Prepared for

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2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLANT HAMMOND ASH POND 4 (AP-4)

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Project Number GW6581D

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CERTIFICATION STATEMENT

This *2023 Annual Groundwater Monitoring and Corrective Action Report, Plant Hammond – Ash Pond 4 (AP-4)* has been prepared in compliance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management 391-3-4-.01.

_____ July 31, 2023

Whitney B. Law Date

Georgia Professional Engineer No. 36641

SUMMARY

This summary of the *2023 Annual Groundwater Monitoring and Corrective Action Report* provides the status of groundwater monitoring and corrective action program for the reporting period of July 2022 through June 2023 (referred herein as the "reporting period") at the Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 4 (AP-4) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, and by reference, Part A, Section 6[1] 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 and the Site

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Dry ash stacking operations in AP-4 began in 1994 and continued until 2010; AP-4 received both fly ash and bottom ash during this period. AP-4 was closed in 2012; therefore, AP-4 is not subject to the federal monitoring requirements, however, the GA EPD monitoring requirements incorporates by reference the federal regulations on this matter[2]. As such, the federal CCR Rule is referenced in lieu of the GA EPD CCR regulations when discussing aspects of the groundwater monitoring program established for the Site. The Site is located on the western portion of the Plant Hammond property. The GA EPD approved closure permit no. 057-025D(CCR) for AP-4 on January 27, 2021. Georgia Power plans to perform closure by removal of CCR from AP-4.

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-4 since August 2016. During the reporting period, Geosyntec conducted two groundwater sampling events in August 2022 and January 2023. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Per the federal CCR Rule, groundwater data for both events were evaluated in

[1] 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
[2] GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a)

accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III[3] and Appendix IV[4] constituents in excess of the groundwater protection standards (GWPS) in select monitoring wells, as summarized in the table below.

Appendix III Constituent	***August 2022***	***January 2023***
Boron	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-118
Calcium	HGWC-102, HGWC-103, HGWC-105, HGWC-118	HGWC-102, HGWC-103, HGWC-105, HGWC-118
Chloride	HGWC-102, HGWC-103	HGWC-102, HGWC-103, HGWC-105
pH	HGWC-101	None
Sulfate	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-118
Total Dissolved Solids	HGWC-102, HGWC-103, HGWC-105	HGWC-102, HGWC-103, HGWC-105
Appendix IV Constituent[5]	***August 2022***	***January 2023***
Cobalt	HGWC-117	None

Georgia Power submitted an Alternate Source Demonstration (ASD) to GA EPD on October 28, 2021, to address the statistically significant level (SSL) of cobalt identified in HGWC-117 following the August 2021 event; the ASD was approved by GA EPD on July 19, 2023. Based on review of the Appendix III and Appendix IV statistical results completed for the reporting period, the Site will continue in assessment monitoring. 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.

[3] Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)
[4] Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228
[5] A statistically significant level (SSL)-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, where an MCL has not been established, then a CCR-rule specific GWPS; or background concentrations for constituents where the concentration is greater than the MCL or rule specified GWPS.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

AP-4	Ash Pond 4
ASD	alternate source demonstration
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
GCL	geosynthetic clay liner
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GSC	Groundwater Stats Consulting
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
i	horizontal hydraulic gradient
K_h	horizontal hydraulic conductivity
MCL	Maximum Contaminant Level
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 (federal 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 *2023 Annual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 4 (AP-4) for the reporting period of July 2022 through June 2023 (referred to herein as the "reporting period").

Groundwater monitoring and reporting for the CCR unit is performed in accordance with the monitoring requirements of the GA EPD Rules for Solid Waste Management 391-3-4-.10(6), but also in accordance with the federal CCR Rule, specifically § 257.90 through § 257.95. 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. Also, the closure permit issued by GA EPD (i.e., no. 057-025D(CCR)) stipulates that groundwater monitoring is required while CCR waste remains in place at the CCR unit and for no less than 5-years after removal of the material.

AP-4 was closed in 2012; therefore, AP-4 is not subject to the federal monitoring requirements, though GA EPD rule 391-3-4-.10(6)(a) promulgates the groundwater monitoring and corrective action regulations stipulated in the federal CCR Rule § 257.90 through § 257.95. A permit application for AP-4 was submitted to GA EPD in November 2018. GA EPD approved closure permit no. 057-025D(CCR) for AP-4 on January 27, 2021.

Due to statistically significant increases (SSIs) of Appendix III constituents identified in the *2019 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019), Georgia Power initiated an assessment monitoring program for AP-4 in August 2019. Since then, Georgia Power has routinely sampled the AP-4 monitoring well network in accordance with the assessment monitoring program as outlined in § 257.95. This report includes the results of the semiannual assessment monitoring events conducted in August 2022 and January 2023.

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 in July 2019 and no longer produce electricity.

AP-4 was commissioned in 1986 as a surface impoundment with a corresponding surface area of approximately 54 acres. Dry ash stacking operations in AP-4 began in 1994 and continued until 2010; AP-4 received both fly ash and bottom ash during this period. AP-4 was capped in place in 2011-2012 in accordance with the GA EPD regulations regarding landfill closures. AP-4 was graded, engineered with drainage, and capped with a geosynthetic clay liner (GCL) and soil cover. Georgia Power plans to perform closure by removal of CCR from AP-4. All CCR within AP-4 will be removed from the site. The Closure Plan submitted to GA EPD as part of the closure permit application package describes the closure activities and requirements in accordance with GA EPD rules 391-3-4-.10(7)(a)2. and 391-3-4.10(9)(c)8. Closure permit no. 057-025D(CCR) was approved by GA EPD on January 27, 2021.

1.2 Regional Geology and Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at AP-4 as described in the *Hydrogeologic Assessment Report* (*Revision 01) – Ash Pond 4, Plant Hammond* (HAR Rev 01) submitted to GA EPD under separate cover in support of the AP-4 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-4 is underlain by the lower units of the Cambrian age Conasauga Formation, consisting of mostly calcareous shale. Based on review of subsurface investigations, the bedrock

underneath AP-4 was described as predominantly shale. AP-4 is underlain primarily by five lithologic units: (i) terrace alluvium; (ii) colluvium; (iii) residuum; (iv) partially weathered shale bedrock; and (v) unweathered shale bedrock.

Based on subsurface investigations, the alluvial deposits generally grade from a silt and silty clay to a clayey sand and silty sand to a sand and gravelly sand at depth. The colluvium consists of silty sand, silty clay with the presence of angular fragments of rocks/materials not expected in the lower units of the Conasauga, such as chert, sandstone, limestone, or coal. Residual or native soils have been derived from the in-place weathering of the shale bedrock. The residuum is generally described as brown to yellow brown firm clayey silt with weathered shale fragments. The partially weathered shale zone occurs as an intermediate weathering stage between the residuum and the unweathered shale bedrock. The weathered material is described as black to dark gray to dark red hard, fissile shale and claystone. The unweathered shale bedrock was not encountered or directly observed in the historical borings advanced at AP-4. However, based on geologic conditions in the region, weathering, fracturing and jointing decreases with depth and the weathered rock material grades into competent bedrock.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at AP-4 is a regional groundwater aquifer that occurs primarily in the alluvium, colluvium, and residuum, but also to some degree within the weathered and fractured bedrock. Based on observations of alluvium, colluvium, and residuum soil types and horizontal conductivity values, the movement of groundwater in the soil can be characterized as low-to moderate permeability, porous media flow. The groundwater flow in the shallow underlying bedrock is characterized as fracture flow, and due to the preponderance of shale beneath AP-4, is expected to be very low permeability. Groundwater flow direction is generally from north to south.

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-4 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 wells were selected based on the characterization of site specific hydrogeologic conditions.

A network of piezometers has been installed at the Site that are used to gauge water levels to define groundwater flow direction and gradients. The locations of the detection monitoring well (formerly known as "compliance monitoring well") network and piezometers associated with AP-4 are shown on **Figure 2**; well construction details are listed in **Table 1**.

In April 2023, Georgia Power submitted to GA EPD a minor modification to the closure permit proposing to remove HGWC-117 from the detection monitoring well network via abandonment and replace it with HGWC-117A as the detection monitoring well. The proposal to abandon HGWC-117 was based on the findings presented in an Alternate Source Demonstration (ASD) to address the statistically significant level (SSL) of cobalt reported for HGWC-117 (Geosyntec, 2021b). GA EPD approved abandoning HGWC- 117 in July 2023, and the well was abandoned on July 13, 2023, in accordance with the methods outlined in the approved Groundwater Monitoring Plan (Geosyntec, 2023).

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 Monitoring Well Installation and Maintenance

As previously described in Section 1.3, HGWC-117 was abandoned on July 13, 2023. The associated *Well Abandonment Summary Memorandum* outlining the details of this effort is provided in **Appendix A**.

The well and piezometer networks are inspected semiannually to determine 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 and January 2023, the networks were inspected and necessary corrective actions were identified and subsequently completed, as documented in **Appendix B**. 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-4 in August 2019. Since 2019, GA EPD adopted the federal groundwater protection standard (GWPS) on February 22, 2022, for cobalt, lead, lithium, and molybdenum (detailed in Section 4.1.2). For the current reporting period, the Appendix IV constituent cobalt was identified at an SSL in exceedance of the GWPS in former detection monitoring well HGWC-117. However, Georgia Power submitted an ASD to GA EPD on October 28, 2021, to address the SSL of cobalt (Geosyntec, 2021b). Additional details regarding the ASD are provided in Section 5.

For the reporting period, semiannual assessment monitoring events were conducted in August 2022 and January 2023. The AP-4 wells sampled during these events and the dates associated with them are summarized in **Table 2.** The laboratory reports associated with the August 2022 and January 2023 groundwater sampling events are provided in **Appendix C.** Details of the event and analytical results are discussed in Section 3, while details of the statistical analyses performed are provided in Section 4 of this report.

2.3 Additional Groundwater Evaluations

Supplemental groundwater samples were collected from the entire AP-4 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 composition of the groundwater at the Site. The laboratory reports associated with the data are provided in **Appendix C**.

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-4 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-4 wells and piezometers during the August 2022 and January 2023 assessment monitoring events and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The August 2022 and January 2023 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

Surface water elevations were recorded from one surveyed gauging point located along Unnamed Creek east of AP-4, as shown on **Figure 2**.

The groundwater and surface water elevation data presented in **Table 3** were used to prepare potentiometric surface contour maps for the August 2022 and January 2023 events, which are presented on **Figure 3** and **Figure 4**, respectively. Groundwater in the AP-4 area flows under the influence of topography from slightly higher ground surface elevations on the northern side of AP-4 toward lower elevations to the south of AP-4 along the Coosa River.

3.2 Groundwater Gradient and Flow Velocity

The horizontal groundwater hydraulic gradient within the uppermost aquifer beneath AP-4 was calculated using the groundwater elevation data from the August 2022 and January 2023 event. The horizontal hydraulic gradient is commonly calculated between two points 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. Given the surface area covered by AP-4, horizontal hydraulic gradients were calculated along the eastern, central, and western portions of the unit. The well pairs correlating to these flow areas are, respectively: GWA-14 and HGWC-118; HGWA-113 and HGWC-102; and HGWA-111 and HGWC-107. The supporting calculations are presented in **Table 4.** The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figure 3** and **Figure 4**. The presented

hydraulic gradients from the three portions were averaged for the reporting period to provide a representative gradient of 0.016 feet per foot (ft/ft) across AP-4.

The approximate horizontal flow velocity associated with AP-4 groundwater was calculated using the following derivative of Darcy's Law. The calculations are presented 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 Southern Company Services in 2013 to evaluate hydraulic conditions in the vicinity of AP-4. Results of these field events are discussed in detail in the HAR Rev 01 (Geosyntec, 2020). Horizontal hydraulic conductivity (K_h) was estimated for units above the top of bedrock by performing slug tests. The tests were conducted at wells screened in the terrace alluvium or colluvial material; a geometric mean for K_h of 5.86 x 10^{-4} centimeters per second (cm/sec) (1.67 feet per day [ft/day]) was calculated from the slug test data for the two units. Since the majority of the wells are screened in either alluvial or alluvial/colluvial materials, no hydraulic conductivity testing was conducted on the residuum, weathered shale, or unweathered shale.

The groundwater flow velocity calculation is performed using the geometric mean for K_h of 1.67 ft/day. An estimated effective porosity (n_e) of 0.15 is used to represent average conditions for the silty clay alluvium/colluvium, derived based on review of literature, observed site lithology, and professional judgement. With these variables assigned, and accounting for the representative hydraulic gradient discussed above, the representative

groundwater flow velocity underneath AP-4 was calculated to be 0.18 ft/day for the reporting period.

3.3 Groundwater Sampling Procedures

Groundwater samples were collected from the monitoring network using low-flow sampling procedures in accordance with § 257.93(a). Purging and sampling was performed using dedicated bladder pumps with dedicated tubing and peristaltic pumps. For wells sampled with peristaltic pumps, the pump intake was lowered to the midpoint of the well screen (or as appropriate based on the groundwater level). Peristaltic 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 (or similar) portable turbidity meter. Groundwater samples were collected once the following stabilization criteria were met:

- pH ± 0.1 standard units (s.u.).
- Conductivity ± 5%.
- ±0.2 milligrams per liter (mg/L) or ±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 August 2022 and January 2023 assessment monitoring events are provided in **Appendix C**.

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 C**. The groundwater analytical results from the August 2022 and January 2023 sampling events are summarized in **Table 5**; the supplementary geochemical ionic data from the August 2022 event are presented in **Table 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, 2023), 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 for both semiannual events 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 GWPS for the Appendix IV monitoring 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 reports generated from the analyses are provided in **Appendix D**.

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, which 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 determine 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 D** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and presented in **Table 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, and the most recent sample from each downgradient well is compared to the same limit for each constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are 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-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 SSL 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 exceedance 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 analyses presented in **Appendix D**, groundwater conditions have not returned to background and assessment monitoring should continue. Based on the statistical analyses of the Appendix IV data from the August 2022 monitoring event, an SSL of cobalt was identified in HGWC-117.

As discussed in Section 5, Georgia Power submitted an ASD to GA EPD in October 2021 that outlined multiple lines of evidence that the cobalt SSL at HGWC-117 is not associated with a release from AP-4. As a result, monitoring well HGWC-117 was not included in the statistical analysis of the January 2023 data set. Instead, HGWC-117A was used as the new detection monitoring well. No SSLs were identified for the January 2023 monitoring event.

5.0 ALTERNATE SOURCE DEMONSTRATION

An ASD was prepared and submitted to GA EPD on October 28, 2021, to address the SSL of cobalt reported for HGWC-117 (Geosyntec, 2021b). The ASD presented multiple lines of evidence that the SSL is not associated with a release from AP-4, but is instead an isolated occurrence unrelated to the unit, and may have been affected by pump/sampling issues. A Pearson correlation coefficient analysis of available groundwater data for HGWC-117 did not identify statistically significant positive correlations between cobalt concentrations and concentrations of Appendix III constituents; if cobalt were to originate from CCR, it should have statistically significant positive correlations with the Appendix III indicator constituents to indicate a similar source of solutes. Additionally, to evaluate groundwater quality in vicinity of HGWC-117 and assess the SSL of cobalt, HGWC-117A was installed approximately 30 ft side-gradient to HGWC-117 and screened in the same lithology.

Five groundwater samples have been collected at HGWC-117A since August 2021, with each of the cobalt concentration results reported as estimated below the reporting limit (i.e., "J" qualified). Statistical determination of the confidence interval for this dataset (**Appendix D**) provides an additional line of evidence supporting the theory that the SSL of cobalt in HGWC-117 is an isolated occurrence unrelated to AP-4, and that groundwater samples collected from HGWC-117 do not accurately represent aquifer conditions proximal to the unit. Therefore, HGWC-117 was removed from the detection monitoring well network and replaced with HGWC-117A in the revised Groundwater Monitoring Plan (Geosyntec, 2023) submitted to GA EPD in April 2023 as part of the minor modification to the closure permit. GA EPD approved the ASD and HGWC-117 was abandoned in July 2023.

6.0 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. Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-4 in accordance with the assessment monitoring program regulations of § 257.95. As discussed in Section 5, the SSL of cobalt identified in HGWC-117 has been addressed with an ASD (Geosyntec, 2021b) and installation of replacement well HGWC-117A.

7.0 CONCLUSIONS AND FUTURE ACTIONS

This *2023 Annual Groundwater Monitoring and Corrective Action Report* for Plant Hammond AP-4 was prepared to fulfill the requirements of the GA EPD Rules for Solid Waste Management 391-3-4-.10, and indirectly by reference the federal CCR Rule. Statistical analyses of the groundwater monitoring data for AP-4 for the reporting period identified an SSL of cobalt in former detection monitoring well HGWC-117. However, the SSL has been addressed with a previously submitted ASD (Geosyntec, 2021b) in conjunction with adequate groundwater data to statistically determine that well HGWC-117A more accurately represents aquifer conditions downgradient to AP-4. For the January 2023 monitoring event HGWC-117A replaced HGWC-117 as the detection monitoring well for this portion of the unit's monitoring well network. A revised Groundwater Monitoring Plan (Geosyntec, 2023) was submitted to GA EPD in April 2023 (Geosyntec, 2023) as part of the minor modification to the closure permit in which Georgia Power proposed to abandon HGWC-117. GA EPD approved both the ASD and the abandonment of HGWC-117 in July 2023. An updated minor modification of the site GWMP will be submitted to document the updated detection network.

Georgia Power will continue to monitor groundwater in accordance with the assessment monitoring program as specified in § 257.95. The next assessment monitoring event for AP-4 is scheduled to begin August 2023.

8.0 REFERENCES

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TABLES

Table 1
Monitoring Well Network Summary
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation [2] (ft)	Top of Casing Elevation [2] (ft)	Top of Screen Elevation [2] (ft)	Bottom of Screen Elevation [2] (ft)	Well Depth (ft BTOC) [3]	Screen Interval Length (ft)
Detection Monitoring Well										
HGWA-47	Upgradient	8/21/2020	1548990.96	1934171.84	577.39	580.33	546.84	536.84	43.74	10
HGWA-48D	Upgradient	8/20/2020	1548989.39	1934178.15	577.29	580.26	517.54	507.54	72.97	10
HGWA-111	Upgradient	8/21/2012	1548834.26	1935222.81	588.79	591.75	558.48	548.48	43.67	10
HGWA-112	Upgradient	8/21/2012	1548885.63	1935647.00	593.46	596.27	566.52	556.52	40.15	10
HGWA-113	Upgradient	10/2/2012	1548944.62	1935990.09	592.07	594.58	568.87	558.87	36.11	10
HGWC-101	Downgradient	8/7/2012	1547725.50	1936369.58	575.91	578.85	551.31	541.31	37.94	10
HGWC-102	Downgradient	8/7/2012	1547713.50	1936033.33	574.54	577.54	550.51	540.51	37.43	10
HGWC-103	Downgradient	8/8/2012	1547848.88	1935732.96	577.76	580.79	553.51	543.51	37.68	10
HGWC-105	Downgradient	8/8/2012	1547855.56	1935110.36	579.08	582.09	547.72	537.72	44.67	10
HGWC-107	Downgradient	8/8/2012	1547909.99	1934442.24	576.43	579.31	551.51	541.51	38.20	10
HGWC-109	Downgradient	8/15/2012	1548627.41	1934362.77	573.66	576.77	555.81	545.81	31.36	10
HGWC-117A	Downgradient	7/21/2021	1548082.04	1937157.25	578.85	581.76	551.85	541.85	40.31	10
HGWC-118	Downgradient	10/1/2012	1547980.56	1936946.37	576.52	579.02	548.51	538.51	40.91	10
Piezometer										
MW-12	Downgradient	10/21/2014	1547853.78	1937525.46	580.59	583.27	555.84	545.84	37.83	10
HGWC-117[4]	Downgradient	8/14/2012	1548100.77	1937180.43	579.31	581.98	552.12	542.12	40.26	10
GWC-4	Downgradient	8/8/2012	1547898.31	1935398.70	577.73	580.65	543.47	533.47	47.58	10
GWC-6	Downgradient	8/13/2012	1547843.93	1934800.45	578.55	581.63	553.90	543.90	38.13	10
GWC-8	Downgradient	8/9/2012	1548167.13	1934342.94	577.13	579.99	549.47	539.47	40.92	10
GWA-14	Upgradient	10/2/2012	1548982.59	1936642.58	589.70	592.14	561.40	551.40	41.14	10
GWA-15	Upgradient	8/22/2012	1548766.17	1936808.47	588.37	591.56	571.44	561.44	30.52	10
GWA-16	Upgradient	8/21/2012	1548592.74	1937210.99	579.58	582.55	569.94	559.94	23.01	10
GWC-19	Downgradient	8/14/2012	1547892.89	1936572.97	576.90	579.83	554.04	544.04	36.19	10

Notes:
ft = feet
ft BTOC = feet below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 11, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWC-117A).
(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 11, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWC-117A).
(3) Total well depth accounts for sump if data provided on well construction logs.
(4) During this reporting period, former detection monitoring well HGWC-117 was reclassified as piezometer, and replaced by HGWC-117A, as proposed in the minor modification to the closure permit submitted to GA EPD April 2023. The well was subsequently abandoned on July 13, 2023, following GA EPD approval.

Table 2

Groundwater Sampling Event Summary

Plant Hammond AP-4, Floyd County, Georgia

Well ID	Hydraulic Location	August 2 - 10, 2022	January 24 - 25, 2023
Purpose of Sampling Event:		**Assessment**	**Assessment**
HGWA-47	Upgradient	X	X
HGWA-48D	Upgradient	X	X
HGWA-111	Upgradient	X	X
HGWA-112	Upgradient	X	X
HGWA-113	Upgradient	X	X
HGWC-101	Downgradient	X	X
HGWC-102	Downgradient	X	X
HGWC-103	Downgradient	X	X
HGWC-105	Downgradient	X	X
HGWC-107	Downgradient	X	X
HGWC-109	Downgradient	X	X
HGWC-117	Downgradient	X	X
HGWC-117A	Downgradient	X	X
HGWC-118	Downgradient	X	X

Table 3
Summary of Groundwater and Surface Water Elevations
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Top of Casing Elevation [1] (ft)	August 1, 2022		January 23, 2023	
		Depth to Water (ft BTOC)	Groundwater Elevations (ft)	Depth to Water (ft BTOC)	Groundwater Elevations (ft)
Detection Monitoring Well					
HGWA-47	580.33	7.63	572.70	6.30	574.03
HGWA-48D	580.26	7.53	572.73	6.18	574.08
HGWA-111	591.75	12.12	579.63	10.76	580.99
HGWA-112	596.27	11.43	584.84	8.45	587.82
HGWA-113	594.58	10.92	583.66	4.78	589.80
HGWC-101	578.85	13.18	565.67	12.60	566.25
HGWC-102	577.54	13.09	564.45	13.88	563.66
HGWC-103	580.79	13.67	567.12	12.33	568.46
HGWC-105	582.09	17.97	564.12	18.58	563.51
HGWC-107	579.31	15.17	564.14	15.61	563.70
HGWC-109	576.77	8.68	568.09	7.05	569.72
HGWC-117A[2]	581.76	16.77	564.99	17.00	564.76
HGWC-118	579.02	13.48	565.54	13.28	565.74
Piezometer					
MW-12	583.27	18.65	564.62	19.03	564.24
HGWC-117[2]	581.98	17.01	564.97	17.21	564.77
GWC-4	580.65	13.43	567.22	12.09	568.56
GWC-6	581.63	17.33	564.30	17.45	564.18
GWC-8	579.99	14.13	565.86	11.58	568.41
GWA-14	592.14	7.50	584.64	13.15	578.99
GWA-15	591.56	8.23	583.33	7.68	583.88
GWA-16	582.55	5.52	577.03	5.10	577.45
GWC-19	579.83	12.98	566.85	12.05	567.78
Surface Water Level Gauge Point					
Unnamed Creek	580.14	15.75	564.39	16.48	563.66

Notes:
-- = not applicable
ft = feet
ft BTOC = feet below top of casing
(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 10, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWC-117A).
(2) Former detection monitoring well HGWC-117 was reclassified as piezometer, and replaced by HGWC-117A, as proposed in the minor modification to the closure permit submitted to GA EPD April 2023. The well was subsequently abandoned on July 13, 2023, following GA EPD approval.

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

	August 1, 2022				January 23, 2023				
Flow Path Direction [1]	**h_1 (ft)**	**h_2 (ft)**	**L (ft)**	**i (ft/ft)**	**h_1 (ft)**	**h_2 (ft)**	**L (ft)**	**i (ft/ft)**	**Average i (ft/ft)**
Eastern Flow Path (GWA-14 to HGWC-118)	584.64	565.54	1,075	0.018	578.99	565.74	1,075	0.012	0.016
Central Flow Path (HGWA-113 to HGWC-102)	583.66	564.45	1,235	0.016	589.80	563.66	1,250	0.021	
Western Flow Path (HGWA-111 to HGWC-107)	579.63	564.14	1,210	0.013	580.99	563.70	1,210	0.014	

Flow Path Direction [1]	**K_h (ft/day)**	**n_e**	**Average i (ft/ft)**	**V (ft/day)[2]**
Eastern Flow Path (GWA-14 to HGWC-118)	1.67	0.15	0.016	0.18
Central Flow Path (HGWA-113 to HGWC-102)				
Western Flow Path (HGWA-111 to HGWC-107)				

Notes:
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-4 and illustrated on Figure 3 and Figure 4 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-4, Floyd County, Georgia

	Well ID:	HGWA-47	HGWA-47	HGWA-48D	HGWA-48D	HGWA-111	HGWA-111	HGWA-112	HGWA-112	HGWA-113	HGWA-113	HGWC-101	HGWC-101	HGWC-102	HGWC-102	HGWC-103	HGWC-103
	Sample Date:	8/2/2022	1/24/2023	8/5/2022	1/24/2023	8/5/2022	1/24/2023	8/5/2022	1/24/2023	8/2/2022	1/24/2023	8/10/2022	1/25/2023	8/5/2022	1/25/2023	8/5/2022	1/25/2023
	Parameter [1,2]																
APPENDIX III	Boron	<0.0086	<0.0086	0.011 J	<0.0086	<0.0086	<0.0086	0.012 J	<0.0086	<0.0086	<0.0086	0.17	0.12	2.9	2.5	3.6	2.7
	Calcium	73.0	69.2	59.6	57.8	53.0	55.4	7.1	6.6	8.0	7.5	24.6	20.4	127	128	128	109
	Chloride	3.0	3.0	2.4	2.8	2.7	3.6	5.0	5.6	1.8	1.8	5.5	5.7	7.7	7.8	7.8	8.0
	Fluoride	0.080 J	0.081 J	0.12	0.092 J	0.10	0.086 J	0.077 J	0.055 J	0.19	0.20	0.065 J	<0.05	0.076 J	<0.05	0.071 J	<0.05
	pH [3]	7.34	7.38	7.40	7.47	6.97	7.11	5.43	5.67	6.08	6.15	5.37	5.48	5.69	5.77	5.71	5.65
	Sulfate	2.1	2.2	3.4	2.9	1.4	1.9	<0.50	0.81 J	7.5	6.6	99.5	95.0	358	348	369	342
	TDS	222	223	224	230	171	177	44.0	96.0	85.0	146	232	186	696	664	692	630
APPENDIX IV	Antimony	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<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	<0.0022	<0.0022	<0.0022	<0.0022
	Barium	0.029	0.029	0.110	0.110	0.028	0.028	0.027	0.025	0.030	0.028	0.040	0.033	0.031	0.027	0.037	0.032
	Beryllium	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	0.000064 J	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00011 J	0.00011 J	0.00044 J	0.00035 J	0.00081	0.00063
	Chromium	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.0045 J	0.0041 J	0.0013 J	0.0036 J	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	Cobalt	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	0.0028 J	0.0021 J	0.0010 J	0.0016 J	0.0021 J	0.0017 J
	Fluoride	0.080 J	0.081 J	0.12	0.092 J	0.10	0.086 J	0.077 J	0.055 J	0.19	0.20	0.065 J	<0.05	0.076 J	<0.05	0.071 J	<0.05
	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	<0.00089	<0.00089	<0.00089	<0.00089
	Lithium	0.0026 J	0.0029 J	0.0036 J	0.0046 J	0.0019 J	0.0023 J	<0.00073	<0.00073	0.00089 J	0.00091 J	<0.00073	<0.00073	0.0013 J	0.0010 J	0.0014 J	0.0012 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	<0.00013	<0.00013	0.00017 J	<0.00013
	Molybdenum	<0.00074	<0.00074	0.0012 J	0.00086 J	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074
	Comb. Radium 226/228	0.491 U	0.391 U	0.599 U	0.856	0.573 U	0.190 U	0.665 U	0.331 U	0.791 U	0.529 U	0.601 U	0.419 U	0.618 U	0.513 U	0.205 U	0.568 U
	Selenium	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	0.0034 J	0.0025 J	<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	<0.00018	<0.00018	<0.00018	<0.00018

Notes:
< = 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).
TDS = Total dissolved solids
U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228).
(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6010D, 6020B, 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.
(3) The pH value presented was recorded at the time of sample collection in the field.

Table 5
Summary of Semiannual Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWC-105	HGWC-105	HGWC-107	HGWC-107	HGWC-109	HGWC-109	HGWC-117A	HGWC-117A	HGWC-117	HGWC-117	HGWC-118	HGWC-118
	Sample Date:	8/5/2022	1/25/2023	8/5/2022	1/25/2023	8/5/2022	1/25/2023	8/5/2022	1/25/2023	8/5/2022	1/25/2023	8/5/2022	1/25/2023
	Parameter [1,2]												
APPENDIX III	Boron	1.3	1.3	0.79	0.82	0.25	0.22	0.34	0.27	0.85	0.77	0.57	0.62
	Calcium	121	113	63.0	57.8	50.8	42.4	68.6	64.5	44.8	40.5	88.5	81.8
	Chloride	5.0	6.0	2.7	3.3	3.7	4.3	7.4	5.9	4.4	4.7	3.8	4.3
	Fluoride	0.075 J	0.051 J	0.093 J	0.054 J	0.14	0.12	0.12	0.085 J	0.075 J	0.05 J	0.12	0.095 J
	pH [3]	6.46	6.41	6.07	6.13	6.81	6.66	6.44	6.53	5.46	5.56	7.07	6.67
	Sulfate	217	230	120	128	23.0	25.4	76.1	72.9	132	126	69.8	73.0
	TDS	514	537	274	304	195	214	270	289	285	266	329	337
APPENDIX IV	Antimony	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	0.0012 J	<0.00078	<0.00078	<0.00078
	Arsenic	<0.0022	<0.0022	<0.0022	<0.0022	0.0022 J	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
	Barium	0.088	0.094	0.036	0.035	0.085	0.076	0.055	0.050	0.044	0.038	0.039	0.048
	Beryllium	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	0.000078 J	<0.000054	<0.000054	<0.000054
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.0012	0.00097	<0.00011	<0.00011
	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
	Cobalt	<0.00039	0.00046 J	<0.00039	<0.00039	0.00080 J	0.0016 J	0.0011 J	0.00048 J	0.023	0.018	<0.00039	<0.00039
	Fluoride	0.075 J	0.051 J	0.093 J	0.054 J	0.14	0.12	0.12	0.085 J	0.075 J	0.05 J	0.12	0.095 J
	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
	Lithium	0.0039 J	0.0038 J	0.00082 J	0.00081 J	0.00087 J	<0.00073	0.0038 J	0.0037 J	0.0017 J	0.0015 J	0.0018 J	0.001 J
	Mercury	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	0.00014 J	<0.00013	<0.00013	<0.00013
	Molybdenum	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074
	Comb. Radium 226/228	0.139 U	0.432 U	0.917 U	0.71 0 U	0.220 U	0.195 U	0.000 U	0.595 U	0.605 U	0.437 U	0.206 U	1.44
	Selenium	<0.0014	<0.0014	<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

Table 6
Summary of Geochemical Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWA-47	HGWA-48D	HGWA-111	HGWA-112	HGWA-113	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-117	HGWC-118
	Sample Date:	8/2/2022	8/5/2022	8/5/2022	8/5/2022	8/2/2022	8/10/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022
	Parameter [1,2]														
GEOCHEM	Bicarbonate Alkalinity	209	198	145	23.4	40.4	21.1	96.6	79.9	141	71.6	156	128	48.0	198
	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	<5.0	<5.0
	Total Alkaliniity	209	198	145	23.4	40.4	21.1	96.6	79.9	141	71.6	156	128	48.0	198
	Iron	0.026 J	0.41	<0.025	<0.025	<0.025	6.4	2.0	2.0	6.9	<0.025	7.5	0.34	<0.025	<0.025
	Magnesium	5.6	11.5	5.5	2.6	3.5	12.9	33.3	33.4	12.3	11.0	10.9	9.1	14.1	11.6
	Manganese	0.032 J	0.018 J	<0.0043	<0.0043	0.0018 J	2.5	2.0	2.0	0.42	0.26	0.42	0.23	12.5	0.13
	Poassium	0.43	0.49	0.75	0.87	0.22	0.74	2.8	3.4	0.90	2.6	0.43	0.61	0.61	0.70
	Sodium	3.8	11.6	5.5	3.8	10.4	11.4	15.6	18.8	14.2	8.3	9.0	9.5	8.1	8.6
	Sulfide	<0.050	0.18	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Notes:
< = 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).
(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.

