2019	<0.0005		0.00015 (J)				
8/22/2019		<0.0005					
9/23/2019	<0.0005		<0.0005	<0.0005			
3/2/2020	<0.0005		<0.0005	<0.0005			
3/25/2020	<0.0005		0.00014 (J)	<0.0005			
8/24/2020		<0.0005					
8/25/2020			<0.0005	<0.0005			
8/28/2020	<0.0005						
9/15/2020	<0.0005		0.00012 (J)	<0.0005			
9/16/2020					<0.0005	<0.0005	0.0005
9/25/2020					-0.0005	-0.0005	<0.0005
11/10/2020					<0.0005	<0.0005	<0.000E
11/11/2020 12/15/2020					<0.0005	<0.0005	<0.0005
12/16/2020					<0.0005	<0.0003	<0.0005
1/19/2021					<0.0005	<0.0005	NO.0003
1/20/2021					10.0003	10.0003	<0.0005
8/11/2021	<0.0005				<0.0005		5.5555
8/12/2021	0.0000		0.00014 (J)	<0.0005	5.5555		
8/13/2021		<0.0005	2.000.7(0)	0.000		<0.0005	<0.0005
2/1/2022	<0.0005	<0.0005	0.00017 (J)	<0.0005	<0.0005	<0.0005	<0.0005
8/2/2022	<0.0005	<0.0005	0.00023 (J)	<0.0005	<0.0005	<0.0005	<0.0005
		<del>-</del>	(-)	<del>-</del>	<del>-</del>		

Constituent: Cadmium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.0005	<0.0005	<0.0005		
10/26/2016	<0.0005		<0.0005		
11/7/2016		<0.0005			
1/13/2017		<0.0005			
1/27/2017	<0.0005		<0.0005		
5/25/2017	<0.0005		<0.0005		
6/3/2017		<0.0005			
8/11/2017			<0.0005		
10/2/2017	<0.0005	<0.0005			
11/15/2017	<0.0005	<0.0005	<0.0005		
6/5/2018	<0.0005	<0.0005	<0.0005		
10/2/2018	<0.0005		<0.0005		
10/5/2018		<0.0005			
8/22/2019	<0.0005	<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			
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
1/20/2021				<0.0005	<0.0005
8/16/2021	<0.0005	<0.0005	<0.0005		
8/19/2021				<0.0005	<0.0005
2/2/2022	<0.0005	<0.0005	<0.0005		
2/3/2022				<0.0005	<0.0005
8/4/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Constituent: Calcium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	138		22.9	76.2			
7/11/2016	97.2		22.3				
7/12/2016				61.5			
8/30/2016	97.5	71.3	26.4	65.1			
10/19/2016	99.2		21.7	73.2			
10/20/2016		90.3					
12/6/2016	105		18.2	74.9			
1/24/2017	95.7		18.5	69.6			
1/25/2017		77.3					
3/21/2017	106		18.6	75.7			
5/22/2017	107		17.8	71.5			
5/25/2017		69.9					
8/11/2017		79.5					
10/3/2017	102		20.2	76.3			
11/15/2017		72.8					
6/4/2018	124		19.1	73.4			
6/5/2018		71.4					
10/1/2018	108		20.5 (J)	80.9			
10/2/2018		66.6					
4/1/2019				80.5			
4/2/2019	132	60.9	22.5 (J)				
6/18/2019		75					
9/23/2019	118		19.5	71			
10/21/2019		80.8					
3/24/2020		81.2					
3/25/2020	127		23	89.8			
6/16/2020	130			85.1			
9/15/2020	103	75.8	21.1	73.1			
9/16/2020					56	30	
9/25/2020							56.8
11/10/2020					63.3	33.6	
11/11/2020							54.9
12/15/2020					62.6	28.7	
12/16/2020							56.4
1/19/2021					60.1	33	
1/20/2021							55
3/10/2021	111					18.3	
3/11/2021		60.4 (M1)	43.8	83.8	59.6		
3/12/2021							56.5
8/11/2021	113				61		
8/12/2021			21.9	84			
8/13/2021		62.9				28.9	53
2/1/2022	106	57.5	27.2	85.1	55.9	24.8	51.3
8/2/2022	117	69.5	31.2	84.6	54.1	20.9	49.9

Constituent: Calcium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	152	178	90.4		
10/26/2016	156		94.5		
11/7/2016		170			
1/13/2017		192			
1/27/2017	157		84.2		
5/25/2017	173		100		
6/3/2017		172			
8/11/2017			99.1		
10/2/2017	168	195			
11/15/2017	182	184	103		
6/5/2018	161	195	103		
10/2/2018	174		100		
10/5/2018		181			
4/2/2019	150				
4/3/2019		184	96.7		
6/17/2019	164	173			
6/18/2019			97.1		
10/21/2019		173	96.9		
10/22/2019	171				
3/24/2020			104		
3/25/2020	170	139			
5/22/2020				140	112
6/15/2020	175				
6/16/2020				178	131
8/25/2020				186	130
9/18/2020					119
9/21/2020	152			155	
9/28/2020		167	107		
11/11/2020					133
11/12/2020				165	
12/16/2020				194	132
1/20/2021				177 (M1)	131
3/12/2021	174			165	138
3/15/2021		167	103		
8/16/2021	171	162	106		
8/19/2021				196	139
2/2/2022	159	148	95.9		
2/3/2022				175	157
8/4/2022	173	160	103	170	141

Constituent: Chloride (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	9.94		6.14	5.93			
7/11/2016	6.3		5.9				
7/12/2016				6.2			
8/30/2016	6	2.8	6.2	6.4			
10/19/2016	5.8		6.1	6.5			
10/20/2016		2.8					
12/6/2016	5.4		6	7.2			
1/24/2017	5.2		6.1	6.4			
1/25/2017		2.8					
3/21/2017	4.6		5.9	7.5			
5/22/2017	4.6		5.9	6.5			
5/25/2017		2.9					
8/11/2017		3					
10/3/2017	5.6		6.3	6.5			
11/15/2017		3.1					
6/4/2018	13.1		6.1	6.3			
6/5/2018		3					
10/1/2018	6.6		6.4	6.4			
10/2/2018		3.1					
4/1/2019				6.5			
4/2/2019	20.3	3.6	5.8				
6/18/2019		3.2					
9/23/2019	17.7		5.1	5.9			
10/21/2019		4.5					
3/24/2020		4.5					
3/25/2020	20.4		5.2	6.1			
6/16/2020	41.1			5.8			
9/15/2020	13.4	3.6	5	6			
9/16/2020					4.1	4.1	
9/25/2020							3.6
11/10/2020					4.4	7.8	
11/11/2020							3.3
12/15/2020					4.7	9.4	
12/16/2020							3.4
1/19/2021					4.1	9.5	
1/20/2021							3.5
3/10/2021	7.4					12.3	
3/11/2021		2.3	5.1	5.9	4.5		
3/12/2021							3.3
8/11/2021	9.6				3.5		
8/12/2021			5.2	4.8			
8/13/2021		2.6				39.9	3.3
2/1/2022	7.5	2.2	7	5.7	4.1	44.8	3.5
8/2/2022	14.1	2.7	7.8	5.9	4.3	19.8	3.9

Constituent: Chloride (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	3.5	64	3		
10/26/2016	3.6		3.6		
11/7/2016		65			
1/13/2017		50			
1/27/2017	3.3		4		
5/25/2017	3.4		3.5		
6/3/2017		43			
8/11/2017			2.9		
10/2/2017	4.2	42			
11/15/2017	2.9	46	3.1		
6/5/2018	3.1	40.4	3.1		
10/2/2018	3.2		3.4		
10/5/2018		39			
4/2/2019	3.1				
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		
10/22/2019	3.4				
3/24/2020			2.7		
3/25/2020	2.4	16.3			
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	2.4			12.1	
9/28/2020		23.2	2.5		
11/11/2020					8.3
11/12/2020				10.4	
12/16/2020				5.3	8.9
1/20/2021				10.2	8.5
3/12/2021	2.4			10.8	8.5
3/15/2021		21.8	2.9		
8/16/2021	2.4	18	2.6		
8/19/2021				4.5	7.8
2/2/2022	2.5	16.8	2.6		
2/3/2022				8.1	8.5
8/4/2022	2.7	15.4	2.6	11.6	8.7

Constituent: Chromium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	<0.005		<0.005	<0.005			
7/11/2016	<0.005		<0.005				
7/12/2016				<0.005			
8/30/2016	<0.005	<0.005	<0.005	<0.005			
10/19/2016	<0.005		<0.005	<0.005			
10/20/2016		<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					
3/21/2017	0.0005 (J)		<0.005	<0.005			
5/22/2017	<0.005		<0.005	0.0007 (J)			
5/25/2017		0.0006 (J)					
8/11/2017		0.0007 (J)					
11/15/2017		0.0006 (J)					
4/2/2018	<0.005		<0.005				
4/3/2018				<0.005			
6/5/2018		<0.005					
10/2/2018		<0.005					
3/12/2019	<0.005		<0.005	<0.005			
4/1/2019				<0.005			
4/2/2019	<0.005		0.0079 (J)				
8/22/2019		0.0006 (J)					
9/23/2019	<0.005		0.00058 (J)	<0.005			
10/21/2019		0.00068 (J)					
3/2/2020	<0.005		0.00041 (J)	<0.005			
3/24/2020		0.0013 (J)					
3/25/2020	0.00072 (J)		<0.005	<0.005			
8/24/2020		0.00093 (J)					
8/25/2020			0.00067 (J)	<0.005			
8/28/2020	<0.005						
9/15/2020	<0.005	0.00067 (J)	<0.005	<0.005			
9/16/2020					<0.005	0.0012 (J)	
9/25/2020							<0.005
11/10/2020					<0.005	0.00089 (J)	
11/11/2020							<0.005
12/15/2020					<0.005	0.00072 (J)	
12/16/2020							<0.005
1/19/2021					<0.005	<0.005	
1/20/2021							0.00067 (J)
3/10/2021	<0.005					<0.005	
3/11/2021		0.0017 (J)	<0.005	<0.005	<0.005		
3/12/2021							<0.005
8/11/2021	<0.005		0.005	0.005	<0.005		
8/12/2021		<0.00E	<0.005	<0.005		0.0016 ( !)	40 00F
8/13/2021	-0.005	<0.005	-0.005	-0.005	-0.005	0.0016 (J)	<0.005
2/1/2022	<0.005	<0.005	<0.005	<0.005	<0.005	0.0013 (J)	<0.005
8/2/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Constituent: Chromium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016			<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	<0.005		<0.005		
5/25/2017	<0.005		<0.005		
6/3/2017		<0.005			
8/11/2017			<0.005		
10/2/2017	<0.005	<0.005			
11/15/2017		<0.005	<0.005		
6/5/2018	<0.005	<0.005	<0.005		
10/2/2018	<0.005		<0.005		
10/5/2018		<0.005			
8/22/2019	0.00072 (J)	<0.005			
8/23/2019	.,		<0.005		
10/21/2019	l	<0.005	0.00046 (J)		
10/22/2019			- (-)		
3/24/2020			0.00051 (J)		
3/25/2020	0.0015 (J)	0.0005 (J)	- (-)		
5/22/2020	(-)			0.00058 (J)	<0.005
6/16/2020				0.00052 (J)	<0.005
8/25/2020				<0.005	0.00096 (J)
8/26/2020	<0.005	<0.005		<del></del>	(-)
8/27/2020			<0.005		
9/18/2020			<del>-</del>		<0.005
9/21/2020	0.00065 (J)			<0.005	
9/28/2020	0.00000 (0)	<0.005	<0.005	0.000	
11/11/2020	ı				<0.005
11/12/2020				<0.005	
12/16/2020				<0.005	<0.005
1/20/2021				0.00081 (J)	<0.005
3/12/2021	<0.005			<0.005	<0.005
3/15/2021	-0.000	<0.005	<0.005	-0.000	-0.000
8/16/2021	<0.005	<0.005	<0.005		
8/19/2021	<b>~0.003</b>	<b>\0.003</b>	×0.003	<0.005	<0.005
2/2/2022	<0.005	<0.005	<0.005	-0.000	-0.000
2/3/2022	-0.005	·0.003	٠٠.٥٥٥	<0.005	<0.005
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005
01712022	-0.003	~0.00J	-0.000	-0.000	-0.003

Constituent: Cobalt (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
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			
10/19/2016	<0.005		0.0201	<0.005			
10/20/2016		<0.005					
12/6/2016	<0.005		0.0184	<0.005			
1/24/2017	<0.005		0.0206	<0.005			
1/25/2017		<0.005					
3/21/2017	<0.005		0.0251	<0.005			
5/22/2017	<0.005		0.0263	<0.005			
5/25/2017		<0.005					
8/11/2017		<0.005					
11/15/2017		<0.005					
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					
10/1/2018	<0.005		0.026	<0.005			
10/2/2018		<0.005					
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					
9/23/2019	<0.005		0.038	<0.005			
10/21/2019		<0.005					
3/2/2020	<0.005		0.019	<0.005			
3/24/2020		<0.005					
3/25/2020	<0.005		0.02	<0.005			
8/24/2020		<0.005					
8/25/2020			0.018	<0.005			
8/28/2020	<0.005						
9/15/2020	<0.005	<0.005	0.021	<0.005			
9/16/2020					<0.005	<0.005	
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
1/19/2021					<0.005	<0.005	
1/20/2021							<0.005
3/10/2021	<0.005					<0.005	
3/11/2021		<0.005	0.013	<0.005	<0.005		
3/12/2021							<0.005
8/11/2021	<0.005				<0.005		
8/12/2021			0.022	<0.005			
8/13/2021		<0.005				<0.005	<0.005
2/1/2022	<0.005	<0.005	0.025	<0.005	<0.005	<0.005	<0.005
8/2/2022	0.00054 (J)	<0.005	0.024	<0.005	<0.005	<0.005	<0.005

Constituent: Cobalt (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.0052 (J)	<0.005	<0.005		
10/26/2016	0.0041 (J)		<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	0.0034 (J)		<0.005		
5/25/2017	0.0035 (J)		<0.005		
6/3/2017		0.0005 (J)			
8/11/2017			<0.005		
10/2/2017	0.0036 (J)	0.0003 (J)			
11/15/2017	0.0032 (J)	0.0003 (J)	<0.005		
6/5/2018	0.0031 (J)	<0.005	<0.005		
10/2/2018	0.0025 (J)		<0.005		
10/5/2018		<0.005			
8/22/2019	0.0028 (J)	<0.005			
8/23/2019			<0.005		
10/21/2019		<0.005	<0.005		
10/22/2019	0.0031 (J)				
3/24/2020			<0.005		
3/25/2020	0.0036 (J)	<0.005			
5/22/2020				0.01	<0.005
6/16/2020				0.0096	<0.005
8/25/2020				0.0087	<0.005
8/26/2020	0.0023 (J)	<0.005			
8/27/2020			<0.005		
9/18/2020					<0.005
9/21/2020	0.0041 (J)			0.012	
9/28/2020		<0.005	<0.005		
11/11/2020					<0.005
11/12/2020				0.012	
12/16/2020				0.0055	<0.005
1/20/2021				0.012	<0.005
3/12/2021	0.0027 (J)			0.014	<0.005
3/15/2021		<0.005	<0.005		
8/16/2021	0.0037 (J)	<0.005	<0.005		
8/19/2021				0.0054	<0.005
2/2/2022	0.0072	<0.005	<0.005		
2/3/2022				0.0086	<0.005
8/4/2022	0.0058	<0.005	<0.005	0.014	<0.005

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
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)			
10/19/2016	0.213 (U)		1.11 (U)	0.626 (U)			
10/20/2016		0.496 (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)					
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)					
8/11/2017		0.908 (U)					
11/15/2017		0.662 (U)					
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)					
10/1/2018	0.132 (U)		0.434 (U)	0.781 (U)			
10/2/2018		1.37					
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)					
9/30/2019	0.306 (U)		1.04 (U)	0.384 (U)			
10/21/2019		0.772 (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)			
8/24/2020		0.883 (U)					
8/25/2020			0.778 (U)	0.33 (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)	
9/25/2020							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)
1/19/2021					0.685 (U)	0.79 (U)	
1/20/2021							0.682 (U)
8/11/2021	0.115 (U)				0.394 (U)		
8/12/2021			0.746 (U)	0.498 (U)			
8/13/2021		0.914 (U)				0.959 (U)	1.2
2/1/2022	0.143 (U)	0.276 (U)	0.588 (U)	0.266 (U)	1.12	0.665 (U)	0.895
8/2/2022	0.203 (U)	0.573 (U)	0.861 (U)	0.4 (U)	0.662 (U)	0.952 (U)	0.509 (U)

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	1.47	1.57	1.22		
10/26/2016	0.864 (U)		0.637 (U)		
11/7/2016		0.739 (U)			
1/13/2017		0.744 (U)			
1/27/2017	0.521 (U)		0.795 (U)		
5/25/2017	0.681 (U)		0.896 (U)		
6/3/2017		0 (U)			
8/11/2017			0.828 (U)		
10/2/2017	0.632 (U)	0.68 (U)			
11/15/2017	1.3	0.911 (U)	0.478 (U)		
6/5/2018	1.26 (U)	0.948 (U)	0.947 (U)		
10/2/2018	0.572 (U)		0.617 (U)		
10/5/2018		1.17 (U)			
8/22/2019	1.35	1.3			
8/23/2019			0.834		
10/21/2019		0.393 (U)	1.11 (U)		
10/22/2019	0.76 (U)				
3/24/2020			0.796 (U)		
3/25/2020	0.696 (U)	0.505 (U)			
5/22/2020				1.1 (U)	1.82
6/16/2020				1.62	1.82
8/25/2020				1.65	1.82
8/26/2020	0.357 (U)	1.96			
8/27/2020			0.494 (U)		
9/18/2020					0.841 (U)
9/21/2020	0.553 (U)			1.45	
9/28/2020		0.761 (U)	0.477 (U)		
11/11/2020					0.837 (U)
11/12/2020				0.633 (U)	
12/16/2020				0.818 (U)	1.26 (U)
1/20/2021				1.01 (U)	0.985 (U)
8/16/2021	1.25	0.192 (U)	0.734 (U)		
8/19/2021		. ,	. ,	0.721 (U)	1.11
2/2/2022	0.816 (U)	0.254 (U)	0.564 (U)	• /	
2/3/2022	` '	` '	` '	0.257 (U)	1.51
8/4/2022	0.687 (U)	1.16 (U)	0.16 (U)	0.971 (U)	1.34 (U)
	. ,	• •	• •	• •	, ,