Table 7
Summary of Background Concentrations and Groundwater Protection Standards
Plant Hammond AP-4, Floyd County, Georgia

Analyte	Units	MCL	CCR-Rule Specified[1]	Background[2]	GWPS[3,4]
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	0.11	2
Beryllium	mg/L	0.004	N/A	0.0019	0.004
Cadmium	mg/L	0.005	N/A	0.0005	0.005
Chromium	mg/L	0.1	N/A	0.0061	0.1
Cobalt	mg/L	N/A	0.006	0.005	0.006
Fluoride	mg/L	4	N/A	0.17	4
Lead	mg/L	N/A	0.015	0.0016	0.015
Lithium	mg/L	N/A	0.040	0.03	0.04
Mercury	mg/L	0.002	N/A	0.0002	0.002
Molybdenum	mg/L	N/A	0.100	0.01	0.1
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	1.3, 1.28	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). Where two numbers are present, they denote the different background levels for each of the two semiannual monitoring events in the order that they were determined.
(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; (iii) where and 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 and January 2023 sampling events.

FIGURES

N

LEGEND

Plant Hammond Property Boundary

Note:
1. Aerial photograph source: Google Earth Pro, August 2019 and Georgia Power Company, September 2022.

0 625 1,250 2,500

SCALE IN FEET

SITE LOCATION MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-4
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2023

FIGURE 1

N

LEGEND

- Detection Monitoring Well
- Piezometer
- Abandoned Well
- Surface Water Level Gauge Point
- Unnamed Creek
- Approximate AP-4
- Plant Hammond Property Boundary

Notes:
1. Aerial photograph source: Google Earth Pro, August 2019 and Georgia Power Company, September 2022.
2. Former detection monitoring well HGWC-117 was reclassified as a piezometer and replaced with HGWC-117A as proposed in the April 2023 minor modification to the closure permit. HGWC-117 was abandoned in July 2023.

0 150 300 600

SCALE IN FEET

MONITORING WELL AND SURFACE WATER GAUGE LOCATION NETWORK MAP

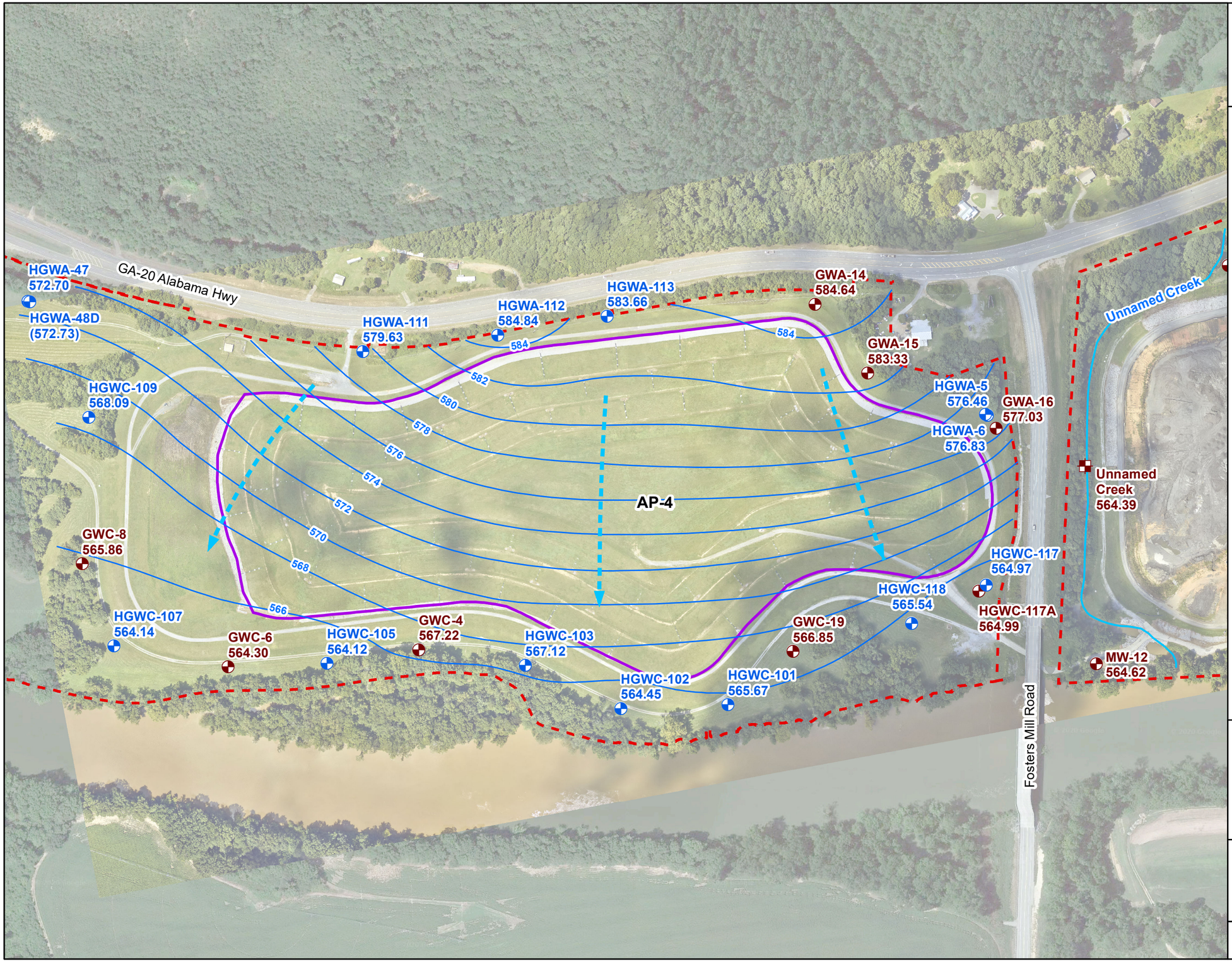
GEORGIA POWER
PLANT HAMMOND
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2023

FIGURE 2



N

LEGEND

- Detection Monitoring Well
- Piezometer
- Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction
- Unnamed Creek
- Approximate AP-4 Boundary
- Plant Hammond Property Boundary

GEORGIA REGISTERED No. PE036612 PROFESSIONAL ENGINEER WHITNEY B. LAW

Notes:
1. Water level elevation recorded on August 1, 2022. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).
2. Groundwater elevation in parentheses was not used in development of groundwater contours due to well being screened at a different elevation in the formation/aquifer.
3. Aerial photograph source: Google Earth Pro, August 2019 and Georgia Power Company, September 2022.

0 150 300 600

SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOUR MAP - AUGUST 2022

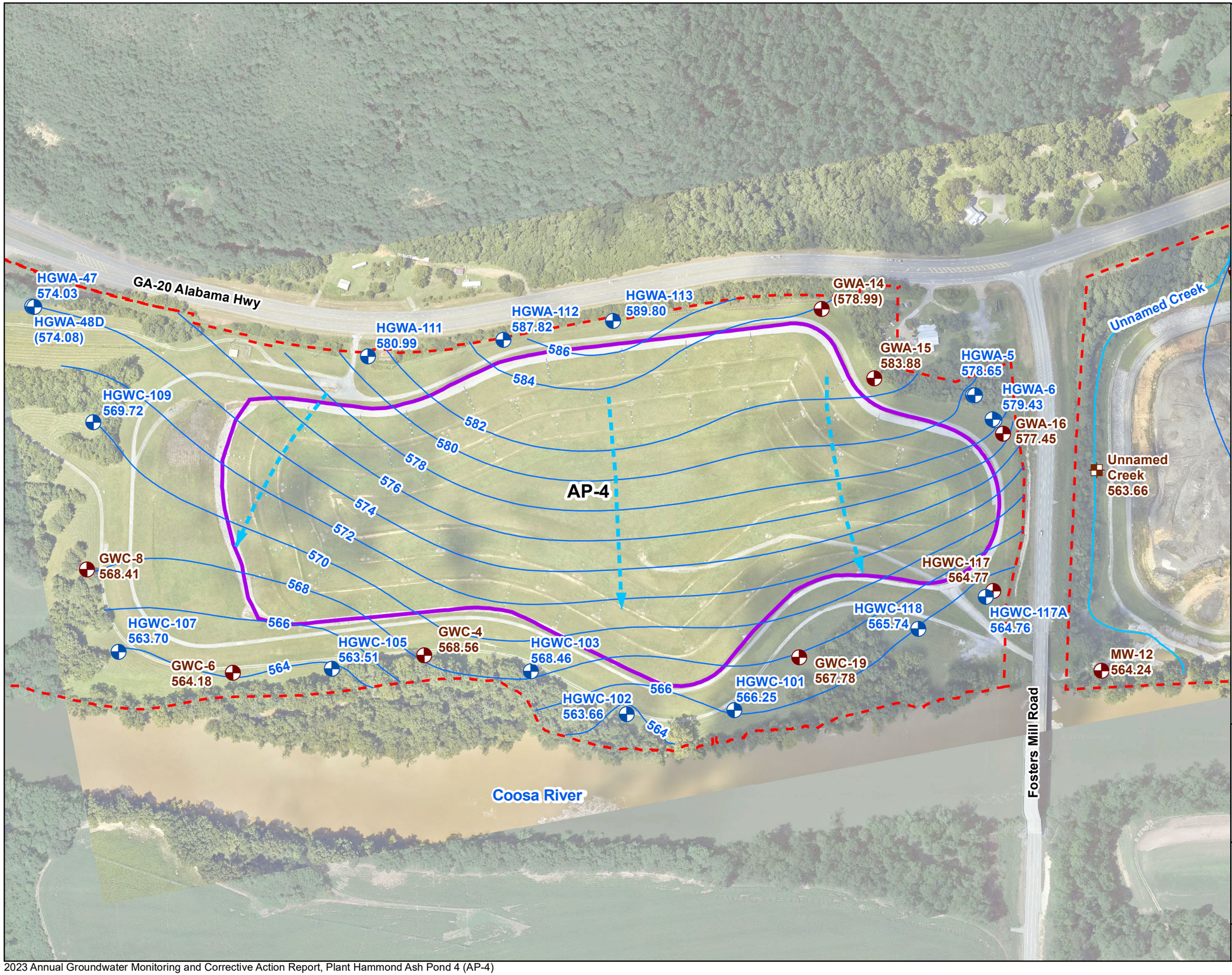
GEORGIA POWER COMPANY
PLANT HAMMOND AP-4
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2023

FIGURE 3



N

LEGEND

- Detection Monitoring Well
- Piezometer
- Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow
- Unnamed Creek
- Approximate AP-4 Boundary
- Plant Hammond Property Boundary

GEORGIA REGISTERED No. PE036640 PROFESSIONAL ENGINEER WHITNEY B. LAW

Notes:
1. Water level elevation recorded on January 23, 2023. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD88).
2. Groundwater elevation in parantheses was not used in development of groundwater contours due to well being screened at a different elevaion in the formation/aquifer or due to erroneous water level readings.
3. Former detection monitoring well HGWC-117 was reclassified as a piezometer and replaced with HGWC-117A as proposed in the April 2023 minor modification to the closure permit. HGWC-117 was abandoned in July 2023.
4. Aerial photograph source: Google Earth Pro, August 2019 and Georgia Power Company, September 2022.

0 150 300 600

SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOUR MAP - JANUARY 2023

GEORGIA POWER COMPANY
PLANT HAMMOND AP-4
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2023

FIGURE 4

APPENDIX A

Well Abandonment Summary Memorandum

Geosyntec consultants

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144
PH 678.202.9500
FAX 678.202.9501
www.geosyntec.com

DATE: July 31, 2023

TO: Kristen Jurinko, P.G., Southern Company Services, Inc.
Lauren Petty, P.G., Georgia Power Company
Ben Hodges, P.G., Georgia Power Company

FROM: Christine Hug, P.G., Geosyntec Consultants
Whitney Law, P.E., Geosyntec Consultants

SUBJECT: **Well Abandonment Summary Memorandum**
Plant Hammond Ash Pond 4
Georgia Power Company

INTRODUCTION

On behalf Georgia Power Company (Georgia Power), Geosyntec Consultants, Inc. (Geosyntec) has prepared this *Well Abandonment Summary Memorandum* for the Georgia Environmental Protection Division (GA EPD) to summarize well abandonment activities at Plant Hammond Ash Ponds 4 (AP-4) conducted on July 13, 2023. The well was abandoned in general accordance with the *Georgia Water Well Standards Act* (OCGA § 12-5-120 through 138) and the U.S. Environmental Protection Agency (USEPA) Science and Ecosystem Support Division guidance document *Design and Installation of Monitoring Wells* (SESDGUID-101-R2).

Abandonment activities were performed by Cascade Drilling (Cascade) of Macon, Georgia. In accordance with the Georgia Water Well Standards Act, Cascade has a bond on file with the State of Georgia. A copy of the bond, which was valid at the time of drilling, is included in **Attachment A**.

WELL ABANDONMENT

Well HGWC-117 was abandoned downgradient of AP-4 by Cascade Drilling on July 13, 2023. The work was completed under the direction and supervision of a Geosyntec geologist licensed in the State of Georgia.

The location of the abandoned well is presented on **Figure 1**. **Table 1** presents well construction and abandonment details. The well was constructed of 2-inch diameter polyvinyl chloride (PVC) well screen and riser installed in a 6-inch diameter borehole and was screened within alluvium.

The water level and total well depth was measured and recorded to calculate the estimated volume of grout needed before initiating abandonment procedures for the well.

The well was abandoned by pumping a sodium bentonite grout slurry (Aquaguard brand) through the end of a PVC tremie pipe placed at the bottom of the well, which was raised as the grout slurry level rose to the ground surface. Aquaguard is a mixture containing granular sodium bentonite blended with inorganic additives which creates a slurry containing 30 percent active solids with a density of 10.1 pounds per gallon when mixed with 14 gallons of water. The volume of grout material used was consistent with the anticipated (calculated) volumes, indicating little to no grout loss or bridging (**Table 1**).

The steel protective cover, concrete bollards, and any above ground PVC casing materials were removed from the well location and staged on site for disposal by Georgia Power. Once the grout had cured for several hours, the well was then over drilled to 5 feet below ground surface (ft bgs) and grouted to surface. During the over drilling the grouted PVC casing was drilled up and extracted as part of the drill cuttings. Drilling was performed with a Terrasonic compact crawler truck-mounted rig, using sonic techniques. No water was used during the over drilling part of the abandonment.

The well abandonment form is provided in **Attachment B**.

Sincerely,

Christine Hug, P.G.
Senior Geologist

Whitney Law, P.E.
Program Director

*****

Geosyntec consultants

ENCLOSURES

Table 1 – Summary Details of Abandoned Well

Figure 1 – Abandoned Well Location - July 2023

Attachment A – Bond for Drillers

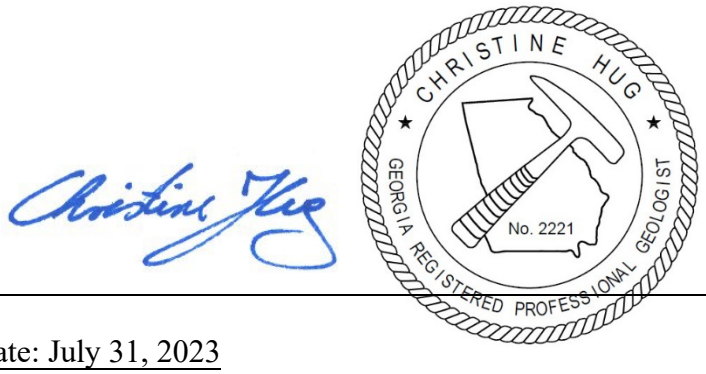
Attachment B – Well Abandonment Log

Georgia Power

CERTIFICATION PAGE

I hereby certify that this *Well Abandonment Summary Memorandum, Plant Hammond Ash Pond 4* has been prepared by, or under the direct supervision of, a Qualified Groundwater Scientist with Geosyntec Consultants, Inc. and is in compliance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391- 3- 4-.10.

According to 391-3-4-.01, a Qualified Groundwater Scientist is "a professional engineer or geologist registered to practice in Georgia who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields that enable individuals to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action."



Date: July 31, 2023

Christine Hug, P.G.
Georgia Professional Geologist No. 2221
Project Manager
Geosyntec Consultants

Table 1
Summary Details of Abandoned Well
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Installation Date	Northing [(1)]	Easting [(1)]	Ground Surface Elevation (ft)	Top of Casing Elevation [(2)] (ft)	Screen Interval Length	Well Depth (ft BTOC)[(3)]	Depth to Water (ft BTOC)[(3)]	Abandonment Date	Estimated PVC Grout Volume	Actual PVC Grout Volume	Estimated Open Hole Grout Volume	Actual Open Hole Grout Volume (gal)	Abandonment Method
HGWC-117	8/14/2012	1548100.77	1937180.43	579.31	581.98	10	40.25	16.78	7/13/2023	7.00	12.00	7.34	10.00	A

Notes:
ft = feet.
ft BTOC = feet below top of casing.
gal = US liquid gallon.
OD = Outer diameter.
PVC = Polyvinyl chloride casing.
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.
(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).
(3) Total well depth measured prior to abandonment.

Abandonment Method:
A = Tremie grouted PVC riser pipe, overdrilled to 5 ft below ground surface using 6 inch OD sonic casing and grouted to surface.

N

LEGEND

- Abandoned Well
- Unnamed Creek
- Approximate AP-4 Boundary
- Plant Hammond Property Boundary

Notes:
1. Aerial photograph source: Google Earth Pro, August 2019 and Georgia Power Company, September 2022.

0 150 300 600

SCALE IN FEET

ABANDONED WELL LOCATION - JULY 2023

GEORGIA POWER
PLANT HAMMOND AP-4
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2023

FIGURE 1

ATTACHMENT A

Bond for Drillers

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company , Surety upon

a certain Bond No. 800033976

dated effective September 27, 2017
(MONTH-DAY-YEAR)

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

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

does hereby continue said bond in force for the further period

beginning on June 30, 2023
(MONTH-DAY-YEAR)

and ending on June 30, 2025
(MONTH-DAY-YEAR)

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

Description of bond Performance Bond for Water Well Contractors

Premium:

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

Signed and dated on April 13, 2023
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By _____
ATTORNEY-IN-FACT Carlos A. Albelo

intact INSURANCE

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Megan Sivley, Melissa Haddick, Sandra Parker, Orlando Aguirre, Stacy Killebrew, Carlos A. Albelo**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this first day of January, 2023.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

By _____
Sarah A. Kolar, General Counsel

STATE OF MINNESOTA
HENNEPIN COUNTY

On this first day of January, 2023, before me personally came Sarah A. Kolar, General Counsel of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and she acknowledged the execution of the same, and being by me duly sworn, that she is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.

ALISON DWAN NASH-TROUT
NOTARY PUBLIC - MINNESOTA
My Commission Expires
January 31, 2026

_____
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 13th day of April, 2023.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

This Power of Attorney expires
January 31, 2025

_____
Kara Barrow, Secretary

Please direct bond verifications to surety@intactinsurance.com

ATTACHMENT B

Well Abandonment Log

SOUTHERN COMPANY
Energy to Serve Your World℠

WELL ABANDONMENT DATA

PROJECT: Plant Hammond Ash Pond 4 (AP-4) Well Abandonment	**WELL NO.:** HGWC-117
SITE: Plant Hammond	**COORDINATES: (NAD83)** N:1548100.77 E: 1937180.43
FORM PREPARED BY: Eliane Volk (Geosyntec Consultants) **ABANDONMENT BY:** Brandon Griffis(Cascade Drilling)	**DATE ABANDONED:** 07/13/2023
METHOD OF FILLING: Grout in place, over drill to 5 ft bgs and grout to surface.	**VOLUME USED:** Aquaguard bentonite grout: 12 gal PVC + 10 gal open hole
DEPTH SOUNDED PRIOR TO FILLING/GROUTING: 40.25 ft bTOC	**DEPTH TO WATER PRIOR TO ABANDONMENT:** 16.78 ft bTOC

TOC Elevation (NAVD88): 581.98 ft

2 inch OD

	DEPTH*:	ELEV.*:
GROUND SURFACE	0.0 ft	579.31 ft
TOP OF SCREEN	27.19ft	552.12 ft
BOTTOM OF WELL	37.19 ft	542.12 ft

Notes:

ft bTOC = Feet below top of PVC casing

ft bgs = Feet below ground surface

gal = US liquid gallon

OD = Outer diameter

** Well construction details from original boring log*

REMARKS:

- Added Aquaguard bentonite grout into 2 inch PVC casing and filled to surface (12 gal).
- Removed bollards and protective well riser, and cut remaining PVC casing back to ground surface.
- Over drilled well to 5 ft bgs (OD = 6 inch) using sonic casing.
- Grouted 6 inch open hole to surface using Aquaguard bentonite grout (10 gal).

Certified By:

CHRISTINE HUG
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 2221

Date: 7/31/2023

APPENDIX B

Well Maintenance and Repair Documentation Memoranda

August 2022

Geosyntec consultants

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144
PH 678.202.9500
FAX 678.202.9501
www.geosyntec.com

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 4 (AP-4) – 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-4 during the August 2022 sampling event. 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-4	8/1/2022	All Wells	Checked and cleared weep holes of debris.

ATTACHMENT

Well Inspection Forms

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Tristan D
Well ID: HGWA-47

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Tristan O.
Well ID: HGWA-48D

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.	Bladder		
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Instan O.
Well ID: HGWA - 111

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Tristan O
Well ID: HGWA-112

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80°F

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			Bladder
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Tristan O.
Well ID: HGWA-113

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80s

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Trestan O.
Well ID: HGWC-101

Date (mm/dd/yyyy): 8/1/22
Field Conditions: sunny, 80°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			Bladder
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Tristan O.
Well ID: HGWC-102

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond/AP-4
Field Technician: Tristan D.
Well ID: HGWC-103-70 / HGWC-103

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			Bladder
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Trystan O.
Well ID: HGWC-105

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			Bladder
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond/AP-4
Field Technician: Tristan O.
Well ID: HHWC-107

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80s

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			Bladder
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Trustan D.
Well ID: HA-WC-109

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 90°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.	Bladder		
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Tristan O
Well ID: HGWC-117

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: Cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Level Troll
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Desmond / AP-4
Field Technician: Ruston O.
Well ID: HOWL-117A

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: Tristan O
Well ID: HOWC-118

Date (mm/dd/yyyy): 8/1/22
Field Conditions: Sunny, 80°

		Yes	No	Comments
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)	✓		
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)?	✓		
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 past well logs?	✓		
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**.			NA
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond 4P2/4
Field Technician: Thomas Hessler
Well ID: MW-12

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: overcast, 85°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Level troll
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?	✓		
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Tristan O
Well ID: GWC-4

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Tristan O
Well ID: GWC-6

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Instan O
Well ID: GWC-8

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Tristan O.
Well ID: GWA-14

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: Cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6 Corrective Actions				
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Instan O.
Well ID: GWA-19

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

- If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Instan O.
Well ID: GWC-116

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Hammond / AP-4
Field Technician: Tristan O.
Well ID: GWC-19

Date (mm/dd/yyyy): 08/01/2022
Field Conditions: cloudy, 82°

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
f	Does the well recharge adequately when purged?			N/A
g	Does the well require redevelopment (low flow, excess turbidity)?			N/A
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

January 2023

Geosyntec consultants

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144
PH 678.202.9500
FAX 678.202.9501
www.geosyntec.com

MEMORANDUM

DATE: January 28, 2023

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 4 (AP-4) – 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-4 during the January 2023 sampling event. 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-4	1/23/2023	All Wells	Checked and cleared weep holes of debris.

ATTACHMENT

Well Inspection Forms

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: C. CAIN
Well ID: HGWA-47

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			NA
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: C. CAIN
Well ID: HGWA-48D

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Sample equipment
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?			N/A
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWA-111

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	N/A		
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWA-112

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Sampling equipment
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: L. CAIN
Well ID: HGWA-113

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny. 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C.CAIN
Well ID: HGWC-101

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny, 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWC-102

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWC-103

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWC-105

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Sampling equipment
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWC-107

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Sampling equipment
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?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWC-109

Date (mm/dd/yyyy): 1/23/23
Field Conditions: sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			Sampling Equipment
b	If equipped with dedicated sampling equipment, is it in good operational condition?	✓		~~NA~~ CC 1/25/23
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: C. CAIN
Well ID: HGWC-117

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: HGWC-119A

Date (mm/dd/yyyy): 1/23/23
Field Conditions: sunny 50 F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond / AP-4
Field Technician: A. Szwast
Well ID: HGWC-118

Date (mm/dd/yyyy): 01/27/2023
Field Conditions: sunny, 45°F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			N/A
b	If equipped with dedicated sampling equipment, is it in good operational condition?			N/A
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			N/A
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 condition?			N/A
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-2, AP-4
Field Technician: C. CAIN
Well ID: MW-2

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
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?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: GWC-4

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny, 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: GWC-6

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: GWL-8

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	N/A		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: GWA-14

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: GWA-15

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. C. AIN
Well ID: GWC-16

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.	NA		
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

Well Inspection Form

Plant Name/Unit Name: Plant Hammond AP-4
Field Technician: C. CAIN
Well ID: GWC-19

Date (mm/dd/yyyy): 1/23/23
Field Conditions: Sunny 50F

		Yes	No	Comments
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)	✓		
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)?	✓		
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**.			NA
b	If equipped with dedicated sampling equipment, is it in good operational condition?			NA
c	If equipped with a dedicated water quality sonde, is it in good operational condition?			NA
d	Does the desiccant need to be replaced on the water quality sonde?			NA
e	If equipped with a water level data logger, is it in good operational condition?			NA
f	Does the well recharge adequately when purged?			NA
g	Does the well require redevelopment (low flow, excess turbidity)?		✓	
6	**Corrective Actions**			
a	Are corrective actions needed?		✓	

If yes, indicate here:

APPENDIX C

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL REPORTS

August 2022

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 29, 2022

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

RE: Project: HAMMOND AP-4
Pace Project No.: 92618826

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 04, 2022 and August 12, 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,

Nicole D'Oleo

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Pace Analytical Services Charlotte
South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92618826001	**HGWA-47**	Water	08/02/22 16:27	08/04/22 12:30
92618826002	**HGWA-113**	Water	08/02/22 16:15	08/04/22 12:30
92618826003	**HGWA-48D**	Water	08/05/22 09:47	08/08/22 11:10
92618826004	**HGWA-111**	Water	08/05/22 10:10	08/08/22 11:10
92618826005	**HGWA-112**	Water	08/05/22 09:43	08/08/22 11:10
92618826006	**HGWC-102**	Water	08/05/22 15:02	08/08/22 11:10
92618826007	**HGWC-103**	Water	08/05/22 14:21	08/08/22 11:10
92618826008	**HGWC-105**	Water	08/05/22 11:40	08/08/22 11:10
92618826009	**HGWC-107**	Water	08/05/22 15:46	08/08/22 11:10
92618826010	**HGWC-109**	Water	08/05/22 13:24	08/08/22 11:10
92618826011	**HGWC-117**	Water	08/05/22 13:21	08/08/22 11:10
92618826012	**HGWC-117A**	Water	08/05/22 11:47	08/08/22 11:10
92618826013	**HGWC-118**	Water	08/05/22 15:58	08/08/22 11:10
92618826014	**DUP-4**	Water	08/05/22 00:00	08/08/22 11:10
92618826015	**HGWC-101**	Water	08/10/22 11:30	08/12/22 11:25
92618826016	**EB-4**	Water	08/10/22 09:55	08/12/22 11:25
92618826017	**FB-4**	Water	08/10/22 09:50	08/12/22 11:25

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92618826001	**HGWA-47**	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
92618826002	**HGWA-113**	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
92618826003	**HGWA-48D**	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	JCM	3
92618826004	**HGWA-111**	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	JCM	3
92618826005	**HGWA-112**	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	JCM	3
92618826006	**HGWC-102**	EPA 6010D	KH	6
		EPA 6020B	CW1	13