Constituent: Fluoride (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	: (40,10040	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
	5/19/2016	0.105 (J)		0.0303 (J)	0.0513 (J)			
	7/11/2016	0.16 (J)		0.05 (J)	0.40 ( 1)			
	7/12/2016	0.00 (1)	0.40 (1)	0.00 (1)	0.12 (J)			
	3/30/2016	0.09 (J)	0.19 (J)	0.06 (J)	0.09 (J)			
	0/19/2016	0.1 (J)	0.40 ( 1)	0.04 (J)	0.1 (J)			
	0/20/2016		0.13 (J)					
	2/6/2016	0.11 (J)		0.36	0.21 (J)			
	/24/2017	0.09 (J)		<0.1	0.06 (J)			
	/25/2017		0.22 (J)					
	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)					
8	3/11/2017		0.12 (J)					
1	0/3/2017	0.13 (J)		<0.1	0.13 (J)			
1	1/15/2017		0.05 (J)					
4	/2/2018	<0.1		<0.1				
4	/3/2018				<0.1			
6	6/4/2018	0.074 (J)		<0.1	<0.1			
6	5/5/2018		0.15 (J)					
1	0/1/2018	<0.1		<0.1	<0.1			
1	0/2/2018		0.22 (J)					
3	3/12/2019	0.29 (J)		0.038 (J)	0.072 (J)			
4	/1/2019				0.029 (J)			
4	/2/2019	0.1 (J)	0.2 (J)	0.071 (J)				
6	6/18/2019		0.14 (J)					
8	3/22/2019		0.12 (J)					
9	)/23/2019	0.078 (J)		<0.1	<0.1			
1	0/21/2019		0.15 (J)					
3	3/2/2020	0.076 (J)		<0.1	<0.1			
3	3/24/2020		0.085 (J)					
3	3/25/2020	0.098 (J)		<0.1	<0.1			
6	6/16/2020	0.071 (J)			<0.1			
	3/24/2020		0.075 (J)					
	3/25/2020		. ,	<0.1	<0.1			
	3/28/2020	0.08 (J)						
	)/15/2020	0.082 (J)	0.096 (J)	<0.1	<0.1			
	/16/2020	. ,	. ,			0.22	0.22	
	0/25/2020							0.21
	1/10/2020					0.19	0.59	
	1/11/2020							0.19
	2/15/2020					0.21	0.67	
	2/16/2020					0.2.	0.07	0.18
	/19/2021					0.16	0.74	0.10
	/20/2021					0.10	0.74	0.22
	3/10/2021	0.079 (J)					0.65	0.22
	3/11/2021	0.075 (0)	0.059 (J)	0.1	<0.1	0.2	0.03	
	3/12/2021		0.000 (0)	0.1	30.1	0.2		0.2
		0.059 ( 1)				0.15		0.2
	3/11/2021 3/12/2021	0.058 (J)		<0.1	<0.1	0.10		
			0.065 (1)	~U. I	~U. I		0.87	0.2
	8/13/2021	0.064 (1)	0.065 (J)	-0.1	~0.1	0.10	0.87	0.2
	2/1/2022 8/2/2022	0.064 (J) 0.09 (J)	0.062 (J) 0.1	<0.1 0.053 (J)	<0.1 0.067 (J)	0.19 0.22	0.96 0.8	0.15 0.21
o	11 L1 LULL	0.03 (0)	0.1	0.000 (0)	0.007 (3)	U.ZZ	0.0	V.£1

Constituent: Fluoride (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

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	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.65	0.14 (J)	0.15 (J)		
10/26/2016	0.6		0.3		
11/7/2016		0.18 (J)			
1/13/2017		0.14 (J)			
1/27/2017	1.2		0.3		
5/25/2017	1.4		0.05 (J)		
6/3/2017		0.15 (J)			
8/11/2017			0.1 (J)		
10/2/2017	1	1.2			
11/15/2017	1.3	0.6	<0.1		
6/5/2018	0.48	0.19 (J)	0.078 (J)		
10/2/2018	0.34		0.078 (J)		
10/5/2018		0.23 (J)			
4/2/2019	0.47				
4/3/2019		0.14 (J)	0.089 (J)		
6/17/2019	1.2				
8/22/2019	0.3 (J)	0.2 (J)			
8/23/2019			0.11 (J)		
10/21/2019		0.18 (J)	0.073 (J)		
10/22/2019	0.53				
3/24/2020			<0.1		
3/25/2020	0.43	0.095 (J)			
5/22/2020				0.1 (J)	0.46
6/15/2020	0.37				
6/16/2020				0.12	0.44
8/25/2020				0.16	0.52
8/26/2020	0.48	0.16			
8/27/2020			<0.1		
9/18/2020					0.43
9/21/2020	0.33			0.11	
9/28/2020		0.15	<0.1		
11/11/2020					0.45
11/12/2020				0.12	
12/16/2020				0.2	0.49
1/20/2021				0.13	0.44
3/12/2021	0.42			0.12	0.46
3/15/2021		0.16	<0.1		
8/16/2021	0.39	0.15	<0.1		
8/19/2021				0.17	0.43
2/2/2022	0.36	0.15	<0.1		
2/3/2022				0.18	0.51
8/4/2022	0.38	0.18	0.074 (J)	0.15	0.5

Constituent: Lead (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	<0.001		<0.001	<0.001			
7/11/2016	<0.001		<0.001				
7/12/2016				0.0001 (J)			
8/30/2016	<0.001	<0.001	<0.001	<0.001			
10/19/2016	<0.001		<0.001	<0.001			
10/20/2016		<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					
3/21/2017	<0.001		6E-05 (J)	0.0001 (J)			
5/22/2017	<0.001		9E-05 (J)	<0.001			
5/25/2017		<0.001					
8/11/2017		0.0001 (J)					
11/15/2017		0.0002 (J)					
4/2/2018	<0.001		<0.001				
4/3/2018				<0.001			
6/5/2018		<0.001					
10/2/2018		<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					
9/23/2019	7.8E-05 (J)		9.2E-05 (J)	<0.001			
10/21/2019		9.7E-05 (J)					
3/2/2020	4.8E-05 (J)		9.5E-05 (J)	<0.001			
3/24/2020		0.00012 (J)					
3/25/2020	<0.001		0.00011 (J)	<0.001			
8/24/2020		7.7E-05 (J)					
8/25/2020			8.5E-05 (J)	<0.001			
8/28/2020	7E-05 (J)						
9/15/2020	<0.001	4.3E-05 (J)	8E-05 (J)	4.2E-05 (J)			
9/16/2020					5E-05 (J)	0.00021 (J)	
9/25/2020							<0.001
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)
1/19/2021					4.4E-05 (J)	<0.001	
1/20/2021							8.2E-05 (J)
3/10/2021	<0.001					<0.001	
3/11/2021		9.3E-05 (J)	7.6E-05 (J)	<0.001	9.4E-05 (J)		
3/12/2021							5.5E-05 (J)
8/11/2021	<0.001				<0.001		
8/12/2021			<0.001	<0.001			
8/13/2021		<0.001				<0.001	<0.001
2/1/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/2/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Constituent: Lead (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

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	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.001	<0.001	<0.001		
10/26/2016	0.0002 (J)		<0.001		
11/7/2016		<0.001			
1/13/2017		<0.001			
1/27/2017	<0.001		<0.001		
5/25/2017	9E-05 (J)		<0.001		
6/3/2017		7E-05 (J)			
8/11/2017			8E-05 (J)		
10/2/2017	8E-05 (J)	<0.001			
11/15/2017	<0.001	<0.001	<0.001		
6/5/2018	<0.001	0.00036 (J)	<0.001		
10/2/2018	<0.001		<0.001		
10/5/2018		<0.001			
8/22/2019	<0.001	<0.001			
8/23/2019			4.9E-05 (J)		
10/21/2019		<0.001	4.9E-05 (J)		
10/22/2019	<0.001				
3/24/2020			9.4E-05 (J)		
3/25/2020	<0.001	<0.001			
5/22/2020				0.00014 (J)	<0.001
6/16/2020				0.00013 (J)	<0.001
8/25/2020				<0.001	4.5E-05 (J)
8/26/2020	<0.001	<0.001			
8/27/2020			<0.001		
9/18/2020					<0.001
9/21/2020	<0.001			<0.001	
9/28/2020		<0.001	7.5E-05 (J)		
11/11/2020					4.2E-05 (J)
11/12/2020				4.7E-05 (J)	
12/16/2020				<0.001	<0.001
1/20/2021				9.2E-05 (J)	<0.001
3/12/2021	<0.001			4.4E-05 (J)	4.6E-05 (J)
3/15/2021		0.00015 (J)	<0.001		
8/16/2021	<0.001	<0.001	<0.001		
8/19/2021				<0.001	<0.001
2/2/2022	<0.001	<0.001	<0.001		
2/3/2022				<0.001	<0.001
8/4/2022	<0.001	<0.001	<0.001	<0.001	<0.001

Constituent: Lithium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
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)			
10/19/2016	<0.03		<0.03	0.003 (J)			
10/20/2016		<0.03					
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					
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					
8/11/2017		<0.03					
11/15/2017		<0.03					
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					
10/1/2018	0.00099 (J)		0.0013 (J)	0.0032 (J)			
10/2/2018		<0.03					
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					
9/23/2019	0.0011 (J)		0.0016 (J)	0.0029 (J)			
10/21/2019		<0.03					
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)			
8/24/2020		<0.03					
8/25/2020			0.0015 (J)	0.0027 (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)	
9/25/2020							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)
1/19/2021					0.0025 (J)	<0.03	
1/20/2021							0.0025 (J)
3/10/2021	0.0009 (J)					0.03	
3/11/2021		<0.03	0.0011 (J)	0.0035 (J)	0.0022 (J)		
3/12/2021							0.005 (J)
8/11/2021	0.00078 (J)				0.0024 (J)		
8/12/2021			0.0012 (J)	0.0028 (J)			
8/13/2021		<0.03				0.032	0.0044 (J)
2/1/2022	0.0011 (J)	<0.03	0.0017 (J)	0.0037 (J)	0.0024 (J)	0.048	0.0055 (J)
8/2/2022	<0.03	<0.03	0.0013 (J)	0.003 (J)	0.0019 (J)	0.041	0.0045 (J)

Constituent: Lithium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

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	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126		
8/31/2016	0.0333 (J)	0.0077 (J)	<0.03				
10/26/2016	0.0352 (J)		<0.03				
11/7/2016		0.0089 (J)					
1/13/2017		0.0091 (J)					
1/27/2017	0.0329 (J)		<0.03				
5/25/2017	0.0347 (J)		0.0011 (J)				
6/3/2017		0.0104 (J)					
8/11/2017			<0.03				
10/2/2017	0.0337 (J)	0.0095 (J)					
11/15/2017	0.0347 (J)	0.0086 (J)	<0.03				
6/5/2018	0.033 (J)	0.0092 (J)	0.0012 (J)				
10/2/2018	0.031 (J)		0.0012 (J)				
10/5/2018		0.0091 (J)					
8/22/2019	0.029 (J)	0.0084 (J)					
8/23/2019			0.0011 (J)				
10/21/2019		0.009 (J)	0.0011 (J)				
10/22/2019	0.03 (J)						
3/24/2020			0.0012 (J)				
3/25/2020	0.024 (J)	0.0066 (J)					
5/22/2020				0.0052 (J)	0.0046 (J)		
6/16/2020				0.0053 (J)	0.0045 (J)		
8/25/2020				0.0037 (J)	0.0037 (J)		
8/26/2020	0.023 (J)	0.0071 (J)					
8/27/2020			0.00091 (J)				
9/18/2020					0.0035 (J)		
9/21/2020	0.023 (J)			0.0038 (J)			
9/28/2020		0.0076 (J)	0.0011 (J)				
11/11/2020					0.0032 (J)		
11/12/2020				0.0038 (J)			
12/16/2020				0.0055 (J)	0.0029 (J)		
1/20/2021				0.0046 (J)	0.0038 (J)		
3/12/2021	0.023 (J)			0.0039 (J)	0.0038 (J)		
3/15/2021		0.0077 (J)	0.001 (J)				
8/16/2021	0.025 (J)	0.0075 (J)	0.0011 (J)				
8/19/2021				0.0074 (J)	0.0032 (J)		
2/2/2022	0.025 (J)	0.0082 (J)	0.0012 (J)				
2/3/2022				0.0057 (J)	0.0038 (J)		
8/4/2022	0.023 (J)	0.0069 (J)	0.0011 (J)	0.0035 (J)	0.0034 (J)		

Constituent: Mercury (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	<0.0002		<0.0002	<0.0002			
7/11/2016	<0.0002		<0.0002				
7/12/2016				<0.0002			
8/30/2016	4E-05 (J)	4.3E-05 (J)	4E-05 (J)	<0.0002			
10/19/2016	<0.0002		<0.0002	<0.0002			
10/20/2016		<0.0002					
12/6/2016	<0.0002		<0.0002	<0.0002			
1/24/2017	<0.0002		<0.0002	<0.0002			
1/25/2017		4E-05 (J)					
3/21/2017	<0.0002		<0.0002	<0.0002			
5/22/2017	<0.0002		<0.0002	<0.0002			
5/25/2017		7E-05 (J)					
8/11/2017		<0.0002					
11/15/2017		<0.0002					
4/2/2018	<0.0002		<0.0002				
4/3/2018				<0.0002			
6/5/2018		<0.0002					
10/2/2018		<0.0002					
3/12/2019	<0.0002		<0.0002	<0.0002			
8/22/2019		<0.0002					
3/2/2020	<0.0002		<0.0002	<0.0002			
8/24/2020		<0.0002					
8/25/2020			<0.0002	<0.0002			
8/28/2020	<0.0002						
9/16/2020					<0.0002	<0.0002	
9/25/2020							<0.0002
11/10/2020					<0.0002	<0.0002	
11/11/2020							<0.0002
12/15/2020					<0.0002	<0.0002	
12/16/2020							<0.0002
1/19/2021					<0.0002	<0.0002	
1/20/2021							<0.0002
8/11/2021	<0.0002				<0.0002		
8/12/2021			<0.0002	<0.0002			
8/13/2021		<0.0002				<0.0002	<0.0002
2/1/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/2/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Constituent: Mercury (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	4E-05 (J)	<0.0002	<0.0002		
10/26/2016	<0.0002		<0.0002		
11/7/2016		<0.0002			
1/13/2017		<0.0002			
1/27/2017	<0.0002		<0.0002		
5/25/2017	7E-05 (J)		5.1E-05 (J)		
6/3/2017		<0.0002			
8/11/2017			<0.0002		
10/2/2017	<0.0002	<0.0002			
11/15/2017	<0.0002	<0.0002	<0.0002		
6/5/2018	<0.0002	<0.0002	<0.0002		
10/2/2018	<0.0002		<0.0002		
10/5/2018		<0.0002			
8/22/2019	<0.0002	<0.0002			
8/23/2019			<0.0002		
5/22/2020				<0.0002	<0.0002
6/16/2020				<0.0002	<0.0002
8/25/2020				<0.0002	<0.0002
8/26/2020	<0.0002	<0.0002			
8/27/2020			<0.0002		
9/18/2020					<0.0002
9/21/2020				<0.0002	
11/11/2020					<0.0002
11/12/2020				<0.0002	
12/16/2020				<0.0002	<0.0002
1/20/2021				<0.0002	<0.0002
8/16/2021	<0.0002	<0.0002	<0.0002		
8/19/2021				<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002	<0.0002		
2/3/2022				<0.0002	<0.0002
8/4/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Constituent: Molybdenum (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
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			
10/19/2016	<0.01		<0.01	<0.01			
10/20/2016		0.005 (J)					
12/6/2016	<0.01		<0.01	<0.01			
1/24/2017	<0.01		<0.01	<0.01			
1/25/2017		0.0054 (J)					
3/21/2017	<0.01		<0.01	<0.01			
5/22/2017	<0.01		<0.01	<0.01			
5/25/2017		0.0018 (J)					
8/11/2017		0.0029 (J)					
11/15/2017		0.0018 (J)					
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)					
10/1/2018	<0.01		<0.01	<0.01			
10/2/2018		<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		0.003 (J)					
9/23/2019	<0.01		<0.01	<0.01			
10/21/2019		0.0049 (J)					
3/2/2020	<0.01		<0.01	<0.01			
3/24/2020		0.0091 (J)					
3/25/2020	<0.01		<0.01	<0.01			
6/16/2020	<0.01			<0.01			
8/24/2020		0.0031 (J)					
8/25/2020			<0.01	<0.01			
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)	
9/25/2020							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)
1/19/2021					0.0038 (J)	<0.01	
1/20/2021							0.0063 (J)
3/10/2021	<0.01					0.0019 (J)	
3/11/2021		0.0014 (J)	<0.01	<0.01	0.0064 (J)		
3/12/2021							0.0019 (J)
8/11/2021	<0.01				0.0034 (J)		
8/12/2021			<0.01	<0.01			
8/13/2021		0.0022 (J)				0.0051 (J)	<0.01
2/1/2022	<0.01	0.002 (J)	<0.01	<0.01	0.0036 (J)	0.0055 (J)	<0.01
8/2/2022	<0.01	0.0042 (J)	<0.01	<0.01	0.0042 (J)	0.002 (J)	<0.01

Constituent: Molybdenum (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	
8/31/201	0.0176	<0.01	<0.01			
10/26/20	0.0187		<0.01			
11/7/201	16	<0.01				
1/13/201	17	<0.01				
1/27/201	17 0.0214		<0.01			
5/25/201	17 0.0231		0.0009 (J)			
6/3/2017	7	<0.01				
8/11/201	17		0.0013 (J)			
10/2/201	17 0.0259	<0.01				
11/15/20	0.0281	<0.01	0.0012 (J)			
6/5/2018	0.033	<0.01	<0.01			
10/2/201	18 0.036		<0.01			
10/5/201	18	<0.01				
8/22/201	19 0.039	<0.01				
8/23/201	19		0.0014 (J)			
10/21/20	)19	<0.01	0.0013 (J)			
10/22/20	0.04					
3/24/202	20		0.001 (J)			
3/25/202	20 0.034	<0.01				
5/22/202	20			<0.01	<0.01	
6/16/202	20			<0.01	<0.01	
8/25/202	20			0.00099 (J)	<0.01	
8/26/202	20 0.05	<0.01				
8/27/202	20		0.00091 (J)			
9/18/202	20				<0.01	
9/21/202	20 0.043			<0.01		
9/28/202	20	<0.01	0.0009 (J)			
11/11/20	)20				<0.01	
11/12/20	)20			0.0017 (J)		
12/16/20				0.014	<0.01	
1/20/202	21			0.0013 (J)	<0.01	
3/12/202	21 0.033			0.0012 (J)	<0.01	
3/15/202	21	<0.01	0.00092 (J)			
8/16/202	21 0.035	<0.01	0.00091 (J)			
8/19/202	21			0.021	<0.01	
2/2/2022	0.034	<0.01	0.001 (J)			
2/3/2022				0.0067 (J)	<0.01	
8/4/2022	0.032	<0.01	<0.01	0.0023 (J)	<0.01	

Constituent: pH (s.u.) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot 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)
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	6.75	5.63	7.43			
10/19/2016	7.02		5.46	7.03			
10/20/2016		6.73					
12/6/2016	7.09		5.38	7.08			
1/24/2017	7.2		5.37	7.39			
1/25/2017		6.88					
3/21/2017	7.01		4.9	6.83			
5/22/2017	7.11		5.2	7.02			
5/25/2017		6.55					
8/11/2017		6.56					
10/3/2017	7.21		5.3	7.47			
11/15/2017		6.47					
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					
10/1/2018	7.09		5.31	7.13			
10/2/2018		6.44					
3/12/2019	7.03		5.42	7.29			
4/1/2019				7.16			
4/2/2019	6.86	6.57	5.41				
8/22/2019		6.51					
9/23/2019	7.02		5.33	7.3			
10/21/2019		6.69					
3/2/2020	7.1		5.43	7.12			
3/24/2020		7.08					
3/25/2020	6.95		5.36	7.4			
6/16/2020	6.97			7.31			
8/24/2020		6.54					
8/25/2020			5.17	7.14			
8/28/2020	7.02						
9/15/2020	7.15	6.68	5.22	7.29			
9/16/2020					7.52	7.83	
9/25/2020							7.57
11/10/2020					7.27	7.84	
11/11/2020							7.4
12/15/2020					7.39	7.87	
12/16/2020							7.39
1/19/2021					7.39	7.86	
1/20/2021							7.47
3/10/2021	6.95					7.92	
3/11/2021		6.65	5.8	7.33	7.46		
3/12/2021							7.52
8/11/2021	6.98				7.4		
8/12/2021			5.05	7.31			
8/13/2021		6.56				7.77	7.42
2/1/2022	7.19	6.57	5.24	7.45	7.52	8.25	7.45
8/2/2022	7.03	6.67	4.57	7.02	7.15	7.9	7.39