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		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	JCM	3
92618826007	**HGWC-103**	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	JCM	3
92618826008	**HGWC-105**	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	JCM	3
92618826009	**HGWC-107**	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	JCM	3
92618826010	**HGWC-109**	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	JCM	3
92618826011	**HGWC-117**	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826012	**HGWC-117A**	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	JCM	3
92618826013	**HGWC-118**	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	JCM	3
92618826014	**DUP-4**	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	JCM	3
92618826015	**HGWC-101**	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	JCM	3
92618826016	**EB-4**	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	YEG	3
		SM 4500-S2D-2011	JP1	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826017	**FB-4**	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	YEG	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618826001	**HGWA-47**					
	Performed by	Customer			08/05/22 12:41	
	pH	7.34	Std. Units		08/05/22 12:41	
EPA 6010D	Iron	0.026J	mg/L	0.040	08/11/22 15:07	
EPA 6010D	Manganese	0.032J	mg/L	0.040	08/11/22 15:07	
EPA 6010D	Potassium	0.43	mg/L	0.20	08/11/22 15:07	
EPA 6010D	Sodium	3.8	mg/L	1.0	08/11/22 15:07	
EPA 6010D	Calcium	73.0	mg/L	1.0	08/11/22 15:07	
EPA 6010D	Magnesium	5.6	mg/L	0.050	08/11/22 15:07	
EPA 6020B	Barium	0.029	mg/L	0.0050	08/10/22 19:45	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	08/10/22 19:45	
SM 2540C-2015	Total Dissolved Solids	222	mg/L	10.0	08/08/22 09:18	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	209	mg/L	5.0	08/10/22 09:05	
SM 2320B-2011	Alkalinity, Total as CaCO3	209	mg/L	5.0	08/10/22 09:05	
EPA 300.0 Rev 2.1 1993	Chloride	3.0	mg/L	1.0	08/12/22 17:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.080J	mg/L	0.10	08/12/22 17:02	
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	08/12/22 17:02	
92618826002	**HGWA-113**					
	Performed by	Customer			08/05/22 12:41	
	pH	6.08	Std. Units		08/05/22 12:41	
EPA 6010D	Manganese	0.0081J	mg/L	0.040	08/11/22 15:12	
EPA 6010D	Potassium	0.22	mg/L	0.20	08/11/22 15:12	
EPA 6010D	Sodium	10.4	mg/L	1.0	08/11/22 15:12	
EPA 6010D	Calcium	8.0	mg/L	1.0	08/11/22 15:12	
EPA 6010D	Magnesium	3.5	mg/L	0.050	08/11/22 15:12	
EPA 6020B	Barium	0.030	mg/L	0.0050	08/10/22 19:51	
EPA 6020B	Chromium	0.0013J	mg/L	0.0050	08/10/22 19:51	
EPA 6020B	Lithium	0.00089J	mg/L	0.030	08/10/22 19:51	
EPA 6020B	Selenium	0.0034J	mg/L	0.0050	08/10/22 19:51	
SM 2540C-2015	Total Dissolved Solids	85.0	mg/L	10.0	08/08/22 09:18	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	40.4	mg/L	5.0	08/10/22 11:45	
SM 2320B-2011	Alkalinity, Total as CaCO3	40.4	mg/L	5.0	08/10/22 11:45	
EPA 300.0 Rev 2.1 1993	Chloride	1.8	mg/L	1.0	08/12/22 17:18	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	08/12/22 17:18	
EPA 300.0 Rev 2.1 1993	Sulfate	7.5	mg/L	1.0	08/12/22 17:18	
92618826003	**HGWA-48D**					
	Performed by	Customer			08/08/22 17:07	
	pH	7.40	Std. Units		08/08/22 17:07	
EPA 6010D	Iron	0.41	mg/L	0.040	08/11/22 18:14	
EPA 6010D	Manganese	0.018J	mg/L	0.040	08/11/22 18:14	
EPA 6010D	Potassium	0.49	mg/L	0.20	08/11/22 18:14	
EPA 6010D	Sodium	11.6	mg/L	1.0	08/11/22 18:14	
EPA 6010D	Calcium	59.6	mg/L	1.0	08/11/22 18:14	
EPA 6010D	Magnesium	11.5	mg/L	0.050	08/11/22 18:14	
EPA 6020B	Barium	0.11	mg/L	0.0050	08/11/22 19:24	
EPA 6020B	Boron	0.011J	mg/L	0.040	08/11/22 19:24	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	08/11/22 19:24	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618826003	**HGWA-48D**					
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	08/11/22 19:24	
SM 2540C-2015	Total Dissolved Solids	224	mg/L	10.0	08/11/22 10:35	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	198	mg/L	5.0	08/18/22 10:38	
SM 2320B-2011	Alkalinity, Total as CaCO3	198	mg/L	5.0	08/18/22 10:38	
SM 4500-S2D-2011	Sulfide	0.18	mg/L	0.10	08/12/22 05:05	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	08/17/22 10:39	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/17/22 10:39	
EPA 300.0 Rev 2.1 1993	Sulfate	3.4	mg/L	1.0	08/17/22 10:39	
92618826004	**HGWA-111**					
	Performed by	Customer			08/08/22 17:07	
	pH	6.97	Std. Units		08/08/22 17:07	
EPA 6010D	Potassium	0.75	mg/L	0.20	08/11/22 18:19	
EPA 6010D	Sodium	5.5	mg/L	1.0	08/11/22 18:19	
EPA 6010D	Calcium	53.0	mg/L	1.0	08/11/22 18:19	
EPA 6010D	Magnesium	5.5	mg/L	0.050	08/11/22 18:19	
EPA 6020B	Barium	0.028	mg/L	0.0050	08/11/22 19:30	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	08/11/22 19:30	
SM 2540C-2015	Total Dissolved Solids	171	mg/L	10.0	08/11/22 10:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	145	mg/L	5.0	08/18/22 12:09	
SM 2320B-2011	Alkalinity, Total as CaCO3	145	mg/L	5.0	08/18/22 12:09	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	08/17/22 10:54	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	08/17/22 10:54	
EPA 300.0 Rev 2.1 1993	Sulfate	1.4	mg/L	1.0	08/17/22 10:54	
92618826005	**HGWA-112**					
	Performed by	Customer			08/08/22 17:07	
	pH	5.43	Std. Units		08/08/22 17:07	
EPA 6010D	Potassium	0.87	mg/L	0.20	08/11/22 18:38	
EPA 6010D	Sodium	3.8	mg/L	1.0	08/11/22 18:38	
EPA 6010D	Calcium	7.1	mg/L	1.0	08/11/22 18:38	
EPA 6010D	Magnesium	2.6	mg/L	0.050	08/11/22 18:38	
EPA 6020B	Barium	0.027	mg/L	0.0050	08/12/22 18:56	
EPA 6020B	Boron	0.012J	mg/L	0.040	08/12/22 18:56	
EPA 6020B	Chromium	0.0045J	mg/L	0.0050	08/12/22 18:56	
SM 2540C-2015	Total Dissolved Solids	44.0	mg/L	10.0	08/11/22 10:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	23.4	mg/L	5.0	08/18/22 12:34	
SM 2320B-2011	Alkalinity, Total as CaCO3	23.4	mg/L	5.0	08/18/22 12:34	
EPA 300.0 Rev 2.1 1993	Chloride	5.0	mg/L	1.0	08/17/22 11:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	08/17/22 11:09	
92618826006	**HGWC-102**					
	Performed by	Customer			08/08/22 17:08	
	pH	5.69	Std. Units		08/08/22 17:08	
EPA 6010D	Iron	2.0	mg/L	0.040	08/11/22 19:07	
EPA 6010D	Manganese	2.0	mg/L	0.040	08/11/22 19:07	
EPA 6010D	Potassium	2.8	mg/L	0.20	08/11/22 19:07	
EPA 6010D	Sodium	15.6	mg/L	1.0	08/11/22 19:07	
EPA 6010D	Calcium	127	mg/L	1.0	08/11/22 19:07	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618826006	**HGWC-102**					
EPA 6010D	Magnesium	33.3	mg/L	0.050	08/11/22 19:07	
EPA 6020B	Barium	0.031	mg/L	0.0050	08/12/22 19:02	
EPA 6020B	Boron	2.9	mg/L	0.040	08/12/22 19:02	
EPA 6020B	Cadmium	0.00044J	mg/L	0.00050	08/12/22 19:02	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	08/12/22 19:02	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	08/12/22 19:02	
SM 2540C-2015	Total Dissolved Solids	696	mg/L	20.0	08/11/22 10:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	96.6	mg/L	5.0	08/18/22 12:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	96.6	mg/L	5.0	08/18/22 12:51	
EPA 300.0 Rev 2.1 1993	Chloride	7.7	mg/L	1.0	08/17/22 11:54	
EPA 300.0 Rev 2.1 1993	Fluoride	0.076J	mg/L	0.10	08/17/22 11:54	
EPA 300.0 Rev 2.1 1993	Sulfate	358	mg/L	6.0	08/17/22 16:53	
92618826007	**HGWC-103**					
	Performed by	Customer			08/08/22 17:08	
	pH	5.71	Std. Units		08/08/22 17:08	
EPA 6010D	Iron	2.0	mg/L	0.040	08/11/22 19:11	
EPA 6010D	Manganese	2.0	mg/L	0.040	08/11/22 19:11	
EPA 6010D	Potassium	3.4	mg/L	0.20	08/11/22 19:11	
EPA 6010D	Sodium	18.8	mg/L	1.0	08/11/22 19:11	
EPA 6010D	Calcium	128	mg/L	1.0	08/11/22 19:11	
EPA 6010D	Magnesium	33.4	mg/L	0.050	08/11/22 19:11	
EPA 6020B	Barium	0.037	mg/L	0.0050	08/12/22 19:08	
EPA 6020B	Boron	3.6	mg/L	0.040	08/12/22 19:08	
EPA 6020B	Cadmium	0.00081	mg/L	0.00050	08/12/22 19:08	
EPA 6020B	Cobalt	0.0021J	mg/L	0.0050	08/12/22 19:08	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	08/12/22 19:08	
EPA 7470A	Mercury	0.00017J	mg/L	0.00020	08/25/22 15:29	
SM 2540C-2015	Total Dissolved Solids	692	mg/L	20.0	08/11/22 10:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.9	mg/L	5.0	08/18/22 13:12	
SM 2320B-2011	Alkalinity, Total as CaCO3	79.9	mg/L	5.0	08/18/22 13:12	
EPA 300.0 Rev 2.1 1993	Chloride	7.8	mg/L	1.0	08/17/22 12:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.071J	mg/L	0.10	08/17/22 12:09	
EPA 300.0 Rev 2.1 1993	Sulfate	369	mg/L	6.0	08/17/22 18:08	
92618826008	**HGWC-105**					
	Performed by	Customer			08/08/22 17:08	
	pH	6.46	Std. Units		08/08/22 17:08	
EPA 6010D	Iron	6.9	mg/L	0.040	08/11/22 19:16	
EPA 6010D	Manganese	0.42	mg/L	0.040	08/11/22 19:16	
EPA 6010D	Potassium	0.90	mg/L	0.20	08/11/22 19:16	
EPA 6010D	Sodium	14.2	mg/L	1.0	08/11/22 19:16	
EPA 6010D	Calcium	121	mg/L	1.0	08/11/22 19:16	
EPA 6010D	Magnesium	12.3	mg/L	0.050	08/11/22 19:16	
EPA 6020B	Barium	0.088	mg/L	0.0050	08/12/22 19:14	
EPA 6020B	Boron	1.3	mg/L	0.040	08/12/22 19:14	
EPA 6020B	Lithium	0.0039J	mg/L	0.030	08/12/22 19:14	
SM 2540C-2015	Total Dissolved Solids	514	mg/L	10.0	08/11/22 10:39	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618826008	**HGWC-105**					
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	141	mg/L	5.0	08/18/22 13:21	
SM 2320B-2011	Alkalinity, Total as CaCO3	141	mg/L	5.0	08/18/22 13:21	
EPA 300.0 Rev 2.1 1993	Chloride	5.0	mg/L	1.0	08/17/22 12:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/17/22 12:24	
EPA 300.0 Rev 2.1 1993	Sulfate	217	mg/L	4.0	08/17/22 18:23	
92618826009	**HGWC-107**					
	Performed by	Customer			08/08/22 17:09	
	pH	6.07	Std. Units		08/08/22 17:09	
EPA 6010D	Manganese	0.26	mg/L	0.040	08/11/22 19:21	
EPA 6010D	Potassium	2.6	mg/L	0.20	08/11/22 19:21	
EPA 6010D	Sodium	8.3	mg/L	1.0	08/11/22 19:21	
EPA 6010D	Calcium	63.0	mg/L	1.0	08/11/22 19:21	
EPA 6010D	Magnesium	11.0	mg/L	0.050	08/11/22 19:21	
EPA 6020B	Barium	0.036	mg/L	0.0050	08/12/22 19:20	
EPA 6020B	Boron	0.79	mg/L	0.040	08/12/22 19:20	
EPA 6020B	Lithium	0.00082J	mg/L	0.030	08/12/22 19:20	
SM 2540C-2015	Total Dissolved Solids	274	mg/L	10.0	08/11/22 10:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	71.6	mg/L	5.0	08/18/22 13:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	71.6	mg/L	5.0	08/18/22 13:32	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	08/17/22 13:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.093J	mg/L	0.10	08/17/22 13:09	
EPA 300.0 Rev 2.1 1993	Sulfate	120	mg/L	2.0	08/17/22 19:10	
92618826010	**HGWC-109**					
	Performed by	Customer			08/08/22 17:09	
	pH	6.81	Std. Units		08/08/22 17:09	
EPA 6010D	Iron	7.5	mg/L	0.040	08/11/22 19:26	
EPA 6010D	Manganese	0.42	mg/L	0.040	08/11/22 19:26	
EPA 6010D	Potassium	0.43	mg/L	0.20	08/11/22 19:26	
EPA 6010D	Sodium	9.0	mg/L	1.0	08/11/22 19:26	
EPA 6010D	Calcium	50.8	mg/L	1.0	08/11/22 19:26	
EPA 6010D	Magnesium	10.9	mg/L	0.050	08/11/22 19:26	
EPA 6020B	Arsenic	0.0022J	mg/L	0.0050	08/12/22 19:26	
EPA 6020B	Barium	0.085	mg/L	0.0050	08/12/22 19:26	M1
EPA 6020B	Boron	0.25	mg/L	0.040	08/12/22 19:26	
EPA 6020B	Cobalt	0.00080J	mg/L	0.0050	08/12/22 19:26	
EPA 6020B	Lithium	0.00087J	mg/L	0.030	08/12/22 19:26	
SM 2540C-2015	Total Dissolved Solids	195	mg/L	10.0	08/11/22 10:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	156	mg/L	5.0	08/18/22 13:40	
SM 2320B-2011	Alkalinity, Total as CaCO3	156	mg/L	5.0	08/18/22 13:40	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	08/17/22 13:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	08/17/22 13:24	
EPA 300.0 Rev 2.1 1993	Sulfate	23.0	mg/L	1.0	08/17/22 13:24	
92618826011	**HGWC-117**					
	Performed by	Customer			08/08/22 17:10	
	pH	5.46	Std. Units		08/08/22 17:10	
EPA 6010D	Manganese	12.5	mg/L	0.040	08/11/22 19:30	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618826011	**HGWC-117**					
EPA 6010D	Potassium	0.61	mg/L	0.20	08/11/22 19:30	
EPA 6010D	Sodium	8.1	mg/L	1.0	08/11/22 19:30	
EPA 6010D	Calcium	44.8	mg/L	1.0	08/11/22 19:30	
EPA 6010D	Magnesium	14.1	mg/L	0.050	08/11/22 19:30	
EPA 6020B	Antimony	0.0012J	mg/L	0.0030	08/12/22 20:02	
EPA 6020B	Barium	0.044	mg/L	0.0050	08/12/22 20:02	
EPA 6020B	Beryllium	0.000078J	mg/L	0.00050	08/12/22 20:02	
EPA 6020B	Boron	0.85	mg/L	0.040	08/12/22 20:02	
EPA 6020B	Cadmium	0.0012	mg/L	0.00050	08/12/22 20:02	
EPA 6020B	Cobalt	0.023	mg/L	0.0050	08/12/22 20:02	
EPA 6020B	Lithium	0.0017J	mg/L	0.030	08/12/22 20:02	
EPA 7470A	Mercury	0.00014J	mg/L	0.00020	08/25/22 16:28	
SM 2540C-2015	Total Dissolved Solids	285	mg/L	10.0	08/11/22 10:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	48.0	mg/L	5.0	08/18/22 13:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	48.0	mg/L	5.0	08/18/22 13:51	
EPA 300.0 Rev 2.1 1993	Chloride	4.4	mg/L	1.0	08/17/22 13:39	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/17/22 13:39	
EPA 300.0 Rev 2.1 1993	Sulfate	132	mg/L	2.0	08/17/22 19:26	
92618826012	**HGWC-117A**					
	Performed by	Customer			08/08/22 17:10	
	pH	6.44	Std. Units		08/08/22 17:10	
EPA 6010D	Iron	0.34	mg/L	0.040	08/11/22 19:35	
EPA 6010D	Manganese	0.23	mg/L	0.040	08/11/22 19:35	
EPA 6010D	Potassium	0.61	mg/L	0.20	08/11/22 19:35	
EPA 6010D	Sodium	9.5	mg/L	1.0	08/11/22 19:35	
EPA 6010D	Calcium	68.6	mg/L	1.0	08/11/22 19:35	
EPA 6010D	Magnesium	9.1	mg/L	0.050	08/11/22 19:35	
EPA 6020B	Barium	0.055	mg/L	0.0050	08/12/22 20:08	
EPA 6020B	Boron	0.34	mg/L	0.040	08/12/22 20:08	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	08/12/22 20:08	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	08/12/22 20:08	
SM 2540C-2015	Total Dissolved Solids	270	mg/L	10.0	08/11/22 10:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	128	mg/L	5.0	08/18/22 13:58	
SM 2320B-2011	Alkalinity, Total as CaCO3	128	mg/L	5.0	08/18/22 13:58	
EPA 300.0 Rev 2.1 1993	Chloride	7.4	mg/L	1.0	08/17/22 13:54	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/17/22 13:54	
EPA 300.0 Rev 2.1 1993	Sulfate	76.1	mg/L	1.0	08/17/22 13:54	
92618826013	**HGWC-118**					
	Performed by	Customer			08/08/22 17:10	
	pH	7.07	Std. Units		08/08/22 17:10	
EPA 6010D	Manganese	0.13	mg/L	0.040	08/11/22 19:40	
EPA 6010D	Potassium	0.70	mg/L	0.20	08/11/22 19:40	
EPA 6010D	Sodium	8.6	mg/L	1.0	08/11/22 19:40	
EPA 6010D	Calcium	88.5	mg/L	1.0	08/11/22 19:40	
EPA 6010D	Magnesium	11.6	mg/L	0.050	08/11/22 19:40	
EPA 6020B	Barium	0.039	mg/L	0.0050	08/12/22 20:14	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618826013	**HGWC-118**					
EPA 6020B	Boron	0.57	mg/L	0.040	08/12/22 20:14	
EPA 6020B	Lithium	0.0018J	mg/L	0.030	08/12/22 20:14	
SM 2540C-2015	Total Dissolved Solids	329	mg/L	10.0	08/11/22 10:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	198	mg/L	5.0	08/18/22 14:08	
SM 2320B-2011	Alkalinity, Total as CaCO3	198	mg/L	5.0	08/18/22 14:08	
EPA 300.0 Rev 2.1 1993	Chloride	3.8	mg/L	1.0	08/17/22 14:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/17/22 14:09	
EPA 300.0 Rev 2.1 1993	Sulfate	69.8	mg/L	1.0	08/17/22 14:09	
92618826014	**DUP-4**					
EPA 6010D	Manganese	0.14	mg/L	0.040	08/11/22 19:45	
EPA 6010D	Potassium	0.68	mg/L	0.20	08/11/22 19:45	
EPA 6010D	Sodium	8.7	mg/L	1.0	08/11/22 19:45	
EPA 6010D	Calcium	89.4	mg/L	1.0	08/11/22 19:45	
EPA 6010D	Magnesium	11.6	mg/L	0.050	08/11/22 19:45	
EPA 6020B	Barium	0.044	mg/L	0.0050	08/12/22 20:19	
EPA 6020B	Boron	0.64	mg/L	0.040	08/12/22 20:19	
EPA 6020B	Cobalt	0.00041J	mg/L	0.0050	08/12/22 20:19	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	08/12/22 20:19	
SM 2540C-2015	Total Dissolved Solids	327	mg/L	10.0	08/11/22 10:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	181	mg/L	5.0	08/18/22 10:30	
SM 2320B-2011	Alkalinity, Total as CaCO3	181	mg/L	5.0	08/18/22 10:30	
EPA 300.0 Rev 2.1 1993	Chloride	3.9	mg/L	1.0	08/17/22 14:54	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/17/22 14:54	
EPA 300.0 Rev 2.1 1993	Sulfate	70.6	mg/L	1.0	08/17/22 14:54	
92618826015	**HGWC-101**					
	Performed by	Customer			08/12/22 15:45	
	pH	5.37	Std. Units		08/12/22 15:45	
EPA 6010D	Iron	6.4	mg/L	0.040	08/19/22 21:14	
EPA 6010D	Manganese	2.5	mg/L	0.040	08/19/22 21:14	
EPA 6010D	Potassium	0.74	mg/L	0.20	08/19/22 21:14	
EPA 6010D	Sodium	11.4	mg/L	1.0	08/19/22 21:14	
EPA 6010D	Calcium	24.6	mg/L	1.0	08/19/22 21:14	
EPA 6010D	Magnesium	12.9	mg/L	0.050	08/19/22 21:14	
EPA 6020B	Barium	0.040	mg/L	0.0050	08/26/22 18:13	
EPA 6020B	Beryllium	0.000064J	mg/L	0.00050	08/26/22 18:13	
EPA 6020B	Boron	0.17	mg/L	0.040	08/26/22 18:13	
EPA 6020B	Cadmium	0.00011J	mg/L	0.00050	08/26/22 18:13	
EPA 6020B	Cobalt	0.0028J	mg/L	0.0050	08/26/22 18:13	
SM 2540C-2015	Total Dissolved Solids	232	mg/L	10.0	08/15/22 11:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	21.1	mg/L	5.0	08/20/22 22:06	
SM 2320B-2011	Alkalinity, Total as CaCO3	21.1	mg/L	5.0	08/20/22 22:06	
EPA 300.0 Rev 2.1 1993	Chloride	5.5	mg/L	1.0	08/22/22 05:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.10	08/22/22 05:08	
EPA 300.0 Rev 2.1 1993	Sulfate	99.5	mg/L	2.0	08/22/22 21:28	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-47 **Lab ID: 92618826001** Collected: 08/02/22 16:27 Received: 08/04/22 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/05/22 12:41		
pH	**7.34**	Std. Units			1		08/05/22 12:41		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**0.026J**	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:07	7439-89-6	
Manganese	**0.032J**	mg/L	0.040	0.0043	1	08/11/22 10:02	08/11/22 15:07	7439-96-5	
Potassium	**0.43**	mg/L	0.20	0.15	1	08/11/22 10:02	08/11/22 15:07	7440-09-7	
Sodium	**3.8**	mg/L	1.0	0.58	1	08/11/22 10:02	08/11/22 15:07	7440-23-5	
Calcium	**73.0**	mg/L	1.0	0.12	1	08/11/22 10:02	08/11/22 15:07	7440-70-2	
Magnesium	**5.6**	mg/L	0.050	0.012	1	08/11/22 10:02	08/11/22 15:07	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 19:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37	08/10/22 19:45	7440-38-2	
Barium	**0.029**	mg/L	0.0050	0.00067	1	08/09/22 14:37	08/10/22 19:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/09/22 14:37	08/10/22 19:45	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/09/22 14:37	08/10/22 19:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/09/22 14:37	08/10/22 19:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/09/22 14:37	08/10/22 19:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/09/22 14:37	08/10/22 19:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/09/22 14:37	08/10/22 19:45	7439-92-1	
Lithium	**0.0026J**	mg/L	0.030	0.00073	1	08/09/22 14:37	08/10/22 19:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/09/22 14:37	08/10/22 19:45	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/09/22 14:37	08/10/22 19:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/09/22 14:37	08/10/22 19:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**222**	mg/L	10.0	10.0	1		08/08/22 09:18		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**209**	mg/L	5.0	5.0	1		08/10/22 09:05		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 09:05		
Alkalinity, Total as CaCO3	**209**	mg/L	5.0	5.0	1		08/10/22 09:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-47 **Lab ID: 92618826001** Collected: 08/02/22 16:27 Received: 08/04/22 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
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	**3.0**	mg/L	1.0	0.60	1		08/12/22 17:02	16887-00-6	
Fluoride	**0.080J**	mg/L	0.10	0.050	1		08/12/22 17:02	16984-48-8	
Sulfate	**2.1**	mg/L	1.0	0.50	1		08/12/22 17:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-113 **Lab ID: 92618826002** Collected: 08/02/22 16:15 Received: 08/04/22 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/05/22 12:41		
pH	**6.08**	Std. Units			1		08/05/22 12:41		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 10:02	08/11/22 15:12	7439-89-6	
Manganese	**0.0081J**	mg/L	0.040	0.0043	1	08/11/22 10:02	08/11/22 15:12	7439-96-5	
Potassium	**0.22**	mg/L	0.20	0.15	1	08/11/22 10:02	08/11/22 15:12	7440-09-7	
Sodium	**10.4**	mg/L	1.0	0.58	1	08/11/22 10:02	08/11/22 15:12	7440-23-5	
Calcium	**8.0**	mg/L	1.0	0.12	1	08/11/22 10:02	08/11/22 15:12	7440-70-2	
Magnesium	**3.5**	mg/L	0.050	0.012	1	08/11/22 10:02	08/11/22 15:12	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/09/22 14:37	08/10/22 19:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/09/22 14:37	08/10/22 19:51	7440-38-2	
Barium	**0.030**	mg/L	0.0050	0.00067	1	08/09/22 14:37	08/10/22 19:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/09/22 14:37	08/10/22 19:51	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/09/22 14:37	08/10/22 19:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/09/22 14:37	08/10/22 19:51	7440-43-9	
Chromium	**0.0013J**	mg/L	0.0050	0.0011	1	08/09/22 14:37	08/10/22 19:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/09/22 14:37	08/10/22 19:51	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/09/22 14:37	08/10/22 19:51	7439-92-1	
Lithium	**0.00089J**	mg/L	0.030	0.00073	1	08/09/22 14:37	08/10/22 19:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/09/22 14:37	08/10/22 19:51	7439-98-7	
Selenium	**0.0034J**	mg/L	0.0050	0.0014	1	08/09/22 14:37	08/10/22 19:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/09/22 14:37	08/10/22 19:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**85.0**	mg/L	10.0	10.0	1		08/08/22 09:18		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**40.4**	mg/L	5.0	5.0	1		08/10/22 11:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/10/22 11:45		
Alkalinity, Total as CaCO3	**40.4**	mg/L	5.0	5.0	1		08/10/22 11:45		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-113 **Lab ID: 92618826002** Collected: 08/02/22 16:15 Received: 08/04/22 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:40	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1.8**	mg/L	1.0	0.60	1		08/12/22 17:18	16887-00-6	
Fluoride	**0.19**	mg/L	0.10	0.050	1		08/12/22 17:18	16984-48-8	
Sulfate	**7.5**	mg/L	1.0	0.50	1		08/12/22 17:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-48D **Lab ID: 92618826003** Collected: 08/05/22 09:47 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:07		
pH	**7.40**	Std. Units			1		08/08/22 17:07		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**0.41**	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 18:14	7439-89-6	
Manganese	**0.018J**	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 18:14	7439-96-5	
Potassium	**0.49**	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 18:14	7440-09-7	
Sodium	**11.6**	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 18:14	7440-23-5	
Calcium	**59.6**	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 18:14	7440-70-2	
Magnesium	**11.5**	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 18:14	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 19:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 19:24	7440-38-2	
Barium	**0.11**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 19:24	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/11/22 19:24	7440-41-7	
Boron	**0.011J**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 19:24	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/11/22 19:24	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 19:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 19:24	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/11/22 19:24	7439-92-1	
Lithium	**0.0036J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 19:24	7439-93-2	
Molybdenum	**0.0012J**	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 19:24	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 19:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 19:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**224**	mg/L	10.0	10.0	1		08/11/22 10:35		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**198**	mg/L	5.0	5.0	1		08/18/22 10:38		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 10:38		
Alkalinity, Total as CaCO3	**198**	mg/L	5.0	5.0	1		08/18/22 10:38		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-48D **Lab ID: 92618826003** Collected: 08/05/22 09:47 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	**0.18**	mg/L	0.10	0.050	1		08/12/22 05:05	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.4**	mg/L	1.0	0.60	1		08/17/22 10:39	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		08/17/22 10:39	16984-48-8	
Sulfate	**3.4**	mg/L	1.0	0.50	1		08/17/22 10:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-111 **Lab ID: 92618826004** Collected: 08/05/22 10:10 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:07		
pH	**6.97**	Std. Units			1		08/08/22 17:07		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 18:19	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 18:19	7439-96-5	
Potassium	**0.75**	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 18:19	7440-09-7	
Sodium	**5.5**	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 18:19	7440-23-5	
Calcium	**53.0**	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 18:19	7440-70-2	
Magnesium	**5.5**	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 18:19	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 19:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 19:30	7440-38-2	
Barium	**0.028**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 19:30	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/11/22 19:30	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 19:30	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/11/22 19:30	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 19:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 19:30	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/11/22 19:30	7439-92-1	
Lithium	**0.0019J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 19:30	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 19:30	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 19:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 19:30	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:21	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**171**	mg/L	10.0	10.0	1		08/11/22 10:36		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**145**	mg/L	5.0	5.0	1		08/18/22 12:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 12:09		
Alkalinity, Total as CaCO3	**145**	mg/L	5.0	5.0	1		08/18/22 12:09		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-111 **Lab ID: 92618826004** Collected: 08/05/22 10:10 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:07	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.7**	mg/L	1.0	0.60	1		08/17/22 10:54	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.050	1		08/17/22 10:54	16984-48-8	
Sulfate	**1.4**	mg/L	1.0	0.50	1		08/17/22 10:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-112 **Lab ID: 92618826005** Collected: 08/05/22 09:43 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:07		
pH	**5.43**	Std. Units			1		08/08/22 17:07		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 18:38	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 18:38	7439-96-5	
Potassium	**0.87**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 18:38	7440-09-7	
Sodium	**3.8**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 18:38	7440-23-5	
Calcium	**7.1**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 18:38	7440-70-2	
Magnesium	**2.6**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 18:38	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 18:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 18:56	7440-38-2	
Barium	**0.027**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 18:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 18:56	7440-41-7	
Boron	**0.012J**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 18:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 18:56	7440-43-9	
Chromium	**0.0045J**	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 18:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 18:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 18:56	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 18:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 18:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 18:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 18:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**44.0**	mg/L	10.0	10.0	1		08/11/22 10:36		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**23.4**	mg/L	5.0	5.0	1		08/18/22 12:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 12:34		
Alkalinity, Total as CaCO3	**23.4**	mg/L	5.0	5.0	1		08/18/22 12:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWA-112 **Lab ID: 92618826005** Collected: 08/05/22 09:43 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:07	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.0**	mg/L	1.0	0.60	1		08/17/22 11:09	16887-00-6	
Fluoride	**0.077J**	mg/L	0.10	0.050	1		08/17/22 11:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/17/22 11:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-102 **Lab ID: 92618826006** Collected: 08/05/22 15:02 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:08		
pH	**5.69**	Std. Units			1		08/08/22 17:08		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**2.0**	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:07	7439-89-6	
Manganese	**2.0**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:07	7439-96-5	
Potassium	**2.8**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:07	7440-09-7	
Sodium	**15.6**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:07	7440-23-5	
Calcium	**127**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:07	7440-70-2	
Magnesium	**33.3**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:07	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:02	7440-38-2	
Barium	**0.031**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:02	7440-41-7	
Boron	**2.9**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:02	7440-42-8	
Cadmium	**0.00044J**	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:02	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:02	7440-47-3	
Cobalt	**0.0010J**	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:02	7439-92-1	
Lithium	**0.0013J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:02	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**696**	mg/L	20.0	20.0	1		08/11/22 10:36		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**96.6**	mg/L	5.0	5.0	1		08/18/22 12:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 12:51		
Alkalinity, Total as CaCO3	**96.6**	mg/L	5.0	5.0	1		08/18/22 12:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-102 **Lab ID: 92618826006** Collected: 08/05/22 15:02 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:07	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**7.7**	mg/L	1.0	0.60	1		08/17/22 11:54	16887-00-6	
Fluoride	**0.076J**	mg/L	0.10	0.050	1		08/17/22 11:54	16984-48-8	
Sulfate	**358**	mg/L	6.0	3.0	6		08/17/22 16:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-103 **Lab ID: 92618826007** Collected: 08/05/22 14:21 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:08		
pH	**5.71**	Std. Units			1		08/08/22 17:08		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**2.0**	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:11	7439-89-6	
Manganese	**2.0**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:11	7439-96-5	
Potassium	**3.4**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:11	7440-09-7	
Sodium	**18.8**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:11	7440-23-5	
Calcium	**128**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:11	7440-70-2	
Magnesium	**33.4**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:11	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:08	7440-38-2	
Barium	**0.037**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:08	7440-41-7	
Boron	**3.6**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:08	7440-42-8	
Cadmium	**0.00081**	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:08	7440-47-3	
Cobalt	**0.0021J**	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:08	7439-92-1	
Lithium	**0.0014J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00017J**	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:29	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**692**	mg/L	20.0	20.0	1		08/11/22 10:36		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**79.9**	mg/L	5.0	5.0	1		08/18/22 13:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 13:12		
Alkalinity, Total as CaCO3	**79.9**	mg/L	5.0	5.0	1		08/18/22 13:12		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-103 **Lab ID: 92618826007** Collected: 08/05/22 14:21 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:08	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**7.8**	mg/L	1.0	0.60	1		08/17/22 12:09	16887-00-6	
Fluoride	**0.071J**	mg/L	0.10	0.050	1		08/17/22 12:09	16984-48-8	
Sulfate	**369**	mg/L	6.0	3.0	6		08/17/22 18:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-105 **Lab ID: 92618826008** Collected: 08/05/22 11:40 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:08		
pH	**6.46**	Std. Units			1		08/08/22 17:08		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**6.9**	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:16	7439-89-6	
Manganese	**0.42**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:16	7439-96-5	
Potassium	**0.90**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:16	7440-09-7	
Sodium	**14.2**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:16	7440-23-5	
Calcium	**121**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:16	7440-70-2	
Magnesium	**12.3**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:16	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:14	7440-38-2	
Barium	**0.088**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:14	7440-41-7	
Boron	**1.3**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:14	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:14	7439-92-1	
Lithium	**0.0039J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:14	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:31	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**514**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**141**	mg/L	5.0	5.0	1		08/18/22 13:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 13:21		
Alkalinity, Total as CaCO3	**141**	mg/L	5.0	5.0	1		08/18/22 13:21		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-105 **Lab ID: 92618826008** Collected: 08/05/22 11:40 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:08	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.0**	mg/L	1.0	0.60	1		08/17/22 12:24	16887-00-6	
Fluoride	**0.075J**	mg/L	0.10	0.050	1		08/17/22 12:24	16984-48-8	
Sulfate	**217**	mg/L	4.0	2.0	4		08/17/22 18:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-107 **Lab ID: 92618826009** Collected: 08/05/22 15:46 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:09		
pH	**6.07**	Std. Units			1		08/08/22 17:09		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:21	7439-89-6	
Manganese	**0.26**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:21	7439-96-5	
Potassium	**2.6**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:21	7440-09-7	
Sodium	**8.3**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:21	7440-23-5	
Calcium	**63.0**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:21	7440-70-2	
Magnesium	**11.0**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:21	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:20	7440-38-2	
Barium	**0.036**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:20	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:20	7440-41-7	
Boron	**0.79**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:20	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:20	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:20	7439-92-1	
Lithium	**0.00082J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:20	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:34	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**274**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**71.6**	mg/L	5.0	5.0	1		08/18/22 13:32		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 13:32		
Alkalinity, Total as CaCO3	**71.6**	mg/L	5.0	5.0	1		08/18/22 13:32		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-107 **Lab ID: 92618826009** Collected: 08/05/22 15:46 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:09	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.7**	mg/L	1.0	0.60	1		08/17/22 13:09	16887-00-6	
Fluoride	**0.093J**	mg/L	0.10	0.050	1		08/17/22 13:09	16984-48-8	
Sulfate	**120**	mg/L	2.0	1.0	2		08/17/22 19:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-109 **Lab ID: 92618826010** Collected: 08/05/22 13:24 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:09		
pH	**6.81**	Std. Units			1		08/08/22 17:09		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**7.5**	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:26	7439-89-6	
Manganese	**0.42**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:26	7439-96-5	
Potassium	**0.43**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:26	7440-09-7	
Sodium	**9.0**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:26	7440-23-5	
Calcium	**50.8**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:26	7440-70-2	
Magnesium	**10.9**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:26	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:26	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:26	7440-38-2	
Barium	**0.085**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:26	7440-39-3	M1
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:26	7440-41-7	
Boron	**0.25**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:26	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:26	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:26	7440-47-3	
Cobalt	**0.00080J**	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:26	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:26	7439-92-1	
Lithium	**0.00087J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:26	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**195**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**156**	mg/L	5.0	5.0	1		08/18/22 13:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 13:40		
Alkalinity, Total as CaCO3	**156**	mg/L	5.0	5.0	1		08/18/22 13:40		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-109 **Lab ID: 92618826010** Collected: 08/05/22 13:24 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:10	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.7**	mg/L	1.0	0.60	1		08/17/22 13:24	16887-00-6	
Fluoride	**0.14**	mg/L	0.10	0.050	1		08/17/22 13:24	16984-48-8	
Sulfate	**23.0**	mg/L	1.0	0.50	1		08/17/22 13:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-117 **Lab ID: 92618826011** Collected: 08/05/22 13:21 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:10		
pH	**5.46**	Std. Units			1		08/08/22 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:30	7439-89-6	
Manganese	**12.5**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:30	7439-96-5	
Potassium	**0.61**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:30	7440-09-7	
Sodium	**8.1**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:30	7440-23-5	
Calcium	**44.8**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:30	7440-70-2	
Magnesium	**14.1**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:30	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.0012J**	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:02	7440-38-2	
Barium	**0.044**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:02	7440-39-3	
Beryllium	**0.000078J**	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:02	7440-41-7	
Boron	**0.85**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:02	7440-42-8	
Cadmium	**0.0012**	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:02	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:02	7440-47-3	
Cobalt	**0.023**	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:02	7439-92-1	
Lithium	**0.0017J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:02	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00014J**	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**285**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**48.0**	mg/L	5.0	5.0	1		08/18/22 13:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 13:51		
Alkalinity, Total as CaCO3	**48.0**	mg/L	5.0	5.0	1		08/18/22 13:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-117 **Lab ID: 92618826011** Collected: 08/05/22 13:21 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:10	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.4**	mg/L	1.0	0.60	1		08/17/22 13:39	16887-00-6	
Fluoride	**0.075J**	mg/L	0.10	0.050	1		08/17/22 13:39	16984-48-8	
Sulfate	**132**	mg/L	2.0	1.0	2		08/17/22 19:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-117A **Lab ID: 92618826012** Collected: 08/05/22 11:47 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:10		
pH	**6.44**	Std. Units			1		08/08/22 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**0.34**	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:35	7439-89-6	
Manganese	**0.23**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:35	7439-96-5	
Potassium	**0.61**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:35	7440-09-7	
Sodium	**9.5**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:35	7440-23-5	
Calcium	**68.6**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:35	7440-70-2	
Magnesium	**9.1**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:35	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:08	7440-38-2	
Barium	**0.055**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:08	7440-41-7	
Boron	**0.34**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:08	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:08	7439-92-1	
Lithium	**0.0038J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**270**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**128**	mg/L	5.0	5.0	1		08/18/22 13:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 13:58		
Alkalinity, Total as CaCO3	**128**	mg/L	5.0	5.0	1		08/18/22 13:58		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-117A **Lab ID: 92618826012** Collected: 08/05/22 11:47 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:10	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**7.4**	mg/L	1.0	0.60	1		08/17/22 13:54	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		08/17/22 13:54	16984-48-8	
Sulfate	**76.1**	mg/L	1.0	0.50	1		08/17/22 13:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-118 **Lab ID: 92618826013** Collected: 08/05/22 15:58 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/08/22 17:10		
pH	**7.07**	Std. Units			1		08/08/22 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:40	7439-89-6	
Manganese	**0.13**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:40	7439-96-5	
Potassium	**0.70**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:40	7440-09-7	
Sodium	**8.6**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:40	7440-23-5	
Calcium	**88.5**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:40	7440-70-2	
Magnesium	**11.6**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:40	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:14	7440-38-2	
Barium	**0.039**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:14	7440-41-7	
Boron	**0.57**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:14	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:14	7439-92-1	
Lithium	**0.0018J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:14	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**329**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**198**	mg/L	5.0	5.0	1		08/18/22 14:08		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 14:08		
Alkalinity, Total as CaCO3	**198**	mg/L	5.0	5.0	1		08/18/22 14:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-118 **Lab ID: 92618826013** Collected: 08/05/22 15:58 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:11	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.8**	mg/L	1.0	0.60	1		08/17/22 14:09	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		08/17/22 14:09	16984-48-8	
Sulfate	**69.8**	mg/L	1.0	0.50	1		08/17/22 14:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: DUP-4 **Lab ID: 92618826014** Collected: 08/05/22 00:00 Received: 08/08/22 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:45	7439-89-6	
Manganese	**0.14**	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:45	7439-96-5	
Potassium	**0.68**	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:45	7440-09-7	
Sodium	**8.7**	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:45	7440-23-5	
Calcium	**89.4**	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:45	7440-70-2	
Magnesium	**11.6**	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:45	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:19	7440-38-2	
Barium	**0.044**	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:19	7440-41-7	
Boron	**0.64**	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:19	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:19	7440-47-3	
Cobalt	**0.00041J**	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:19	7439-92-1	
Lithium	**0.0020J**	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:19	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:36	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**327**	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**181**	mg/L	5.0	5.0	1		08/18/22 10:30		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 10:30		
Alkalinity, Total as CaCO3	**181**	mg/L	5.0	5.0	1		08/18/22 10:30		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:13	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.9**	mg/L	1.0	0.60	1		08/17/22 14:54	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: DUP-4 **Lab ID: 92618826014** Collected: 08/05/22 00:00 Received: 08/08/22 11:10 Matrix: 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	**0.12**	mg/L	0.10	0.050	1		08/17/22 14:54	16984-48-8	
Sulfate	**70.6**	mg/L	1.0	0.50	1		08/17/22 14:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-101 **Lab ID: 92618826015** Collected: 08/10/22 11:30 Received: 08/12/22 11:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		08/12/22 15:45		
pH	**5.37**	Std. Units			1		08/12/22 15:45		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**6.4**	mg/L	0.040	0.025	1	08/19/22 15:31	08/19/22 21:14	7439-89-6	
Manganese	**2.5**	mg/L	0.040	0.0043	1	08/19/22 15:31	08/19/22 21:14	7439-96-5	
Potassium	**0.74**	mg/L	0.20	0.15	1	08/19/22 15:31	08/19/22 21:14	7440-09-7	
Sodium	**11.4**	mg/L	1.0	0.58	1	08/19/22 15:31	08/19/22 21:14	7440-23-5	
Calcium	**24.6**	mg/L	1.0	0.12	1	08/19/22 15:31	08/19/22 21:14	7440-70-2	
Magnesium	**12.9**	mg/L	0.050	0.012	1	08/19/22 15:31	08/19/22 21:14	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/22 10:13	08/26/22 18:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/25/22 10:13	08/26/22 18:13	7440-38-2	
Barium	**0.040**	mg/L	0.0050	0.00067	1	08/25/22 10:13	08/26/22 18:13	7440-39-3	
Beryllium	**0.000064J**	mg/L	0.00050	0.000054	1	08/25/22 10:13	08/26/22 18:13	7440-41-7	
Boron	**0.17**	mg/L	0.040	0.0086	1	08/25/22 10:13	08/26/22 18:13	7440-42-8	
Cadmium	**0.00011J**	mg/L	0.00050	0.00011	1	08/25/22 10:13	08/26/22 18:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/22 10:13	08/26/22 18:13	7440-47-3	
Cobalt	**0.0028J**	mg/L	0.0050	0.00039	1	08/25/22 10:13	08/26/22 18:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/22 10:13	08/26/22 18:13	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/22 10:13	08/26/22 18:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/22 10:13	08/26/22 18:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/22 10:13	08/26/22 18:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/22 10:13	08/26/22 18:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:51	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**232**	mg/L	10.0	10.0	1		08/15/22 11:27		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**21.1**	mg/L	5.0	5.0	1		08/20/22 22:06		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/20/22 22:06		
Alkalinity, Total as CaCO3	**21.1**	mg/L	5.0	5.0	1		08/20/22 22:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: HGWC-101 **Lab ID: 92618826015** Collected: 08/10/22 11:30 Received: 08/12/22 11:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/16/22 05:12	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.5**	mg/L	1.0	0.60	1		08/22/22 05:08	16887-00-6	
Fluoride	**0.065J**	mg/L	0.10	0.050	1		08/22/22 05:08	16984-48-8	
Sulfate	**99.5**	mg/L	2.0	1.0	2		08/22/22 21:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: EB-4 **Lab ID: 92618826016** Collected: 08/10/22 09:55 Received: 08/12/22 11:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/19/22 15:31	08/19/22 21:19	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/19/22 15:31	08/19/22 21:19	7439-96-5	
Potassium	ND	mg/L	0.20	0.15	1	08/19/22 15:31	08/19/22 21:19	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	08/19/22 15:31	08/19/22 21:19	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	08/19/22 15:31	08/19/22 21:19	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	08/19/22 15:31	08/19/22 21:19	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/22 10:13	08/26/22 18:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/25/22 10:13	08/26/22 18:31	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/25/22 10:13	08/26/22 18:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/22 10:13	08/26/22 18:31	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/25/22 10:13	08/26/22 18:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/22 10:13	08/26/22 18:31	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/22 10:13	08/26/22 18:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/22 10:13	08/26/22 18:31	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/22 10:13	08/26/22 18:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/22 10:13	08/26/22 18:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/22 10:13	08/26/22 18:31	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/22 10:13	08/26/22 18:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/22 10:13	08/26/22 18:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/16/22 14:08		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/22/22 12:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/22/22 12:56		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		08/22/22 12:56		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/16/22 05:12	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 05:23	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: EB-4 **Lab ID: 92618826016** Collected: 08/10/22 09:55 Received: 08/12/22 11:25 Matrix: 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	ND	mg/L	0.10	0.050	1		08/22/22 05:23	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 05:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: FB-4 **Lab ID: 92618826017** Collected: 08/10/22 09:50 Received: 08/12/22 11:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	08/19/22 15:31	08/19/22 21:24	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/19/22 15:31	08/19/22 21:24	7439-96-5	
Potassium	ND	mg/L	0.20	0.15	1	08/19/22 15:31	08/19/22 21:24	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	08/19/22 15:31	08/19/22 21:24	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	08/19/22 15:31	08/19/22 21:24	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	08/19/22 15:31	08/19/22 21:24	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/22 10:13	08/26/22 18:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/25/22 10:13	08/26/22 18:37	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/25/22 10:13	08/26/22 18:37	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/22 10:13	08/26/22 18:37	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/25/22 10:13	08/26/22 18:37	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/22 10:13	08/26/22 18:37	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/22 10:13	08/26/22 18:37	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/22 10:13	08/26/22 18:37	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/22 10:13	08/26/22 18:37	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/22 10:13	08/26/22 18:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/22 10:13	08/26/22 18:37	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/22 10:13	08/26/22 18:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/22 10:13	08/26/22 18:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/15/22 11:27		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/22/22 13:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/22/22 13:12		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		08/22/22 13:12		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/16/22 05:12	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 05:38	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92618826

Sample: FB-4 **Lab ID: 92618826017** Collected: 08/10/22 09:50 Received: 08/12/22 11:25 Matrix: 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	ND	mg/L	0.10	0.050	1		08/22/22 05:38	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 05:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716032
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826001, 92618826002

METHOD BLANK: 3732776 Matrix: Water
Associated Lab Samples: 92618826001, 92618826002

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	

LABORATORY CONTROL SAMPLE: 3732777

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	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 SPIKE DUPLICATE: 3732778 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
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	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716036
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826003, 92618826004

METHOD BLANK: 3732817 Matrix: Water
Associated Lab Samples: 92618826003, 92618826004

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	

LABORATORY CONTROL SAMPLE: 3732818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	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 DUPLICATE: 3732819 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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716042
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

METHOD BLANK: 3732858 Matrix: Water
Associated Lab Samples: 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/11/22 18:28	
Iron	mg/L	ND	0.040	0.025	08/11/22 18:28	
Magnesium	mg/L	ND	0.050	0.012	08/11/22 18:28	
Manganese	mg/L	ND	0.040	0.0043	08/11/22 18:28	
Potassium	mg/L	ND	0.20	0.15	08/11/22 18:28	
Sodium	mg/L	ND	1.0	0.58	08/11/22 18:28	

LABORATORY CONTROL SAMPLE: 3732859

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	
Iron	mg/L	1	1.1	108	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Manganese	mg/L	1	1.1	107	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732860 3732861

Parameter	Units	92618826005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	7.1	1	1	7.9	8.2	83	111	75-125	3	20	
Iron	mg/L	ND	1	1	1.1	1.1	106	111	75-125	4	20	
Magnesium	mg/L	2.6	1	1	3.6	3.7	95	112	75-125	4	20	
Manganese	mg/L	ND	1	1	1.1	1.1	107	110	75-125	3	20	
Potassium	mg/L	0.87	1	1	1.9	1.9	98	103	75-125	3	20	
Sodium	mg/L	3.8	1	1	4.7	4.9	97	113	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 718461
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826015, 92618826016, 92618826017

METHOD BLANK: 3745232 Matrix: Water
Associated Lab Samples: 92618826015, 92618826016, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/19/22 20:02	
Iron	mg/L	ND	0.040	0.025	08/19/22 20:02	
Magnesium	mg/L	ND	0.050	0.012	08/19/22 20:02	
Manganese	mg/L	ND	0.040	0.0043	08/19/22 20:02	
Potassium	mg/L	ND	0.20	0.15	08/19/22 20:02	
Sodium	mg/L	ND	1.0	0.58	08/19/22 20:02	

LABORATORY CONTROL SAMPLE: 3745233

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	107	80-120	
Iron	mg/L	1	1.1	109	80-120	
Magnesium	mg/L	1	1.1	108	80-120	
Manganese	mg/L	1	1.1	108	80-120	
Potassium	mg/L	1	1.1	108	80-120	
Sodium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745234 3745235

Parameter	Units	92618822005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	430	1	1	397	419	-3270	-1110	75-125	5	20	M1
Iron	mg/L	21.4	1	1	20.9	22.1	-54	73	75-125	6	20	M1
Magnesium	mg/L	71.6	1	1	68.0	71.9	-362	24	75-125	6	20	M1
Manganese	mg/L	1.2	1	1	2.2	2.3	92	108	75-125	7	20	
Potassium	mg/L	1.4	1	1	2.4	2.5	98	108	75-125	4	20	
Sodium	mg/L	16.1	1	1	15.9	17.0	-12	95	75-125	6	20	M1

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 715918
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826001, 92618826002

METHOD BLANK: 3732042 Matrix: Water
Associated Lab Samples: 92618826001, 92618826002

Parameter	Units	Blank Result	Reporting 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

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% 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 SPIKE DUPLICATE: 3732044 3732045

Parameter	Units	92618820002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.12	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	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732044 3732045

Parameter	Units	92618820002 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	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716035
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826003, 92618826004

METHOD BLANK: 3732802 Matrix: Water
Associated Lab Samples: 92618826003, 92618826004

Parameter	Units	Blank Result	Reporting 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 SAMPLE: 3732803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.094	94	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	103	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.096	96	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732804 3732805

Parameter	Units	92618823003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.092	98	91	75-125	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732804 3732805

Parameter	Units	92618823003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.048	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	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716046
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

METHOD BLANK: 3732885 Matrix: Water
Associated Lab Samples: 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/12/22 18:44	
Arsenic	mg/L	ND	0.0050	0.0022	08/12/22 18:44	
Barium	mg/L	ND	0.0050	0.00067	08/12/22 18:44	
Beryllium	mg/L	ND	0.00050	0.000054	08/12/22 18:44	
Boron	mg/L	ND	0.040	0.0086	08/12/22 18:44	
Cadmium	mg/L	ND	0.00050	0.00011	08/12/22 18:44	
Chromium	mg/L	ND	0.0050	0.0011	08/12/22 18:44	
Cobalt	mg/L	ND	0.0050	0.00039	08/12/22 18:44	
Lead	mg/L	ND	0.0010	0.00089	08/12/22 18:44	
Lithium	mg/L	ND	0.030	0.00073	08/12/22 18:44	
Molybdenum	mg/L	ND	0.010	0.00074	08/12/22 18:44	
Selenium	mg/L	ND	0.0050	0.0014	08/12/22 18:44	
Thallium	mg/L	ND	0.0010	0.00018	08/12/22 18:44	

LABORATORY CONTROL SAMPLE: 3732886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	115	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.11	110	80-120	
Selenium	mg/L	0.1	0.091	91	80-120	
Thallium	mg/L	0.1	0.090	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732887 3732888

Parameter	Units	92618826010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	115	112	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732887 3732888

Parameter	Units	92618826010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0022J	0.1	0.1	0.098	0.096	96	93	75-125	3	20	
Barium	mg/L	0.085	0.1	0.1	0.22	0.21	134	126	75-125	4	20	M1
Beryllium	mg/L	ND	0.1	0.1	0.091	0.089	91	89	75-125	3	20	
Boron	mg/L	0.25	1	1	1.2	1.2	93	90	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Cobalt	mg/L	0.00080J	0.1	0.1	0.10	0.098	99	97	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.093	0.090	93	90	75-125	4	20	
Lithium	mg/L	0.00087J	0.1	0.1	0.093	0.089	92	88	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.10	108	103	75-125	5	20	
Selenium	mg/L	ND	0.1	0.1	0.090	0.089	90	89	75-125	1	20	
Thallium	mg/L	ND	0.1	0.1	0.091	0.088	91	88	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 719529
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826015, 92618826016, 92618826017

METHOD BLANK: 3750023 Matrix: Water
Associated Lab Samples: 92618826015, 92618826016, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/26/22 17:19	
Arsenic	mg/L	ND	0.0050	0.0022	08/26/22 17:19	
Barium	mg/L	ND	0.0050	0.00067	08/26/22 17:19	
Beryllium	mg/L	ND	0.00050	0.000054	08/26/22 17:19	
Boron	mg/L	ND	0.040	0.0086	08/26/22 17:19	
Cadmium	mg/L	ND	0.00050	0.00011	08/26/22 17:19	
Chromium	mg/L	ND	0.0050	0.0011	08/26/22 17:19	
Cobalt	mg/L	ND	0.0050	0.00039	08/26/22 17:19	
Lead	mg/L	ND	0.0010	0.00089	08/26/22 17:19	
Lithium	mg/L	ND	0.030	0.00073	08/26/22 17:19	
Molybdenum	mg/L	ND	0.010	0.00074	08/26/22 17:19	
Selenium	mg/L	ND	0.0050	0.0014	08/26/22 17:19	
Thallium	mg/L	ND	0.0010	0.00018	08/26/22 17:19	

LABORATORY CONTROL SAMPLE: 3750024

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	113	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750025 3750026

Parameter	Units	92618822008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	108	109	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.11	103	103	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750025 3750026

Parameter	Units	92618822008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.022J	0.1	0.1	0.12	0.12	99	101	75-125	1	20	
Beryllium	mg/L	0.00066J	0.1	0.1	0.095	0.096	94	95	75-125	1	20	
Boron	mg/L	9.6	1	1	10.8	11.2	123	162	75-125	4	20	M1
Cadmium	mg/L	0.0013J	0.1	0.1	0.099	0.10	98	101	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.098	0.10	98	99	75-125	1	20	
Cobalt	mg/L	0.082	0.1	0.1	0.17	0.18	92	96	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.093	0.091	93	90	75-125	2	20	
Lithium	mg/L	ND	0.1	0.1	0.10J	0.10J	98	97	75-125		20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	1	20	
Selenium	mg/L	0.0089J	0.1	0.1	0.11	0.11	101	102	75-125	1	20	
Thallium	mg/L	ND	0.1	0.1	0.092	0.091	92	91	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 719270
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826001, 92618826002, 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010

METHOD BLANK: 3749002 Matrix: Water
Associated Lab Samples: 92618826001, 92618826002, 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/25/22 15:02	

LABORATORY CONTROL SAMPLE: 3749003

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3749004 3749005

Parameter	Units	92618822003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	ND	ND	0	0	75-125		20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 719540
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826011, 92618826012, 92618826013, 92618826014, 92618826015, 92618826016, 92618826017

METHOD BLANK: 3750066 Matrix: Water
Associated Lab Samples: 92618826011, 92618826012, 92618826013, 92618826014, 92618826015, 92618826016, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/25/22 16:25	

LABORATORY CONTROL SAMPLE: 3750067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750068 3750069

Parameter	Units	92618826014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0019	0.0023	77	92	75-125	18	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 715588
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826001, 92618826002

METHOD BLANK: 3730515 Matrix: Water
Associated Lab Samples: 92618826001, 92618826002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/08/22 09:16	

LABORATORY CONTROL SAMPLE: 3730516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	395	99	80-120	

SAMPLE DUPLICATE: 3730517

Parameter	Units	92617392050 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	582	612	5	25	

SAMPLE DUPLICATE: 3730518

Parameter	Units	92618820002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	648	646	0	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716396
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

METHOD BLANK: 3734636 Matrix: Water
Associated Lab Samples: 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/11/22 10:34	

LABORATORY CONTROL SAMPLE: 3734637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	80-120	

SAMPLE DUPLICATE: 3735020

Parameter	Units	92618826003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	224	225	0	25	

SAMPLE DUPLICATE: 3735021

Parameter	Units	92618826011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	285	282	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 717151
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826015, 92618826017

METHOD BLANK: 3738466 Matrix: Water
Associated Lab Samples: 92618826015, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/15/22 11:23	

LABORATORY CONTROL SAMPLE: 3738467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	415	104	80-120	

SAMPLE DUPLICATE: 3738468

Parameter	Units	92620164002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	226	227	0	25	

SAMPLE DUPLICATE: 3738469

Parameter	Units	92619171028 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 717424
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92618826016

METHOD BLANK: 3739844 Matrix: Water
Associated Lab Samples: 92618826016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/16/22 14:07	

LABORATORY CONTROL SAMPLE: 3739845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	380	95	80-120	

SAMPLE DUPLICATE: 3739846

Parameter	Units	92618826016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 3739847

Parameter	Units	92620047010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	91.0	89.0	2	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716055
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826001

METHOD BLANK: 3732994 Matrix: Water
Associated Lab Samples: 92618826001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
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

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

LABORATORY CONTROL SAMPLE: 3732996

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732997 3732998

Parameter	Units	92618216031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	55.8	50	50	107	108	103	104	80-120	1	25	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716212
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826002

METHOD BLANK: 3733541 Matrix: Water
Associated Lab Samples: 92618826002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	08/10/22 10:57	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	08/10/22 10:57	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	08/10/22 10:57	

LABORATORY CONTROL SAMPLE: 3733542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.1	96	80-120	

LABORATORY CONTROL SAMPLE: 3733543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.5	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733544 3733545

Parameter	Units	92618829005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	263	50	50	299	296	73	67	80-120	1	25	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 717930
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826003, 92618826014

METHOD BLANK: 3742740 Matrix: Water
Associated Lab Samples: 92618826003, 92618826014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	08/17/22 22:16	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	08/17/22 22:16	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	08/17/22 22:16	

LABORATORY CONTROL SAMPLE: 3742741

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.4	103	80-120	

LABORATORY CONTROL SAMPLE: 3742742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3742743 3742744

Parameter	Units	92618768003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	28.6	50	50	76.7	77.6	96	98	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3742745 3742746

Parameter	Units	92618768012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	179	50	50	222	221	87	85	80-120	0	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 718058
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013

METHOD BLANK: 3743085 Matrix: Water
Associated Lab Samples: 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	08/18/22 11:50	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	08/18/22 11:50	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	08/18/22 11:50	

LABORATORY CONTROL SAMPLE: 3743086

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.9	104	80-120	

LABORATORY CONTROL SAMPLE: 3743087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743088 3743089

Parameter	Units	92618826004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	145	50	50	195	195	100	100	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743090 3743091

Parameter	Units	92618826005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	23.4	50	50	73.6	73.9	101	101	80-120	0	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 718422
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826015

METHOD BLANK: 3744931 Matrix: Water
Associated Lab Samples: 92618826015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	08/20/22 18:57	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	08/20/22 18:57	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	08/20/22 18:57	

LABORATORY CONTROL SAMPLE: 3744932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.1	104	80-120	

LABORATORY CONTROL SAMPLE: 3744933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744934 3744935

Parameter	Units	92619657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	93.8	50	50	145	145	102	103	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744936 3744937

Parameter	Units	92619981006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	54.2	50	50	96.7	96.9	85	85	80-120	0	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 718423
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826016, 92618826017

METHOD BLANK: 3744938 Matrix: Water
Associated Lab Samples: 92618826016, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	08/22/22 12:39	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	08/22/22 12:39	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	08/22/22 12:39	

LABORATORY CONTROL SAMPLE: 3744939

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.9	102	80-120	

LABORATORY CONTROL SAMPLE: 3744940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744941 3744942

Parameter	Units	92618826016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	51.3	50.6	101	99	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744943 3744944

Parameter	Units	92618822018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	45.8	44.6	92	89	80-120	3	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 715461
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826001, 92618826002

METHOD BLANK: 3730179 Matrix: Water
Associated Lab Samples: 92618826001, 92618826002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	08/06/22 03:29	

LABORATORY CONTROL SAMPLE: 3730180

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730181 3730182

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730183 3730184

Parameter	Units	92618728001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.53	0.53	104	105	80-120	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716745
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

METHOD BLANK: 3736453 Matrix: Water
Associated Lab Samples: 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	08/12/22 05:05	

LABORATORY CONTROL SAMPLE: 3736454

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736455 3736456

Parameter	Units	92618826003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.18	0.5	0.5	0.71	0.71	106	105	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736457 3736458

Parameter	Units	92618826013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.50	0.51	99	101	80-120	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 717375
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826015, 92618826016, 92618826017

METHOD BLANK: 3739685 Matrix: Water
Associated Lab Samples: 92618826015, 92618826016, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	08/16/22 05:08	

LABORATORY CONTROL SAMPLE: 3739686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.44	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3739687 3739688

Parameter	Units	92620253016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.50	0.52	99	104	80-120	4	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3739689 3739690

Parameter	Units	92620379008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.49	0.52	99	104	80-120	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 716707
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826001, 92618826002

METHOD BLANK: 3736371 Matrix: Water
Associated Lab Samples: 92618826001, 92618826002

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

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736373 3736374

Parameter	Units	92618820001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max 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 SPIKE DUPLICATE: 3736375 3736376

Parameter	Units	92618820011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max 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	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 717492
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

METHOD BLANK: 3740200 Matrix: Water
Associated Lab Samples: 92618826003, 92618826004, 92618826005, 92618826006, 92618826007, 92618826008, 92618826009, 92618826010, 92618826011, 92618826012, 92618826013, 92618826014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/17/22 07:54	
Fluoride	mg/L	ND	0.10	0.050	08/17/22 07:54	
Sulfate	mg/L	ND	1.0	0.50	08/17/22 07:54	

LABORATORY CONTROL SAMPLE: 3740201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.5	95	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	47.6	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3740202 3740203

Parameter	Units	92619725001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	64.1	50	50	105	105	82	83	90-110	1	10	M1
Fluoride	mg/L	0.38	2.5	2.5	2.7	2.8	94	96	90-110	2	10	
Sulfate	mg/L	288	50	50	337	338	99	100	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3740204 3740205

Parameter	Units	92618826008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.0	50	50	59.1	59.0	108	108	90-110	0	10	
Fluoride	mg/L	0.075J	2.5	2.5	2.8	2.8	107	108	90-110	1	10	
Sulfate	mg/L	217	50	50	264	265	95	96	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92618826

QC Batch: 718643
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92618826015, 92618826016, 92618826017

METHOD BLANK: 3745968 Matrix: Water
Associated Lab Samples: 92618826015, 92618826016, 92618826017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/21/22 22:55	
Fluoride	mg/L	ND	0.10	0.050	08/21/22 22:55	
Sulfate	mg/L	ND	1.0	0.50	08/21/22 22:55	

LABORATORY CONTROL SAMPLE: 3745969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.3	103	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	50.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745970 3745971

Parameter	Units	92621513001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.9	50	50	54.3	53.7	105	104	90-110	1	10	
Fluoride	mg/L	2.6	2.5	2.5	3.8	1.8	46	-31	90-110	69	10	M1,R1
Sulfate	mg/L	6.9	50	50	58.2	57.5	103	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745972 3745973

Parameter	Units	92618822011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	52.3	52.5	104	105	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	106	108	90-110	1	10	
Sulfate	mg/L	ND	50	50	51.1	51.2	102	102	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: HAMMOND AP-4
Pace Project No.: 92618826

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

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618826001	**HGWA-47**				
92618826002	**HGWA-113**				
92618826003	**HGWA-48D**				
92618826004	**HGWA-111**				
92618826005	**HGWA-112**				
92618826006	**HGWC-102**				
92618826007	**HGWC-103**				
92618826008	**HGWC-105**				
92618826009	**HGWC-107**				
92618826010	**HGWC-109**				
92618826011	**HGWC-117**				
92618826012	**HGWC-117A**				
92618826013	**HGWC-118**				
92618826015	**HGWC-101**				
92618826001	**HGWA-47**	EPA 3010A	716032	EPA 6010D	716586
92618826002	**HGWA-113**	EPA 3010A	716032	EPA 6010D	716586
92618826003	**HGWA-48D**	EPA 3010A	716036	EPA 6010D	716583
92618826004	**HGWA-111**	EPA 3010A	716036	EPA 6010D	716583
92618826005	**HGWA-112**	EPA 3010A	716042	EPA 6010D	716585
92618826006	**HGWC-102**	EPA 3010A	716042	EPA 6010D	716585
92618826007	**HGWC-103**	EPA 3010A	716042	EPA 6010D	716585
92618826008	**HGWC-105**	EPA 3010A	716042	EPA 6010D	716585
92618826009	**HGWC-107**	EPA 3010A	716042	EPA 6010D	716585
92618826010	**HGWC-109**	EPA 3010A	716042	EPA 6010D	716585
92618826011	**HGWC-117**	EPA 3010A	716042	EPA 6010D	716585
92618826012	**HGWC-117A**	EPA 3010A	716042	EPA 6010D	716585
92618826013	**HGWC-118**	EPA 3010A	716042	EPA 6010D	716585
92618826014	**DUP-4**	EPA 3010A	716042	EPA 6010D	716585
92618826015	**HGWC-101**	EPA 3010A	718461	EPA 6010D	718515
92618826016	**EB-4**	EPA 3010A	718461	EPA 6010D	718515
92618826017	**FB-4**	EPA 3010A	718461	EPA 6010D	718515
92618826001	**HGWA-47**	EPA 3005A	715918	EPA 6020B	716063
92618826002	**HGWA-113**	EPA 3005A	715918	EPA 6020B	716063
92618826003	**HGWA-48D**	EPA 3005A	716035	EPA 6020B	716280
92618826004	**HGWA-111**	EPA 3005A	716035	EPA 6020B	716280
92618826005	**HGWA-112**	EPA 3005A	716046	EPA 6020B	716279
92618826006	**HGWC-102**	EPA 3005A	716046	EPA 6020B	716279
92618826007	**HGWC-103**	EPA 3005A	716046	EPA 6020B	716279
92618826008	**HGWC-105**	EPA 3005A	716046	EPA 6020B	716279
92618826009	**HGWC-107**	EPA 3005A	716046	EPA 6020B	716279
92618826010	**HGWC-109**	EPA 3005A	716046	EPA 6020B	716279
92618826011	**HGWC-117**	EPA 3005A	716046	EPA 6020B	716279
92618826012	**HGWC-117A**	EPA 3005A	716046	EPA 6020B	716279
92618826013	**HGWC-118**	EPA 3005A	716046	EPA 6020B	716279
92618826014	**DUP-4**	EPA 3005A	716046	EPA 6020B	716279