Constituent: pH (s.u.) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot Plant Hammond Client: Southern Company Data: Hammond AP-3

					,,
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	6.73	6.62	6.99		
10/27/2016	6.77		7.06		
11/7/2016		6.71			
1/13/2017		6.57			
1/27/2017	6.74		7.13		
5/25/2017	6.99		7.1		
6/3/2017		6.71			
8/11/2017			7.02		
10/2/2017	7.66	7.65			
11/15/2017	6.71	6.69	7.04		
6/5/2018	6.83	6.79	7.17		
10/2/2018	6.83		7.08		
10/5/2018		6.71			
4/2/2019	6.87				
4/3/2019		6.73	7.14		
8/22/2019	6.79	6.77			
8/23/2019			7.02		
10/21/2019		6.74	7.05		
10/22/2019	6.74				
3/24/2020			7.18		
3/25/2020	6.8	6.91			
5/22/2020				6.43	7.22
6/15/2020	6.8				
6/16/2020				6.29	6.92
8/25/2020				6.36	6.78
8/26/2020	6.96	6.73			
8/27/2020			7.15		
9/18/2020					6.97
9/21/2020	6.98			6.22	
9/28/2020		6.93	7.27		
11/11/2020					6.86
11/12/2020				6.13	
12/16/2020				6.61	6.93
1/20/2021				6.23	6.99
3/12/2021	6.95			6.18	7.05
3/15/2021		6.87	7.22		
8/16/2021	6.92	6.74	7.09		
8/19/2021				7.24	7.32
2/2/2022	7	6.92	7.28		
2/3/2022				6.56	7.01
8/4/2022	6.93	6.8	7.15	6.09	6.99

Constituent: Selenium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	<0.005		<0.005	<0.005			
7/11/2016	<0.005		<0.005				
7/12/2016				<0.005			
8/30/2016	<0.005	<0.005	<0.005	<0.005			
10/19/2016	<0.005		<0.005	<0.005			
10/20/2016		<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					
3/21/2017	<0.005		<0.005	<0.005			
5/22/2017	<0.005		<0.005	<0.005			
5/25/2017		<0.005					
8/11/2017		<0.005					
11/15/2017		<0.005					
4/2/2018	<0.005		<0.005				
4/3/2018				<0.005			
6/4/2018	<0.005		<0.005	<0.005			
6/5/2018		<0.005					
10/1/2018	<0.005		<0.005	<0.005			
10/2/2018		0.0015 (J)					
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					
9/23/2019	<0.005		<0.005	<0.005			
3/2/2020	<0.005		<0.005	<0.005			
3/25/2020	<0.005		<0.005	<0.005			
8/24/2020		<0.005					
8/25/2020			<0.005	<0.005			
8/28/2020	<0.005						
9/15/2020	<0.005		<0.005	<0.005			
9/16/2020					<0.005	<0.005	
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
1/19/2021					<0.005	<0.005	
1/20/2021							<0.005
8/11/2021	<0.005				<0.005		
8/12/2021			<0.005	<0.005			
8/13/2021		<0.005				<0.005	<0.005
2/1/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/2/2022	<0.005	<0.005	0.0014 (J)	<0.005	<0.005	<0.005	<0.005

Constituent: Selenium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

					··· · · · · · · · · · · · · · · · · ·
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016	<0.005		<0.005		
11/7/2016		<0.005			
1/13/2017		0.0011 (J)			
1/27/2017	<0.005		<0.005		
5/25/2017	<0.005		<0.005		
6/3/2017		<0.005			
8/11/2017			<0.005		
10/2/2017	0.002 (J)	<0.005			
11/15/2017	<0.005	<0.005	<0.005		
6/5/2018	<0.005	<0.005	<0.005		
10/2/2018	<0.005		0.0014 (J)		
10/5/2018		<0.005			
8/22/2019	<0.005	<0.005			
8/23/2019			<0.005		
5/22/2020				<0.005	<0.005
6/16/2020				<0.005	<0.005
8/25/2020				<0.005	<0.005
8/26/2020	<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
1/20/2021				<0.005	<0.005
8/16/2021	<0.005	<0.005	<0.005		
8/19/2021				<0.005	<0.005
2/2/2022	<0.005	<0.005	<0.005		
2/3/2022				<0.005	<0.005
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005

Constituent: Sulfate (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
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)
5/19/2016	66.9		48.6	42.3			
7/11/2016	41		45				
7/12/2016				44			
8/30/2016	36	49	42	40			
10/19/2016	46		44	43			
10/20/2016		49					
12/6/2016	59		44	43			
1/24/2017	46		46	48			
1/25/2017		48					
3/21/2017	63		46	45			
5/22/2017	77		48	46			
5/25/2017		48					
8/11/2017		47					
10/3/2017	42		47	48			
11/15/2017		49					
6/4/2018	71.8		47.8	46.6			
6/5/2018		48.9					
10/1/2018	49.1		48.1	48.6			
10/2/2018		48.6					
4/1/2019				50.4			
4/2/2019	84.3	39.6	48.7				
6/18/2019		44.5					
9/23/2019	70.2		47.2	43.9			
10/21/2019		45.6					
3/24/2020		25.9					
3/25/2020	85.9		46.3	50.5			
6/16/2020	88.2			49.5			
9/15/2020	47.3	41.4	51.5	44.7			
9/16/2020					43	43	
9/25/2020							6.8
11/10/2020					39	6.3	
11/11/2020							11.2
12/15/2020					38.8	6.7	
12/16/2020							11.3
1/19/2021					37.3	7.4	
1/20/2021							14.2
3/10/2021	49.6					<1	
3/11/2021		40.7	52.9	50.4	38.6		
3/12/2021							8.7
8/11/2021	48.9				30.5		
8/12/2021			47.4	38.6			
8/13/2021		42.1				56.1	8.1
2/1/2022	43.7	41.1	67.1	46	37.5	56.3	2.5
8/2/2022	58.1	41.5	86.9	43.5	37	13.2	2.1

Constituent: Sulfate (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

			Flatit Hall	illiona Cilent. 300	unem company Data: Hamiliona Ar-3
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	290	280	72		
10/26/2016	280		71		
11/7/2016		300			
1/13/2017		270			
1/27/2017	290		74		
5/25/2017	280		73		
6/3/2017		270			
8/11/2017			71		
10/2/2017	300	330			
11/15/2017	300	280	70		
6/5/2018	273	241	74		
10/2/2018	328		80.7		
10/5/2018		271			
4/2/2019	256				
4/3/2019		230	75.2		
6/17/2019	243	219			
6/18/2019			75.3		
10/21/2019		238	78.5		
10/22/2019	266				
3/24/2020			74.6		
3/25/2020	226	116			
5/22/2020				345	56.1
6/15/2020	212				
6/16/2020				320	57.6
8/25/2020				353	62.8
9/18/2020					62.7
9/21/2020	225			352	
9/28/2020		182	86.2		
11/11/2020					62.3
11/12/2020				300	
12/16/2020				306	68.1
1/20/2021				335	66.6
3/12/2021	210			293	69.7
3/15/2021		177	74		
8/16/2021	211	158	74		
8/19/2021				264	64.4
2/2/2022	201	147	70.7		
2/3/2022				304	66.8
8/4/2022	230	162	73.1	331	68.3

Constituent: Thallium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

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	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
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			
10/19/2016	<0.001		<0.001	<0.001			
10/20/2016		<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					
3/21/2017	<0.001		3E-05 (J)	<0.001			
5/22/2017	<0.001		<0.001	<0.001			
5/25/2017		<0.001					
8/11/2017		<0.001					
11/15/2017		<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					
10/1/2018	<0.001		<0.001	<0.001			
10/2/2018		<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					
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			
8/28/2020	<0.001						
9/15/2020	<0.001		<0.001	<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
1/19/2021					<0.001	<0.001	
1/20/2021							<0.001
8/11/2021	<0.001				<0.001		
8/12/2021			<0.001	<0.001			
8/13/2021		<0.001				<0.001	<0.001
2/1/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/2/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Constituent: Thallium (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.001	<0.001	<0.001		
10/26/2016	<0.001		<0.001		
11/7/2016		<0.001			
1/13/2017		<0.001			
1/27/2017	<0.001		<0.001		
5/25/2017	<0.001		<0.001		
6/3/2017		<0.001			
8/11/2017			<0.001		
10/2/2017	<0.001	<0.001			
11/15/2017	<0.001	<0.001	<0.001		
6/5/2018	<0.001	<0.001	<0.001		
10/2/2018	<0.001		<0.001		
10/5/2018		<0.001			
8/22/2019	<0.001	<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			
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
1/20/2021				<0.001	<0.001
8/16/2021	<0.001	<0.001	<0.001	0.00	0.00
8/19/2021	3.001	-0.001	-0.001	<0.001	<0.001
2/2/2022	<0.001	<0.001	<0.001	-0.001	-0.001
2/3/2022	-0.001	·0.001	·0.001	<0.001	<0.001
8/4/2022	<0.001	<0.001	<0.001	<0.001	<0.001
0,7/2022	-0.001	·0.001	·0.001	-0.001	·0.001

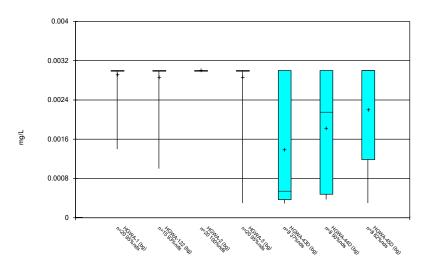
Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
5/19/2016	421		143	267			
7/11/2016	363		125				
7/12/2016				249			
8/30/2016	330	280	168	254			
10/19/2016	380		176	357			
10/20/2016		265					
12/6/2016	377		145	285			
1/24/2017	342		129	300			
1/25/2017		371					
3/21/2017	340		103	288			
5/22/2017	338		92	263			
5/25/2017		237					
8/11/2017		253					
10/3/2017	343		127	300			
11/15/2017		261					
6/4/2018	415		140	266			
6/5/2018		276					
10/1/2018	354		135	291			
10/2/2018		256					
4/1/2019				284			
4/2/2019	452	814 (o)	133				
6/18/2019		233					
9/23/2019	442		129	268			
10/21/2019		296					
3/24/2020		278					
3/25/2020	496		138	284			
6/16/2020	632			448			
9/15/2020	265	267	124	258			
9/16/2020					272	270	
9/25/2020							263
11/10/2020					307	287	
11/11/2020							276
12/15/2020					289	295	
12/16/2020							294
1/19/2021					270	278	
1/20/2021							289
3/10/2021	348					289	
3/11/2021		206	169	267	279		
3/12/2021							260
8/11/2021	366				277		
8/12/2021			118	265			
8/13/2021		201				436	272
2/1/2022	270	203	156	350	156	444	268
8/2/2022	400	217	196	287	278	311	261

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

					, ,
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	6 700	876	379		
10/26/201	16 795		409		
11/7/2016	6	1000			
1/13/2017	7	827			
1/27/2017	7 706		370		
5/25/2017	7 669		351		
6/3/2017		846			
8/11/2017	7		322		
10/2/2017	7 672	884			
11/15/201	17 721	838	350		
6/5/2018	723	823	360		
10/2/2018			363		
10/5/2018		813			
4/2/2019					
4/3/2019		785	369		
6/17/2019		751			
10/21/201		771	357		
10/22/201					
3/24/2020			355		
3/25/2020		521			
5/22/2020				809	496
6/15/2020					
6/16/2020				665	508
8/25/2020				772	505
9/18/2020				- · <del>-</del>	452
9/21/2020				956	.02
9/28/2020		<10	176		
11/11/202					468
11/12/202				694	100
12/16/202				816	536
1/20/2021				726	472
3/12/2021				664	474
3/15/202		614	340	004	7/7
8/16/2021		626	352		
8/19/2021		020	JJZ	732	488
2/2/2022		638	347	132	400
		USO	347	726	466
2/3/2022		640	224	726	466
8/4/2022	632	640	334	706	510

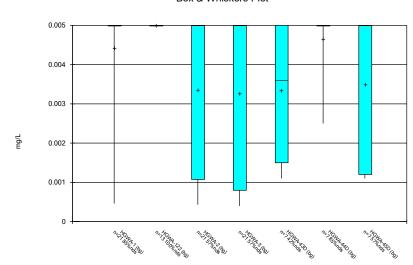
# FIGURE B.



Constituent: Antimony Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

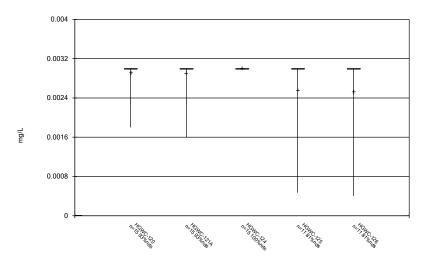
#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

## Box & Whiskers Plot



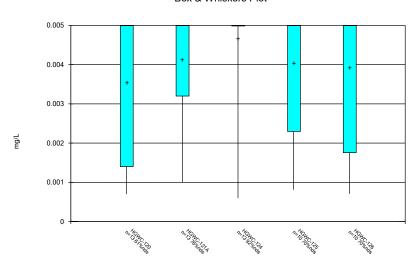
Constituent: Arsenic Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

## Box & Whiskers Plot

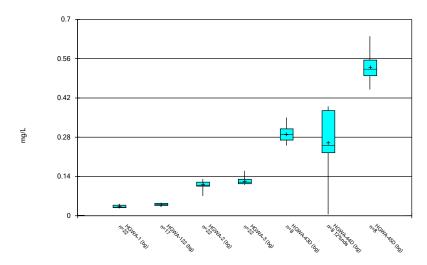


Constituent: Antimony Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



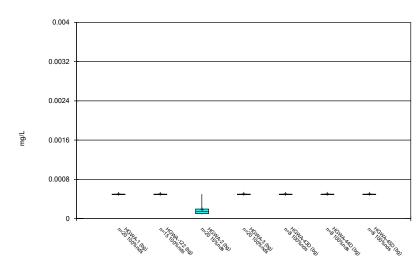
Constituent: Arsenic Analysis Run 10/27/2022 5:09 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Barium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

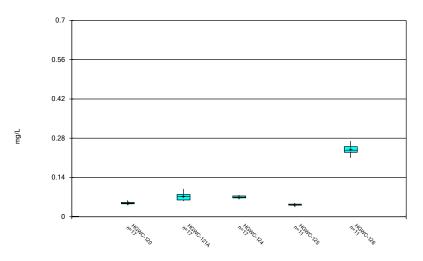
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



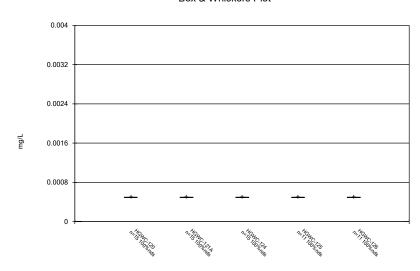
Constituent: Beryllium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot

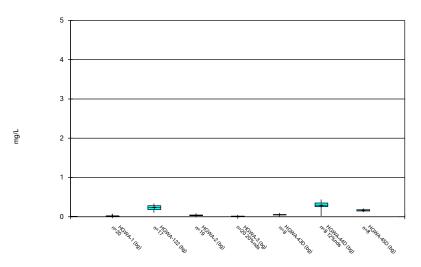


Constituent: Barium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



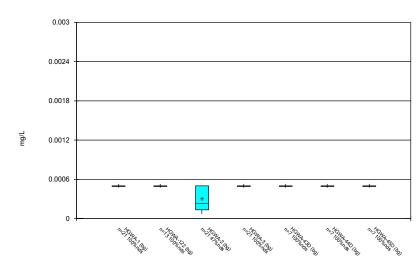
Constituent: Beryllium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Boron Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

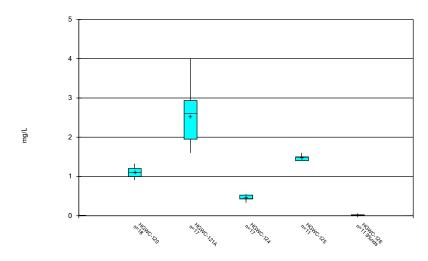
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



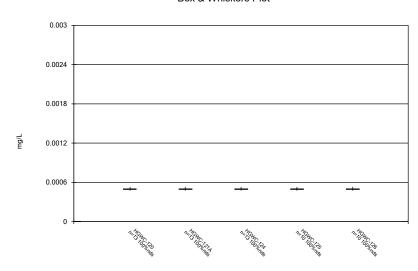
Constituent: Cadmium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot

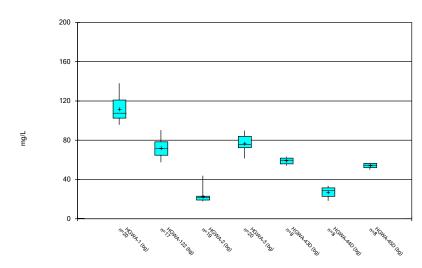


Constituent: Boron Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot

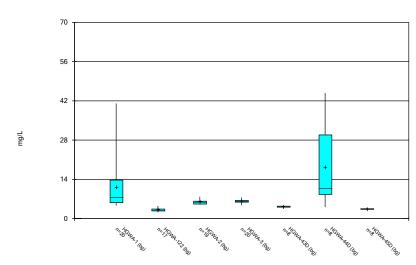


Constituent: Cadmium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



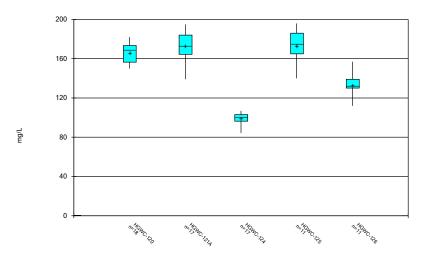
Constituent: Calcium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG



Constituent: Chloride Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

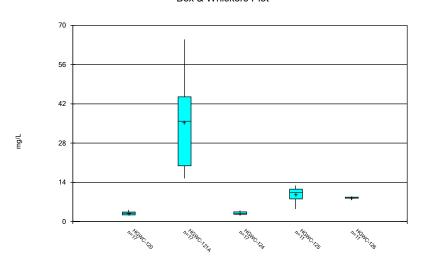
Box & Whiskers Plot



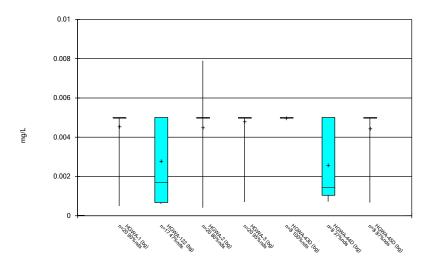
Constituent: Calcium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot

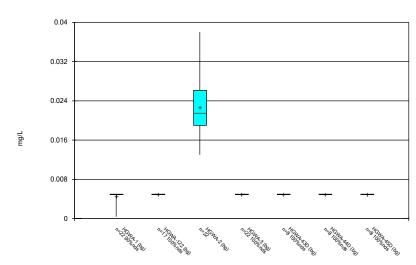


Constituent: Chloride Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



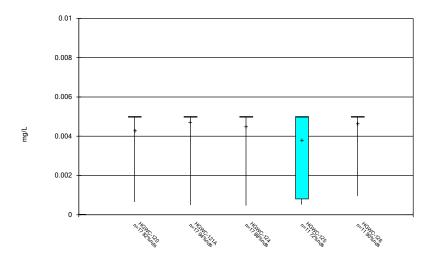
Constituent: Chromium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG



Constituent: Cobalt Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

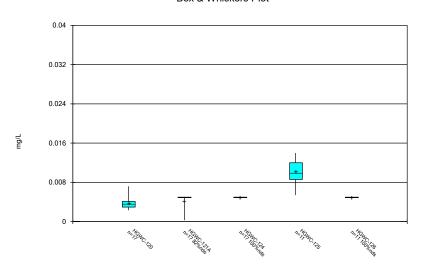
Box & Whiskers Plot



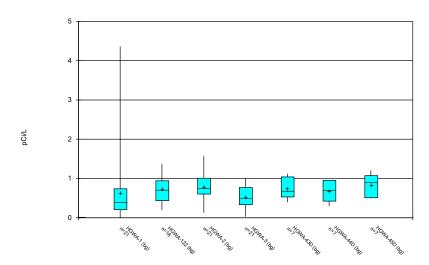
Constituent: Chromium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

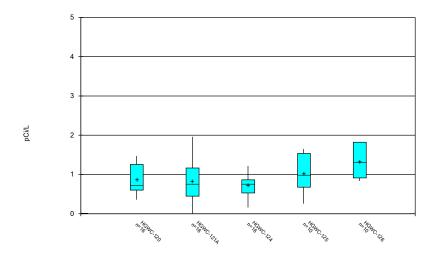
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



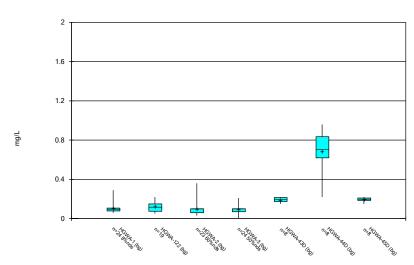
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Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Combined Radium 226 + 228 Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plo
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

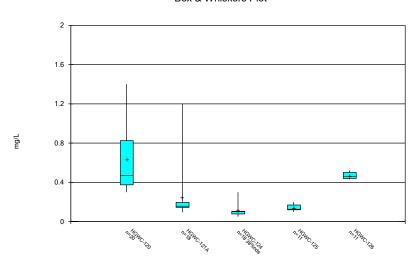
Box & Whiskers Plot



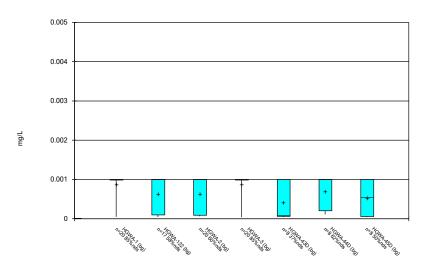
Constituent: Fluoride Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



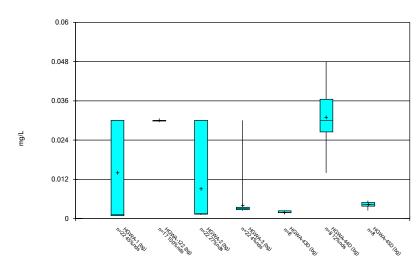
Constituent: Fluoride Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



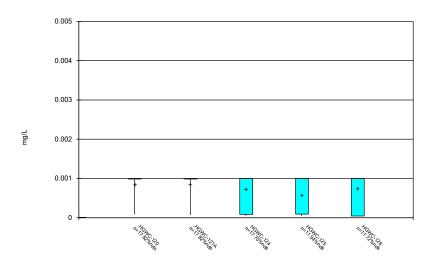
Constituent: Lead Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

## Box & Whiskers Plot



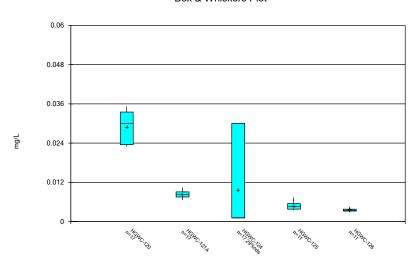
Constituent: Lithium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



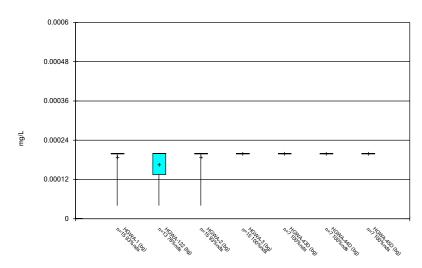
Constituent: Lead Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot

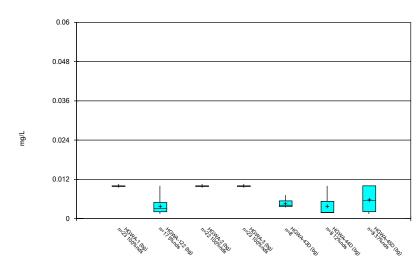


Constituent: Lithium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



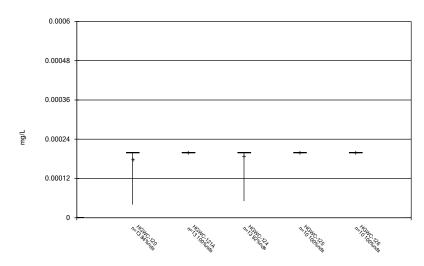
Constituent: Mercury Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG



Constituent: Molybdenum Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

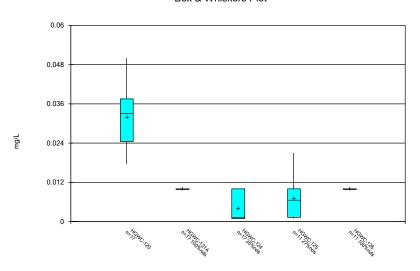
Box & Whiskers Plot



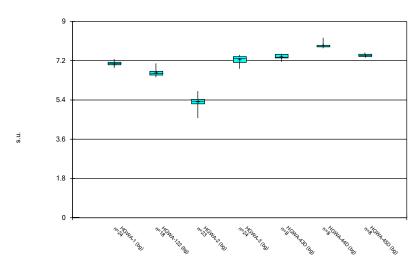
Constituent: Mercury Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



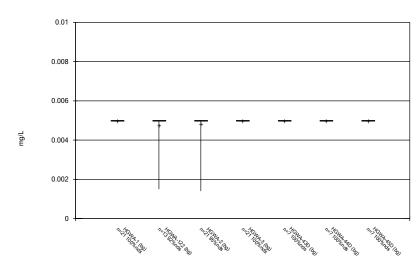
Constituent: Molybdenum Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: pH Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

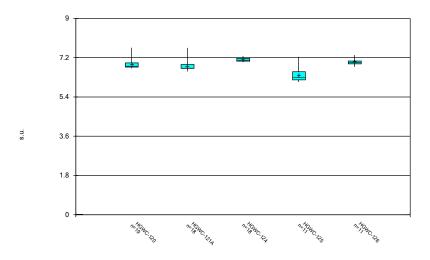
#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

## Box & Whiskers Plot



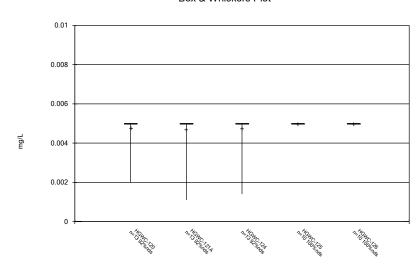
Constituent: Selenium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

## Box & Whiskers Plot

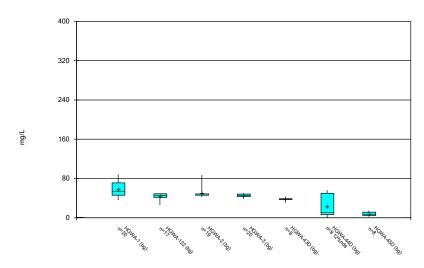


Constituent: pH Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



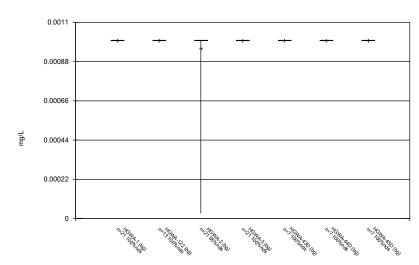
Constituent: Selenium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



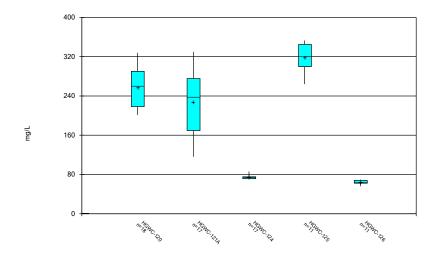
Constituent: Sulfate Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

## Box & Whiskers Plot



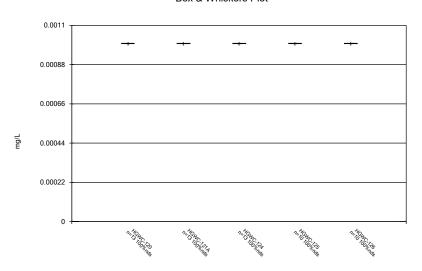
Constituent: Thallium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



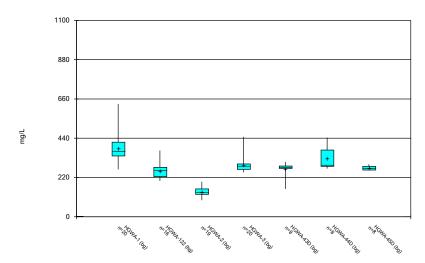
Constituent: Sulfate Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot

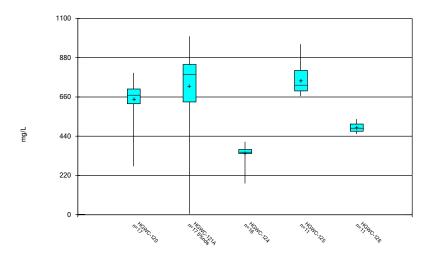


Constituent: Thallium Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Total Dissolved Solids Analysis Run 10/27/2022 5:10 PM View: Time Series & Box Plot
Plant Hammond Client: Southern Company Data: Hammond AP-3

## Box & Whiskers Plot



# FIGURE C.

# **Outlier Summary**

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 7:09 PM

HGWA-122 Total Dissolved Solids (mg/L)

4/2/2019

814 (o)

# FIGURE D.

# Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 6:56 PM

Constituent	Well	Upper Lim.	Lower Lim.	<u>Date</u>	Observ.	Sig. Bg N%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-120	0.44	n/a	8/4/2022	1	Yes 100 5	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.44	n/a	8/4/2022	1.8	Yes 100 5	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.44	n/a	8/4/2022	1.4	Yes 100 5	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	n/a	8/4/2022	173	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	n/a	8/4/2022	160	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	n/a	8/4/2022	170	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-126	138	n/a	8/4/2022	141	Yes 100 0	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	n/a	8/4/2022	230	Yes 100 1	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	n/a	8/4/2022	162	Yes 100 1	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	n/a	8/4/2022	331	Yes 100 1	n/a	n/a	0.0001934	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	8/4/2022	640	Yes 99 0	n/a	n/a	0.0001978	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	8/4/2022	706	Yes 99 0	n/a	n/a	0.0001978	NP Inter (normality) 1 of 2

# Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 6:56 PM

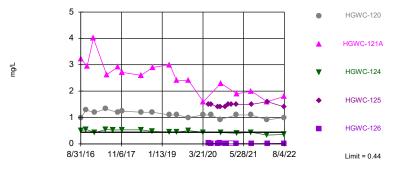
Boron (mg/L)         HGWC-120         0.44         n/a         8/4/2022         1         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-121A         0.44         n/a         8/4/2022         1.8         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-124         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-125         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         1.73         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         173         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121         138         n/a         8/4/2022         103         N o 100 0         n/a
Boron (mg/L)         HGWC-124         0.44         n/a         8/4/2022         0.36         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-125         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         1.73         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a
Boron (mg/L)         HGWC-125         0.44         n/a         8/4/2022         1.4         Yes 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         0.023J         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         103         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         17         No 100 0         n/a
Boron (mg/L)         HGWC-126         0.44         n/a         8/4/2022         0.023J         No 100 5         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0         n/a<
Calcium (mg/L)         HGWC-120         138         n/a         8/4/2022         173         Yes 100 0 n/a         n/a         n/a         0.0001934 n/a         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-121A         138 n/a         8/4/2022 160         Yes 100 0 n/a         n/a         n/a         0.0001934 NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124 138 n/a         n/a         8/4/2022 170         Yes 100 0 n/a         n/a         n/a         0.0001934 NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125 138 n/a         n/a         8/4/2022 170 Yes 100 0 n/a         n/a         n/a         0.0001934 NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126 138 n/a         n/a         8/4/2022 141 Yes 100 0 n/a         n/a         n/a         0.0001934 NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120 44.8 n/a         n/a         8/4/2022 2.7 No 100 0 n/a         100 0 n/a         n/a         0.0001934 NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A 44.8 n/a         44.8 n/a         8/4/2022 2.6 No 100 0 n/a         No 100 0 n/a         n/a         n/a         0.0001934 NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A 44.8 n/a         44.8 n/a         8/4/2022 2.6 No 100 0 n/a         No 100 0 n/a<
Calcium (mg/L)         HGWC-121A         138         n/a         8/4/2022         160         Yes 100 0 n/a         n/a         n/a         0.0001934 n/a         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         103         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0 n/a         n/a         n/a         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0 n/a         n/a         n/a         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-126         44.8         n/a         8/4/2022         2.7         No 100 0 n/a         n/a         n/a         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0 n/a         n/a         n/a         0.00019
Calcium (mg/L)         HGWC-124         138         n/a         8/4/2022         103         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         26         No 100 0         0
Calcium (mg/L)         HGWC-125         138         n/a         8/4/2022         170         Yes 100 0 n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0 n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         2.6         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0 n/a         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2
Calcium (mg/L)         HGWC-126         138         n/a         8/4/2022         141         Yes 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-120         44.8         n/a         8/4/2022         2.7         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-121A         44.8         n/a         8/4/2022         15.4         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2           Chloride (mg/L)         HGWC-124         44.8         n/a         8/4/2022         2.6         No 100 0         n/a         n/a         0.0001934         NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-120 44.8 n/a 8/4/2022 2.7 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-121A 44.8 n/a 8/4/2022 15.4 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-124 44.8 n/a 8/4/2022 2.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L)
Chloride (mg/L) HGWC-121A 44.8 n/a 8/4/2022 15.4 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-124 44.8 n/a 8/4/2022 2.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-124 44.8 n/a 8/4/2022 2.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-125 44.8 n/a 8/4/2022 11.6 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Chloride (mg/L) HGWC-126 44.8 n/a 8/4/2022 8.7 No 100 0 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-120 0.96 n/a 8/4/2022 0.38 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-121A 0.96 n/a 8/4/2022 0.18 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-124 0.96 n/a 8/4/2022 0.074J No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-125 0.96 n/a 8/4/2022 0.15 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
Fluoride (mg/L) HGWC-126 0.96 n/a 8/4/2022 0.5 No 114 24.56 n/a n/a 0.0001526 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-120 8.25 4.57 8/4/2022 6.93 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-121A 8.25 4.57 8/4/2022 6.8 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-124 8.25 4.57 8/4/2022 7.15 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-125 8.25 4.57 8/4/2022 6.09 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
pH (s.u.) HGWC-126 8.25 4.57 8/4/2022 6.99 No 113 0 n/a n/a 0.000311 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-120 88.2 n/a 8/4/2022 230 Yes 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-121A 88.2 n/a 8/4/2022 162 Yes 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-124 88.2 n/a 8/4/2022 73.1 No 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-125 88.2 n/a 8/4/2022 331 Yes 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Sulfate (mg/L) HGWC-126 88.2 n/a 8/4/2022 68.3 No 100 1 n/a n/a 0.0001934 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-120 632 n/a 8/4/2022 632 No 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-121A 632 n/a 8/4/2022 640 Yes 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-124 632 n/a 8/4/2022 334 No 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-125 632 n/a 8/4/2022 706 Yes 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L) HGWC-126 632 n/a 8/4/2022 510 No 99 0 n/a n/a 0.0001978 NP Inter (normality) 1 of 2

Hollow symbols indicate censored values

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 Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 100 background values. 5% NDs. Annual per-constituent alpha = 0.001932. Individual comparison alpha = 0.0001934 (1 of 2). Comparing 5 points to limit.

> Constituent: Boron Analysis Run 10/20/2022 6:55 PM View: A3 PL Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Prediction Limit Within Limit Interwell Non-parametric 70 HGWC-120 56 HGWC-121A 42 HGWC-124 28 **HGWC-125** 14 HGWC-126 8/31/16 11/6/17 1/13/19 3/21/20 5/28/21 8/4/22

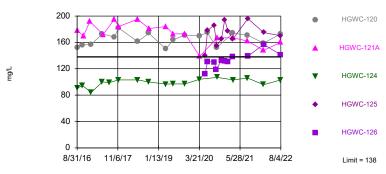
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 100 background values. Annual per-constituent alpha = 0.001932. Individual comparison alpha = 0.0001934 (1 of 2). Comparing 5 points to limit.

Limit = 44.8

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-120, HGWC-121A. HGWC-125, HGWC-126

**Prediction Limit** Interwell Non-parametric

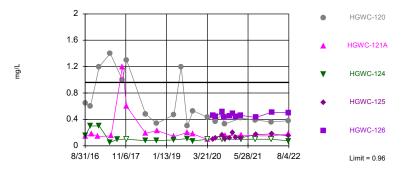


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 100 background values. Annual per-constituent alpha = 0.001932. Individual comparison alpha = 0.0001934 (1 of 2). Comparing 5 points to limit.

> Constituent: Calcium Analysis Run 10/20/2022 6:55 PM View: A3 PL Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

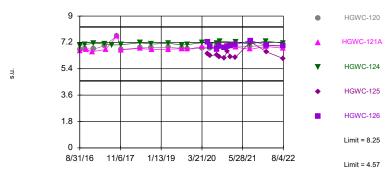
**Prediction Limit** Within Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 114 background values. 24.56% NDs. Annual perconstituent alpha = 0.001525. Individual comparison alpha = 0.0001526 (1 of 2). Comparing 5 points to limit.

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Prediction Limit Within Limits Interwell Non-parametric

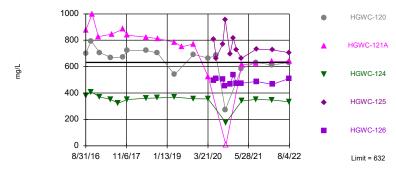


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 113 background values. Annual perconstituent alpha = 0.003107. Individual comparison alpha = 0.000311 (1 of 2). Comparing 5 points to limit.

> Constituent: pH Analysis Run 10/20/2022 6:55 PM View: A3 PL Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

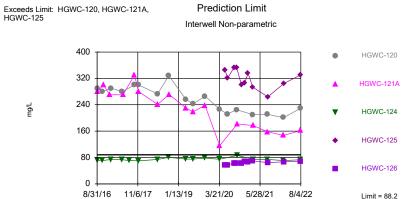
Prediction Limit Exceeds Limit: HGWC-121A, HGWC-125 Interwell Non-parametric



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 99 background values. Annual per-constituent alpha = 0.001976. Individual comparison alpha = 0.0001978 (1 of 2). Comparing 5 points to limit.

> Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:55 PM View: A3 PL Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 100 background values. 1% NDs. Annual per-constituent alpha = 0.001932. Individual comparison alpha = 0.0001934 (1 of 2). Comparing 5 points to limit.