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618826015	**HGWC-101**	EPA 3005A	719529	EPA 6020B	719606
92618826016	**EB-4**	EPA 3005A	719529	EPA 6020B	719606
92618826017	**FB-4**	EPA 3005A	719529	EPA 6020B	719606
92618826001	**HGWA-47**	EPA 7470A	719270	EPA 7470A	719542
92618826002	**HGWA-113**	EPA 7470A	719270	EPA 7470A	719542
92618826003	**HGWA-48D**	EPA 7470A	719270	EPA 7470A	719542
92618826004	**HGWA-111**	EPA 7470A	719270	EPA 7470A	719542
92618826005	**HGWA-112**	EPA 7470A	719270	EPA 7470A	719542
92618826006	**HGWC-102**	EPA 7470A	719270	EPA 7470A	719542
92618826007	**HGWC-103**	EPA 7470A	719270	EPA 7470A	719542
92618826008	**HGWC-105**	EPA 7470A	719270	EPA 7470A	719542
92618826009	**HGWC-107**	EPA 7470A	719270	EPA 7470A	719542
92618826010	**HGWC-109**	EPA 7470A	719270	EPA 7470A	719542
92618826011	**HGWC-117**	EPA 7470A	719540	EPA 7470A	719600
92618826012	**HGWC-117A**	EPA 7470A	719540	EPA 7470A	719600
92618826013	**HGWC-118**	EPA 7470A	719540	EPA 7470A	719600
92618826014	**DUP-4**	EPA 7470A	719540	EPA 7470A	719600
92618826015	**HGWC-101**	EPA 7470A	719540	EPA 7470A	719600
92618826016	**EB-4**	EPA 7470A	719540	EPA 7470A	719600
92618826017	**FB-4**	EPA 7470A	719540	EPA 7470A	719600
92618826001	**HGWA-47**	SM 2540C-2015	715588		
92618826002	**HGWA-113**	SM 2540C-2015	715588		
92618826003	**HGWA-48D**	SM 2540C-2015	716396		
92618826004	**HGWA-111**	SM 2540C-2015	716396		
92618826005	**HGWA-112**	SM 2540C-2015	716396		
92618826006	**HGWC-102**	SM 2540C-2015	716396		
92618826007	**HGWC-103**	SM 2540C-2015	716396		
92618826008	**HGWC-105**	SM 2540C-2015	716396		
92618826009	**HGWC-107**	SM 2540C-2015	716396		
92618826010	**HGWC-109**	SM 2540C-2015	716396		
92618826011	**HGWC-117**	SM 2540C-2015	716396		
92618826012	**HGWC-117A**	SM 2540C-2015	716396		
92618826013	**HGWC-118**	SM 2540C-2015	716396		
92618826014	**DUP-4**	SM 2540C-2015	716396		
92618826015	**HGWC-101**	SM 2540C-2015	717151		
92618826016	**EB-4**	SM 2540C-2015	717424		
92618826017	**FB-4**	SM 2540C-2015	717151		
92618826001	**HGWA-47**	SM 2320B-2011	716055		
92618826002	**HGWA-113**	SM 2320B-2011	716212		
92618826003	**HGWA-48D**	SM 2320B-2011	717930		
92618826004	**HGWA-111**	SM 2320B-2011	718058		
92618826005	**HGWA-112**	SM 2320B-2011	718058		
92618826006	**HGWC-102**	SM 2320B-2011	718058		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618826007	HGWC-103	SM 2320B-2011	718058		
92618826008	HGWC-105	SM 2320B-2011	718058		
92618826009	HGWC-107	SM 2320B-2011	718058		
92618826010	HGWC-109	SM 2320B-2011	718058		
92618826011	HGWC-117	SM 2320B-2011	718058		
92618826012	HGWC-117A	SM 2320B-2011	718058		
92618826013	HGWC-118	SM 2320B-2011	718058		
92618826014	DUP-4	SM 2320B-2011	717930		
92618826015	HGWC-101	SM 2320B-2011	718422		
92618826016	EB-4	SM 2320B-2011	718423		
92618826017	FB-4	SM 2320B-2011	718423		
92618826001	HGWA-47	SM 4500-S2D-2011	715461		
92618826002	HGWA-113	SM 4500-S2D-2011	715461		
92618826003	HGWA-48D	SM 4500-S2D-2011	716745		
92618826004	HGWA-111	SM 4500-S2D-2011	716745		
92618826005	HGWA-112	SM 4500-S2D-2011	716745		
92618826006	HGWC-102	SM 4500-S2D-2011	716745		
92618826007	HGWC-103	SM 4500-S2D-2011	716745		
92618826008	HGWC-105	SM 4500-S2D-2011	716745		
92618826009	HGWC-107	SM 4500-S2D-2011	716745		
92618826010	HGWC-109	SM 4500-S2D-2011	716745		
92618826011	HGWC-117	SM 4500-S2D-2011	716745		
92618826012	HGWC-117A	SM 4500-S2D-2011	716745		
92618826013	HGWC-118	SM 4500-S2D-2011	716745		
92618826014	DUP-4	SM 4500-S2D-2011	716745		
92618826015	HGWC-101	SM 4500-S2D-2011	717375		
92618826016	EB-4	SM 4500-S2D-2011	717375		
92618826017	FB-4	SM 4500-S2D-2011	717375		
92618826001	HGWA-47	EPA 300.0 Rev 2.1 1993	716707		
92618826002	HGWA-113	EPA 300.0 Rev 2.1 1993	716707		
92618826003	HGWA-48D	EPA 300.0 Rev 2.1 1993	717492		
92618826004	HGWA-111	EPA 300.0 Rev 2.1 1993	717492		
92618826005	HGWA-112	EPA 300.0 Rev 2.1 1993	717492		
92618826006	HGWC-102	EPA 300.0 Rev 2.1 1993	717492		
92618826007	HGWC-103	EPA 300.0 Rev 2.1 1993	717492		
92618826008	HGWC-105	EPA 300.0 Rev 2.1 1993	717492		
92618826009	HGWC-107	EPA 300.0 Rev 2.1 1993	717492		
92618826010	HGWC-109	EPA 300.0 Rev 2.1 1993	717492		
92618826011	HGWC-117	EPA 300.0 Rev 2.1 1993	717492		
92618826012	HGWC-117A	EPA 300.0 Rev 2.1 1993	717492		
92618826013	HGWC-118	EPA 300.0 Rev 2.1 1993	717492		
92618826014	DUP-4	EPA 300.0 Rev 2.1 1993	717492		
92618826015	HGWC-101	EPA 300.0 Rev 2.1 1993	718643		
92618826016	EB-4	EPA 300.0 Rev 2.1 1993	718643		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92618826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618826017	**FB-4**	EPA 300.0 Rev 2.1 1993	718643		

DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

~~Asheville~~ ☐ ~~Eden~~ ☐ ~~Greenwood~~ ☐ ~~Huntersville~~ ☐ ~~Raleigh~~ ☐ ~~Mech~~ ☐ ☐ ☐

WO# : 92618826

92618826

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Pace ☐ Other:

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/4/23 CAG

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 230 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 3.3 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 3.3

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ ~~Yes~~ ☐ ~~No~~

Did samples originate from a foreign source (internationally, ~~including Hawaii and Puerto Rico~~)? ☐ ~~Yes~~ ☐ ~~No~~

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☐ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: **Date:**

Project Manager SRF Review: **Date:**

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

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

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

***Check all unpreserved Nitrates for chlorine

Project #

WO# : 92618826

PM: NMG Due Date: 08/18/22

CLIENT: GA-GA Power

Item#	BPBU-125 mL Plastic Unpreserved (N/A) (Cl-)	BPBU-250 mL Plastic Unpreserved (N/A)	BPBU-500 mL Plastic Unpreserved (N/A)	BPJU-1 liter Plastic Unpreserved (N/A)	BPAS-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BPJN-250 mL plastic HNO3 (pH < 2)	BPAZ-125 mL Plastic ZN Acetate & NaOH (>9)	BPAB-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AGJU-1 liter Amber Unpreserved (N/A) (Cl-)	AGJH-1 liter Amber HCl (pH < 2)	AGBU-250 mL Amber Unpreserved (N/A) (Cl-)	AGJS-1 liter Amber H2SO4 (pH < 2)	AGBS-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA 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)	BPN	BP3N-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DGDU-40 mL Amber Unpreserved vials (N/A)
1		2	1			1	1																		2	1			
2		2	1			1	1																		2	1			
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A — Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	10 Day

Section B — Required Project Information

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Hammond AP-4
Project Number:	

Section C — Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Nicole D'Oleo
Pace Profile #:	10839

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D — Required Client Information

SAMPLE ID
(A-Z, 0-9 / -)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	Full App. III and IV metals	RAD 226/228	TDS	Major Ions	Alkalinity, Bicarbonate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																		N	N	N	N	N	N		
1	HGWA-47	WG	G	8/2/2022	16:27	TK	8/2/2022		22	7	3		3					1	X	X	X	X	X	X	N	pH = 7.34
2	HGWA-113	WG	G	8/2/2022	16:15				25	7	3		3					1	X	X	X	X	X	X	N	pH = 6.08
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										TK 8/2/2022
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Hessler / Geo	8/4/2022	1230	Ryan Williams / Pace	8/4/2022	1230	
	Ryan Williams / Pace	8/4/2022	1615	[signature]	8/4/22	1615	

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Thomas Hessler, Kristie a Grandstaff			
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	8/2/2022	

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

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

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

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

Laboratory receiving samples:
~~Asheville~~ ~~Eden~~ ~~Greenwood~~ ~~Huntersville~~ ~~Raleigh~~ ~~Mechanicsville~~ ~~Atlanta~~ ✓ ~~Kernersville~~

Sample Condition Upon Receipt

Client Name: GA Power

Proje

WO#: 92618826
PM: NMG Due Date: 08/18/22
CLIENT: GA-GA Power

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Other:____ FS

Custody Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/8/22 CM

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 083

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 2.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
☐ Samples out of temp criteria Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.6

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

WO# : 92618826

PM: NMG Due Date: 08/18/22

CLIENT: GA-GA Power

~~*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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA 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)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9 3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		2	1			1	1																		2				
2		2	1			1	1																		2				
3		2	1			1	1																		2				
4		2	1			1	1																		2				
5		2	1			1	1																		2				
6		2	1			1	1																		2				
7		2	1			1	1																		2				
8		2	1			1	1																		2				
9		2	1			1	1																		2				
10		2	1			1	1																		2				
11		2	1			1	1																		2				
12		2	1			1	1																		2				

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference	
Phone:	Fax:	Project Name	Hammond AP-4	Pace Project Manager	Nicole D'Oleo
Requested Due Date/TAT:	10 Day	Project Number		Pace Profile #	10839

REGULATORY AGENCY: NPDES | GROUND WATER | DRINKING WATER | UST | RCRA | ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID
(A-Z, 0-9 / , -)
Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END DATE	COLLECTED COMPOSITE END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	Full App III and IV metals	RAD 226/228	TDS	Major Ions	Alkalinity, Bicarbonate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																		N	N	N	N	N	N		
1	HGWA-48D	WG	G	8/5/2022	09:47				22	7	3		3					1		x	x	x	x	x	x	N	pH = 7.40
2	HGWA-111	WG	G	8/5/2022	10:10				22	7	3		3					1		x	x	x	x	x	x	N	pH = 6.97
3	HGWA-112	WG	G	8/5/2022	09:43				21	7	3		3					1		x	x	x	x	x	x	N	pH = 5.43
4	HGWC-102	WG	G	8/5/2022	15:02				22	7	3		3					1		x	x	x	x	x	x	N	pH = 5.69
5	HGWC-103	WG	G	8/5/2022	14:21				20	7	3		3					1		x	x	x	x	x	x	N	pH = 5.71
6	HGWC-105	WG	G	8/5/2022	11:40				20	7	3		3					1		x	x	x	x	x	x	N	pH = 6.46
7	HGWC-107	WG	G	8/5/2022	15:46				21	7	3		3					1		x	x	x	x	x	x	N	pH = 6.07
8	HGWC-109	WG	G	8/5/2022	13:24				20	7	3		3					1		x	x	x	x	x	x	N	pH = 6.81
9	HGWC-117	WG	G	8/5/2022	13:21				23	7	3		3					1		x	x	x	x	x	x	N	pH = 5.46
10	HGWC-117A	WG	G	8/5/2022	11:47				22	7	3		3					1		x	x	x	x	x	x	N	pH = 6.44
11	HGWC-118	WG	G	8/5/2022	15:58				22	7	3		3					1		x	x	x	x	x	x	N	pH = 7.07
12	DUP-4	WG	G	8/5/2022	00:00				21	7	3		3					1		x	x	x	x	x	x	N	N/A

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Hesslin / Geo	8/5/2022	1110	Ryan Williams / Pace	8/5/2022	1110	
	Ryan Williams / Pace	8/5/2022	1455	Chandra Hunt	8/5/22	1455	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hesslin, Kristen Crandall, Anthony Erwust

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/5/2022

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

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

DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: GA Power

Project

WO# : 92618826

PM: NMG Due Date: 08/18/22

CLIENT: GA-GA Power

Courier: ☐ Commercial ☐ FedEx ☑ Pace ☐ UPS ☐ USPS ☐ Other: ☐ Client

Custody Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/12/22 CW

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☐ IR Gun ID: 230

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, ~~including Hawaii and Puerto Rico~~)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

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

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

***Check all unpreserved Nitrates for chlorine

Project **WO#: 92618826**

PM: NMG Due Date: 08/18/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA 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)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		2	1			1	1																	2				
2		2	1			1	1																	2				
3		2	1			1	1																	2				
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11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company	GA Power	Report To	SCS Contacts	Attention:	Southern Co.
Address	Atlanta, GA	Copy To	Geosyntec Contacts	Company Name	
				Address	
Email To	SCS Contacts	Purchase Order No.		Pace Quote Reference:	
Phone / Fax		Project Name	Hammond AP-4	Pace Project Manager:	Nicole D'Oleo
Requested Due Date/TAT:	10 Day	Project Number		Pace Profile #	10839

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N): N N N N N N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Chloride, Fluoride, Sulfate	Full App III and IV metals	RAD 226/228	TDS	Major Ions	Alkalinity Bicarbonate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92618826
1	HGWC-101	WG	G	8/10/2022	11:30			22	7	3		3					1	X	X	X	X	X	X	N	pH = 5.37 015
2	EB-4	WQ	G	8/10/2022	09:55			22	7	3		3					1	X	X	X	X	X	X	N	N/A 016
3	FB-4	WQ	G	8/10/2022	09:50	TK 8/10/2022		22	7	3		3					1	X	X	X	X	X	X	N	N/A 017
4																									Last sample
5																									
6																									
7																									
8						TK 8/10/2022																			
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Kessler / Geo	8/12/2022	1125	Kyan Williams / Pace	8/12/2022	1125	
	Kyan Williams / Pace	8/12/2022	1230	[signature]	8/12/22	1230	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Kessler

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 8/10/2022

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

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

September 22, 2022

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

RE: Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 04, 2022 and August 12, 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,

Nicole D'Oleo

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92618784001	**HGWA-47**	Water	08/02/22 16:27	08/04/22 12:30
92618784002	**HGWA-113**	Water	08/02/22 16:15	08/04/22 12:30
92618784003	**HGWA-48D**	Water	08/05/22 09:47	08/08/22 11:10
92618784004	**HGWA-111**	Water	08/05/22 10:10	08/08/22 11:10
92618784005	**HGWA-112**	Water	08/05/22 09:43	08/08/22 11:10
92618784006	**HGWC-102**	Water	08/05/22 15:02	08/08/22 11:10
92618784007	**HGWC-103**	Water	08/05/22 14:21	08/08/22 11:10
92618784008	**HGWC-105**	Water	08/05/22 11:40	08/08/22 11:10
92618784009	**HGWC-107**	Water	08/05/22 15:46	08/08/22 11:10
92618784010	**HGWC-109**	Water	08/05/22 13:24	08/08/22 11:10
92618784011	**HGWC-117**	Water	08/05/22 13:21	08/08/22 11:10
92618784012	**HGWC-117A**	Water	08/05/22 11:47	08/08/22 11:10
92618784013	**HGWC-118**	Water	08/05/22 15:58	08/08/22 11:10
92618784014	**DUP-4**	Water	08/05/22 00:00	08/08/22 11:10
92618784015	**HGWC-101**	Water	08/10/22 11:30	08/12/22 11:25
92618784016	**EB-4**	Water	08/10/22 09:55	08/12/22 11:25
92618784017	**FB-4**	Water	08/10/22 09:50	08/12/22 11:25

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92618784001	**HGWA-47**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784002	**HGWA-113**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784003	**HGWA-48D**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784004	**HGWA-111**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784005	**HGWA-112**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784006	**HGWC-102**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784007	**HGWC-103**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784008	**HGWC-105**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784009	**HGWC-107**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784010	**HGWC-109**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784011	**HGWC-117**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784012	**HGWC-117A**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784013	**HGWC-118**	EPA 9315	RMS	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784014	**DUP-4**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784015	**HGWC-101**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784016	**EB-4**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92618784017	**FB-4**	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

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618784001	**HGWA-47**					
EPA 9315	Radium-226	0.0605 ± 0.277 (0.689) C:87% T:NA	pCi/L		09/06/22 08:51	
EPA 9320	Radium-228	0.430 ± 0.331 (0.648) C:68% T:96%	pCi/L		08/30/22 12:40	
Total Radium Calculation	Total Radium	0.491 ± 0.608 (1.34)	pCi/L		09/06/22 15:52	
92618784002	**HGWA-113**					
EPA 9315	Radium-226	0.142 ± 0.243 (0.547) C:88% T:NA	pCi/L		09/06/22 08:52	
EPA 9320	Radium-228	0.649 ± 0.343 (0.590) C:72% T:91%	pCi/L		08/30/22 12:40	
Total Radium Calculation	Total Radium	0.791 ± 0.586 (1.14)	pCi/L		09/06/22 15:52	
92618784003	**HGWA-48D**					
EPA 9315	Radium-226	0.276 ± 0.274 (0.528) C:93% T:NA	pCi/L		09/12/22 08:37	
EPA 9320	Radium-228	0.323 ± 0.484 (1.04) C:76% T:97%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.599 ± 0.758 (1.57)	pCi/L		09/12/22 15:39	
92618784004	**HGWA-111**					
EPA 9315	Radium-226	0.155 ± 0.141 (0.260) C:94% T:NA	pCi/L		09/12/22 08:41	
EPA 9320	Radium-228	0.418 ± 0.504 (1.07) C:74% T:91%	pCi/L		08/30/22 15:48	
Total Radium Calculation	Total Radium	0.573 ± 0.645 (1.33)	pCi/L		09/12/22 15:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618784005	**HGWA-112**					
EPA 9315	Radium-226	0.00734 ± 0.0873 (0.239) C:91% T:NA	pCi/L		09/12/22 08:42	
EPA 9320	Radium-228	0.658 ± 0.453 (0.876) C:71% T:91%	pCi/L		08/30/22 16:39	
Total Radium Calculation	Total Radium	0.665 ± 0.540 (1.12)	pCi/L		09/12/22 15:39	
92618784006	**HGWC-102**					
EPA 9315	Radium-226	0.0838 ± 0.129 (0.284) C:83% T:NA	pCi/L		09/12/22 08:42	
EPA 9320	Radium-228	0.534 ± 0.422 (0.838) C:73% T:88%	pCi/L		08/30/22 16:39	
Total Radium Calculation	Total Radium	0.618 ± 0.551 (1.12)	pCi/L		09/12/22 15:39	
92618784007	**HGWC-103**					
EPA 9315	Radium-226	0.0246 ± 0.106 (0.275) C:80% T:NA	pCi/L		09/12/22 08:43	
EPA 9320	Radium-228	0.180 ± 0.356 (0.784) C:69% T:97%	pCi/L		08/30/22 16:39	
Total Radium Calculation	Total Radium	0.205 ± 0.462 (1.06)	pCi/L		09/12/22 15:39	
92618784008	**HGWC-105**					
EPA 9315	Radium-226	0.0602 ± 0.147 (0.350) C:84% T:NA	pCi/L		09/12/22 08:43	
EPA 9320	Radium-228	0.0785 ± 0.284 (0.652) C:70% T:84%	pCi/L		08/30/22 16:38	
Total Radium Calculation	Total Radium	0.139 ± 0.431 (1.00)	pCi/L		09/12/22 15:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618784009	**HGWC-107**					
EPA 9315	Radium-226	0.159 ± 0.132 (0.223) C:91% T:NA	pCi/L		09/12/22 08:17	
EPA 9320	Radium-228	0.758 ± 0.492 (0.929) C:69% T:81%	pCi/L		08/30/22 16:38	
Total Radium Calculation	Total Radium	0.917 ± 0.624 (1.15)	pCi/L		09/12/22 15:39	
92618784010	**HGWC-109**					
EPA 9315	Radium-226	0.220 ± 0.168 (0.283) C:88% T:NA	pCi/L		09/12/22 08:18	
EPA 9320	Radium-228	-0.118 ± 0.321 (0.783) C:70% T:88%	pCi/L		08/30/22 16:39	
Total Radium Calculation	Total Radium	0.220 ± 0.489 (1.07)	pCi/L		09/12/22 15:39	
92618784011	**HGWC-117**					
EPA 9315	Radium-226	0.195 ± 0.151 (0.250) C:91% T:NA	pCi/L		09/12/22 08:18	
EPA 9320	Radium-228	0.410 ± 0.496 (1.05) C:66% T:102%	pCi/L		08/30/22 16:44	
Total Radium Calculation	Total Radium	0.605 ± 0.647 (1.30)	pCi/L		09/12/22 15:39	
92618784012	**HGWC-117A**					
EPA 9315	Radium-226	-0.0400 ± 0.0923 (0.298) C:89% T:NA	pCi/L		09/12/22 08:18	
EPA 9320	Radium-228	-0.270 ± 0.553 (1.31) C:68% T:89%	pCi/L		08/30/22 16:44	
Total Radium Calculation	Total Radium	0.000 ± 0.645 (1.61)	pCi/L		09/12/22 15:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618784013	**HGWC-118**					
EPA 9315	Radium-226	0.0500 ± 0.0923 (0.210) C:87% T:NA	pCi/L		09/12/22 08:14	
EPA 9320	Radium-228	0.156 ± 0.417 (0.935) C:67% T:90%	pCi/L		08/30/22 17:52	
Total Radium Calculation	Total Radium	0.206 ± 0.509 (1.15)	pCi/L		09/12/22 15:39	
92618784014	**DUP-4**					
EPA 9315	Radium-226	0.0383 ± 0.123 (0.306) C:86% T:NA	pCi/L		09/12/22 08:25	
EPA 9320	Radium-228	-0.0305 ± 0.419 (0.992) C:69% T:83%	pCi/L		08/30/22 17:53	
Total Radium Calculation	Total Radium	0.0383 ± 0.542 (1.30)	pCi/L		09/12/22 15:39	
92618784015	**HGWC-101**					
EPA 9315	Radium-226	0.0416 ± 0.111 (0.270) C:87% T:NA	pCi/L		09/12/22 08:25	
EPA 9320	Radium-228	0.559 ± 0.392 (0.764) C:76% T:92%	pCi/L		09/06/22 11:55	
Total Radium Calculation	Total Radium	0.601 ± 0.503 (1.03)	pCi/L		09/12/22 15:39	
92618784016	**EB-4**					
EPA 9315	Radium-226	0.0576 ± 0.108 (0.247) C:92% T:NA	pCi/L		09/12/22 09:16	
EPA 9320	Radium-228	0.686 ± 0.384 (0.692) C:83% T:87%	pCi/L		09/06/22 11:55	
Total Radium Calculation	Total Radium	0.744 ± 0.492 (0.939)	pCi/L		09/12/22 15:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92618784017	**FB-4**					
EPA 9315	Radium-226	-0.0541 ± 0.0746 (0.266) C:92% T:NA	pCi/L		09/12/22 09:16	
EPA 9320	Radium-228	1.08 ± 0.463 (0.755) C:80% T:81%	pCi/L		09/06/22 11:56	
Total Radium Calculation	Total Radium	1.08 ± 0.538 (1.02)	pCi/L		09/12/22 15:39	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWA-47 **Lab ID: 92618784001** Collected: 08/02/22 16:27 Received: 08/04/22 12:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0605 ± 0.277 (0.689) C:87% T:NA**	pCi/L	09/06/22 08:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.430 ± 0.331 (0.648) C:68% T:96%**	pCi/L	08/30/22 12:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.491 ± 0.608 (1.34)**	pCi/L	09/06/22 15:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWA-113 **Lab ID: 92618784002** Collected: 08/02/22 16:15 Received: 08/04/22 12:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.142 ± 0.243 (0.547) C:88% T:NA**	pCi/L	09/06/22 08:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.649 ± 0.343 (0.590) C:72% T:91%**	pCi/L	08/30/22 12:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.791 ± 0.586 (1.14)**	pCi/L	09/06/22 15:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWA-48D **Lab ID: 92618784003** Collected: 08/05/22 09:47 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.276 ± 0.274 (0.528) C:93% T:NA**	pCi/L	09/12/22 08:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.323 ± 0.484 (1.04) C:76% T:97%**	pCi/L	08/30/22 15:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.599 ± 0.758 (1.57)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWA-111 **Lab ID: 92618784004** Collected: 08/05/22 10:10 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.155 ± 0.141 (0.260) C:94% T:NA**	pCi/L	09/12/22 08:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.418 ± 0.504 (1.07) C:74% T:91%**	pCi/L	08/30/22 15:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.573 ± 0.645 (1.33)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWA-112 **Lab ID: 92618784005** Collected: 08/05/22 09:43 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.00734 ± 0.0873 (0.239) C:91% T:NA**	pCi/L	09/12/22 08:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.658 ± 0.453 (0.876) C:71% T:91%**	pCi/L	08/30/22 16:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.665 ± 0.540 (1.12)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-102 **Lab ID: 92618784006** Collected: 08/05/22 15:02 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0838 ± 0.129 (0.284) C:83% T:NA**	pCi/L	09/12/22 08:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.534 ± 0.422 (0.838) C:73% T:88%**	pCi/L	08/30/22 16:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.618 ± 0.551 (1.12)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-103 **Lab ID: 92618784007** Collected: 08/05/22 14:21 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0246 ± 0.106 (0.275) C:80% T:NA**	pCi/L	09/12/22 08:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.180 ± 0.356 (0.784) C:69% T:97%**	pCi/L	08/30/22 16:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.205 ± 0.462 (1.06)**	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-105 **Lab ID: 92618784008** Collected: 08/05/22 11:40 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0602 ± 0.147 (0.350) C:84% T:NA**	pCi/L	09/12/22 08:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.0785 ± 0.284 (0.652) C:70% T:84%**	pCi/L	08/30/22 16:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.139 ± 0.431 (1.00)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-107 **Lab ID: 92618784009** Collected: 08/05/22 15:46 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.159 ± 0.132 (0.223) C:91% T:NA**	pCi/L	09/12/22 08:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.758 ± 0.492 (0.929) C:69% T:81%**	pCi/L	08/30/22 16:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.917 ± 0.624 (1.15)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-109 **Lab ID: 92618784010** Collected: 08/05/22 13:24 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.220 ± 0.168 (0.283) C:88% T:NA**	pCi/L	09/12/22 08:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.118 ± 0.321 (0.783) C:70% T:88%**	pCi/L	08/30/22 16:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.220 ± 0.489 (1.07)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-117 **Lab ID: 92618784011** Collected: 08/05/22 13:21 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.195 ± 0.151 (0.250) C:91% T:NA**	pCi/L	09/12/22 08:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.410 ± 0.496 (1.05) C:66% T:102%**	pCi/L	08/30/22 16:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.605 ± 0.647 (1.30)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-117A **Lab ID: 92618784012** Collected: 08/05/22 11:47 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0400 ± 0.0923 (0.298) C:89% T:NA**	pCi/L	09/12/22 08:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.270 ± 0.553 (1.31) C:68% T:89%**	pCi/L	08/30/22 16:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.645 (1.61)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-118 **Lab ID: 92618784013** Collected: 08/05/22 15:58 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0500 ± 0.0923 (0.210) C:87% T:NA**	pCi/L	09/12/22 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.156 ± 0.417 (0.935) C:67% T:90%**	pCi/L	08/30/22 17:52	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.206 ± 0.509 (1.15)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: DUP-4 **Lab ID: 92618784014** Collected: 08/05/22 00:00 Received: 08/08/22 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0383 ± 0.123 (0.306) C:86% T:NA**	pCi/L	09/12/22 08:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0305 ± 0.419 (0.992) C:69% T:83%**	pCi/L	08/30/22 17:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0383 ± 0.542 (1.30)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: HGWC-101 **Lab ID: 92618784015** Collected: 08/10/22 11:30 Received: 08/12/22 11:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0416 ± 0.111 (0.270) C:87% T:NA**	pCi/L	09/12/22 08:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.559 ± 0.392 (0.764) C:76% T:92%**	pCi/L	09/06/22 11:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.601 ± 0.503 (1.03)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: EB-4 **Lab ID: 92618784016** Collected: 08/10/22 09:55 Received: 08/12/22 11:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0576 ± 0.108 (0.247) C:92% T:NA**	pCi/L	09/12/22 09:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.686 ± 0.384 (0.692) C:83% T:87%**	pCi/L	09/06/22 11:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.744 ± 0.492 (0.939)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Sample: FB-4 **Lab ID: 92618784017** Collected: 08/10/22 09:50 Received: 08/12/22 11:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0541 ± 0.0746 (0.266) C:92% T:NA**	pCi/L	09/12/22 09:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.08 ± 0.463 (0.755) C:80% T:81%**	pCi/L	09/06/22 11:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.08 ± 0.538 (1.02)**	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

QC Batch: 525942
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92618784001, 92618784002

METHOD BLANK: 2551544 Matrix: Water
Associated Lab Samples: 92618784001, 92618784002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.337 ± 0.280 (0.556) C:74% T:97%	pCi/L	08/30/22 12:39	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

QC Batch: 525510
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92618784001, 92618784002

METHOD BLANK: 2549236 Matrix: Water
Associated Lab Samples: 92618784001, 92618784002

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

QC Batch: 530296
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014, 92618784015, 92618784016, 92618784017

METHOD BLANK: 2572288
Matrix: Water
Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014, 92618784015, 92618784016, 92618784017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0685 ± 0.143 (0.332) C:93% T:NA	pCi/L	09/12/22 08:36	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

QC Batch: 527810
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92618784015, 92618784016, 92618784017

METHOD BLANK: 2560804 Matrix: Water
Associated Lab Samples: 92618784015, 92618784016, 92618784017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.981 ± 0.360 (0.508) C:81% T:99%	pCi/L	09/06/22 11:54	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

QC Batch: 525976
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014

METHOD BLANK: 2551589 Matrix: Water
Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

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

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618784001	HGWA-47	EPA 9315	525510		
92618784002	HGWA-113	EPA 9315	525510		
92618784003	HGWA-48D	EPA 9315	530296		
92618784004	HGWA-111	EPA 9315	530296		
92618784005	HGWA-112	EPA 9315	530296		
92618784006	HGWC-102	EPA 9315	530296		
92618784007	HGWC-103	EPA 9315	530296		
92618784008	HGWC-105	EPA 9315	530296		
92618784009	HGWC-107	EPA 9315	530296		
92618784010	HGWC-109	EPA 9315	530296		
92618784011	HGWC-117	EPA 9315	530296		
92618784012	HGWC-117A	EPA 9315	530296		
92618784013	HGWC-118	EPA 9315	530296		
92618784014	DUP-4	EPA 9315	530296		
92618784015	HGWC-101	EPA 9315	530296		
92618784016	EB-4	EPA 9315	530296		
92618784017	FB-4	EPA 9315	530296		
92618784001	HGWA-47	EPA 9320	525942		
92618784002	HGWA-113	EPA 9320	525942		
92618784003	HGWA-48D	EPA 9320	525976		
92618784004	HGWA-111	EPA 9320	525976		
92618784005	HGWA-112	EPA 9320	525976		
92618784006	HGWC-102	EPA 9320	525976		
92618784007	HGWC-103	EPA 9320	525976		
92618784008	HGWC-105	EPA 9320	525976		
92618784009	HGWC-107	EPA 9320	525976		
92618784010	HGWC-109	EPA 9320	525976		
92618784011	HGWC-117	EPA 9320	525976		
92618784012	HGWC-117A	EPA 9320	525976		
92618784013	HGWC-118	EPA 9320	525976		
92618784014	DUP-4	EPA 9320	525976		
92618784015	HGWC-101	EPA 9320	527810		
92618784016	EB-4	EPA 9320	527810		
92618784017	FB-4	EPA 9320	527810		
92618784001	HGWA-47	Total Radium Calculation	530889		
92618784002	HGWA-113	Total Radium Calculation	530889		
92618784003	HGWA-48D	Total Radium Calculation	532141		
92618784004	HGWA-111	Total Radium Calculation	532141		
92618784005	HGWA-112	Total Radium Calculation	532141		
92618784006	HGWC-102	Total Radium Calculation	532141		
92618784007	HGWC-103	Total Radium Calculation	532141		
92618784008	HGWC-105	Total Radium Calculation	532141		
92618784009	HGWC-107	Total Radium Calculation	532141		
92618784010	HGWC-109	Total Radium Calculation	532141		
92618784011	HGWC-117	Total Radium Calculation	532141		
92618784012	HGWC-117A	Total Radium Calculation	532141		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 RAD
Pace Project No.: 92618784

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618784013	**HGWC-118**	Total Radium Calculation	532141		
92618784014	**DUP-4**	Total Radium Calculation	532141		
92618784015	**HGWC-101**	Total Radium Calculation	532141		
92618784016	**EB-4**	Total Radium Calculation	532141		
92618784017	**FB-4**	Total Radium Calculation	532141		

Pace	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

Laboratory receiving samples:

~~Asheville~~ ☐ ~~Eden~~ ☐ ~~Greenwood~~ ☐ ~~Huntersville~~ ☐ ~~Raleigh~~ ☐ ~~Mechanicsville~~ ☐ ~~Atlanta~~ ☑ ~~Kernersville~~ ☐

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92618784

92618784

Courier: ☐ Commercial ☑ Pace ☐ Fed Ex ☐ UPS ☐ USPS ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/4/22 CMG

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 230 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 3.3 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 3.3

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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	☐ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

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

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

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92618784

PM: NMG Due Date: 08/25/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BPAZ-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA 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)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3N-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG8U-40 mL Amber Unpreserved vials (N/A)
1		2	1			1	1																						
2		2	1			1	1																		2	2			
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A — Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	10 Day

Section B — Required Project Information

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Hammond AP-4
Project Number:	

Section C — Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Nicole D'Oleo
Pace Profile #:	10839

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	Full App. III and IV metals	RAD 226/228	TDS	Major Ions	Alkalinity, Bicarbonate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N		
1	HGWA-47	WG	G	8/2/2022	16:27		TK 8/2/2022	22	7	3		3					1		X	X	X	X	X	X	N	pH = 7.34
2	HGWA-113	WG	G	8/2/2022	16:15			25	7	3		3					1		X	X	X	X	X	X	N	pH = 6.08
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										TK 8/2/2022
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Hessler / Geo	8/4/2022	1230	Ryan Williams / Pace	8/4/2022	1230	
	Ryan Williams / Pace	8/4/2022	1515		8/4/22	1515	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Kristen Orndorff

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/2/2022

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

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

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

Pace	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

Laboratory receiving samples:

~~Asheville~~ ☐ ~~Eden~~ ☐ ~~Greenwood~~ ☐ ~~Huntersville~~ ☐ ~~Raleigh~~ ☐ ~~M~~ ☐ ☑ Kernersville ☐

Sample Condition Upon Receipt

WO# : 92618784

PM: NMG Due Date: 08/22/22

CLIENT: GA-GA Power

Client Name: GA Power

Project #:

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace FS ☐ Other:____

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/8/22 LDW

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 083 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 2.6 **Correction Factor:** Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.6

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: W	☑ Yes	☐ No	☐ N/A	9.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

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

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

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92618784

PM: NMG Due Date: 08/22/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA 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)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		2	1			1	1																		2				
2		2	1			1	1																		2				
3		2	1			1	1																		2				
4		2	1			1	1																		2				
5		2	1			1	1																		2				
6		2	1			1	1																		2				
7		2	1			1	1																		2				
8		2	1			1	1																		2				
9		2	1			1	1																		2				
10		2	1			1	1																		2				
11		2	1			1	1																		2				
12		2	1			1	1																		2				

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference	
Phone:	Fax:	Project Name	Hammond AP-4	Pace Project Manager	Nicole D'Oleo
Requested Due Date/TAT:	10 Day	Project Number:		Pace Profile #	10839

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	Full App III and IV metals	RAD 226/228	TDS	Major Ions	Alkalinity, Bicarbonate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																		N	N	N	N	N	N		
1	HGWA-48D	WG	G	8/5/2022	09:47			22	7	3		3					1		X	X	X	X	X	X	N	pH = 7.40
2	HGWA-111	WG	G	8/5/2022	10:10			22	7	3		3					1		X	X	X	X	X	X	N	pH = 6.97
3	HGWA-112	WG	G	8/5/2022	09:43			21	7	3		3					1		X	X	X	X	X	X	N	pH = 5.43
4	HGWC-102	WG	G	8/5/2022	15:02			22	7	3		3					1		X	X	X	X	X	X	N	pH = 5.69
5	HGWC-103	WG	G	8/5/2022	14:21			20	7	3		3					1		X	X	X	X	X	X	N	pH = 5.71
6	HGWC-105	WG	G	8/5/2022	11:40			20	7	3		3					1		X	X	X	X	X	X	N	pH = 6.46
7	HGWC-107	WG	G	8/5/2022	15:46			21	7	3		3					1		X	X	X	X	X	X	N	pH = 6.07
8	HGWC-109	WG	G	8/5/2022	13:24			20	7	3		3					1		X	X	X	X	X	X	N	pH = 6.81
9	HGWC-117	WG	G	8/5/2022	13:21			23	7	3		3					1		X	X	X	X	X	X	N	pH = 5.46
10	HGWC-117A	WG	G	8/5/2022	11:47			22	7	3		3					1		X	X	X	X	X	X	N	pH = 6.44
11	HGWC-118	WG	G	8/5/2022	15:58			22	7	3		3					1		X	X	X	X	X	X	N	pH = 7.07
12	DUP-4	WG	G	8/5/2022	00:00			21	7	3		3					1		X	X	X	X	X	X	N	N/A

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Hessler / Geo	8/5/2022	1110	Ryan Williams / Pace	8/5/2022	1110	
	Ryan Williams / Pace	8/8/2022	1455	Charles Hunter	8/8/22	1455	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Kristen Brandolf, Anthony Sexton

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/5/2022

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

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

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

January 2023

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 27, 2023

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

RE: Project: Hammond AP-4
Pace Project No.: 92649038

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2023. 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,

Stephanie Knott

Stephanie Knott for
Bonnie Vang
bonnie.vang@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power-CCR
Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Laura Midkiff, Georgia Power
Michael Smilley, Georgia Power
Tina Sullivan, ERM
Anthony Szwast, Geosyntec

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Hammond AP-4
Pace Project No.: 92649038

Pace Analytical Services Charlotte
South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92649038001	**HAM-HGWC-101**	Water	01/25/23 09:53	01/26/23 11:15
92649038002	**HAM-HGWC-102**	Water	01/25/23 11:09	01/26/23 11:15
92649038003	**HAM-HGWC-103**	Water	01/25/23 14:16	01/26/23 11:15
92649038004	**HAM-HGWC-105**	Water	01/25/23 15:38	01/26/23 11:15
92649038005	**HAM-HGWC-107**	Water	01/25/23 12:20	01/26/23 11:15
92649038006	**HAM-HGWC-109**	Water	01/25/23 10:35	01/26/23 11:15
92649038007	**HAM-HGWC-117**	Water	01/25/23 16:00	01/26/23 11:15
92649038008	**HAM-HGWC-117A**	Water	01/25/23 14:30	01/26/23 11:15
92649038009	**HAM-HGWC-118**	Water	01/25/23 15:29	01/26/23 11:15
92649038010	**HAM-AP-4-FD-04**	Water	01/25/23 00:00	01/26/23 11:15
92649038011	**HAM-AP-4-EB-04**	Water	01/25/23 16:25	01/26/23 11:15
92649038012	**HAM-AP-4-FB-04**	Water	01/25/23 16:35	01/26/23 11:15
92649038013	**HAM-HGWA-47**	Water	01/24/23 17:15	01/26/23 11:15
92649038014	**HAM-HGWA-48D**	Water	01/24/23 15:45	01/26/23 11:15
92649038015	**HAM-HGWA-111**	Water	01/24/23 13:28	01/26/23 11:15
92649038016	**HAM-HGWA-112**	Water	01/24/23 13:24	01/26/23 11:15
92649038017	**HAM-HGWA-113**	Water	01/24/23 17:25	01/26/23 11:15

Pace Analytical Services, LLC
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92649038001	**HAM-HGWC-101**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038002	**HAM-HGWC-102**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038003	**HAM-HGWC-103**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038004	**HAM-HGWC-105**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038005	**HAM-HGWC-107**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038006	**HAM-HGWC-109**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038007	**HAM-HGWC-117**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038008	**HAM-HGWC-117A**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038009	**HAM-HGWC-118**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038010	**HAM-AP-4-FD-04**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038011	**HAM-AP-4-EB-04**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038012	**HAM-AP-4-FB-04**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038013	**HAM-HGWA-47**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038014	**HAM-HGWA-48D**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038015	**HAM-HGWA-111**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038016	**HAM-HGWA-112**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92649038017	**HAM-HGWA-113**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Hammond AP-4
Pace Project No.: 92649038

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649038001	**HAM-HGWC-101**					
	Performed by	Customer			02/15/23 10:38	
	pH	5.47	Std. Units		02/15/23 10:38	
EPA 6010D	Calcium	20.4	mg/L	1.0	01/31/23 00:33	
EPA 6020B	Barium	0.033	mg/L	0.0050	02/02/23 19:10	
EPA 6020B	Boron	0.12	mg/L	0.040	02/02/23 19:10	
EPA 6020B	Cadmium	0.00011J	mg/L	0.00050	02/02/23 19:10	
EPA 6020B	Cobalt	0.0021J	mg/L	0.0050	02/02/23 19:10	
SM 2540C-2015	Total Dissolved Solids	186	mg/L	25.0	01/27/23 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	5.7	mg/L	1.0	01/29/23 08:02	
EPA 300.0 Rev 2.1 1993	Sulfate	95.0	mg/L	2.0	01/30/23 00:29	
92649038002	**HAM-HGWC-102**					
	Performed by	Customer			02/15/23 10:39	
	pH	5.77	Std. Units		02/15/23 10:39	
EPA 6010D	Calcium	128	mg/L	1.0	01/31/23 00:38	
EPA 6020B	Barium	0.027	mg/L	0.0050	02/02/23 19:16	
EPA 6020B	Boron	2.5	mg/L	0.040	02/02/23 19:16	
EPA 6020B	Cadmium	0.00035J	mg/L	0.00050	02/02/23 19:16	
EPA 6020B	Cobalt	0.0016J	mg/L	0.0050	02/02/23 19:16	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	02/02/23 19:16	
SM 2540C-2015	Total Dissolved Solids	664	mg/L	25.0	01/27/23 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	7.8	mg/L	1.0	01/29/23 08:26	
EPA 300.0 Rev 2.1 1993	Sulfate	348	mg/L	8.0	01/30/23 00:54	
92649038003	**HAM-HGWC-103**					
	Performed by	Customer			02/15/23 10:40	
	pH	5.65	Std. Units		02/15/23 10:40	
EPA 6010D	Calcium	109	mg/L	1.0	01/31/23 00:43	
EPA 6020B	Barium	0.032	mg/L	0.0050	02/02/23 19:22	
EPA 6020B	Boron	2.7	mg/L	0.040	02/02/23 19:22	
EPA 6020B	Cadmium	0.00063	mg/L	0.00050	02/02/23 19:22	
EPA 6020B	Cobalt	0.0017J	mg/L	0.0050	02/02/23 19:22	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	02/02/23 19:22	
SM 2540C-2015	Total Dissolved Solids	630	mg/L	25.0	01/27/23 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	8.0	mg/L	1.0	01/29/23 08:50	
EPA 300.0 Rev 2.1 1993	Sulfate	342	mg/L	8.0	01/30/23 01:20	
92649038004	**HAM-HGWC-105**					
	Performed by	Customer			02/15/23 10:41	
	pH	6.41	Std. Units		02/15/23 10:41	
EPA 6010D	Calcium	113	mg/L	1.0	01/31/23 00:48	
EPA 6020B	Barium	0.094	mg/L	0.0050	02/02/23 19:28	
EPA 6020B	Boron	1.3	mg/L	0.040	02/02/23 19:28	
EPA 6020B	Cobalt	0.00046J	mg/L	0.0050	02/02/23 19:28	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	02/02/23 19:28	
SM 2540C-2015	Total Dissolved Solids	537	mg/L	25.0	01/27/23 19:27	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	01/29/23 09:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	01/29/23 09:14	
EPA 300.0 Rev 2.1 1993	Sulfate	230	mg/L	5.0	01/30/23 01:45	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Hammond AP-4
Pace Project No.: 92649038

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649038005	**HAM-HGWC-107**					
	Performed by	Customer			02/15/23 10:42	
	pH	6.13	Std. Units		02/15/23 10:42	
EPA 6010D	Calcium	57.8	mg/L	1.0	01/31/23 00:52	
EPA 6020B	Barium	0.035	mg/L	0.0050	02/02/23 19:46	
EPA 6020B	Boron	0.82	mg/L	0.040	02/02/23 19:46	
EPA 6020B	Lithium	0.00081J	mg/L	0.030	02/02/23 19:46	
SM 2540C-2015	Total Dissolved Solids	304	mg/L	25.0	01/27/23 19:28	
EPA 300.0 Rev 2.1 1993	Chloride	3.3	mg/L	1.0	01/29/23 09:38	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.10	01/29/23 09:38	
EPA 300.0 Rev 2.1 1993	Sulfate	128	mg/L	3.0	01/30/23 02:11	
92649038006	**HAM-HGWC-109**					
	Performed by	Customer			02/15/23 10:43	
	pH	6.66	Std. Units		02/15/23 10:43	
EPA 6010D	Calcium	42.4	mg/L	1.0	01/31/23 00:58	
EPA 6020B	Barium	0.076	mg/L	0.0050	02/02/23 19:52	
EPA 6020B	Boron	0.22	mg/L	0.040	02/02/23 19:52	
EPA 6020B	Cobalt	0.0016J	mg/L	0.0050	02/02/23 19:52	
SM 2540C-2015	Total Dissolved Solids	214	mg/L	25.0	01/27/23 19:28	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	01/29/23 10:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	01/29/23 10:01	
EPA 300.0 Rev 2.1 1993	Sulfate	25.4	mg/L	1.0	01/29/23 10:01	
92649038007	**HAM-HGWC-117**					
	Performed by	Customer			02/15/23 10:44	
	pH	5.56	Std. Units		02/15/23 10:44	
EPA 6010D	Calcium	40.5	mg/L	1.0	01/31/23 01:03	
EPA 6020B	Barium	0.038	mg/L	0.0050	02/02/23 19:58	
EPA 6020B	Boron	0.77	mg/L	0.040	02/02/23 19:58	
EPA 6020B	Cadmium	0.00097	mg/L	0.00050	02/02/23 19:58	
EPA 6020B	Cobalt	0.018	mg/L	0.0050	02/02/23 19:58	
EPA 6020B	Lithium	0.0015J	mg/L	0.030	02/02/23 19:58	
SM 2540C-2015	Total Dissolved Solids	266	mg/L	25.0	01/27/23 19:28	
EPA 300.0 Rev 2.1 1993	Chloride	4.7	mg/L	1.0	01/29/23 10:25	
EPA 300.0 Rev 2.1 1993	Fluoride	0.050J	mg/L	0.10	01/29/23 10:25	
EPA 300.0 Rev 2.1 1993	Sulfate	126	mg/L	3.0	01/30/23 03:28	
92649038008	**HAM-HGWC-117A**					
	Performed by	Customer			02/15/23 10:44	
	pH	6.53	Std. Units		02/15/23 10:44	
EPA 6010D	Calcium	64.5	mg/L	1.0	01/31/23 01:17	
EPA 6020B	Barium	0.050	mg/L	0.0050	02/02/23 20:04	
EPA 6020B	Boron	0.27	mg/L	0.040	02/02/23 20:04	
EPA 6020B	Cobalt	0.00048J	mg/L	0.0050	02/02/23 20:04	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	02/02/23 20:04	
SM 2540C-2015	Total Dissolved Solids	289	mg/L	25.0	01/27/23 19:28	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	01/29/23 10:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.085J	mg/L	0.10	01/29/23 10:49	
EPA 300.0 Rev 2.1 1993	Sulfate	72.9	mg/L	1.0	01/29/23 10:49	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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SUMMARY OF DETECTION

Project: Hammond AP-4
Pace Project No.: 92649038

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649038009	**HAM-HGWC-118**					
	Performed by	Customer			02/15/23 10:46	
	pH	6.67	Std. Units		02/15/23 10:46	
EPA 6010D	Calcium	81.8	mg/L	1.0	01/31/23 01:22	
EPA 6020B	Barium	0.048	mg/L	0.0050	02/02/23 20:10	
EPA 6020B	Boron	0.62	mg/L	0.040	02/02/23 20:10	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	02/02/23 20:10	
SM 2540C-2015	Total Dissolved Solids	337	mg/L	25.0	01/27/23 19:29	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	01/29/23 11:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.095J	mg/L	0.10	01/29/23 11:13	
EPA 300.0 Rev 2.1 1993	Sulfate	73.0	mg/L	1.0	01/29/23 11:13	
92649038010	**HAM-AP-4-FD-04**					
EPA 6010D	Calcium	114	mg/L	1.0	01/31/23 01:27	
EPA 6020B	Barium	0.094	mg/L	0.0050	02/02/23 20:16	
EPA 6020B	Boron	1.2	mg/L	0.040	02/02/23 20:16	
EPA 6020B	Cobalt	0.00044J	mg/L	0.0050	02/02/23 20:16	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	02/02/23 20:16	
SM 2540C-2015	Total Dissolved Solids	522	mg/L	25.0	01/27/23 19:30	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	01/29/23 12:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.10	01/29/23 12:24	
EPA 300.0 Rev 2.1 1993	Sulfate	228	mg/L	5.0	01/30/23 03:54	M1
92649038013	**HAM-HGWA-47**					
	Performed by	Customer			02/15/23 10:47	
	pH	7.38	Std. Units		02/15/23 10:47	
EPA 6010D	Calcium	69.2	mg/L	1.0	01/31/23 01:41	
EPA 6020B	Barium	0.029	mg/L	0.0050	02/02/23 20:34	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	02/02/23 20:34	
SM 2540C-2015	Total Dissolved Solids	223	mg/L	25.0	01/27/23 14:06	
EPA 300.0 Rev 2.1 1993	Chloride	3.0	mg/L	1.0	01/29/23 14:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.081J	mg/L	0.10	01/29/23 14:23	
EPA 300.0 Rev 2.1 1993	Sulfate	2.2	mg/L	1.0	01/29/23 14:23	
92649038014	**HAM-HGWA-48D**					
	Performed by	Customer			02/15/23 10:51	
	pH	7.46	Std. Units		02/15/23 10:51	
EPA 6010D	Calcium	57.8	mg/L	1.0	01/31/23 01:46	
EPA 6020B	Barium	0.11	mg/L	0.0050	02/02/23 20:40	
EPA 6020B	Lithium	0.0046J	mg/L	0.030	02/02/23 20:40	
EPA 6020B	Molybdenum	0.00086J	mg/L	0.010	02/02/23 20:40	
SM 2540C-2015	Total Dissolved Solids	230	mg/L	25.0	01/27/23 14:06	
EPA 300.0 Rev 2.1 1993	Chloride	2.8	mg/L	1.0	01/29/23 14:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.092J	mg/L	0.10	01/29/23 14:47	
EPA 300.0 Rev 2.1 1993	Sulfate	2.9	mg/L	1.0	01/29/23 14:47	
92649038015	**HAM-HGWA-111**					
	Performed by	Customer			02/15/23 10:52	
	pH	7.11	Std. Units		02/15/23 10:52	
EPA 6010D	Calcium	55.4	mg/L	1.0	01/31/23 01:51	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Hammond AP-4
Pace Project No.: 92649038

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649038015	**HAM-HGWA-111**					
EPA 6020B	Barium	0.028	mg/L	0.0050	02/02/23 20:58	
EPA 6020B	Lithium	0.0023J	mg/L	0.030	02/02/23 20:58	
SM 2540C-2015	Total Dissolved Solids	177	mg/L	25.0	01/27/23 14:07	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	01/29/23 15:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.086J	mg/L	0.10	01/29/23 15:11	
EPA 300.0 Rev 2.1 1993	Sulfate	1.9	mg/L	1.0	01/29/23 15:11	
92649038016	**HAM-HGWA-112**					
	Performed by	Customer			02/15/23 10:52	
	pH	5.67	Std. Units		02/15/23 10:52	
EPA 6010D	Calcium	6.6	mg/L	1.0	01/31/23 01:56	
EPA 6020B	Barium	0.025	mg/L	0.0050	02/02/23 21:04	
EPA 6020B	Chromium	0.0041J	mg/L	0.0050	02/02/23 21:04	
SM 2540C-2015	Total Dissolved Solids	96.0	mg/L	25.0	01/27/23 14:07	
EPA 300.0 Rev 2.1 1993	Chloride	5.6	mg/L	1.0	01/29/23 15:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.055J	mg/L	0.10	01/29/23 15:35	
EPA 300.0 Rev 2.1 1993	Sulfate	0.81J	mg/L	1.0	01/29/23 15:35	
92649038017	**HAM-HGWA-113**					
	Performed by	Customer			02/15/23 10:53	
	pH	6.15	Std. Units		02/15/23 10:53	
EPA 6010D	Calcium	7.5	mg/L	1.0	02/02/23 21:14	
EPA 6020B	Barium	0.028	mg/L	0.0050	02/02/23 21:10	
EPA 6020B	Chromium	0.0036J	mg/L	0.0050	02/02/23 21:10	
EPA 6020B	Lithium	0.00091J	mg/L	0.030	02/02/23 21:10	
EPA 6020B	Selenium	0.0025J	mg/L	0.0050	02/02/23 21:10	
SM 2540C-2015	Total Dissolved Solids	146	mg/L	25.0	01/27/23 14:07	
EPA 300.0 Rev 2.1 1993	Chloride	1.8	mg/L	1.0	01/29/23 15:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	01/29/23 15:58	
EPA 300.0 Rev 2.1 1993	Sulfate	6.6	mg/L	1.0	01/29/23 15:58	

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ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-101 **Lab ID: 92649038001** Collected: 01/25/23 09:53 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:38		
pH	**5.47**	Std. Units			1		02/15/23 10:38		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**20.4**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 00:33	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:10	7440-38-2	
Barium	**0.033**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:10	7440-41-7	
Boron	**0.12**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:10	7440-42-8	
Cadmium	**0.00011J**	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:10	7440-47-3	
Cobalt	**0.0021J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:10	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:10	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:10	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**186**	mg/L	25.0	25.0	1		01/27/23 19:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.7**	mg/L	1.0	0.60	1		01/29/23 08:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/29/23 08:02	16984-48-8	
Sulfate	**95.0**	mg/L	2.0	1.0	2		01/30/23 00:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-102 **Lab ID: 92649038002** Collected: 01/25/23 11:09 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:39		
pH	**5.77**	Std. Units			1		02/15/23 10:39		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**128**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 00:38	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:16	7440-38-2	
Barium	**0.027**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:16	7440-41-7	
Boron	**2.5**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:16	7440-42-8	
Cadmium	**0.00035J**	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:16	7440-47-3	
Cobalt	**0.0016J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:16	7439-92-1	
Lithium	**0.0010J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:19	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**664**	mg/L	25.0	25.0	1		01/27/23 19:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**7.8**	mg/L	1.0	0.60	1		01/29/23 08:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/29/23 08:26	16984-48-8	
Sulfate	**348**	mg/L	8.0	4.0	8		01/30/23 00:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-103 **Lab ID: 92649038003** Collected: 01/25/23 14:16 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:40		
pH	**5.65**	Std. Units			1		02/15/23 10:40		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**109**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 00:43	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:22	7440-38-2	
Barium	**0.032**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:22	7440-41-7	
Boron	**2.7**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:22	7440-42-8	
Cadmium	**0.00063**	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:22	7440-47-3	
Cobalt	**0.0017J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:22	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:22	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**630**	mg/L	25.0	25.0	1		01/27/23 19:26		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**8.0**	mg/L	1.0	0.60	1		01/29/23 08:50	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/29/23 08:50	16984-48-8	
Sulfate	**342**	mg/L	8.0	4.0	8		01/30/23 01:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-105 **Lab ID: 92649038004** Collected: 01/25/23 15:38 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:41		
pH	**6.41**	Std. Units			1		02/15/23 10:41		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**113**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 00:48	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:28	7440-38-2	
Barium	**0.094**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:28	7440-41-7	
Boron	**1.3**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:28	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:28	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:28	7440-47-3	
Cobalt	**0.00046J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:28	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:28	7439-92-1	
Lithium	**0.0038J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:28	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:25	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**537**	mg/L	25.0	25.0	1		01/27/23 19:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.0**	mg/L	1.0	0.60	1		01/29/23 09:14	16887-00-6	
Fluoride	**0.051J**	mg/L	0.10	0.050	1		01/29/23 09:14	16984-48-8	
Sulfate	**230**	mg/L	5.0	2.5	5		01/30/23 01:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-107 **Lab ID: 92649038005** Collected: 01/25/23 12:20 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:42		
pH	**6.13**	Std. Units			1		02/15/23 10:42		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**57.8**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 00:52	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:46	7440-38-2	
Barium	**0.035**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:46	7440-41-7	
Boron	**0.82**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:46	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:46	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:46	7439-92-1	
Lithium	**0.00081J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:46	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**304**	mg/L	25.0	25.0	1		01/27/23 19:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.3**	mg/L	1.0	0.60	1		01/29/23 09:38	16887-00-6	
Fluoride	**0.054J**	mg/L	0.10	0.050	1		01/29/23 09:38	16984-48-8	
Sulfate	**128**	mg/L	3.0	1.5	3		01/30/23 02:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-109 **Lab ID: 92649038006** Collected: 01/25/23 10:35 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:43		
pH	**6.66**	Std. Units			1		02/15/23 10:43		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**42.4**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 00:58	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:52	7440-38-2	
Barium	**0.076**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:52	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:52	7440-41-7	
Boron	**0.22**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:52	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:52	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:52	7440-47-3	
Cobalt	**0.0016J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:52	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:52	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:52	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**214**	mg/L	25.0	25.0	1		01/27/23 19:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.3**	mg/L	1.0	0.60	1		01/29/23 10:01	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		01/29/23 10:01	16984-48-8	
Sulfate	**25.4**	mg/L	1.0	0.50	1		01/29/23 10:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-117 **Lab ID: 92649038007** Collected: 01/25/23 16:00 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:44		
pH	**5.56**	Std. Units			1		02/15/23 10:44		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**40.5**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:03	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 19:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 19:58	7440-38-2	
Barium	**0.038**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 19:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 19:58	7440-41-7	
Boron	**0.77**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 19:58	7440-42-8	
Cadmium	**0.00097**	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 19:58	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 19:58	7440-47-3	
Cobalt	**0.018**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 19:58	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 19:58	7439-92-1	
Lithium	**0.0015J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 19:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 19:58	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 19:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 19:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:38	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**266**	mg/L	25.0	25.0	1		01/27/23 19:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.7**	mg/L	1.0	0.60	1		01/29/23 10:25	16887-00-6	
Fluoride	**0.050J**	mg/L	0.10	0.050	1		01/29/23 10:25	16984-48-8	
Sulfate	**126**	mg/L	3.0	1.5	3		01/30/23 03:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-117A **Lab ID: 92649038008** Collected: 01/25/23 14:30 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:44		
pH	**6.53**	Std. Units			1		02/15/23 10:44		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**64.5**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:17	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:04	7440-38-2	
Barium	**0.050**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:04	7440-41-7	
Boron	**0.27**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:04	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:04	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:04	7440-47-3	
Cobalt	**0.00048J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:04	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:04	7439-92-1	
Lithium	**0.0037J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:04	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**289**	mg/L	25.0	25.0	1		01/27/23 19:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.9**	mg/L	1.0	0.60	1		01/29/23 10:49	16887-00-6	
Fluoride	**0.085J**	mg/L	0.10	0.050	1		01/29/23 10:49	16984-48-8	
Sulfate	**72.9**	mg/L	1.0	0.50	1		01/29/23 10:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWC-118 **Lab ID: 92649038009** Collected: 01/25/23 15:29 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:46		
pH	**6.67**	Std. Units			1		02/15/23 10:46		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**81.8**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:22	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:10	7440-38-2	
Barium	**0.048**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:10	7440-41-7	
Boron	**0.62**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:10	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:10	7439-92-1	
Lithium	**0.0010J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:10	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:43	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**337**	mg/L	25.0	25.0	1		01/27/23 19:29		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.3**	mg/L	1.0	0.60	1		01/29/23 11:13	16887-00-6	
Fluoride	**0.095J**	mg/L	0.10	0.050	1		01/29/23 11:13	16984-48-8	
Sulfate	**73.0**	mg/L	1.0	0.50	1		01/29/23 11:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-AP-4-FD-04 **Lab ID: 92649038010** Collected: 01/25/23 00:00 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**114**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:27	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:16	7440-38-2	
Barium	**0.094**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:16	7440-41-7	
Boron	**1.2**	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:16	7440-47-3	
Cobalt	**0.00044J**	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:16	7439-92-1	
Lithium	**0.0036J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:46	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**522**	mg/L	25.0	25.0	1		01/27/23 19:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.0**	mg/L	1.0	0.60	1		01/29/23 12:24	16887-00-6	
Fluoride	**0.052J**	mg/L	0.10	0.050	1		01/29/23 12:24	16984-48-8	
Sulfate	**228**	mg/L	5.0	2.5	5		01/30/23 03:54	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-AP-4-EB-04 **Lab ID: 92649038011** Collected: 01/25/23 16:25 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:31	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:22	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:22	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:22	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		01/27/23 19:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		01/29/23 13:36	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/29/23 13:36	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		01/29/23 13:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-AP-4-FB-04 **Lab ID: 92649038012** Collected: 01/25/23 16:35 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:36	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:28	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:28	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:28	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:28	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:28	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:28	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:28	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:51	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		01/27/23 19:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		01/29/23 13:59	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/29/23 13:59	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		01/29/23 13:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWA-47 **Lab ID: 92649038013** Collected: 01/24/23 17:15 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:47		
pH	**7.38**	Std. Units			1		02/15/23 10:47		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**69.2**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:41	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:34	7440-38-2	
Barium	**0.029**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:34	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:34	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:34	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:34	7439-92-1	
Lithium	**0.0029J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:34	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 08:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**223**	mg/L	25.0	25.0	1		01/27/23 14:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.0**	mg/L	1.0	0.60	1		01/29/23 14:23	16887-00-6	
Fluoride	**0.081J**	mg/L	0.10	0.050	1		01/29/23 14:23	16984-48-8	
Sulfate	**2.2**	mg/L	1.0	0.50	1		01/29/23 14:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWA-48D **Lab ID: 92649038014** Collected: 01/24/23 15:45 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:51		
pH	**7.46**	Std. Units			1		02/15/23 10:51		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**57.8**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:46	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:40	7440-38-2	
Barium	**0.11**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:40	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:40	7439-92-1	
Lithium	**0.0046J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:40	7439-93-2	
Molybdenum	**0.00086J**	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:40	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 09:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**230**	mg/L	25.0	25.0	1		01/27/23 14:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.8**	mg/L	1.0	0.60	1		01/29/23 14:47	16887-00-6	
Fluoride	**0.092J**	mg/L	0.10	0.050	1		01/29/23 14:47	16984-48-8	
Sulfate	**2.9**	mg/L	1.0	0.50	1		01/29/23 14:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWA-111 **Lab ID: 92649038015** Collected: 01/24/23 13:28 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:52		
pH	**7.11**	Std. Units			1		02/15/23 10:52		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**55.4**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:51	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 20:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 20:58	7440-38-2	
Barium	**0.028**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 20:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 20:58	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 20:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 20:58	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 20:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 20:58	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 20:58	7439-92-1	
Lithium	**0.0023J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 20:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 20:58	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 20:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 20:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 09:04	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**177**	mg/L	25.0	25.0	1		01/27/23 14:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.6**	mg/L	1.0	0.60	1		01/29/23 15:11	16887-00-6	
Fluoride	**0.086J**	mg/L	0.10	0.050	1		01/29/23 15:11	16984-48-8	
Sulfate	**1.9**	mg/L	1.0	0.50	1		01/29/23 15:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWA-112 **Lab ID: 92649038016** Collected: 01/24/23 13:24 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:52		
pH	**5.67**	Std. Units			1		02/15/23 10:52		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**6.6**	mg/L	1.0	0.12	1	01/30/23 15:10	01/31/23 01:56	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 21:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 21:04	7440-38-2	
Barium	**0.025**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 21:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 21:04	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 21:04	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 21:04	7440-43-9	
Chromium	**0.0041J**	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 21:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 21:04	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 21:04	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 21:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 21:04	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 21:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 21:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 09:07	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**96.0**	mg/L	25.0	25.0	1		01/27/23 14:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.6**	mg/L	1.0	0.60	1		01/29/23 15:35	16887-00-6	
Fluoride	**0.055J**	mg/L	0.10	0.050	1		01/29/23 15:35	16984-48-8	
Sulfate	**0.81J**	mg/L	1.0	0.50	1		01/29/23 15:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Hammond AP-4
Pace Project No.: 92649038

Sample: HAM-HGWA-113 **Lab ID: 92649038017** Collected: 01/24/23 17:25 Received: 01/26/23 11:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**Customer**				1		02/15/23 10:53		
pH	**6.15**	Std. Units			1		02/15/23 10:53		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**7.5**	mg/L	1.0	0.12	1	01/31/23 17:09	02/02/23 21:14	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	01/30/23 12:30	02/02/23 21:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	01/30/23 12:30	02/02/23 21:10	7440-38-2	
Barium	**0.028**	mg/L	0.0050	0.00067	1	01/30/23 12:30	02/02/23 21:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	01/30/23 12:30	02/02/23 21:10	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	01/30/23 12:30	02/02/23 21:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	01/30/23 12:30	02/02/23 21:10	7440-43-9	
Chromium	**0.0036J**	mg/L	0.0050	0.0011	1	01/30/23 12:30	02/02/23 21:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	01/30/23 12:30	02/02/23 21:10	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	01/30/23 12:30	02/02/23 21:10	7439-92-1	
Lithium	**0.00091J**	mg/L	0.030	0.00073	1	01/30/23 12:30	02/02/23 21:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	01/30/23 12:30	02/02/23 21:10	7439-98-7	
Selenium	**0.0025J**	mg/L	0.0050	0.0014	1	01/30/23 12:30	02/02/23 21:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	01/30/23 12:30	02/02/23 21:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/06/23 15:05	02/07/23 09:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**146**	mg/L	25.0	25.0	1		01/27/23 14:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1.8**	mg/L	1.0	0.60	1		01/29/23 15:58	16887-00-6	
Fluoride	**0.20**	mg/L	0.10	0.050	1		01/29/23 15:58	16984-48-8	
Sulfate	**6.6**	mg/L	1.0	0.50	1		01/29/23 15:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 752651
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016