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
5/19/2016	0.0214 (J)	<0.04	0.0321 (J)						
7/11/2016	0.0142 (J)		0.0337 (J)						
7/12/2016		0.0074 (J)							
8/30/2016	0.0074 (J)	<0.04	0.0173 (J)	0.277					
8/31/2016					3.23	0.981	0.494		
10/19/2016	0.0224 (J)	0.0085 (J)	0.0341 (J)						
10/20/2016				0.336					
10/26/2016						1.28	0.55		
11/7/2016					2.95				
12/6/2016	0.0211 (J)	0.0085 (J)	0.0326 (J)						
1/13/2017					4.01				
1/24/2017	0.0165 (J)	0.01 (J)	0.0365 (J)						
1/25/2017				0.274					
1/27/2017						1.19	0.428		
3/21/2017	0.0187 (J)	0.0079 (J)	0.0349 (J)						
5/22/2017	0.0782	0.0131 (J)	0.0475						
5/25/2017		. ,		0.298		1.33	0.544		
6/3/2017					2.62				
8/11/2017				0.285			0.524		
10/2/2017				0.200	2.92	1.19	0.02		
10/3/2017	0.0198 (J)	0.0097 (J)	0.0386 (J)		2.02				
11/15/2017	0.0100 (0)	0.0007 (0)	0.0000 (0)	0.322	2.71	1.24	0.531		
6/4/2018	0.02 (J)	0.017 (J)	0.036 (J)	0.522	2.71	1.24	0.551		
6/5/2018	0.02 (3)	0.017 (3)	0.030 (3)	0.24	2.6	1.2	0.53		
10/1/2018	0.012 ( 1)	0.0061 (1)	0.035 (J)	0.24	2.0	1.2	0.55		
	0.013 (J)	0.0061 (J)	0.033 (3)	0.20		1.0	0.47		
10/2/2018				0.28	2.0	1.2	0.47		
10/5/2018		0.0000 (1)			2.9				
4/1/2019	0.010 (1)	0.0066 (J)	0.004 (1)	0.10		4.4			
4/2/2019	0.016 (J)		0.034 (J)	0.18	•	1.1	0.45		
4/3/2019					3		0.45		
6/17/2019				0.05	2.4	1.1	0.45		
6/18/2019				0.25			0.45		
9/23/2019	0.021 (J)	0.0081 (J)	0.04 (J)						
10/21/2019				0.25	2.4		0.5		
10/22/2019						1			
3/24/2020				0.1			0.44		
3/25/2020	0.025 (J)	0.0096 (J)	0.039 (J)		1.6	1.1			
5/22/2020								0.026 (J)	1.5
6/15/2020						1.1			
6/16/2020	0.021 (J)	0.01 (J)							1.5
8/25/2020								0.016 (J)	1.4
9/15/2020	0.017 (J)	0.0071 (J)	0.044 (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					2.3		0.43		
11/10/2020									
11/11/2020								0.009 (J)	
11/12/2020									1.4
12/15/2020									
12/16/2020								0.011 (J)	1.5

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								<0.04	1.5
3/10/2021	0.015 (J)								
3/11/2021		0.015 (J)	0.056	0.2					
3/12/2021						1.1		0.016 (J)	1.5
3/15/2021					1.9		0.4		
8/11/2021	0.02 (J)								
8/12/2021		<0.04	0.044						
8/13/2021				0.19					
8/16/2021					2	1.1	0.44		
8/19/2021								0.011 (J)	1.5
2/1/2022	0.016 (J)	0.011 (J)	0.056	0.17					
2/2/2022					1.6	0.91	0.33		
2/3/2022								0.016 (J)	1.6
8/2/2022	0.012 (J)	<0.04	0.047	0.18					
8/4/2022					1.8	1	0.36	0.023 (J)	1.4

	HGWA-44D (bg)	HGWA-43D (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	0.23	0.061 (J)	
	U.23	0.001 (J)	
9/18/2020			
9/21/2020			0.40
9/25/2020			0.16
9/28/2020			
11/10/2020	0.29	0.057 (J)	
11/11/2020			0.17
11/12/2020			
12/15/2020	0.31	0.052 (J)	
12/16/2020			0.16

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	<0.04	0.049 (J)	
1/20/2021			0.19
3/10/2021	0.39		
3/11/2021		0.06	
3/12/2021			0.19
3/15/2021			
8/11/2021		0.042	
8/12/2021			
8/13/2021	0.31		0.15
8/16/2021			
8/19/2021			
2/1/2022	0.44	0.05	0.14
2/2/2022			
2/3/2022			
8/2/2022	0.31	0.043	0.14
8/4/2022			

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
5/19/2016	138	76.2	22.9						
7/11/2016	97.2		22.3						
7/12/2016		61.5							
8/30/2016	97.5	65.1	26.4	71.3					
8/31/2016					178	152	90.4		
10/19/2016	99.2	73.2	21.7						
10/20/2016				90.3					
10/26/2016						156	94.5		
11/7/2016					170				
12/6/2016	105	74.9	18.2		.,,				
1/13/2017	.00		.0.2		192				
1/24/2017	95.7	69.6	18.5		102				
1/25/2017	55.7	03.0		77.3					
1/27/2017				77.5		157	84.2		
3/21/2017	106	75.7	18.6			137	04.2		
	106								
5/22/2017	107	71.5	17.8	CO O		170	100		
5/25/2017				69.9		173	100		
6/3/2017					172				
8/11/2017				79.5			99.1		
10/2/2017					195	168			
10/3/2017	102	76.3	20.2						
11/15/2017				72.8	184	182	103		
6/4/2018	124	73.4	19.1						
6/5/2018				71.4	195	161	103		
10/1/2018	108	80.9	20.5 (J)						
10/2/2018				66.6		174	100		
10/5/2018					181				
4/1/2019		80.5							
4/2/2019	132		22.5 (J)	60.9		150			
4/3/2019					184		96.7		
6/17/2019					173	164			
6/18/2019				75			97.1		
9/23/2019	118	71	19.5						
10/21/2019				80.8	173		96.9		
10/22/2019						171			
3/24/2020				81.2			104		
3/25/2020	127	89.8	23		139	170			
5/22/2020								112	140
6/15/2020						175			
6/16/2020	130	85.1						131	178
8/25/2020	.00							130	186
9/15/2020	103	73.1	21.1	75.8				150	100
9/16/2020	100	70.1	21.1	70.0					
9/18/2020								119	
						150		119	155
9/21/2020						152			155
9/25/2020					107		107		
9/28/2020					167		107		
11/10/2020								100	
11/11/2020								133	
11/12/2020									165
12/15/2020									
12/16/2020								132	194

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								131	177 (M1)
3/10/2021	111								
3/11/2021		83.8	43.8	60.4 (M1)					
3/12/2021						174		138	165
3/15/2021					167		103		
8/11/2021	113								
8/12/2021		84	21.9						
8/13/2021				62.9					
8/16/2021					162	171	106		
8/19/2021								139	196
2/1/2022	106	85.1	27.2	57.5					
2/2/2022					148	159	95.9		
2/3/2022								157	175
8/2/2022	117	84.6	31.2	69.5					
8/4/2022					160	173	103	141	170

	HGWA-44D (bg)	HGWA-43D (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	30	56	
9/18/2020			
9/21/2020			
9/25/2020			56.8
9/28/2020			
11/10/2020	33.6	63.3	
11/11/2020			54.9
11/12/2020			
12/15/2020	28.7	62.6	
12/16/2020	-	-	56.4

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	33	60.1	
1/20/2021			55
3/10/2021	18.3		
3/11/2021		59.6	
3/12/2021			56.5
3/15/2021			
8/11/2021		61	
8/12/2021			
8/13/2021	28.9		53
8/16/2021			
8/19/2021			
2/1/2022	24.8	55.9	51.3
2/2/2022			
2/3/2022			
8/2/2022	20.9	54.1	49.9
8/4/2022			

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
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					64	3.5	3		
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						3.3	4		
3/21/2017	4.6	7.5	5.9						
5/22/2017	4.6	6.5	5.9						
5/25/2017				2.9		3.4	3.5		
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	46	2.9	3.1		
6/4/2018	13.1	6.3	6.1						
6/5/2018				3	40.4	3.1	3.1		
10/1/2018	6.6	6.4	6.4						
10/2/2018				3.1		3.2	3.4		
10/5/2018					39				
4/1/2019		6.5							
4/2/2019	20.3		5.8	3.6		3.1			
4/3/2019					35.9		3.4		
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	29.9		3.6		
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								8.6	12.9
6/15/2020						2.3			
6/16/2020	41.1	5.8						8.6	10.4
8/25/2020								8.7	10.6
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					23.2		2.5		
11/10/2020					<del>-</del>		-		
11/11/2020								8.3	
11/12/2020								- <del>-</del>	10.4
12/15/2020									•
12/16/2020								8.9	5.3
<del></del>								-	

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								8.5	10.2
3/10/2021	7.4								
3/11/2021		5.9	5.1	2.3					
3/12/2021						2.4		8.5	10.8
3/15/2021					21.8		2.9		
8/11/2021	9.6								
8/12/2021		4.8	5.2						
8/13/2021				2.6					
8/16/2021					18	2.4	2.6		
8/19/2021								7.8	4.5
2/1/2022	7.5	5.7	7	2.2					
2/2/2022					16.8	2.5	2.6		
2/3/2022								8.5	8.1
8/2/2022	14.1	5.9	7.8	2.7					
8/4/2022					15.4	2.7	2.6	8.7	11.6

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
5/19/2016	HOVIA-43D (Dg)	HOVIA-14D (Dg)	Tann too (ug)
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

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	4.1	9.5	
1/20/2021			3.5
3/10/2021		12.3	
3/11/2021	4.5		
3/12/2021			3.3
3/15/2021			
8/11/2021	3.5		
8/12/2021			
8/13/2021		39.9	3.3
8/16/2021			
8/19/2021			
2/1/2022	4.1	44.8	3.5
2/2/2022			
2/3/2022			
8/2/2022	4.3	19.8	3.9
8/4/2022			

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
5/19/2016	0.105 (J)	0.0513 (J)	0.0303 (J)						
7/11/2016	0.16 (J)		0.05 (J)						
7/12/2016		0.12 (J)							
8/30/2016	0.09 (J)	0.09 (J)	0.06 (J)	0.19 (J)					
8/31/2016					0.65	0.15 (J)	0.14 (J)		
10/19/2016	0.1 (J)	0.1 (J)	0.04 (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)	0.21 (J)	0.36						
1/13/2017							0.14 (J)		
1/24/2017	0.09 (J)	0.06 (J)	<0.1						
1/25/2017				0.22 (J)					
1/27/2017					1.2	0.3			
3/21/2017	0.13 (J)	0.005 (J)	<0.1						
5/22/2017	0.12 (J)	0.05 (J)	<0.1						
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)	0.13 (J)	<0.1						
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	0.074 (0)	-0.1	-0.1	0.15 (J)	0.48	0.078 (J)	0.19 (J)		
10/1/2018	<0.1	<0.1	<0.1	0.10 (0)	0.40	0.070 (0)	0.10 (0)		
10/2/2018	-0.1	-0.1	-0.1	0.22 (J)	0.34	0.078 (J)			
10/5/2018				0.22 (0)	0.54	0.070 (3)	0.23 (J)		
3/12/2019	0.20 (1)	0.072 (J)	0.038 (J)				0.23 (3)		
4/1/2019	0.29 (J)	0.072 (J) 0.029 (J)	0.036 (3)						
	0.1 (1)	0.029 (3)	0.071 (1)	0.271)	0.47				
4/2/2019	0.1 (J)		0.071 (J)	0.2 (J)	0.47	0.000 (1)	0.1470		
4/3/2019					4.0	0.089 (J)	0.14 (J)		
6/17/2019				0.4470	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								0.1 (J)	0.46
6/15/2020					0.37				
6/16/2020	0.071 (J)	<0.1						0.12	0.44
8/24/2020				0.075 (J)					
8/25/2020		<0.1	<0.1					0.16	0.52
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)					

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
9/16/2020									
9/18/2020									0.43
9/21/2020					0.33			0.11	
9/25/2020									
9/28/2020						<0.1	0.15		
11/10/2020									
11/11/2020									0.45
11/12/2020								0.12	
12/15/2020									
12/16/2020								0.2	0.49
1/19/2021									
1/20/2021								0.13	0.44
3/10/2021	0.079 (J)								
3/11/2021		<0.1	0.1	0.059 (J)					
3/12/2021					0.42			0.12	0.46
3/15/2021						<0.1	0.16		
8/11/2021	0.058 (J)								
8/12/2021		<0.1	<0.1						
8/13/2021				0.065 (J)					
8/16/2021					0.39	<0.1	0.15		
8/19/2021								0.17	0.43
2/1/2022	0.064 (J)	<0.1	<0.1	0.062 (J)					
2/2/2022					0.36	<0.1	0.15		
2/3/2022								0.18	0.51
8/2/2022	0.09 (J)	0.067 (J)	0.053 (J)	0.1					
8/4/2022					0.38	0.074 (J)	0.18	0.15	0.5

	HGWA-44D (bg)	HGWA-43D (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						

	HGWA-44D (bg)	HGWA-43D (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	0.59	0.19	
11/11/2020			0.19
11/12/2020			
12/15/2020	0.67	0.21	
12/16/2020			0.18
1/19/2021	0.74	0.16	
1/20/2021			0.22
3/10/2021	0.65		
3/11/2021		0.2	
3/12/2021			0.2
3/15/2021			
8/11/2021		0.15	
8/12/2021			
8/13/2021	0.87		0.2
8/16/2021			
8/19/2021			
2/1/2022	0.96	0.19	0.15
2/2/2022			
2/3/2022			
8/2/2022	0.8	0.22	0.21
8/4/2022			

5/19/2016	HGWA-1 (bg) 7.27	HGWA-3 (bg) 7.45	HGWA-2 (bg) 5.81	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
7/11/2016	7.06	7.43	5.68						
	7.00	7.22	5.06						
7/12/2016	7.00	7.32	F 62	6.75					
8/30/2016	7.28	7.43	5.63	6.75	0.70	0.00	0.00		
8/31/2016	7.00	7.00	F 40		6.73	6.99	6.62		
10/19/2016	7.02	7.03	5.46	0.70					
10/20/2016				6.73					
10/27/2016					6.77	7.06			
11/7/2016							6.71		
12/6/2016	7.09	7.08	5.38						
1/13/2017							6.57		
1/24/2017	7.2	7.39	5.37						
1/25/2017				6.88					
1/27/2017					6.74	7.13			
3/21/2017	7.01	6.83	4.9						
5/22/2017	7.11	7.02	5.2						
5/25/2017				6.55	6.99	7.1			
6/3/2017							6.71		
8/11/2017				6.56		7.02			
10/2/2017					7.66		7.65		
10/3/2017	7.21	7.47	5.3						
11/15/2017				6.47	6.71	7.04	6.69		
4/2/2018	7.1		5.4						
4/3/2018		7.38							
6/4/2018	7.06	7.38	5.27						
6/5/2018				6.66	6.83	7.17	6.79		
10/1/2018	7.09	7.13	5.31						
10/2/2018				6.44	6.83	7.08			
10/5/2018							6.71		
3/12/2019	7.03	7.29	5.42						
4/1/2019		7.16							
4/2/2019	6.86		5.41	6.57	6.87				
4/3/2019						7.14	6.73		
8/22/2019				6.51	6.79		6.77		
8/23/2019						7.02			
9/23/2019	7.02	7.3	5.33						
10/21/2019				6.69		7.05	6.74		
10/22/2019					6.74				
3/2/2020	7.1	7.12	5.43						
3/24/2020				7.08		7.18			
3/25/2020	6.95	7.4	5.36		6.8		6.91		
5/22/2020								6.43	7.22
6/15/2020					6.8				
6/16/2020	6.97	7.31						6.29	6.92
8/24/2020	0.07	7.0.		6.54				0.20	0.02
8/25/2020		7.14	5.17					6.36	6.78
8/26/2020					6.96		6.73		=::=
8/27/2020					5.50	7.15	5.70		
8/28/2020	7.02					7.10			
9/15/2020	7.02	7.29	5.22	6.68					
9/16/2020	7.13	7.23	J.ZZ	0.00					
9/18/2020									6.97
31 101ZUZU									0.37

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
9/21/2020					6.98			6.22	
9/25/2020									
9/28/2020						7.27	6.93		
11/10/2020									
11/11/2020									6.86
11/12/2020								6.13	
12/15/2020									
12/16/2020								6.61	6.93
1/19/2021									
1/20/2021								6.23	6.99
3/10/2021	6.95								
3/11/2021		7.33	5.8	6.65					
3/12/2021					6.95			6.18	7.05
3/15/2021						7.22	6.87		
8/11/2021	6.98								
8/12/2021		7.31	5.05						
8/13/2021				6.56					
8/16/2021					6.92	7.09	6.74		
8/19/2021								7.24	7.32
2/1/2022	7.19	7.45	5.24	6.57					
2/2/2022					7	7.28	6.92		
2/3/2022								6.56	7.01
8/2/2022	7.03	7.02	4.57	6.67					
8/4/2022					6.93	7.15	6.8	6.09	6.99

	HGWA-44D (bg)	HGWA-43D (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	7.83	7.52	
9/18/2020			

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
9/21/2020			
9/25/2020			7.57
9/28/2020			
11/10/2020	7.84	7.27	
11/11/2020			7.4
11/12/2020			
12/15/2020	7.87	7.39	
12/16/2020			7.39
1/19/2021	7.86	7.39	
1/20/2021			7.47
3/10/2021	7.92		
3/11/2021		7.46	
3/12/2021			7.52
3/15/2021			
8/11/2021		7.4	
8/12/2021			
8/13/2021	7.77		7.42
8/16/2021			
8/19/2021			
2/1/2022	8.25	7.52	7.45
2/2/2022			
2/3/2022			
8/2/2022	7.9	7.15	7.39
8/4/2022			

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
5/19/2016	66.9	42.3	48.6						
7/11/2016	41		45						
7/12/2016		44							
8/30/2016	36	40	42	49					
8/31/2016					280	290	72		
10/19/2016	46	43	44						
10/20/2016				49					
10/26/2016						280	71		
11/7/2016					300				
12/6/2016	59	43	44						
1/13/2017					270				
1/24/2017	46	48	46						
1/25/2017				48					
1/27/2017						290	74		
3/21/2017	63	45	46						
5/22/2017	77	46	48						
5/25/2017	,,	-10		48		280	73		
6/3/2017				40	270	200	7.0		
8/11/2017				47	270		71		
10/2/2017				47	330	300	71		
10/3/2017	42	48	47		330	300			
	42	40		40	200	200	70		
11/15/2017	74.0	40.0		49	280	300	70		
6/4/2018	71.8	46.6	47.8	40.0	044	070	74		
6/5/2018	40.4	10.0		48.9	241	273	74		
10/1/2018	49.1	48.6	48.1	40.0		000	00.7		
10/2/2018				48.6	074	328	80.7		
10/5/2018		50.4			271				
4/1/2019		50.4							
4/2/2019	84.3		48.7	39.6		256			
4/3/2019					230		75.2		
6/17/2019					219	243			
6/18/2019				44.5			75.3		
9/23/2019	70.2	43.9	47.2						
10/21/2019				45.6	238		78.5		
10/22/2019						266			
3/24/2020				25.9			74.6		
3/25/2020	85.9	50.5	46.3		116	226			
5/22/2020								56.1	345
6/15/2020						212			
6/16/2020	88.2	49.5						57.6	320
8/25/2020								62.8	353
9/15/2020	47.3	44.7	51.5	41.4					
9/16/2020									
9/18/2020								62.7	
9/21/2020						225			352
9/25/2020									
9/28/2020					182		86.2		
11/10/2020									
11/11/2020								62.3	
11/12/2020									300
12/15/2020									
12/16/2020								68.1	306

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								66.6	335
3/10/2021	49.6								
3/11/2021		50.4	52.9	40.7					
3/12/2021						210		69.7	293
3/15/2021					177		74		
8/11/2021	48.9								
8/12/2021		38.6	47.4						
8/13/2021				42.1					
8/16/2021					158	211	74		
8/19/2021								64.4	264
2/1/2022	43.7	46	67.1	41.1					
2/2/2022					147	201	70.7		
2/3/2022								66.8	304
8/2/2022	58.1	43.5	86.9	41.5					
8/4/2022					162	230	73.1	68.3	331