METHOD BLANK: 3910594 Matrix: Water
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	01/30/23 23:40	

LABORATORY CONTROL SAMPLE: 3910595

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.99J	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3910596 3910597

Parameter	Units	92648446001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	85.0	1	1	80.4	83.9	-467	-112	75-125	4	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 752956
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92649038017

METHOD BLANK: 3912342 Matrix: Water
Associated Lab Samples: 92649038017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/02/23 20:40	

LABORATORY CONTROL SAMPLE: 3912343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3912344 3912345

Parameter	Units	92649037012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L		1	1	4.1	4.3	96	117	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 752599
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

METHOD BLANK: 3910295 Matrix: Water
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/02/23 18:35	
Arsenic	mg/L	ND	0.0050	0.0022	02/02/23 18:35	
Barium	mg/L	ND	0.0050	0.00067	02/02/23 18:35	
Beryllium	mg/L	ND	0.00050	0.000054	02/02/23 18:35	
Boron	mg/L	ND	0.040	0.0086	02/02/23 18:35	
Cadmium	mg/L	ND	0.00050	0.00011	02/02/23 18:35	
Chromium	mg/L	ND	0.0050	0.0011	02/02/23 18:35	
Cobalt	mg/L	ND	0.0050	0.00039	02/02/23 18:35	
Lead	mg/L	ND	0.0010	0.00089	02/02/23 18:35	
Lithium	mg/L	ND	0.030	0.00073	02/02/23 18:35	
Molybdenum	mg/L	ND	0.010	0.00074	02/02/23 18:35	
Selenium	mg/L	ND	0.0050	0.0014	02/02/23 18:35	
Thallium	mg/L	ND	0.0010	0.00018	02/02/23 18:35	

LABORATORY CONTROL SAMPLE: 3910296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.10	103	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3910297 3910298

Parameter	Units	92648446001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20	
Barium	mg/L	0.13	0.1	0.1	0.22	0.22	97	90	75-125	3	20	
Beryllium	mg/L	ND	0.1	0.1	0.089	0.089	89	89	75-125	0	20	
Boron	mg/L	0.012J	1	1	0.92	0.93	91	92	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	3	20	
Cobalt	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20	
Lithium	mg/L	0.0030J	0.1	0.1	0.092	0.091	89	88	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	100	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 754045
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

METHOD BLANK: 3917075 Matrix: Water
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/07/23 08:04	

LABORATORY CONTROL SAMPLE: 3917076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3917077 3917078

Parameter	Units	92649038001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0024	91	95	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 752254 | 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: 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

METHOD BLANK: 3908925 Matrix: Water
Associated Lab Samples: 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	01/27/23 14:00	

LABORATORY CONTROL SAMPLE: 3908926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	371	93	80-120	

SAMPLE DUPLICATE: 3908927

Parameter	Units	92648636001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	71.0		10	

SAMPLE DUPLICATE: 3908928

Parameter	Units	92649038017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	146	147	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 752344 — 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: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012

METHOD BLANK: 3909241 — Matrix: Water
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	01/27/23 19:22	

LABORATORY CONTROL SAMPLE: 3909242

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	392	98	80-120	

SAMPLE DUPLICATE: 3909243

Parameter	Units	92649136001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	89.0	91.0	2	10	

SAMPLE DUPLICATE: 3909244

Parameter	Units	92649038008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	289	264	9	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Hammond AP-4
Pace Project No.: 92649038

QC Batch: 752456
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

METHOD BLANK: 3909761 Matrix: Water
Associated Lab Samples: 92649038001, 92649038002, 92649038003, 92649038004, 92649038005, 92649038006, 92649038007, 92649038008, 92649038009, 92649038010, 92649038011, 92649038012, 92649038013, 92649038014, 92649038015, 92649038016, 92649038017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/29/23 05:16	
Fluoride	mg/L	ND	0.10	0.050	01/29/23 05:16	
Sulfate	mg/L	ND	1.0	0.50	01/29/23 05:16	

LABORATORY CONTROL SAMPLE: 3909762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	50.7	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3909763 3909764

Parameter	Units	92649224020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	50.7	51.2	101	102	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	105	90-110	0	10	
Sulfate	mg/L	ND	50	50	50.3	50.7	101	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3909765 3909766

Parameter	Units	92649038010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.0	50	50	57.0	57.6	102	103	90-110	1	10	
Fluoride	mg/L	0.052J	2.5	2.5	2.6	2.6	100	102	90-110	1	10	
Sulfate	mg/L	228	50	50	269	270	83	84	90-110	0	10	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Hammond AP-4
Pace Project No.: 92649038

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

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92649038001	**HAM-HGWC-101**				
92649038002	**HAM-HGWC-102**				
92649038003	**HAM-HGWC-103**				
92649038004	**HAM-HGWC-105**				
92649038005	**HAM-HGWC-107**				
92649038006	**HAM-HGWC-109**				
92649038007	**HAM-HGWC-117**				
92649038008	**HAM-HGWC-117A**				
92649038009	**HAM-HGWC-118**				
92649038013	**HAM-HGWA-47**				
92649038014	**HAM-HGWA-48D**				
92649038015	**HAM-HGWA-111**				
92649038016	**HAM-HGWA-112**				
92649038017	**HAM-HGWA-113**				
92649038001	**HAM-HGWC-101**	EPA 3010A	752651	EPA 6010D	752696
92649038002	**HAM-HGWC-102**	EPA 3010A	752651	EPA 6010D	752696
92649038003	**HAM-HGWC-103**	EPA 3010A	752651	EPA 6010D	752696
92649038004	**HAM-HGWC-105**	EPA 3010A	752651	EPA 6010D	752696
92649038005	**HAM-HGWC-107**	EPA 3010A	752651	EPA 6010D	752696
92649038006	**HAM-HGWC-109**	EPA 3010A	752651	EPA 6010D	752696
92649038007	**HAM-HGWC-117**	EPA 3010A	752651	EPA 6010D	752696
92649038008	**HAM-HGWC-117A**	EPA 3010A	752651	EPA 6010D	752696
92649038009	**HAM-HGWC-118**	EPA 3010A	752651	EPA 6010D	752696
92649038010	**HAM-AP-4-FD-04**	EPA 3010A	752651	EPA 6010D	752696
92649038011	**HAM-AP-4-EB-04**	EPA 3010A	752651	EPA 6010D	752696
92649038012	**HAM-AP-4-FB-04**	EPA 3010A	752651	EPA 6010D	752696
92649038013	**HAM-HGWA-47**	EPA 3010A	752651	EPA 6010D	752696
92649038014	**HAM-HGWA-48D**	EPA 3010A	752651	EPA 6010D	752696
92649038015	**HAM-HGWA-111**	EPA 3010A	752651	EPA 6010D	752696
92649038016	**HAM-HGWA-112**	EPA 3010A	752651	EPA 6010D	752696
92649038017	**HAM-HGWA-113**	EPA 3010A	752956	EPA 6010D	753082
92649038001	**HAM-HGWC-101**	EPA 3005A	752599	EPA 6020B	752695
92649038002	**HAM-HGWC-102**	EPA 3005A	752599	EPA 6020B	752695
92649038003	**HAM-HGWC-103**	EPA 3005A	752599	EPA 6020B	752695
92649038004	**HAM-HGWC-105**	EPA 3005A	752599	EPA 6020B	752695
92649038005	**HAM-HGWC-107**	EPA 3005A	752599	EPA 6020B	752695
92649038006	**HAM-HGWC-109**	EPA 3005A	752599	EPA 6020B	752695
92649038007	**HAM-HGWC-117**	EPA 3005A	752599	EPA 6020B	752695
92649038008	**HAM-HGWC-117A**	EPA 3005A	752599	EPA 6020B	752695
92649038009	**HAM-HGWC-118**	EPA 3005A	752599	EPA 6020B	752695
92649038010	**HAM-AP-4-FD-04**	EPA 3005A	752599	EPA 6020B	752695
92649038011	**HAM-AP-4-EB-04**	EPA 3005A	752599	EPA 6020B	752695
92649038012	**HAM-AP-4-FB-04**	EPA 3005A	752599	EPA 6020B	752695
92649038013	**HAM-HGWA-47**	EPA 3005A	752599	EPA 6020B	752695
92649038014	**HAM-HGWA-48D**	EPA 3005A	752599	EPA 6020B	752695
92649038015	**HAM-HGWA-111**	EPA 3005A	752599	EPA 6020B	752695
92649038016	**HAM-HGWA-112**	EPA 3005A	752599	EPA 6020B	752695

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92649038017	**HAM-HGWA-113**	EPA 3005A	752599	EPA 6020B	752695
92649038001	**HAM-HGWC-101**	EPA 7470A	754045	EPA 7470A	754214
92649038002	**HAM-HGWC-102**	EPA 7470A	754045	EPA 7470A	754214
92649038003	**HAM-HGWC-103**	EPA 7470A	754045	EPA 7470A	754214
92649038004	**HAM-HGWC-105**	EPA 7470A	754045	EPA 7470A	754214
92649038005	**HAM-HGWC-107**	EPA 7470A	754045	EPA 7470A	754214
92649038006	**HAM-HGWC-109**	EPA 7470A	754045	EPA 7470A	754214
92649038007	**HAM-HGWC-117**	EPA 7470A	754045	EPA 7470A	754214
92649038008	**HAM-HGWC-117A**	EPA 7470A	754045	EPA 7470A	754214
92649038009	**HAM-HGWC-118**	EPA 7470A	754045	EPA 7470A	754214
92649038010	**HAM-AP-4-FD-04**	EPA 7470A	754045	EPA 7470A	754214
92649038011	**HAM-AP-4-EB-04**	EPA 7470A	754045	EPA 7470A	754214
92649038012	**HAM-AP-4-FB-04**	EPA 7470A	754045	EPA 7470A	754214
92649038013	**HAM-HGWA-47**	EPA 7470A	754045	EPA 7470A	754214
92649038014	**HAM-HGWA-48D**	EPA 7470A	754045	EPA 7470A	754214
92649038015	**HAM-HGWA-111**	EPA 7470A	754045	EPA 7470A	754214
92649038016	**HAM-HGWA-112**	EPA 7470A	754045	EPA 7470A	754214
92649038017	**HAM-HGWA-113**	EPA 7470A	754045	EPA 7470A	754214
92649038001	**HAM-HGWC-101**	SM 2540C-2015	752344		
92649038002	**HAM-HGWC-102**	SM 2540C-2015	752344		
92649038003	**HAM-HGWC-103**	SM 2540C-2015	752344		
92649038004	**HAM-HGWC-105**	SM 2540C-2015	752344		
92649038005	**HAM-HGWC-107**	SM 2540C-2015	752344		
92649038006	**HAM-HGWC-109**	SM 2540C-2015	752344		
92649038007	**HAM-HGWC-117**	SM 2540C-2015	752344		
92649038008	**HAM-HGWC-117A**	SM 2540C-2015	752344		
92649038009	**HAM-HGWC-118**	SM 2540C-2015	752344		
92649038010	**HAM-AP-4-FD-04**	SM 2540C-2015	752344		
92649038011	**HAM-AP-4-EB-04**	SM 2540C-2015	752344		
92649038012	**HAM-AP-4-FB-04**	SM 2540C-2015	752344		
92649038013	**HAM-HGWA-47**	SM 2540C-2015	752254		
92649038014	**HAM-HGWA-48D**	SM 2540C-2015	752254		
92649038015	**HAM-HGWA-111**	SM 2540C-2015	752254		
92649038016	**HAM-HGWA-112**	SM 2540C-2015	752254		
92649038017	**HAM-HGWA-113**	SM 2540C-2015	752254		
92649038001	**HAM-HGWC-101**	EPA 300.0 Rev 2.1 1993	752456		
92649038002	**HAM-HGWC-102**	EPA 300.0 Rev 2.1 1993	752456		
92649038003	**HAM-HGWC-103**	EPA 300.0 Rev 2.1 1993	752456		
92649038004	**HAM-HGWC-105**	EPA 300.0 Rev 2.1 1993	752456		
92649038005	**HAM-HGWC-107**	EPA 300.0 Rev 2.1 1993	752456		
92649038006	**HAM-HGWC-109**	EPA 300.0 Rev 2.1 1993	752456		
92649038007	**HAM-HGWC-117**	EPA 300.0 Rev 2.1 1993	752456		
92649038008	**HAM-HGWC-117A**	EPA 300.0 Rev 2.1 1993	752456		
92649038009	**HAM-HGWC-118**	EPA 300.0 Rev 2.1 1993	752456		
92649038010	**HAM-AP-4-FD-04**	EPA 300.0 Rev 2.1 1993	752456		
92649038011	**HAM-AP-4-EB-04**	EPA 300.0 Rev 2.1 1993	752456		
92649038012	**HAM-AP-4-FB-04**	EPA 300.0 Rev 2.1 1993	752456		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4
Pace Project No.: 92649038

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92649038013	**HAM-HGWA-47**	EPA 300.0 Rev 2.1 1993	752456		
92649038014	**HAM-HGWA-48D**	EPA 300.0 Rev 2.1 1993	752456		
92649038015	**HAM-HGWA-111**	EPA 300.0 Rev 2.1 1993	752456		
92649038016	**HAM-HGWA-112**	EPA 300.0 Rev 2.1 1993	752456		
92649038017	**HAM-HGWA-113**	EPA 300.0 Rev 2.1 1993	752456		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt
	Effective Date: 11/14/2022

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mech ☐ ☐ ☐ ☐

Sample Condition Upon Receipt

Client Name: Georgia Pow **Project #:**

WO# : 92649038

92649038

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other: ____

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 1/26/23 JM

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☐ IR Gun ID: 230

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 1.3 **Correction Factor:** Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.3

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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: WG/WQ				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

Qualtrax ID: 69614

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

***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

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

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

Project #

WO#: 92649038

PM: BV Due Date: 02/09/23

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (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)	BPIN	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Qualtrax ID: 69614

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	Hammond AP-4	Pace Project Manager:	Bonnie Vang
Requested Due Date/TAT:	10 Day	Project Number:		Pace Profile #:	10839

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	Full App. III and IV metals	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N		
1	HAM-HGWC-101	WG	G	1/25/2023	0953				18	5	2	3							X	X	X	X	N	001 pH = 5.47
2	HAM-HGWC-102	WG	G	1/25/2023	1109				17	5	2	3							X	X	X	X	N	002 pH = 5.77
3	HAM-HGWC-103	WG	G	1/25/2023	1416				17	5	2	3							X	X	X	X	N	003 pH = 5.65
4	HAM-HGWC-105	WG	G	1/25/2023	1536				16	5	2	3							X	X	X	X	N	004 pH = 6.41
5	HAM-HGWC-107	WG	G	1/25/2023	1220				18	5	2	3							X	X	X	X	N	005 pH = 6.13
6	HAM-HGWC-109	WG	G	1/25/2023	1035				17	5	2	3							X	X	X	X	N	006 pH = 6.66
7	HAM-HGWC-117	WG	G	1/25/2023	1600				17	5	2	3							X	X	X	X	N	007 pH = 5.56
8	HAM-HGWC-117A	WG	G	1/25/2023	1430				18	5	2	3							X	X	X	X	N	008 pH = 6.53
9	HAM-HGWC-118	WG	G	1/25/2023	1529				17	5	2	3							X	X	X	X	N	009 pH = 6.67
10	HAM-AP-4-FD-04	WQ	G	1/25/2023	0000				17	5	2	3							X	X	X	X	N	010 N/A
11	HAM-AP-4-EB-04	WQ	G	1/25/2023	1625				17	5	2	3							X	X	X	X	N	011 N/A
12	HAM-AP-4-FB-04	WQ	G	1/25/2023	1635	TJ 1/25/2023			17	5	2	3							X	X	X	X	N	012 N/A

92649038

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Task Code: HAM-CCR-ASSMT-2023S1	Thomas Kessler / Geosyntec	1/26/23	1100	/ Geosyntec	1/26/23	1100	
	/ Geosyntec	1/24/23	1115	Ryan Williams / Pace	1/26/2023	1115	
	Ryan Williams / Pace	1/26/2023	1435		1/26/23	1435	

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Thomas Kessler / Geosyntec Consultants, Inc.				
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY): 01/25/2023				

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

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

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: Georgia Power **Project #:**

WO#: 92649038
PM: BV Due Date: 02/09/23
CLIENT: GA-GA Power

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☑ Pace ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 1/26/23 JM

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☐ IR Gun ID: 230 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 1.3 **Correction Factor:** Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.3

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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: WG/WQ				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

WO# : 92649038

PM: BV **Due Date: 02/09/23**

CLIENT: GA-GA Power

***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 #

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (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)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1	1			1																			2				
2		1	1			1																			2				
3		1	1			1																			2				
4		1	1			1																			2				
5		1	1			1																			2				
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	10 Day

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Hammond AP-4
Project Number:	

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Bonnie Vang
Pace Profile #:	10839

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N): Analysis Test Y/N	Chlorides, Fluorides, Sulfate	Full App. III and IV metals	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N		
1	HAM-HGWA-47	WG	G	1/24/2023	1715			17	5	2		3						X	X	X	X	N	013	pH = 7.38
2	HAM-HGWA-48D	WG	G	1/24/2023	1545			18	5	2		3						X	X	X	X	N	014	pH = 7.46
3	HAM-HGWA-111	WG	G	1/24/2023	1328			18	5	2		3						X	X	X	X	N	015	pH = 7.11
4	HAM-HGWA-112	WG	G	1/24/2023	1324			18	5	2		3						X	X	X	X	N	016	pH = 5.67
5	HAM-HGWA-113	WG	G	1/24/2023	1725			16	5	2		3						X	X	X	X	N	017	pH = 6.15
6						TJ 1/24/2023																		
7																								
8																								
9						TJ 1/24/2023																		
10																								
11																								
12																								

92649038

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Task Code: HAM-CCR-ASSMT-2023S1	Thomas Hessler / Geosyntec	1/26/23	1100	[illegible] / GEOSYNTEC	1/26/23	1100	
	[illegible] / Geosyntec	1/26/23	1115	Ryan Williams / Pace	1/26/2023	1115	
	Ryan Williams / Pace	1/26/2023	1436	[signature]	1/26/23	1435	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler / Geosyntec Consultants, Inc.

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 01/26/2023

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

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

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

February 17, 2023

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

RE: Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2023. 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,

Bonnie Vang
bonnie.vang@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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92649040001	**HAM-HGWC-101**	Water	01/25/23 09:53	01/26/23 11:15
92649040002	**HAM-HGWC-102**	Water	01/25/23 11:09	01/26/23 11:15
92649040003	**HAM-HGWC-103**	Water	01/25/23 14:16	01/26/23 11:15
92649040004	**HAM-HGWC-105**	Water	01/25/23 15:38	01/26/23 11:15
92649040005	**HAM-HGWC-107**	Water	01/25/23 12:20	01/26/23 11:15
92649040006	**HAM-HGWC-109**	Water	01/25/23 10:35	01/26/23 11:15
92649040007	**HAM-HGWC-117**	Water	01/25/23 16:00	01/26/23 11:15
92649040008	**HAM-HGWC-117A**	Water	01/25/23 14:30	01/26/23 11:15
92649040009	**HAM-HGWC-118**	Water	01/25/23 15:29	01/26/23 11:15
92649040010	**HAM-AP-4-FD-04**	Water	01/25/23 00:00	01/26/23 11:15
92649040011	**HAM-AP-4-EB-04**	Water	01/25/23 16:25	01/26/23 11:15
92649040012	**HAM-AP-4-FB-04**	Water	01/25/23 16:35	01/26/23 11:15
92649040013	**HAM-HGWA-47**	Water	01/24/23 17:15	01/26/23 11:15
92649040014	**HAM-HGWA-48D**	Water	01/24/23 15:45	01/26/23 11:15
92649040015	**HAM-HGWA-111**	Water	01/24/23 13:28	01/26/23 11:15
92649040016	**HAM-HGWA-112**	Water	01/24/23 13:24	01/26/23 11:15
92649040017	**HAM-HGWA-113**	Water	01/24/23 17:25	01/26/23 11:15

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92649040001	**HAM-HGWC-101**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040002	**HAM-HGWC-102**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040003	**HAM-HGWC-103**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040004	**HAM-HGWC-105**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040005	**HAM-HGWC-107**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040006	**HAM-HGWC-109**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040007	**HAM-HGWC-117**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040008	**HAM-HGWC-117A**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040009	**HAM-HGWC-118**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040010	**HAM-AP-4-FD-04**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040011	**HAM-AP-4-EB-04**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040012	**HAM-AP-4-FB-04**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040013	**HAM-HGWA-47**	EPA 9315	RMS	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040014	**HAM-HGWA-48D**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040015	**HAM-HGWA-111**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040016	**HAM-HGWA-112**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92649040017	**HAM-HGWA-113**	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649040001	**HAM-HGWC-101**					
EPA 9315	Radium-226	0.0255 ± 0.0902 (0.224) C:97% T:NA	pCi/L		02/15/23 19:47	
EPA 9320	Radium-228	0.393 ± 0.398 (0.823) C:77% T:80%	pCi/L		02/13/23 13:03	
Total Radium Calculation	Total Radium	0.419 ± 0.488 (1.05)	pCi/L		02/17/23 12:29	
92649040002	**HAM-HGWC-102**					
EPA 9315	Radium-226	0.0599 ± 0.0799 (0.167) C:94% T:NA	pCi/L		02/16/23 12:01	
EPA 9320	Radium-228	0.453 ± 0.385 (0.762) C:72% T:78%	pCi/L		02/13/23 13:03	
Total Radium Calculation	Total Radium	0.513 ± 0.465 (0.929)	pCi/L		02/17/23 12:29	
92649040003	**HAM-HGWC-103**					
EPA 9315	Radium-226	0.168 ± 0.116 (0.185) C:103% T:NA	pCi/L		02/16/23 10:39	
EPA 9320	Radium-228	0.400 ± 0.342 (0.679) C:81% T:80%	pCi/L		02/13/23 13:03	
Total Radium Calculation	Total Radium	0.568 ± 0.458 (0.864)	pCi/L		02/17/23 12:29	
92649040004	**HAM-HGWC-105**					
EPA 9315	Radium-226	0.164 ± 0.107 (0.155) C:97% T:NA	pCi/L		02/16/23 10:42	
EPA 9320	Radium-228	0.268 ± 0.351 (0.747) C:82% T:78%	pCi/L		02/13/23 13:03	
Total Radium Calculation	Total Radium	0.432 ± 0.458 (0.902)	pCi/L		02/17/23 12:29	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649040005	**HAM-HGWC-107**					
EPA 9315	Radium-226	0.134 ± 0.101 (0.165) C:95% T:NA	pCi/L		02/16/23 10:26	
EPA 9320	Radium-228	0.576 ± 0.468 (0.932) C:73% T:73%	pCi/L		02/13/23 13:03	
Total Radium Calculation	Total Radium	0.710 ± 0.569 (1.10)	pCi/L		02/17/23 12:29	
92649040006	**HAM-HGWC-109**					
EPA 9315	Radium-226	0.195 ± 0.121 (0.185) C:95% T:NA	pCi/L		02/16/23 12:00	
EPA 9320	Radium-228	-0.146 ± 0.328 (0.806) C:78% T:76%	pCi/L		02/13/23 13:04	
Total Radium Calculation	Total Radium	0.195 ± 0.449 (0.991)	pCi/L		02/17/23 12:29	
92649040007	**HAM-HGWC-117**					
EPA 9315	Radium-226	0.122 ± 0.126 (0.254) C:95% T:NA	pCi/L		02/16/23 08:56	
EPA 9320	Radium-228	0.315 ± 0.341 (0.706) C:77% T:80%	pCi/L		02/13/23 13:04	
Total Radium Calculation	Total Radium	0.437 ± 0.467 (0.960)	pCi/L		02/17/23 12:29	
92649040008	**HAM-HGWC-117A**					
EPA 9315	Radium-226	0.128 ± 0.111 (0.204) C:95% T:NA	pCi/L		02/16/23 08:59	
EPA 9320	Radium-228	0.467 ± 0.419 (0.844) C:74% T:79%	pCi/L		02/13/23 13:04	
Total Radium Calculation	Total Radium	0.595 ± 0.530 (1.05)	pCi/L		02/17/23 12:29	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649040009	**HAM-HGWC-118**					
EPA 9315	Radium-226	0.123 ± 0.0962 (0.157) C:97% T:NA	pCi/L		02/16/23 09:01	
EPA 9320	Radium-228	1.32 ± 0.599 (1.03) C:73% T:79%	pCi/L		02/13/23 13:04	
Total Radium Calculation	Total Radium	1.44 ± 0.695 (1.19)	pCi/L		02/17/23 12:29	
92649040010	**HAM-AP-4-FD-04**					
EPA 9315	Radium-226	0.138 ± 0.108 (0.187) C:97% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.730 ± 0.343 (0.563) C:84% T:87%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.868 ± 0.451 (0.750)	pCi/L		02/17/23 12:27	
92649040011	**HAM-AP-4-EB-04**					
EPA 9315	Radium-226	0.0354 ± 0.0726 (0.169) C:87% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.512 ± 0.342 (0.647) C:85% T:81%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.547 ± 0.415 (0.816)	pCi/L		02/17/23 12:27	
92649040012	**HAM-AP-4-FB-04**					
EPA 9315	Radium-226	0.0650 ± 0.0818 (0.167) C:97% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.301 ± 0.299 (0.617) C:84% T:94%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.366 ± 0.381 (0.784)	pCi/L		02/17/23 12:27	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649040013	**HAM-HGWA-47**					
EPA 9315	Radium-226	0.148 ± 0.102 (0.156) C:97% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.243 ± 0.270 (0.563) C:84% T:91%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.391 ± 0.372 (0.719)	pCi/L		02/17/23 12:27	
92649040014	**HAM-HGWA-48D**					
EPA 9315	Radium-226	0.0667 ± 0.0757 (0.148) C:104% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.789 ± 0.338 (0.521) C:85% T:87%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.856 ± 0.414 (0.669)	pCi/L		02/17/23 12:27	
92649040015	**HAM-HGWA-111**					
EPA 9315	Radium-226	0.0221 ± 0.0898 (0.225) C:93% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.168 ± 0.293 (0.641) C:83% T:89%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.190 ± 0.383 (0.866)	pCi/L		02/17/23 12:27	
92649040016	**HAM-HGWA-112**					
EPA 9315	Radium-226	0.0963 ± 0.0947 (0.177) C:93% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.235 ± 0.266 (0.556) C:84% T:90%	pCi/L		02/10/23 11:28	
Total Radium Calculation	Total Radium	0.331 ± 0.361 (0.733)	pCi/L		02/17/23 12:27	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92649040017	**HAM-HGWA-113**					
EPA 9315	Radium-226	0.0907 ± 0.0914 (0.174) C:95% T:NA	pCi/L		02/16/23 10:17	
EPA 9320	Radium-228	0.438 ± 0.297 (0.561) C:79% T:85%	pCi/L		02/10/23 12:01	
Total Radium Calculation	Total Radium	0.529 ± 0.388 (0.735)	pCi/L		02/17/23 12:27	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-101 **Lab ID: 92649040001** Collected: 01/25/23 09:53 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0255 ± 0.0902 (0.224) C:97% T:NA**	pCi/L	02/15/23 19:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.393 ± 0.398 (0.823) C:77% T:80%**	pCi/L	02/13/23 13:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.419 ± 0.488 (1.05)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-102 **Lab ID: 92649040002** Collected: 01/25/23 11:09 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0599 ± 0.0799 (0.167) C:94% T:NA**	pCi/L	02/16/23 12:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.453 ± 0.385 (0.762) C:72% T:78%**	pCi/L	02/13/23 13:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.513 ± 0.465 (0.929)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-103 **Lab ID: 92649040003** Collected: 01/25/23 14:16 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.168 ± 0.116 (0.185) C:103% T:NA**	pCi/L	02/16/23 10:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.400 ± 0.342 (0.679) C:81% T:80%**	pCi/L	02/13/23 13:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.568 ± 0.458 (0.864)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-105 **Lab ID: 92649040004** Collected: 01/25/23 15:38 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.164 ± 0.107 (0.155) C:97% T:NA**	pCi/L	02/16/23 10:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.268 ± 0.351 (0.747) C:82% T:78%**	pCi/L	02/13/23 13:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.432 ± 0.458 (0.902)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-107 **Lab ID: 92649040005** Collected: 01/25/23 12:20 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.134 ± 0.101 (0.165) C:95% T:NA**	pCi/L	02/16/23 10:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.576 ± 0.468 (0.932) C:73% T:73%**	pCi/L	02/13/23 13:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.710 ± 0.569 (1.10)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-109 **Lab ID: 92649040006** Collected: 01/25/23 10:35 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.195 ± 0.121 (0.185) C:95% T:NA**	pCi/L	02/16/23 12:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.146 ± 0.328 (0.806) C:78% T:76%**	pCi/L	02/13/23 13:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.195 ± 0.449 (0.991)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-117 **Lab ID: 92649040007** Collected: 01/25/23 16:00 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.122 ± 0.126 (0.254) C:95% T:NA**	pCi/L	02/16/23 08:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.315 ± 0.341 (0.706) C:77% T:80%**	pCi/L	02/13/23 13:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.437 ± 0.467 (0.960)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-117A **Lab ID: 92649040008** Collected: 01/25/23 14:30 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.128 ± 0.111 (0.204) C:95% T:NA**	pCi/L	02/16/23 08:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.467 ± 0.419 (0.844) C:74% T:79%**	pCi/L	02/13/23 13:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.595 ± 0.530 (1.05)**	pCi/L	02/17/23 12:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWC-118 **Lab ID: 92649040009** Collected: 01/25/23 15:29 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.123 ± 0.0962 (0.157) C:97% T:NA**	pCi/L	02/16/23 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.32 ± 0.599 (1.03) C:73% T:79%**	pCi/L	02/13/23 13:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.44 ± 0.695 (1.19)**	pCi/L	02/17/23 12:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-AP-4-FD-04 **Lab ID: 92649040010** Collected: 01/25/23 00:00 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.138 ± 0.108 (0.187) C:97% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.730 ± 0.343 (0.563) C:84% T:87%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.868 ± 0.451 (0.750)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-AP-4-EB-04 **Lab ID: 92649040011** Collected: 01/25/23 16:25 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0354 ± 0.0726 (0.169) C:87% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.512 ± 0.342 (0.647) C:85% T:81%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.547 ± 0.415 (0.816)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-AP-4-FB-04 **Lab ID: 92649040012** Collected: 01/25/23 16:35 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0650 ± 0.0818 (0.167) C:97% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.301 ± 0.299 (0.617) C:84% T:94%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.366 ± 0.381 (0.784)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWA-47 **Lab ID: 92649040013** Collected: 01/24/23 17:15 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.148 ± 0.102 (0.156) C:97% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.243 ± 0.270 (0.563) C:84% T:91%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.391 ± 0.372 (0.719)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWA-48D **Lab ID: 92649040014** Collected: 01/24/23 15:45 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0667 ± 0.0757 (0.148) C:104% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.789 ± 0.338 (0.521) C:85% T:87%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.856 ± 0.414 (0.669)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWA-111 **Lab ID: 92649040015** Collected: 01/24/23 13:28 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0221 ± 0.0898 (0.225) C:93% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.168 ± 0.293 (0.641) C:83% T:89%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.190 ± 0.383 (0.866)**	pCi/L	02/17/23 12:27	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWA-112 **Lab ID: 92649040016** Collected: 01/24/23 13:24 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0963 ± 0.0947 (0.177) C:93% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.235 ± 0.266 (0.556) C:84% T:90%**	pCi/L	02/10/23 11:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.331 ± 0.361 (0.733)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Sample: HAM-HGWA-113 **Lab ID: 92649040017** Collected: 01/24/23 17:25 Received: 01/26/23 11:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0907 ± 0.0914 (0.174) C:95% T:NA**	pCi/L	02/16/23 10:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.438 ± 0.297 (0.561) C:79% T:85%**	pCi/L	02/10/23 12:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.529 ± 0.388 (0.735)**	pCi/L	02/17/23 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

QC Batch: 563640
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92649040001, 92649040002, 92649040003, 92649040004, 92649040005, 92649040006, 92649040007, 92649040008, 92649040009

METHOD BLANK: 2736994 Matrix: Water
Associated Lab Samples: 92649040001, 92649040002, 92649040003, 92649040004, 92649040005, 92649040006, 92649040007, 92649040008, 92649040009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.204 ± 0.336 (0.731) C:81% T:82%	pCi/L	02/13/23 13:01	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

QC Batch: 563637
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92649040001, 92649040002, 92649040003, 92649040004, 92649040005, 92649040006, 92649040007, 92649040008, 92649040009

METHOD BLANK: 2736986 Matrix: Water
Associated Lab Samples: 92649040001, 92649040002, 92649040003, 92649040004, 92649040005, 92649040006, 92649040007, 92649040008, 92649040009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0170 ± 0.0627 (0.161) C:102% T:NA	pCi/L	02/15/23 18:29	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