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
5/19/2016	HGWA-44D (bg)	TIGWA-43D (bg)	TIGWA-45D (bg)
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	6.3	39	
11/11/2020			11.2
11/12/2020			
12/15/2020	6.7	38.8	
12/16/2020			11.3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	7.4	37.3	
1/20/2021			14.2
3/10/2021	<1		
3/11/2021		38.6	
3/12/2021			8.7
3/15/2021			
8/11/2021		30.5	
8/12/2021			
8/13/2021	56.1		8.1
8/16/2021			
8/19/2021			
2/1/2022	56.3	37.5	2.5
2/2/2022			
2/3/2022			
8/2/2022	13.2	37	2.1
8/4/2022			

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
5/19/2016	421	267	143						
7/11/2016	363		125						
7/12/2016		249							
8/30/2016	330	254	168	280					
8/31/2016					876	700	379		
10/19/2016	380	357	176						
10/20/2016				265					
10/26/2016						795	409		
11/7/2016					1000				
12/6/2016	377	285	145						
1/13/2017					827				
1/24/2017	342	300	129						
1/25/2017				371					
1/27/2017						706	370		
3/21/2017	340	288	103						
5/22/2017	338	263	92						
5/25/2017				237		669	351		
6/3/2017					846				
8/11/2017				253			322		
10/2/2017					884	672			
10/3/2017	343	300	127						
11/15/2017				261	838	721	350		
6/4/2018	415	266	140						
6/5/2018				276	823	723	360		
10/1/2018	354	291	135						
10/2/2018				256		703	363		
10/5/2018					813				
4/1/2019		284							
4/2/2019	452		133	814 (o)		540			
4/3/2019					785		369		
6/17/2019					751				
6/18/2019				233					
9/23/2019	442	268	129						
10/21/2019				296	771		357		
10/22/2019						693			
3/24/2020				278			355		
3/25/2020	496	284	138		521	665			
5/22/2020								809	496
6/15/2020						685			
6/16/2020	632	448						665	508
8/25/2020								772	505
9/15/2020	265	258	124	267					
9/16/2020									
9/18/2020									452
9/21/2020						272		956	
9/25/2020									
9/28/2020					<10		176		
11/10/2020									
11/11/2020									468
11/12/2020								694	
12/15/2020									
12/16/2020								816	536

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
1/19/2021									
1/20/2021								726	472
3/10/2021	348								
3/11/2021		267	169	206					
3/12/2021						584		664	474
3/15/2021					614		340		
8/11/2021	366								
8/12/2021		265	118						
8/13/2021				201					
8/16/2021					626	632	352		
8/19/2021								732	488
2/1/2022	270	350	156	203					
2/2/2022					638	612	347		
2/3/2022								726	466
8/2/2022	400	287	196	217					
8/4/2022					640	632	334	706	510

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)			
5/19/2016	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)			
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				
	L1L	210				
9/18/2020						
9/21/2020			262			
9/25/2020			263			
9/28/2020	007	007				
11/10/2020	307	287	070			
11/11/2020			276			
11/12/2020						
12/15/2020	289	295				
12/16/2020			294			

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	270	278	
1/20/2021			289
3/10/2021		289	
3/11/2021	279		
3/12/2021			260
3/15/2021			
8/11/2021	277		
8/12/2021			
8/13/2021		436	272
8/16/2021			
8/19/2021			
2/1/2022	156	444	268
2/2/2022			
2/3/2022			
8/2/2022	278	311	261
8/4/2022			

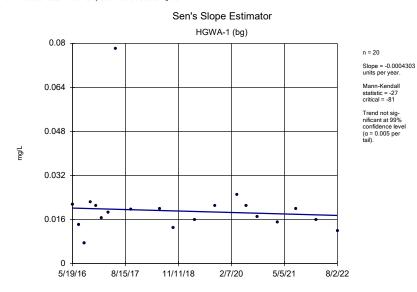
# FIGURE E.

## Appendix III Trend Test - Significant Results

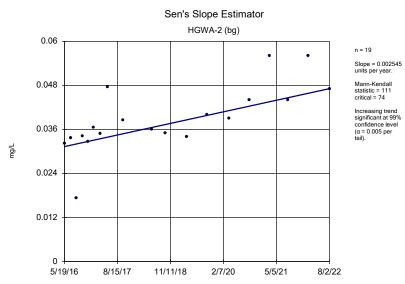
	Plant Hammond Client:	Southern Company	Data: Har	mmond AP-3	Print	ted 10/20	0/2022, 7	:00 PM			
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWA-122 (bg)	-0.02454	-84	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002545	111	74	Yes	19	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.04213	-73	-68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2499	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.436	99	81	Yes	20	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.681	-68	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-126	13.84	40	34	Yes	11	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.483	-76	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.619	101	74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-16.59	-98	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.95	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-121A	-52.05	-94	-63	Yes	17	5.882	n/a	n/a	0.01	NP

#### Appendix III Trend Test - All Results

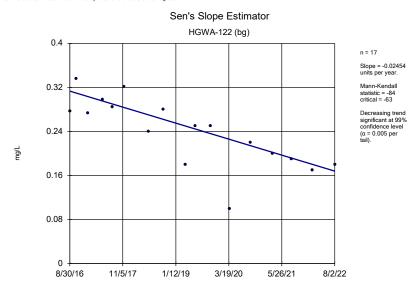
Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 7:00 PM Constituent Well Slope Calc. Critical Sig. <u>N</u> <u>%NDs</u> <u>Normality</u> <u>Xform</u> <u>Alpha</u> Method HGWA-1 (bg) -0.0004303 -27 20 NP Boron (mg/L) -81 No 0 n/a n/a 0.01 HGWA-122 (bg) -0.02454 -84 NP Boron (mg/L) -63 Yes n/a 0.01 Boron (mg/L) HGWA-2 (bg) 0.002545 111 74 Yes 19 0 n/a n/a 0.01 NP HGWA-3 (bg) 0.0003378 22 NP 81 No 20 20 0.01 Boron (mg/L) n/a n/a Boron (mg/L) HGWA-43D (bg) -0.01038 -21 No NP Boron (mg/L) HGWA-44D (bg) 0.1016 13 21 No 8 12.5 n/a n/a 0.01 NP Boron (mg/L) HGWA-45D (bg) -0.01353 -11 -21 No 8 0 0.01 NP n/a n/a HGWC-120 Boron (mg/L) -0.04213 -73 Yes 18 n/a n/a 0.01 NP Boron (mg/L) HGWC-121A -0.2499 -96 -63 Yes 17 0 n/a n/a 0.01 NP HGWC-125 0 8 Nο 0 NP Boron (mg/L) 34 11 n/a n/a 0.01 Calcium (mg/L) HGWA-1 (bg) 2.653 61 81 No 20 0 n/a n/a 0.01 NΡ Calcium (mg/L) HGWA-122 (bg) -2.468 -40 -63 No 17 0 n/a 0.01 NP 0.7505 51 NP Calcium (mg/L) HGWA-2 (ba) 74 No 19 0 n/a n/a 0.01 Calcium (mg/L) HGWA-3 (bg) 2.436 99 0.01 NP 81 Yes 20 n/a n/a Calcium (mg/L) HGWA-43D (bg) -3.927 -14 -21 No 8 0 n/a n/a 0.01 NP 0 HGWA-44D (bg) -5.744 -14 No 8 NP Calcium (mg/L) -21 n/a n/a 0.01 HGWA-45D (bg) -3.572 -18 -21 No 8 0 0.01 ΝP Calcium (mg/L) n/a n/a Calcium (mg/L) HGWC-120 1.46 33 68 No 18 0 0.01 NP HGWC-121A -5.681 Calcium (mg/L) -68 -63 Yes 17 0 n/a n/a 0.01 NP Calcium (mg/L) HGWC-125 8.147 10 34 No 11 n/a n/a 0.01 NP Calcium (mg/L) HGWC-126 13.84 40 34 Yes 11 0 n/a n/a 0.01 NP 35 81 0 NP Sulfate (mg/L) HGWA-1 (bg) 1.779 Nο 20 n/a n/a 0.01 HGWA-122 (bg) -1.483 -76 -63 Yes 17 0 n/a 0.01 NP Sulfate (mg/L) n/a Sulfate (mg/L) HGWA-2 (bg) 1.619 101 74 Yes 19 0 0.01 NP Sulfate (mg/L) HGWA-3 (ba) 0.673 52 81 No 20 0 n/a n/a 0.01 NP Sulfate (mg/L) HGWA-43D (bg) -1.657 -20 -21 No 0.01 n/a n/a Sulfate (mg/L) HGWA-44D (bg) 4.085 8 21 No 8 12.5 n/a n/a 0.01 NP HGWA-45D (ba) Sulfate (mg/L) -4.804 -12 -21 No 8 0 n/a n/a 0.01 NP HGWC-120 -16.59 -98 -68 18 0 0.01 NP Sulfate (mg/L) Yes n/a Sulfate (mg/L) HGWC-121A -25.95 -96 -63 Yes 17 0 0.01 NP HGWC-125 -27 92 Sulfate (mg/L) -21 -34 Nο 11 0 n/a n/a 0.01 NP Total Dissolved Solids (mg/L) HGWA-1 (ba) 3.538 14 81 No 20 0 n/a n/a 0.01 NP Total Dissolved Solids (mg/L) HGWA-122 (bg) -11.75 -48 -58 No 0 0.01 NP 0 Total Dissolved Solids (mg/L) HGWA-2 (bg) 1.249 6 74 Nο 19 n/a n/a 0.01 NP Total Dissolved Solids (mg/L) 17 No 20 0 NP HGWA-3 (bg) 1.162 81 n/a n/a 0.01 Total Dissolved Solids (mg/L) HGWA-43D (bg) -11.77 -8 -21 No 8 0 0.01 NP Total Dissolved Solids (mg/L) HGWA-44D (bg) 59.96 18 21 No 8 0 n/a n/a 0.01 NP HGWA-45D (bg) NP Total Dissolved Solids (mg/L) -7.51 -8 -21 8 0.01 No 0 n/a n/a Total Dissolved Solids (mg/L) HGWC-121A -52.05 -94 Yes 17 n/a 0.01 ΝP Total Dissolved Solids (mg/L) HGWC-125 -12 NP -33 98 -34 Nο 11 n/a 0.01



Constituent: Boron Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3

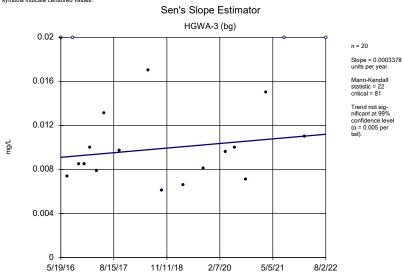


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Plant Hammond Client: Southern Company Data: Hammond AP-3

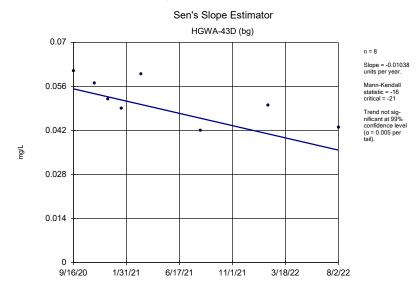


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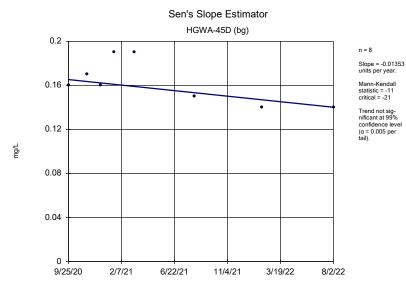
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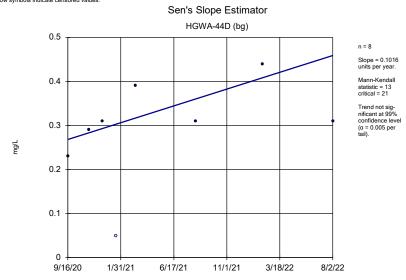


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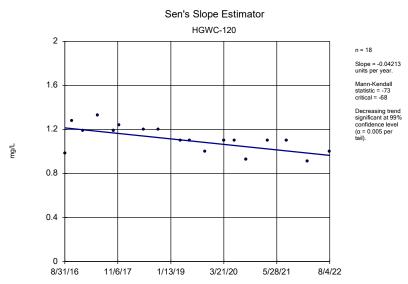
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Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

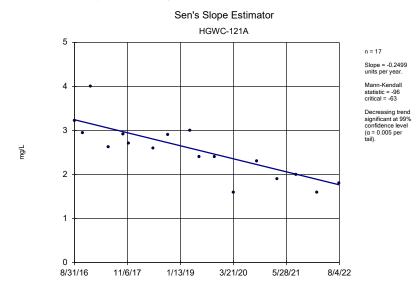


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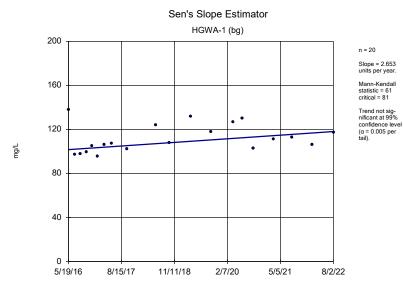
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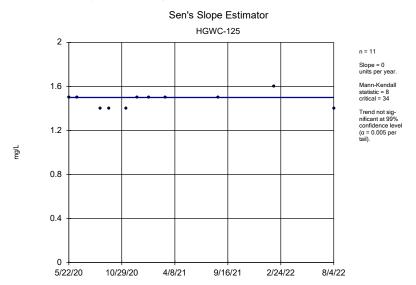
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Constituent: Boron Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
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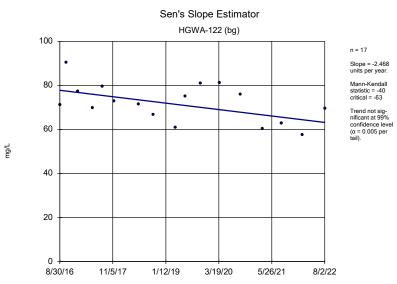


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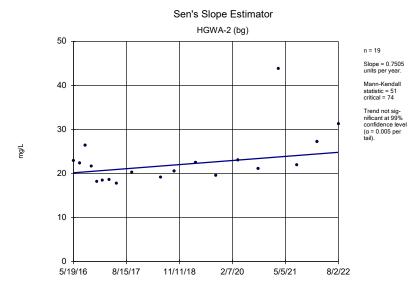


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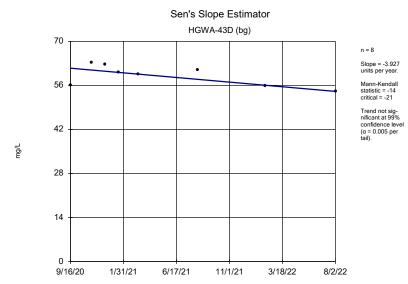
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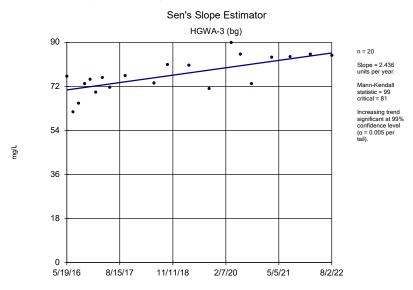
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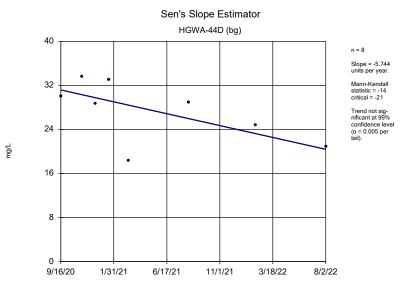
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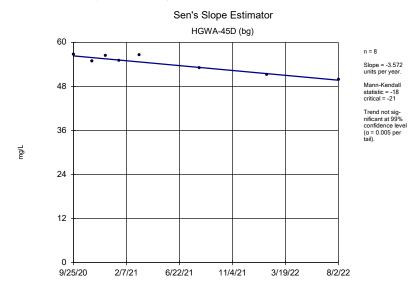
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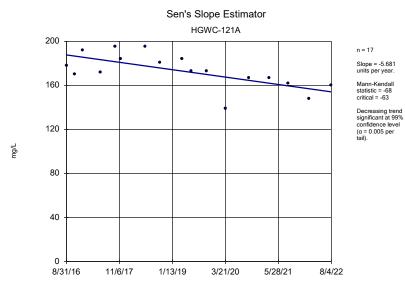
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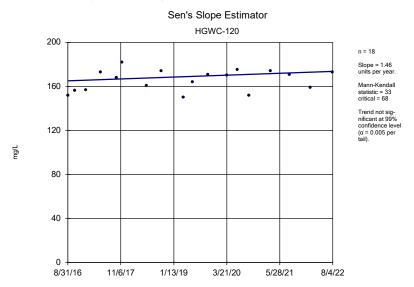
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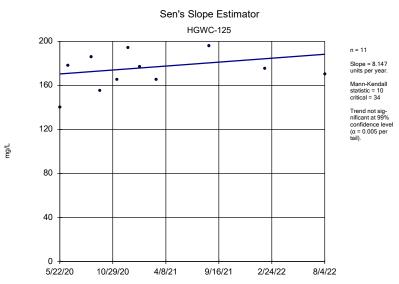
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Plant Hammond Client: Southern Company Data: Hammond AP-3



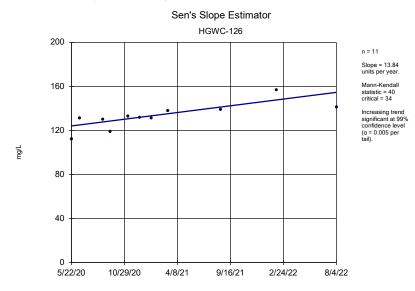
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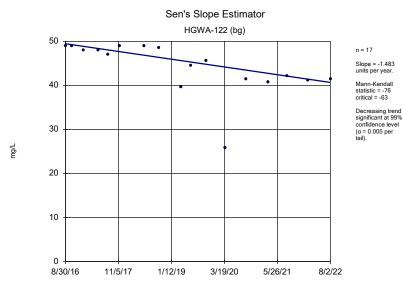
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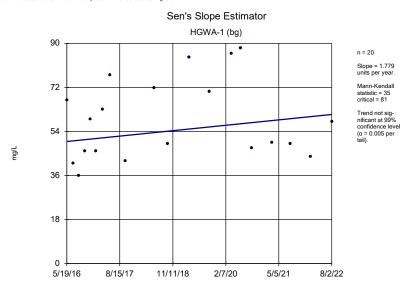
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Plant Hammond Client: Southern Company Data: Hammond AP-3



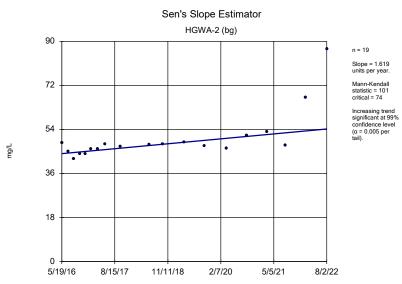
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Plant Hammond Client: Southern Company Data: Hammond AP-3



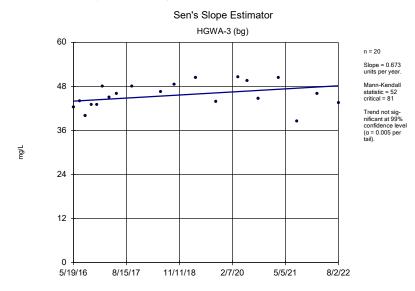
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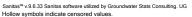
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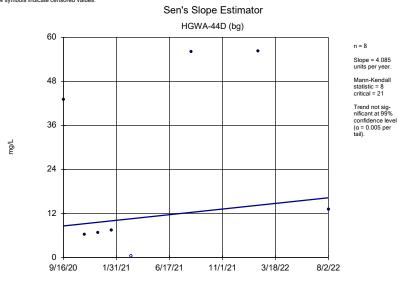


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Plant Hammond Client: Southern Company Data: Hammond AP-3

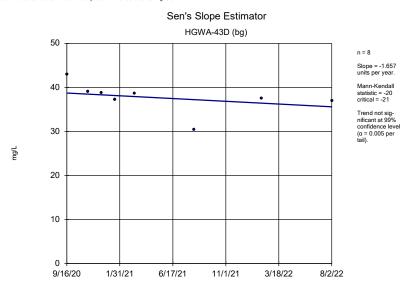


Constituent: Sulfate Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3

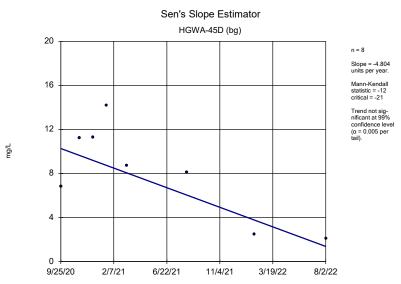




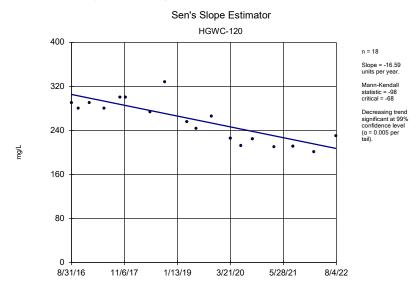
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Plant Hammond Client: Southern Company Data: Hammond AP-3



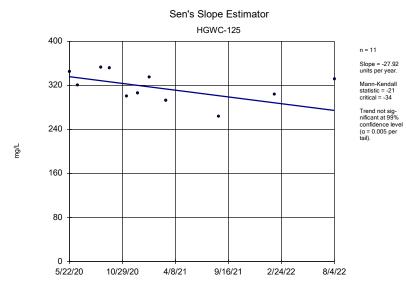
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Plant Hammond Client: Southern Company Data: Hammond AP-3



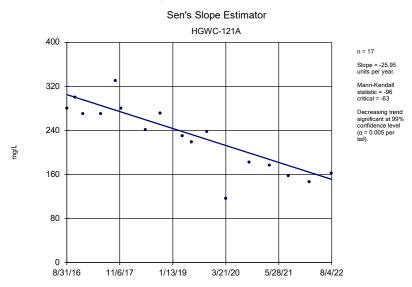
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Plant Hammond Client: Southern Company Data: Hammond AP-3



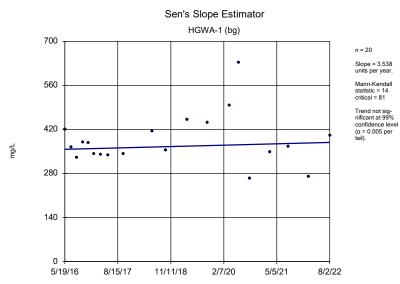
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Plant Hammond Client: Southern Company Data: Hammond AP-3



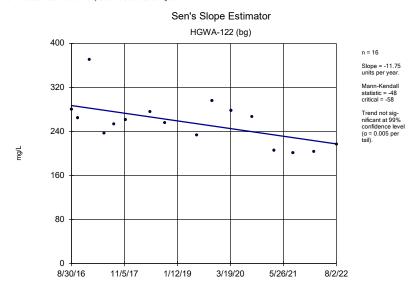
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Plant Hammond Client: Southern Company Data: Hammond AP-3



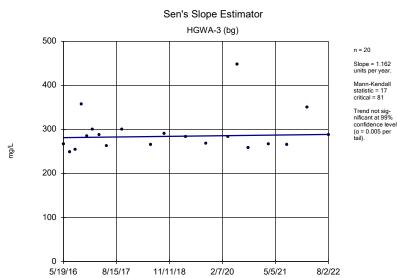
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Plant Hammond Client: Southern Company Data: Hammond AP-3



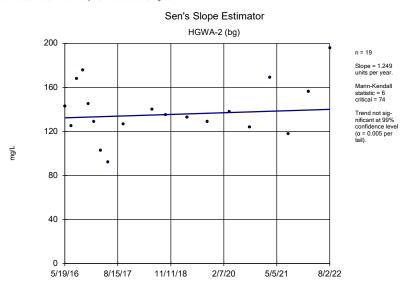
Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3



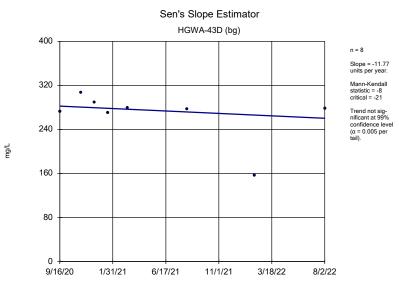
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Plant Hammond Client: Southern Company Data: Hammond AP-3



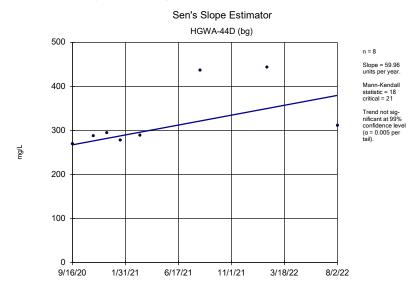
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Plant Hammond Client: Southern Company Data: Hammond AP-3



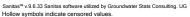
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Plant Hammond Client: Southern Company Data: Hammond AP-3

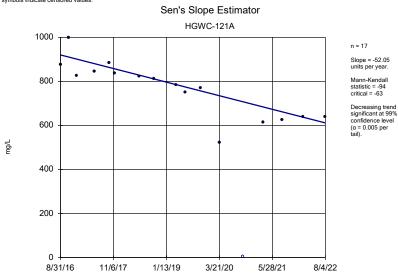


Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3

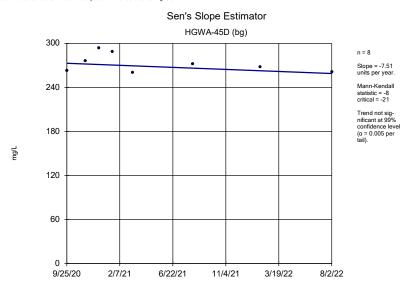


Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3

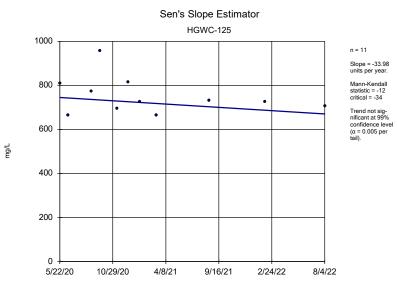




Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Total Dissolved Solids Analysis Run 10/20/2022 6:59 PM View: A3 Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-3

# FIGURE F.

## **Upper Tolerance Limits**

Client: Southern Company Data: Hammond AP-3 Printed 10/20/2022, 7:13 PM Well Upper Lim. Date Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. Constituent Observ. <u>Alpha</u> Method 0.003 n/a 99 n/a 84.85 n/a 0.006232 NP Inter(NDs) Antimony (mg/L) n/a n/a n/a n/a n/a Arsenic (mg/L) 0.005 n/a 97 0.006905 NP Inter(NDs) Barium (mg/L) n/a 0.64 n/a n/a n/a 107 n/a n/a 0.9346 n/a n/a 0.004135 NP Inter(normality) 0.0005 82.83 0.006232 NP Inter(NDs) Beryllium (mg/L) n/a n/a n/a 99 n/a n/a n/a n/a n/a Cadmium (mg/L) 0.0005 n/a 97 n/a 88.66 0.006905 NP Inter(NDs) 0.0079 0.005625 NP Inter(NDs) Chromium (mg/L) n/a n/a n/a n/a 101 n/a n/a 78.22 n/a n/a 0.038 n/a 107 n/a 0.004135 NP Inter(NDs) Cobalt (mg/L) n/a n/a n/a n/a 77.57 n/a n/a Combined Radium 226 + 228 (pCi/L) n/a 1.648 n/a n/a 100 0.787 0.2581 None sqrt(x) 0.05 Fluoride (mg/L) 0.96 n/a n/a n/a 114 n/a n/a 24.56 n/a n/a 0.002887 NP Inter(normality) 0.001 0.005625 Lead (mg/L) n/a n/a n/a n/a 101 n/a n/a 67.33 n/a n/a NP Inter(NDs) Lithium (mg/L) n/a 0.048 n/a n/a 107 n/a 32.71 n/a 0.004135 NP Inter(normality) n/a n/a n/a 0.0002 0.01738 NP Inter(NDs) Mercury (mg/L) n/a n/a n/a n/a 79 n/a n/a 93.67 n/a n/a 0.01 n/a 109 n/a 66.97 0.003731 NP Inter(NDs) Molybdenum (mg/L) n/a n/a n/a n/a n/a n/a Selenium (mg/L) n/a 0.005 n/a 97 n/a 97.94 n/a 0.006905 NP Inter(NDs) Thallium (mg/L) n/a 0.001 n/a n/a n/a 97 n/a n/a 98.97 n/a n/a 0.006905 NP Inter(NDs)

# FIGURE G.

PLANT HA	MMOND A	P-3 GWPS		
		CCR-Rule	Background	
Constituent Name	MCL	Specified	Limit	GWPS
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		0.64	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.65	5
Fluoride, Total (mg/L)	4		0.96	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.048	0.048
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

<sup>\*</sup>Grey cell indidcates background is higher than MCL or CCR-Rule

<sup>\*</sup>MCL = Maximum Contaminant Level

<sup>\*</sup>CCR = Coal Combustion Residuals

<sup>\*</sup>GWPS = Groundwater Protection Statard

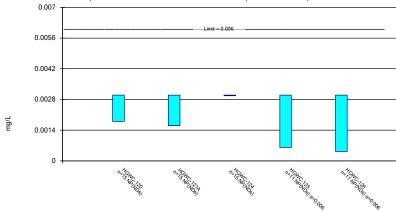
# FIGURE H.

# Confidence Interval - All Results (No Significant) Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 11/1/2022, 9:54 AM

	Plant	Hammond	Client: Southern Co	mpany Data	a: Hamr	mond AP	-3 Printe	d 11/1/2022, 9:54 A	M	
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	%NDs	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	15	93.33	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-121A	0.003	0.0016	0.006	No	15	93.33	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-124	0.003	0.003	0.006	No	15	100	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00061	0.006	No	11	81.82	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.00043	0.006	No	11	81.82	No	0.006	NP (NDs)
Arsenic (mg/L)	HGWC-120	0.005	0.001	0.01	No	13	61.54	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-121A	0.005	0.0014	0.01	No	13	76.92	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-124	0.005	0.0006	0.01	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-125	0.005	0.0014	0.01	No	10	70	No	0.011	NP (NDs)
Arsenic (mg/L)	HGWC-126	0.005	0.00091	0.01	No	10	70	No	0.011	NP (NDs)
Barium (mg/L)	HGWC-120	0.05171	0.04652	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08026	0.06462	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.0728	0.06747	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04629	0.0408	2	No	11	0	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2562	0.2275	2	No	11	0	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	17	82.35	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	17	94.12	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	17	88.24	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00058	0.1	No	11	72.73	No	0.006	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.005	0.1	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.004435	0.002982	0.038	No	17	0	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	17	82.35	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-124	0.005	0.005	0.038	No	17	100	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01265	0.007679	0.038	No	11	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-126	0.005	0.005	0.038	No	11	100	No	0.006	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.087	0.6342	5	No	16	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.169	0.492	5	No	16	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.8959	0.5525	5	No	16	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.423	0.6226	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.687	0.9815	5	No	10	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-120	1	0.37	4	No	20	0	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.2	0.14	4	No	18	0	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.11	0.05	4	No	18	38.89	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1686	0.115	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.4938	0.4389	4	No	11	0	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.015	No	17	82.35	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.015	No	17	82.35	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.00008	0.015	No No	17	70.59	No No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125 HGWC-126	0.001 0.001	0.000047 0.000045	0.015 0.015	No	11	54.55 72.73	No	0.006 0.006	NP (NDs)
Lead (mg/L)					No	11 17	0	No		NP (NDs)
Lithium (mg/L) Lithium (mg/L)	HGWC-120 HGWC-121A	0.0337 0.00897	0.023 0.007677	0.048 0.048	No No	17	0	No No	0.01 0.01	NP (normality) Param.
Lithium (mg/L)	HGWC-121A	0.00537	0.007077	0.048	No	17	29.41	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.005757	0.00377	0.048	No	11	0	No	0.01	Param.
Lithium (mg/L)	HGWC-126	0.003737	0.00377	0.048	No	11	0	No	0.01	Param.
Mercury (mg/L)	HGWC-120	0.0002	0.000200	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-121A	0.0002	0.00007	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-124	0.0002	0.0002	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-125	0.0002	0.0002	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	HGWC-126	0.0002	0.0002	0.002	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	HGWC-120	0.03746	0.02651	0.1	No	17	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-121A	0.01	0.01	0.1	No	17	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.1	No	17	35.29	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.01036	-0.0001221	0.1	No	11	27.27	No	0.01	Param.
Molybdenum (mg/L)	HGWC-126	0.01030	0.01	0.1	No	11	100	No	0.006	NP (NDs)
Selenium (mg/L)	HGWC-120	0.005	0.002	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-121A	0.005	0.0011	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-124	0.005	0.0014	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-125	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
Selenium (mg/L)	HGWC-126	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
										. /

#### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

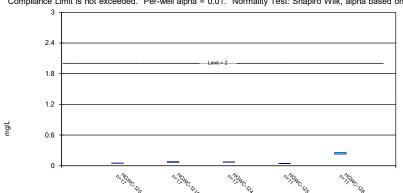


Constituent: Antimony Analysis Run 11/1/2022 9:52 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

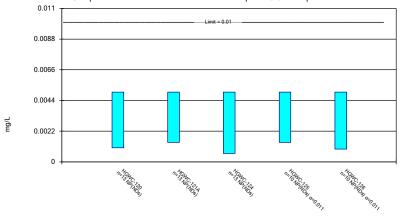
#### Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

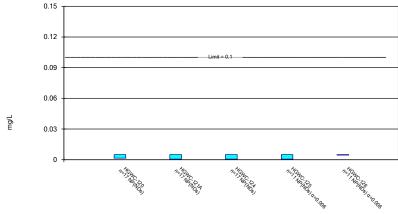


Constituent: Arsenic Analysis Run 11/1/2022 9:52 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

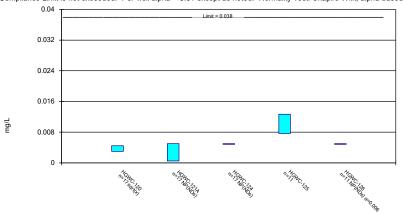
#### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



#### 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: Cobalt Analysis Run 11/1/2022 9:52 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

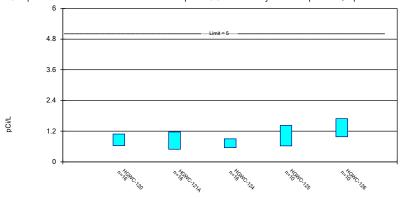
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

## 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 11/1/2022 9:52 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

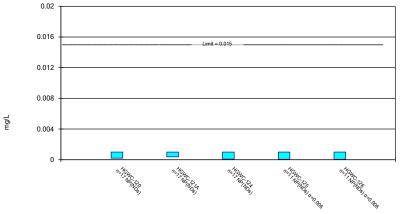


Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2022 9:52 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

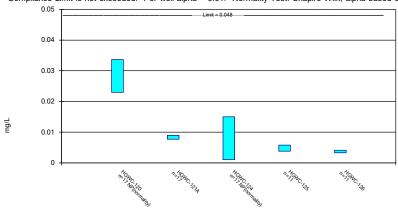
#### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



#### 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.

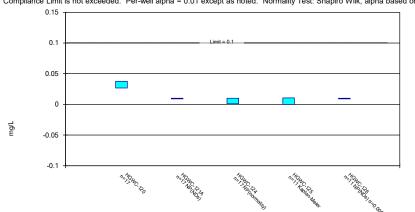


Constituent: Lithium Analysis Run 11/1/2022 9:52 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

#### Parametric and Non-Parametric (NP) Confidence Interval

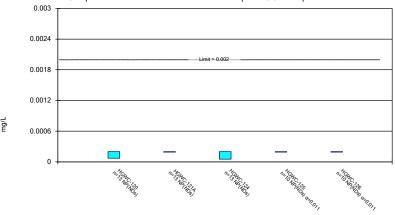
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/1/2022 9:52 AM View: Confidence Interval 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.

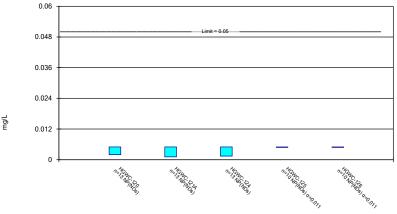


Constituent: Mercury Analysis Run 11/1/2022 9:52 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

#### Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

#### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	< 0.003	<0.003	<0.003		
10/26/201	6 <0.003		<0.003		
11/7/2016	i	<0.003			
1/13/2017	•	<0.003			
1/27/2017	<0.003		<0.003		
5/25/2017	<0.003		<0.003		
6/3/2017		<0.003			
8/11/2017	•		<0.003		
10/2/2017	<0.003	<0.003			
11/15/201	7 <0.003	<0.003	<0.003		
6/5/2018	<0.003	<0.003	<0.003		
10/2/2018	< 0.003		<0.003		
10/5/2018	<b>;</b>	<0.003			
8/22/2019	< 0.003	<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	<0.003			
8/27/2020	)		<0.003		
9/18/2020	)				<0.003
9/21/2020	< 0.003			<0.003	
9/28/2020	)	<0.003	<0.003		
11/11/202	0				0.0004 (J)
11/12/202	0			<0.003	
12/16/202	20			<0.003	<0.003
1/20/2021				<0.003	<0.003
3/12/2021	0.0018 (J)			0.00061 (J)	0.00043 (J)
3/15/2021		<0.003	<0.003		
8/16/2021	<0.003	<0.003	<0.003		
8/19/2021				<0.003	<0.003
2/2/2022	< 0.003	<0.003	<0.003		
2/3/2022				<0.003	<0.003
8/4/2022	<0.003	0.0016 (J)	<0.003	<0.003	<0.003
Mean	0.00292	0.002907	0.003	0.002553	0.00253
Std. Dev.	0.0003098	0.0003615	0	0.0009956	0.001046
Upper Lim		0.003	0.003	0.003	0.003
Lower Lim		0.0016	0.003	0.00061	0.00043

Constituent: Arsenic (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

			i idiit i	iaminona Olient.	Baa. Hamilion A5
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016	<0.005		<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	<0.005		<0.005		
5/25/2017	0.0014 (J)		0.0006 (J)		
6/3/2017		0.001 (J)			
8/11/2017			<0.005		
10/2/2017	0.0007 (J)	<0.005			
11/15/2017	<0.005	<0.005	<0.005		
6/5/2018	0.001 (J)	0.0014 (J)	<0.005		
10/2/2018	<0.005		<0.005		
10/5/2018		<0.005			
8/22/2019	<0.005	<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			
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
1/20/2021				<0.005	<0.005
8/16/2021	0.0015 (J)	0.0014 (J)	<0.005		
8/19/2021				<0.005	<0.005
2/2/2022	0.0014 (J)	<0.005	<0.005		
2/3/2022				0.0032 (J)	0.0026 (J)
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005
Mean	0.003538	0.004138	0.004662	0.004041	0.003922
Std. Dev.	0.001934	0.00164	0.00122	0.001652	0.001803
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.001	0.0014	0.0006	0.0014	0.00091

Constituent: Barium (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

			. idik i idi	illona ollona oda	Supply Su
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.045	0.0782	0.0744		
10/26/2016	0.0462		0.0735		
11/7/2016		0.0764			
1/13/2017		0.0744			
1/27/2017	0.0451		0.0632		
5/25/2017	0.0488		0.0773		
6/3/2017		0.0933			
8/11/2017			0.0672		
10/2/2017	0.0479	0.0815			
11/15/2017	0.051	0.0807	0.0707		
6/5/2018	0.051	0.078	0.07		
10/2/2018	0.059		0.067		
10/5/2018		0.074			
8/22/2019	0.05	0.066			
8/23/2019			0.066		
10/21/2019		0.074	0.075		
10/22/2019	0.051				
3/24/2020			0.075		
3/25/2020	0.052	0.099			
5/22/2020				0.048	0.24
6/16/2020				0.049	0.24
8/25/2020				0.045	0.23
8/26/2020	0.041	0.057			
8/27/2020			0.062		
9/18/2020					0.21
9/21/2020	0.046			0.042	
9/28/2020		0.056	0.071		
11/11/2020					0.23
11/12/2020				0.042	
12/16/2020				0.041	0.24
1/20/2021				0.045	0.25
3/12/2021	0.047			0.043	0.27
3/15/2021		0.059	0.071		
8/16/2021	0.052	0.06	0.069		
8/19/2021				0.044	0.27
2/2/2022	0.054	0.064	0.072		
2/3/2022				0.043	0.24
8/4/2022	0.048	0.06	0.068	0.037	0.24
Mean	0.04912	0.07244	0.07014	0.04355	0.2418
Std. Dev.	0.004139	0.01248	0.004251	0.003297	0.01722
Upper Lim.	0.05171	0.08026	0.0728	0.04629	0.2562
Lower Lim.	0.04652	0.06462	0.06747	0.0408	0.2275

Constituent: Chromium (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016	<0.005		<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	<0.005		<0.005		
5/25/2017	<0.005		<0.005		
6/3/2017		<0.005			
8/11/2017			<0.005		
10/2/2017	<0.005	<0.005			
11/15/2017	<0.005	<0.005	<0.005		
6/5/2018	<0.005	<0.005	<0.005		
10/2/2018	<0.005		<0.005		
10/5/2018		<0.005			
8/22/2019	0.00072 (J)	<0.005			
8/23/2019			<0.005		
10/21/2019		<0.005	0.00046 (J)		
10/22/2019	<0.005				
3/24/2020			0.00051 (J)		
3/25/2020	0.0015 (J)	0.0005 (J)			
5/22/2020				0.00058 (J)	<0.005
6/16/2020				0.00052 (J)	<0.005
8/25/2020				<0.005	0.00096 (J)
8/26/2020	<0.005	<0.005			
8/27/2020			<0.005		
9/18/2020					<0.005
9/21/2020	0.00065 (J)			<0.005	
9/28/2020		<0.005	<0.005		
11/11/2020					<0.005
11/12/2020				<0.005	
12/16/2020				<0.005	<0.005
1/20/2021				0.00081 (J)	<0.005
3/12/2021	<0.005			<0.005	<0.005
3/15/2021		<0.005	<0.005		
8/16/2021	<0.005	<0.005	<0.005		
8/19/2021				<0.005	<0.005
2/2/2022	<0.005	<0.005	<0.005		
2/3/2022				<0.005	<0.005
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005
Mean	0.004286	0.004735	0.004469	0.00381	0.004633
Std. Dev.	0.001598	0.001091	0.001499	0.002039	0.001218
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0015	0.0005	0.00051	0.00058	0.005

Constituent: Cobalt (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.0052 (J)	<0.005	<0.005		
10/26/2016	0.0041 (J)		<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	0.0034 (J)		<0.005		
5/25/2017	0.0035 (J)		<0.005		
6/3/2017		0.0005 (J)			
8/11/2017			<0.005		
10/2/2017	0.0036 (J)	0.0003 (J)			
11/15/2017	0.0032 (J)	0.0003 (J)	<0.005		
6/5/2018	0.0031 (J)	<0.005	<0.005		
10/2/2018	0.0025 (J)		<0.005		
10/5/2018		<0.005			
8/22/2019	0.0028 (J)	<0.005			
8/23/2019			<0.005		
10/21/2019		<0.005	<0.005		
10/22/2019	0.0031 (J)				
3/24/2020			<0.005		
3/25/2020	0.0036 (J)	<0.005			
5/22/2020				0.01	<0.005
6/16/2020				0.0096	<0.005
8/25/2020				0.0087	<0.005
8/26/2020	0.0023 (J)	<0.005			
8/27/2020			<0.005		
9/18/2020					<0.005
9/21/2020	0.0041 (J)			0.012	
9/28/2020		<0.005	<0.005		
11/11/2020					<0.005
11/12/2020				0.012	
12/16/2020				0.0055	<0.005
1/20/2021				0.012	<0.005
3/12/2021	0.0027 (J)			0.014	<0.005
3/15/2021		<0.005	<0.005		
8/16/2021	0.0037 (J)	<0.005	<0.005		
8/19/2021				0.0054	<0.005
2/2/2022	0.0072	<0.005	<0.005		
2/3/2022				0.0086	<0.005
8/4/2022	0.0058	<0.005	<0.005	0.014	<0.005
Mean	0.003759	0.004182	0.005	0.01016	0.005
Std. Dev.	0.001262	0.001821	0	0.002982	0
Upper Lim.	0.004435	0.005	0.005	0.01265	0.005
Lower Lim.	0.002982	0.0005	0.005	0.007679	0.005

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	1.47	1.57	1.22		
10/26/2016	0.864 (U)		0.637 (U)		
11/7/2016		0.739 (U)			
1/13/2017		0.744 (U)			
1/27/2017	0.521 (U)		0.795 (U)		
5/25/2017	0.681 (U)		0.896 (U)		
6/3/2017		0 (U)			
8/11/2017			0.828 (U)		
10/2/2017	0.632 (U)	0.68 (U)			
11/15/2017	1.3	0.911 (U)	0.478 (U)		
6/5/2018	1.26 (U)	0.948 (U)	0.947 (U)		
10/2/2018	0.572 (U)		0.617 (U)		
10/5/2018		1.17 (U)			
8/22/2019	1.35	1.3			
8/23/2019			0.834		
10/21/2019		0.393 (U)	1.11 (U)		
10/22/2019	0.76 (U)				
3/24/2020			0.796 (U)		
3/25/2020	0.696 (U)	0.505 (U)			
5/22/2020				1.1 (U)	1.82
6/16/2020				1.62	1.82
8/25/2020				1.65	1.82
8/26/2020	0.357 (U)	1.96			
8/27/2020			0.494 (U)		
9/18/2020					0.841 (U)
9/21/2020	0.553 (U)			1.45	
9/28/2020		0.761 (U)	0.477 (U)		
11/11/2020					0.837 (U)
11/12/2020				0.633 (U)	
12/16/2020				0.818 (U)	1.26 (U)
1/20/2021				1.01 (U)	0.985 (U)
8/16/2021	1.25	0.192 (U)	0.734 (U)		
8/19/2021				0.721 (U)	1.11
2/2/2022	0.816 (U)	0.254 (U)	0.564 (U)		
2/3/2022				0.257 (U)	1.51
8/4/2022	0.687 (U)	1.16 (U)	0.16 (U)	0.971 (U)	1.34 (U)
Mean	0.8606	0.8304	0.7242	1.023	1.334
Std. Dev.	0.3479	0.5201	0.2639	0.4488	0.3954
Upper Lim.	1.087	1.169	0.8959	1.423	1.687
Lower Lim.	0.6342	0.492	0.5525	0.6226	0.9815

Constituent: Fluoride (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

			Plant n	iammond Client: 8	Southern Company	Data: Hammond AP-3		
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126			
8/31/2016	0.65	0.14 (J)	0.15 (J)					
10/26/2016	0.6		0.3					
11/7/2016		0.18 (J)						
1/13/2017		0.14 (J)						
1/27/2017	1.2		0.3					
5/25/2017	1.4		0.05 (J)					
6/3/2017		0.15 (J)						
8/11/2017			0.1 (J)					
10/2/2017	1	1.2						
11/15/2017	1.3	0.6	<0.1					
6/5/2018	0.48	0.19 (J)	0.078 (J)					
10/2/2018	0.34		0.078 (J)					
10/5/2018		0.23 (J)						
4/2/2019	0.47							
4/3/2019		0.14 (J)	0.089 (J)					
6/17/2019	1.2							
8/22/2019	0.3 (J)	0.2 (J)						
8/23/2019			0.11 (J)					
10/21/2019		0.18 (J)	0.073 (J)					
10/22/2019	0.53							
3/24/2020			<0.1					
3/25/2020	0.43	0.095 (J)						
5/22/2020				0.1 (J)	0.46			
6/15/2020	0.37							
6/16/2020				0.12	0.44			
8/25/2020				0.16	0.52			
8/26/2020	0.48	0.16						
8/27/2020			<0.1					
9/18/2020					0.43			
9/21/2020	0.33			0.11				
9/28/2020		0.15	<0.1					
11/11/2020					0.45			
11/12/2020				0.12				
12/16/2020				0.2	0.49			
1/20/2021				0.13	0.44			
3/12/2021	0.42			0.12	0.46			
3/15/2021		0.16	<0.1					
8/16/2021	0.39	0.15	<0.1					
8/19/2021				0.17	0.43			
2/2/2022	0.36	0.15	<0.1					
2/3/2022				0.18	0.51			
8/4/2022	0.38	0.18	0.074 (J)	0.15	0.5			
Mean	0.6315	0.2442	0.09733	0.1418	0.4664			
Std. Dev.	0.3655	0.2615	0.07858	0.03219	0.03295			
Upper Lim.	1	0.2	0.11	0.1686	0.4938			
Lower Lim.	0.37	0.14	0.05	0.115	0.4389			

Constituent: Lead (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

					,
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.001	<0.001	<0.001		
10/26/2016	0.0002 (J)		<0.001		
11/7/2016		<0.001			
1/13/2017		<0.001			
1/27/2017	<0.001		<0.001		
5/25/2017	9E-05 (J)		<0.001		
6/3/2017		7E-05 (J)			
8/11/2017			8E-05 (J)		
10/2/2017	8E-05 (J)	<0.001			
11/15/2017	<0.001	<0.001	<0.001		
6/5/2018	<0.001	0.00036 (J)	<0.001		
10/2/2018	<0.001		<0.001		
10/5/2018		<0.001			
8/22/2019	<0.001	<0.001			
8/23/2019			4.9E-05 (J)		
10/21/2019		<0.001	4.9E-05 (J)		
10/22/2019	<0.001				
3/24/2020			9.4E-05 (J)		
3/25/2020	<0.001	<0.001			
5/22/2020				0.00014 (J)	<0.001
6/16/2020				0.00013 (J)	<0.001
8/25/2020				<0.001	4.5E-05 (J)
8/26/2020	<0.001	<0.001			
8/27/2020			<0.001		
9/18/2020					<0.001
9/21/2020	<0.001			<0.001	
9/28/2020		<0.001	7.5E-05 (J)		
11/11/2020					4.2E-05 (J)
11/12/2020				4.7E-05 (J)	
12/16/2020				<0.001	<0.001
1/20/2021				9.2E-05 (J)	<0.001
3/12/2021	<0.001			4.4E-05 (J)	4.6E-05 (J)
3/15/2021		0.00015 (J)	<0.001		
8/16/2021	<0.001	<0.001	<0.001		
8/19/2021				<0.001	<0.001
2/2/2022	<0.001	<0.001	<0.001		
2/3/2022				<0.001	<0.001
8/4/2022	<0.001	<0.001	<0.001	<0.001	<0.001
Mean	0.0008453	0.0008576	0.0007263	0.0005866	0.0007394
Std. Dev.	0.0003453	0.0003214	0.0004372	0.0004758	0.0004464
Upper Lim.	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0002	0.00036	8E-05	4.7E-05	4.5E-05

Constituent: Lithium (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.0333 (J)	0.0077 (J)	<0.03		
10/26/2016	0.0352 (J)		<0.03		
11/7/2016		0.0089 (J)			
1/13/2017		0.0091 (J)			
1/27/2017	0.0329 (J)		<0.03		
5/25/2017	0.0347 (J)		0.0011 (J)		
6/3/2017		0.0104 (J)			
8/11/2017			<0.03		
10/2/2017	0.0337 (J)	0.0095 (J)			
11/15/2017	0.0347 (J)	0.0086 (J)	<0.03		
6/5/2018	0.033 (J)	0.0092 (J)	0.0012 (J)		
10/2/2018	0.031 (J)		0.0012 (J)		
10/5/2018		0.0091 (J)			
8/22/2019	0.029 (J)	0.0084 (J)			
8/23/2019			0.0011 (J)		
10/21/2019		0.009 (J)	0.0011 (J)		
10/22/2019	0.03 (J)				
3/24/2020			0.0012 (J)		
3/25/2020	0.024 (J)	0.0066 (J)			
5/22/2020				0.0052 (J)	0.0046 (J)
6/16/2020				0.0053 (J)	0.0045 (J)
8/25/2020				0.0037 (J)	0.0037 (J)
8/26/2020	0.023 (J)	0.0071 (J)			
8/27/2020			0.00091 (J)		
9/18/2020					0.0035 (J)
9/21/2020	0.023 (J)			0.0038 (J)	
9/28/2020		0.0076 (J)	0.0011 (J)		
11/11/2020					0.0032 (J)
11/12/2020				0.0038 (J)	
12/16/2020				0.0055 (J)	0.0029 (J)
1/20/2021				0.0046 (J)	0.0038 (J)
3/12/2021	0.023 (J)			0.0039 (J)	0.0038 (J)
3/15/2021		0.0077 (J)	0.001 (J)		
8/16/2021	0.025 (J)	0.0075 (J)	0.0011 (J)		
8/19/2021				0.0074 (J)	0.0032 (J)
2/2/2022	0.025 (J)	0.0082 (J)	0.0012 (J)		
2/3/2022				0.0057 (J)	0.0038 (J)
8/4/2022	0.023 (J)	0.0069 (J)	0.0011 (J)	0.0035 (J)	0.0034 (J)
Mean	0.02903	0.008324	0.005195	0.004764	0.003673
Std. Dev.	0.004881	0.001032	0.006524	0.001192	0.0005236
Upper Lim.	0.0337	0.00897	0.015	0.005757	0.004109
Lower Lim.	0.023	0.007677	0.001	0.00377	0.003236

Constituent: Mercury (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

					. ,
	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	4E-05 (J)	<0.0002	<0.0002		
10/26/2016	<0.0002		<0.0002		
11/7/2016		<0.0002			
1/13/2017		<0.0002			
1/27/2017	<0.0002		<0.0002		
5/25/2017	7E-05 (J)		5.1E-05 (J)		
6/3/2017		<0.0002			
8/11/2017			<0.0002		
10/2/2017	<0.0002	<0.0002			
11/15/2017	<0.0002	<0.0002	<0.0002		
6/5/2018	<0.0002	<0.0002	<0.0002		
10/2/2018	<0.0002		<0.0002		
10/5/2018		<0.0002			
8/22/2019	<0.0002	<0.0002			
8/23/2019			<0.0002		
5/22/2020				<0.0002	<0.0002
6/16/2020				<0.0002	<0.0002
8/25/2020				<0.0002	<0.0002
8/26/2020	<0.0002	<0.0002			
8/27/2020			<0.0002		
9/18/2020					<0.0002
9/21/2020				<0.0002	
11/11/2020					<0.0002
11/12/2020				<0.0002	
12/16/2020				<0.0002	<0.0002
1/20/2021				<0.0002	<0.0002
8/16/2021	<0.0002	<0.0002	<0.0002		
8/19/2021				<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002	<0.0002		
2/3/2022				<0.0002	<0.0002
8/4/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mean	0.0001777	0.0002	0.0001885	0.0002	0.0002
Std. Dev.	5.48E-05	0	4.133E-05	0	0
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002
Lower Lim.	7E-05	0.0002	5.1E-05	0.0002	0.0002

Constituent: Molybdenum (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	
8/31/2016	0.0176	<0.01	<0.01			
10/26/2016	0.0187		<0.01			
11/7/2016		<0.01				
1/13/2017		<0.01				
1/27/2017	0.0214		<0.01			
5/25/2017	0.0231		0.0009 (J)			
6/3/2017		<0.01				
8/11/2017			0.0013 (J)			
10/2/2017	0.0259	<0.01				
11/15/2017	0.0281	<0.01	0.0012 (J)			
6/5/2018	0.033	<0.01	<0.01			
10/2/2018	0.036		<0.01			
10/5/2018		<0.01				
8/22/2019	0.039	<0.01				
8/23/2019			0.0014 (J)			
10/21/2019		<0.01	0.0013 (J)			
10/22/2019	0.04					
3/24/2020			0.001 (J)			
3/25/2020	0.034	<0.01				
5/22/2020				<0.01	<0.01	
6/16/2020				<0.01	<0.01	
8/25/2020				0.00099 (J)	<0.01	
8/26/2020	0.05	<0.01				
8/27/2020			0.00091 (J)			
9/18/2020					<0.01	
9/21/2020	0.043			<0.01		
9/28/2020		<0.01	0.0009 (J)			
11/11/2020					<0.01	
11/12/2020				0.0017 (J)		
12/16/2020				0.014	<0.01	
1/20/2021				0.0013 (J)	<0.01	
3/12/2021	0.033			0.0012 (J)	<0.01	
3/15/2021		<0.01	0.00092 (J)			
8/16/2021	0.035	<0.01	0.00091 (J)			
8/19/2021				0.021	<0.01	
2/2/2022	0.034	<0.01	0.001 (J)			
2/3/2022				0.0067 (J)	<0.01	
8/4/2022	0.032	<0.01	<0.01	0.0023 (J)	<0.01	
Mean	0.03199	0.01	0.00422	0.007199	0.01	
Std. Dev.	0.008737	0	0.004403	0.006512	0	
Upper Lim.	0.03746	0.01	0.01	0.01036	0.01	
Lower Lim.	0.02651	0.01	0.00091	-0.0001221	0.01	

Constituent: Selenium (mg/L) Analysis Run 11/1/2022 9:54 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-3

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	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016	<0.005		<0.005		
11/7/2016		<0.005			
1/13/2017		0.0011 (J)			
1/27/2017	<0.005		<0.005		
5/25/2017	<0.005		<0.005		
6/3/2017		<0.005			
8/11/2017			<0.005		
10/2/2017	0.002 (J)	<0.005			
11/15/2017	<0.005	<0.005	<0.005		
6/5/2018	<0.005	<0.005	<0.005		
10/2/2018	<0.005		0.0014 (J)		
10/5/2018		<0.005			
8/22/2019	<0.005	<0.005			
8/23/2019			<0.005		
5/22/2020				<0.005	<0.005
6/16/2020				<0.005	<0.005
8/25/2020				<0.005	<0.005
8/26/2020	<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
1/20/2021				<0.005	<0.005
8/16/2021	<0.005	<0.005	<0.005		
8/19/2021				<0.005	<0.005
2/2/2022	<0.005	<0.005	<0.005		
2/3/2022				<0.005	<0.005
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005
Mean	0.004769	0.0047	0.004723	0.005	0.005
Std. Dev.	0.0008321	0.001082	0.0009985	0	0
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.002	0.0011	0.0014	0.005	0.005
201101 2	2.002		2.00	5.000	2.000