QC Batch: 564181
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92649040010, 92649040011, 92649040012, 92649040013, 92649040014, 92649040015, 92649040016, 92649040017

METHOD BLANK: 2739754 Matrix: Water
Associated Lab Samples: 92649040010, 92649040011, 92649040012, 92649040013, 92649040014, 92649040015, 92649040016, 92649040017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0555 ± 0.0776 (0.164) C:96% T:NA	pCi/L	02/16/23 10:17	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

QC Batch: 564182
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92649040010, 92649040011, 92649040012, 92649040013, 92649040014, 92649040015, 92649040016, 92649040017

METHOD BLANK: 2739757 Matrix: Water
Associated Lab Samples: 92649040010, 92649040011, 92649040012, 92649040013, 92649040014, 92649040015, 92649040016, 92649040017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.348 ± 0.296 (0.591) C:84% T:90%	pCi/L	02/10/23 11:28	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

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

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92649040001	**HAM-HGWC-101**	EPA 9315	563637		
92649040002	**HAM-HGWC-102**	EPA 9315	563637		
92649040003	**HAM-HGWC-103**	EPA 9315	563637		
92649040004	**HAM-HGWC-105**	EPA 9315	563637		
92649040005	**HAM-HGWC-107**	EPA 9315	563637		
92649040006	**HAM-HGWC-109**	EPA 9315	563637		
92649040007	**HAM-HGWC-117**	EPA 9315	563637		
92649040008	**HAM-HGWC-117A**	EPA 9315	563637		
92649040009	**HAM-HGWC-118**	EPA 9315	563637		
92649040010	**HAM-AP-4-FD-04**	EPA 9315	564181		
92649040011	**HAM-AP-4-EB-04**	EPA 9315	564181		
92649040012	**HAM-AP-4-FB-04**	EPA 9315	564181		
92649040013	**HAM-HGWA-47**	EPA 9315	564181		
92649040014	**HAM-HGWA-48D**	EPA 9315	564181		
92649040015	**HAM-HGWA-111**	EPA 9315	564181		
92649040016	**HAM-HGWA-112**	EPA 9315	564181		
92649040017	**HAM-HGWA-113**	EPA 9315	564181		
92649040001	**HAM-HGWC-101**	EPA 9320	563640		
92649040002	**HAM-HGWC-102**	EPA 9320	563640		
92649040003	**HAM-HGWC-103**	EPA 9320	563640		
92649040004	**HAM-HGWC-105**	EPA 9320	563640		
92649040005	**HAM-HGWC-107**	EPA 9320	563640		
92649040006	**HAM-HGWC-109**	EPA 9320	563640		
92649040007	**HAM-HGWC-117**	EPA 9320	563640		
92649040008	**HAM-HGWC-117A**	EPA 9320	563640		
92649040009	**HAM-HGWC-118**	EPA 9320	563640		
92649040010	**HAM-AP-4-FD-04**	EPA 9320	564182		
92649040011	**HAM-AP-4-EB-04**	EPA 9320	564182		
92649040012	**HAM-AP-4-FB-04**	EPA 9320	564182		
92649040013	**HAM-HGWA-47**	EPA 9320	564182		
92649040014	**HAM-HGWA-48D**	EPA 9320	564182		
92649040015	**HAM-HGWA-111**	EPA 9320	564182		
92649040016	**HAM-HGWA-112**	EPA 9320	564182		
92649040017	**HAM-HGWA-113**	EPA 9320	564182		
92649040001	**HAM-HGWC-101**	Total Radium Calculation	567961		
92649040002	**HAM-HGWC-102**	Total Radium Calculation	567961		
92649040003	**HAM-HGWC-103**	Total Radium Calculation	567961		
92649040004	**HAM-HGWC-105**	Total Radium Calculation	567961		
92649040005	**HAM-HGWC-107**	Total Radium Calculation	567961		
92649040006	**HAM-HGWC-109**	Total Radium Calculation	567961		
92649040007	**HAM-HGWC-117**	Total Radium Calculation	567961		
92649040008	**HAM-HGWC-117A**	Total Radium Calculation	567961		
92649040009	**HAM-HGWC-118**	Total Radium Calculation	567961		
92649040010	**HAM-AP-4-FD-04**	Total Radium Calculation	567959		
92649040011	**HAM-AP-4-EB-04**	Total Radium Calculation	567959		
92649040012	**HAM-AP-4-FB-04**	Total Radium Calculation	567959		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4 - RADS
Pace Project No.: 92649040

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92649040013	**HAM-HGWA-47**	Total Radium Calculation	567959		
92649040014	**HAM-HGWA-48D**	Total Radium Calculation	567959		
92649040015	**HAM-HGWA-111**	Total Radium Calculation	567959		
92649040016	**HAM-HGWA-112**	Total Radium Calculation	567959		
92649040017	**HAM-HGWA-113**	Total Radium Calculation	567959		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt
	Effective Date: 11/14/2022

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Alt ☐

WO# : 92649040

92649040

Sample Condition Upon Receipt

Client Name: Georgia Power **Project #:**

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☑ Pace ☐ Client ☐ Other:

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 1/26/23 JM

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☐ IR Gun ID: 230

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 1.3 **Correction Factor:** Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.3

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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: WG/WQ				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: **Date:**

Project Manager SRF Review: **Date:**

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

WO# : 92649040

PM: BV **Due Date: 02/09/23**

CLIENT: GA-GA Power

***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 #

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (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)	BPIN	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1	1			1																		2				
2		1	1			1																		2				
3		1	1			1																		2				
4		1	1			1																		2				
5		1	1			1																		2				
6		1	1			1																		2				
7		1	1			1																		2				
8		1	1			1																		2				
9		1	1			1																		2				
10		1	1			1																		2				
11		1	1			1																		2				
12		1	1			1																		2				

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	10 Day

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Hammond AP-4
Project Number:	

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Bonnie Vang
Pace Profile #:	10839

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	Full App. III and IV metals	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		92649040
1	HAM-HGWC-101	WG	G	1/25/2023	0953				18	5	2	3							X	X	X	X	N	001 pH = 5.47
2	HAM-HGWC-102	WG	G	1/25/2023	1109				17	5	2	3							X	X	X	X	N	002 pH = 5.77
3	HAM-HGWC-103	WG	G	1/25/2023	1416				17	5	2	3							X	X	X	X	N	003 pH = 5.65
4	HAM-HGWC-105	WG	G	1/25/2023	1538				16	5	2	3							X	X	X	X	N	004 pH = 6.41
5	HAM-HGWC-107	WG	G	1/25/2023	1220				18	5	2	3							X	X	X	X	N	005 pH = 6.13
6	HAM-HGWC-109	WG	G	1/25/2023	1035				17	5	2	3							X	X	X	X	N	006 pH = 6.66
7	HAM-HGWC-117	WG	G	1/25/2023	1600				17	5	2	3							X	X	X	X	N	007 pH = 5.56
8	HAM-HGWC-117A	WG	G	1/25/2023	1430				18	5	2	3							X	X	X	X	N	008 pH = 6.53
9	HAM-HGWC-118	WG	G	1/25/2023	1529				17	5	2	3							X	X	X	X	N	009 pH = 6.67
10	HAM-AP-4-FD-04	WQ	G	1/25/2023	0000				17	5	2	3							X	X	X	X	N	010 N/A
11	HAM-AP-4-EB-04	WQ	G	1/25/2023	1625				17	5	2	3							X	X	X	X	N	011 N/A
12	HAM-AP-4-FB-04	WQ	G	1/25/2023	1635	TJ 1/25/2023			17	5	2	3							X	X	X	X	N	012 N/A

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Task Code: HAM-CCR-ASSMT-2023S1	Thomas Kessler / Geosyntec	1/26/23	1100	/ Geosyntec	1/26/23	1100	
	/ Geosyntec	1/26/23	1115	Ryan Williams / Pace	1/26/2023	1115	
	Ryan Williams / Pace	1/26/2023	1435		1/26/23	1435	

SAMPLER NAME AND SIGNATURE						
PRINT Name of SAMPLER:	Thomas Kessler	/ Geosyntec Consultants, Inc.	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 01/25/2023				

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

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

WO#: 92649040
PM: BV Due Date: 02/09/23
CLIENT: GA-GA Power

Sample Condition Upon Receipt

Client Name: Georgia Power Project #:

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☑ Pace ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☐ No

Date/Initials Person Examining Contents: 1/26/23 JM

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☐ IR Gun ID: 230

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 1.3 Correction Factor: Add/Subtract (°C) 0 0

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.3

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ 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: WG/WQ				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt
	Effective Date: 11/14/2022

*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

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

***Check all unpreserved Nitrates for chlorine

Project # **WO# : 92649040**

PM: BV Due Date: 02/09/23

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (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)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1	1			1																		2					
2		1	1			1																		2					
3		1	1			1																		2					
4		1	1			1																		2					
5		1	1			1																		2					
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:
		Address:
Email To: SCS Contacts	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: Hammond AP-4	Pace Project Manager: Bonnie Vang
Requested Due Date/TAT: 10 Day	Project Number:	Pace Profile #: 10839

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☑ OTHER ~~CCR~~

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 / ,) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	COLLECTED COMPOSITE DATE	COLLECTED COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chlorides, Fluoride, Sulfate	Full App. III and IV metals	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																				N	N	N	N		
1	HAM-HGWA-47	WATER WT	WG	G	1/24/2023	1715			17	5	2		3							X	X	X	X	N	013 pH = 7.38
2	HAM-HGWA-48D	WATER WT	WG	G	1/24/2023	1545			18	5	2		3							X	X	X	X	N	014 pH = 7.46
3	HAM-HGWA-111	WATER WT	WG	G	1/24/2023	1328			18	5	2		3							X	X	X	X	N	015 pH = 7.11
4	HAM-HGWA-112	WATER WT	WG	G	1/24/2023	1324			18	5	2		3							X	X	X	X	N	016 pH = 5.67
5	HAM-HGWA-113	WATER WT	WG	G	1/24/2023	1725			16	5	2		3							X	X	X	X	N	pH = 6.15
6																									
7																									
8																									
9																									
10																									
11																									
12																									

TJ 1/24/2023

TJ 1/24/2023

92649040

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Task Code: HAM-CCR-ASSMT-2023S1	Thomas Hessler / Geosyntec	1/26/23	1100	/ Geosyntec	1/26/23	1100	
	/ Geosyntec	1/26/23	1115	Ryan Williams / Pace	1/26/2023	1115	
	Ryan Williams / Pace	1/26/2023	1438		1/26/23	1435	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler Hammond Call / Geosyntec Consultants, Inc.

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 01/24/2023

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

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

VALIDATION REPORTS

August 2022

Geosyntec consultants

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Memorandum

Date:	18 December 2022
To:	Christine Hug
From:	Ashley Wilson
CC:	J. Caprio
Subject:	**Stage 2A Data Validations - Level II Data Deliverable – Pace Analytical Project No.: 92618826**

SITE: CCR Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fourteen aqueous samples, one field blank, one equipment blank and one field duplicate, collected 2, 5 & 10 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
- Select 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.

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
92618826001	HGWA-47
92618826002	HGWA-113
92618826003	HGWA-48D
92618826004	HGWA-111
92618826005	HGWA-112
92618826006	HGWC-102
92618826007	HGWC-103
92618826008	HGWC-105
92618826009	HGWC-107

Laboratory IDs	Client IDs
92618826010	HGWC-109
92618826011	HGWC-117
92618826012	HGWC-117A
92618826013	HGWC-118
92618826014	DUP-4
92618826015	HGWC-101
92618826016	EB-4
92618826017	FB-4

The chain of custody (COC) indicates the samples were received between 0-6 ºC. 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 (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
✓ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank

✓ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data 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). Four method blanks were reported for metals by US EPA method 6020B (batches 715918, 716035, 716046 and 719529), and four method blanks for metals by US EPA Method 6010D (batches 716032, 716036, 716042 and 718461). 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-109 and HGWA-112, respectively. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of barium in the MS/MSD pair using sample HGWC-109 were high and outside of laboratory specified acceptance criteria. Therefore, the concentration of barium in sample HGWC-109 was J+ qualified as estimated with high bias.

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.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWC-109	Barium	0.085	M1	0.085	J+	4

mg/L- milligram per liter
M1-Matrix spike recovery exceeded QC limits
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). 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-4. Metals were not detected in the equipment blank at or above the MDLs.

1.7 Field Blank

One field blank was collected with the sample set, FB-4. 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-4. Acceptable precision (RPD ≤ 30%) was demonstrated between the field duplicate and the original sample, HGWC-118, with the following exceptions.

Cobalt was not detected in sample HGWC-118 and detected at an estimated concentration in DUP-4, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the cobalt concentration in DUP-4 was J qualified as estimated and the non-detect result in HGWC-118 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/l)	Laboratory Flag	RPD	Validation Result (mg/l)	Validation Qualifier	Reason Code
HGWC-118	Cobalt	0.00039	U	NC	0.00039	UJ	7
DUP-4	Cobalt	0.00041	J		0.00041	J	7

mg/L- milligram per liter
NC-noncalculable
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 not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by US EPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data 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 719270 and 719540). Mercury was not detected in the method blanks 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). One sample set specific MS/MSD pair was reported using DUP-4. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was 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.

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-4. 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-4. 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-4. Acceptable precision (RPD $\leq$ 30%) was demonstrated between the field duplicate and the original sample, HGWC-118.

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 (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data 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). Four method blanks were reported for TDS (batches 715588, 716396, 717151 and 717424). Three method blanks were reported for chloride, fluoride and sulfate (batches 716707, 717492 and 718643). Six method blanks were reported for alkalinity (batches 716055, 716212, 717930, 718058, 718422 and 718423). Three method blanks were reported for sulfide (batches 715461, 716745 and 717375). The wet chemistry parameters were not detected in the method blanks at or above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for chloride, fluoride and sulfate using sample HGWC-105. Three sample set specific MS/MSD pairs were reported for alkalinity using samples HGWA-112, HGWA-111 and EB-4. Two sample set specific MS/MSD pairs were reported for sulfide using samples HGWA-48D and HGWC-118. The recovery and RPD results were within the laboratory specified acceptance criteria.

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.

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

Three laboratory duplicates were reported for TDS using samples HGWA-48D, HGWC-117 and EB-4. The RPD results were within the laboratory specified acceptance criteria.

Five 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-4. 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-4. 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-4. Acceptable precision (RPD ≤ 30%) was demonstrated between the field duplicate and the original sample, HGWC-118.

3.10 Sensitivity

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

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected 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.

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

Geosyntec consultants

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Memorandum

Date:	January 10, 2023
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92618784**

SITE: Plant Hammond AP-4 RADS

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fourteen aqueous samples, one field duplicate, one equipment blank and one field blank, collected 1-3 February 2022, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, 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 as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

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

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- 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:

Laboratory ID	Client ID
92618784001	HGWA-47
92618784002	HGWA-113
92618784003	HGWA-48D
92618784004	HGWA-111
92618784005	HGWA-112
92618784006	HGWC-102
92618784007	HGWC-103
92618784008	HGWC-105
92618784009	HGWC-107

Laboratory ID	Client ID
92618784010	HGWC-109
92618784011	HGWC-117
92618784012	HGWC-117A
92618784013	HGWC-118
92618784014	DUP-4
92618784015	HGWC-101
92618784016	EB-4
92618784017	FB-4

The samples were received within 0-6 degrees Celsius (ºC). 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 (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Tracers and Carriers
✓ Field Blank
✓ Equipment 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%.

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). Two method blanks were reported for the radium-226 data (batches 525510 and 530296). Three method blanks were reported for the radium-228 data (batches 525942, 527810 and 525976). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-228 (0.981 pCi/L) were detected in the method blank in batch 527810 at a concentration greater than the MDC. Therefore, the radium-228 concentration in FB-4 was J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
FB-4	Radium-228	1.08	NA	1.08	J+	3
FB-4	Total Radium	1.08	NA	1.08	J+	3

pCi/L-picocuries per liter
NA-not applicable

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

MS/MSD pairs were not reported with the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

1.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HGWC-105. The RER result was within the laboratory specified acceptance criteria.

One batch laboratory duplicate was 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 Field Blank

One field blank was collected with the sample set, FB-4. Radium-226 was not detected in the field blank above the MDCs. However, radium-228 (1.08 pCi/L) was detected at a concentration greater than the MDC. Since the radium-228 and total radium concentrations in FB-4 were J+ qualified as estimated with a high bias due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.9 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.

1.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, HGWC-118.

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.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

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

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

January 2023

Geosyntec consultants

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Memorandum

Date:	May 24, 2023
To:	Whitney Law
From:	Amani Royce
CC:	K. Henderson
Subject:	**Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92649038**

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fourteen aqueous samples, one field duplicate, one field blank, and one equipment blank, collected 24 and 25 January 2023, as part of the Plant Hammond AP on-site sampling event.

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

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

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

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data are usable for supporting project objectives.

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

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

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

Laboratory ID	Client ID
92649038001	HAM-HGWC-101
92649038002	HAM-HGWC-102
92649038003	HAM-HGWC-103
92649038004	HAM-HGWC-105
92649038005	HAM-HGWC-107
92649038006	HAM-HGWC-109
92649038007	HAM-HGWC-117
92649038008	HAM-HGWC-117A
92649038009	HAM-HGWC-118

Laboratory ID	Client ID
92649038010	HAM-AP-4-FD-04
92649038011	HAM-AP-4-EB-04
92649038012	HAM-AP-4-FB-04
92649038013	HAM-HGWA-47
92649038014	HAM-HGWA-48D
92649038015	HAM-HGWA-111
92649038016	HAM-HGWA-112
92649038017	HAM-HGWA-113

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

The laboratory report revised on 27 April 2023 was used for data validation.

The results flagged as “ND” in the electronic data deliverable (EDD) were changed to U.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for 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 data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 752651, 752956, and 752599). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples).

Two batch MS/MSD pairs were reported for calcium. Since these were batch QCs, the results do not affect the samples in this data set and qualifications were not applied to the data.

One batch MS/MSD pair was reported for metals by US EPA method 6020B. Since this was a batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

One equipment blank was collected with the sample set, HAM-AP-4-EB-04. Metals were not detected in the equipment blank above the MDLs.

1.7 Field Blank

One field blank was collected with the sample set, HAM-AP-4-FB-04. Metals were not detected in the field blank above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, HAM-AP-4-FD-04. Acceptable precision (relative percent difference (RPD) $\leq$ 30%) was demonstrated between the field duplicate and the original sample, HAM-HGWC-105.

1.9 Sensitivity

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

1.10 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.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time

- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for 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 data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 754045). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample HAM-HGWC-101. The recovery and RPD results were within the laboratory specified acceptance criteria.

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

One equipment blank was collected with the sample set, HAM-AP-4-EB-04. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

One field blank was collected with the sample set, HAM-AP-4-FB-04. Mercury was not detected in the field blank above the MDL.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, HAM-AP-4-FD-04. Acceptable precision (RPD $\leq$ 30%) was demonstrated between the field duplicate and the original sample, HAM-HGWC-105.

2.9 Sensitivity

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

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by SM 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank

- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for 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 data set is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 752344 and 752254) and one method blank was reported for the anions (batch 752456). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples).

One sample set specific MS/MSD pair was reported for anions, using sample HAM-AP-4-FD-04. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The recoveries of sulfate in the MD/MSD pair using sample HAM-AP-4-FD-04 were low and outside of the laboratory specified acceptance criteria. Since the sulfate concentration in sample HAM-AP-4-FD-04 was greater than four times the spike concentration, no qualifications were applied to the data.

One batch MS/MSD pair was reported for the anions. Since this was a batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for TDS, using samples HAM-HGWA-113 and HAM-HGWC-117A. The RPD results were within the laboratory specified acceptance criteria.

Two batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Equipment Blank

One equipment blank was collected with the sample set HAM-AP-4-EB-04. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

3.8 Field Blank

One field blank was collected with the sample set, HAM-AP-4-FB-04. The wet chemistry parameters were not detected in the field blank above the MDLs.

3.9 Field Duplicate

One field duplicate sample was collected with the sample set, HAM-AP-4-FD-04. Acceptable precision (RPD $\leq$ 30%) was demonstrated between the field duplicate and the original sample, HAM-HGWC-105.

3.10 Sensitivity

The samples were reported to the MDLs for the anions and the reporting limit (RL) for TDS. No elevated non-detect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected 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 at or above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

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

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
RPD - Relative Percent Difference

Geosyntec consultants

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www.geosyntec.com

Memorandum

Date: June 2, 2023

To: Whitney Law

From: Amani Royce

CC: K. Henderson

Subject: Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92649040

SITE: Plant Hammond AP-4 (RADS)

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fourteen aqueous samples, one field duplicate, one field blank, and one equipment blank, collected 24 and 25 January 2023, as part of the Plant Hammond AP on-site sampling event.

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

- Radium-226 by United States (US) Environmental Protection Agency (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 as qualified are usable for meeting project objectives.

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

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

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

Laboratory ID	Client ID
92649040001	HAM-HGWC-101
92649040002	HAM-HGWC-102
92649040003	HAM-HGWC-103
92649040004	HAM-HGWC-105
92649040005	HAM-HGWC-107
92649040006	HAM-HGWC-109
92649040007	HAM-HGWC-117
92649040008	HAM-HGWC-117A
92649040009	HAM-HGWC-118

Laboratory ID	Client ID
92649040010	HAM-AP-4-FD-04
92649040011	HAM-AP-4-EB-04
92649040012	HAM-AP-4-FB-04
92649040013	HAM-HGWA-47
92649040014	HAM-HGWA-48D
92649040015	HAM-HGWA-111
92649040016	HAM-HGWA-112
92649040017	HAM-HGWA-113

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 (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

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%.

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). Two method blanks were reported for the radium-228 data (batches 563640 and 564182). Two method blanks were reported for the radium-226 data (batches 563637 and 564181). 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 pairs were not reported with the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

1.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HAM-AP-4-FD-04. The RER result was within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for radium-226. Since this was a batch QC, the result does 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, HAM-AP-4-EB-04. Radium-226 and radium-228 were not detected in the equipment blank above the MDCs.

1.9 Field Blank

One field blank was collected with the sample set, HAM-AP-4-FB-04. 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, HAM-AP-4-FD-04. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, HAM-HGWC-105.

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.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected 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 at or above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

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

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
RPD - Relative Percent Difference

FIELD SAMPLING REPORTS

August 2022

Low-Flow Test Report:

Test Date / Time: 8/2/2022 3:52:20 PM
Project: GP-Plant Hammond
Operator Name: Tristan Orndorff

Location Name: HGWA-47 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33.74 ft** **Total Depth: 43.19 ft** **Initial Depth to Water: 7.54 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 39 ft** **Estimated Total Volume Pumped: 9 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.08 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883546**

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

Weather Conditions:
Sunny, 91 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 3:52 PM	00:00	7.34 pH	23.23 °C	389.10 µS/cm	0.17 mg/L	2.39 NTU	34.4 mV	7.54 ft	200.00 ml/min
8/2/2022 3:57 PM	05:00	7.33 pH	22.93 °C	392.65 µS/cm	0.11 mg/L	1.54 NTU	43.2 mV	7.60 ft	200.00 ml/min
8/2/2022 4:02 PM	10:00	7.34 pH	22.72 °C	391.97 µS/cm	0.10 mg/L	2.50 NTU	51.6 mV	7.60 ft	200.00 ml/min
8/2/2022 4:07 PM	15:00	7.34 pH	22.51 °C	391.86 µS/cm	0.09 mg/L	1.19 NTU	57.2 mV	7.61 ft	200.00 ml/min
8/2/2022 4:12 PM	20:00	7.34 pH	22.33 °C	391.19 µS/cm	0.08 mg/L	1.04 NTU	62.7 mV	7.61 ft	200.00 ml/min
8/2/2022 4:17 PM	25:00	7.34 pH	22.25 °C	391.51 µS/cm	0.08 mg/L	1.30 NTU	67.0 mV	7.61 ft	200.00 ml/min
8/2/2022 4:22 PM	30:00	7.34 pH	22.27 °C	392.47 µS/cm	0.07 mg/L	1.21 NTU	70.9 mV	7.62 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-47	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:12:03 AM
Project: GP-Plant Hammond
Operator Name: Tristan Orndorff

Location Name: HGWA-48D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 62.97 ft** **Total Depth: 72.90 ft** **Initial Depth to Water: 7.75 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 67.97 ft** **Estimated Total Volume Pumped: 5.2 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 120 ml/min** **Final Draw Down: 2.85 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883546**

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

Weather Conditions:
Sunny, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 9:12 AM	00:00	7.37 pH	20.81 °C	415.72 µS/cm	0.09 mg/L	1.78 NTU	-57.2 mV	9.32 ft	200.00 ml/min
8/5/2022 9:17 AM	05:00	7.38 pH	20.36 °C	418.40 µS/cm	0.07 mg/L	1.66 NTU	-106.5 mV	10.18 ft	200.00 ml/min
8/5/2022 9:22 AM	10:00	7.38 pH	20.63 °C	421.48 µS/cm	0.08 mg/L	0.96 NTU	-124.3 mV	10.61 ft	160.00 ml/min
8/5/2022 9:27 AM	15:00	7.38 pH	21.27 °C	420.70 µS/cm	0.10 mg/L	0.85 NTU	-131.8 mV	10.67 ft	120.00 ml/min
8/5/2022 9:32 AM	20:00	7.39 pH	21.48 °C	418.89 µS/cm	0.11 mg/L	1.25 NTU	-123.4 mV	10.67 ft	120.00 ml/min
8/5/2022 9:37 AM	25:00	7.40 pH	21.57 °C	417.55 µS/cm	0.11 mg/L	0.82 NTU	-112.5 mV	10.64 ft	120.00 ml/min
8/5/2022 9:42 AM	30:00	7.40 pH	21.59 °C	415.63 µS/cm	0.11 mg/L	0.53 NTU	-105.0 mV	10.60 ft	120.00 ml/min

Samples

Sample ID:	Description:
HGWA-48D	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:18:59 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-111 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33.67 ft** **Total Depth: 43.22 ft** **Initial Depth to Water: 12.33 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 38.67 ft** **Estimated Total Volume Pumped: 10 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.02 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	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 9:18 AM	00:00	6.36 pH	22.76 °C	160.56 µS/cm	3.62 mg/L	1.10 NTU	86.7 mV	13.05 ft	200.00 ml/min
8/5/2022 9:23 AM	05:00	6.62 pH	22.54 °C	205.45 µS/cm	3.41 mg/L	1.25 NTU	83.6 mV	13.15 ft	200.00 ml/min
8/5/2022 9:28 AM	10:00	6.69 pH	22.18 °C	217.98 µS/cm	3.37 mg/L	1.50 NTU	86.5 mV	13.20 ft	200.00 ml/min
8/5/2022 9:33 AM	15:00	6.74 pH	22.00 °C	227.88 µS/cm	3.34 mg/L	1.62 NTU	107.5 mV	13.30 ft	200.00 ml/min
8/5/2022 9:38 AM	20:00	6.78 pH	21.96 °C	242.95 µS/cm	3.45 mg/L	1.43 NTU	109.5 mV	13.35 ft	200.00 ml/min
8/5/2022 9:43 AM	25:00	6.83 pH	21.99 °C	256.44 µS/cm	3.30 mg/L	1.24 NTU	105.8 mV	13.35 ft	200.00 ml/min
8/5/2022 9:48 AM	30:00	6.88 pH	22.09 °C	262.74 µS/cm	3.23 mg/L	1.37 NTU	82.4 mV	13.35 ft	200.00 ml/min
8/5/2022 9:53 AM	35:00	6.91 pH	22.18 °C	270.96 µS/cm	3.26 mg/L	1.30 NTU	102.7 mV	13.35 ft	200.00 ml/min
8/5/2022 9:58 AM	40:00	6.95 pH	22.08 °C	278.64 µS/cm	3.21 mg/L	1.26 NTU	80.8 mV	13.35 ft	200.00 ml/min
8/5/2022 10:03 AM	45:00	6.97 pH	22.13 °C	282.93 µS/cm	3.23 mg/L	1.49 NTU	101.1 mV	13.35 ft	200.00 ml/min

Samples

Sample ID:	Description:

HGWA-111	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:08:18 AM
Project: GP-Plant Hammond
Operator Name: Anthony Szwast

Location Name: HGWA-112 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.15 ft** **Total Depth: 39.80 ft** **Initial Depth to Water: 12.05 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 35.15 ft** **Estimated Total Volume Pumped: 7 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.54 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 843593**

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

Weather Conditions:
Sunny, 80 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 9:08 AM	00:00	5.61 pH	22.36 °C	77.50 µS/cm	1.45 mg/L	5.37 NTU	165.2 mV	12.92 ft	200.00 ml/min
8/5/2022 9:13 AM	05:00	5.53 pH	21.24 °C	77.65 µS/cm	1.12 mg/L	4.67 NTU	200.4 mV	13.15 ft	200.00 ml/min
8/5/2022 9:18 AM	10:00	5.49 pH	21.11 °C	77.25 µS/cm	1.02 mg/L	3.55 NTU	170.4 mV	13.38 ft	200.00 ml/min
8/5/2022 9:23 AM	15:00	5.47 pH	21.06 °C	77.03 µS/cm	0.95 mg/L	2.11 NTU	168.8 mV	13.49 ft	200.00 ml/min
8/5/2022 9:28 AM	20:00	5.44 pH	21.14 °C	77.09 µS/cm	0.88 mg/L	2.93 NTU	169.0 mV	13.51 ft	200.00 ml/min
8/5/2022 9:33 AM	25:00	5.43 pH	21.10 °C	76.67 µS/cm	0.87 mg/L	2.30 NTU	167.5 mV	13.51 ft	200.00 ml/min
8/5/2022 9:38 AM	30:00	5.43 pH	21.10 °C	76.46 µS/cm	0.85 mg/L	2.37 NTU	167.3 mV	13.59 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-112	Grab.

Low-Flow Test Report:

Test Date / Time: 8/2/2022 2:19:24 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-113 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 26.11 ft** **Total Depth: 36.13 ft** **Initial Depth to Water: 10.82 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 31.11 ft** **Estimated Total Volume Pumped: 11.5 L** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 10.22 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 884186**

Test Notes:
Seven samples: Full app. III and IV and Major Ions

Weather Conditions:
Sunny, 88 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 2:19 PM	00:00	6.06 pH	25.51 °C	106.93 µS/cm	0.88 mg/L	1.63 NTU	61.0 mV	12.30 ft	100.00 ml/min
8/2/2022 2:24 PM	05:00	6.06 pH	25.15 °C	106.69 µS/cm	0.78 mg/L	9.49 NTU	68.2 mV	12.90 ft	100.00 ml/min
8/2/2022 2:29 PM	10:00	6.05 pH	24.88 °C	107.20 µS/cm	0.73 mg/L	4.18 NTU	69.8 mV	13.40 ft	100.00 ml/min
8/2/2022 2:34 PM	15:00	6.05 pH	24.96 °C	106.24 µS/cm	0.72 mg/L	2.25 NTU	70.7 mV	13.90 ft	100.00 ml/min
8/2/2022 2:39 PM	20:00	6.05 pH	24.87 °C	105.86 µS/cm	0.72 mg/L	2.31 NTU	70.9 mV	14.48 ft	100.00 ml/min
8/2/2022 2:44 PM	25:00	6.05 pH	24.87 °C	106.53 µS/cm	0.73 mg/L	1.79 NTU	70.6 mV	15.00 ft	100.00 ml/min
8/2/2022 2:49 PM	30:00	6.06 pH	24.68 °C	106.87 µS/cm	0.74 mg/L	1.42 NTU	69.8 mV	15.60 ft	100.00 ml/min
8/2/2022 2:54 PM	35:00	6.04 pH	24.74 °C	107.78 µS/cm	0.76 mg/L	1.44 NTU	70.3 mV	16.05 ft	100.00 ml/min
8/2/2022 2:59 PM	40:00	6.06 pH	24.73 °C	108.57 µS/cm	0.74 mg/L	1.23 NTU	68.7 mV	16.50 ft	100.00 ml/min
8/2/2022 3:04 PM	45:00	6.07 pH	24.71 °C	109.13 µS/cm	0.74 mg/L	1.10 NTU	67.7 mV	16.90 ft	100.00 ml/min
8/2/2022 3:09 PM	50:00	6.07 pH	24.58 °C	109.40 µS/cm	0.73 mg/L	1.14 NTU	67.2 mV	17.45 ft	100.00 ml/min
8/2/2022 3:14 PM	55:00	6.07 pH	24.61 °C	110.45 µS/cm	0.73 mg/L	1.71 NTU	66.8 mV	17.75 ft	100.00 ml/min
8/2/2022 3:19 PM	01:00:00	6.06 pH	24.87 °C	109.48 µS/cm	0.72 mg/L	2.10 NTU	66.8 mV	18.10 ft	100.00 ml/min

8/2/2022 3:24 PM	01:05:00	6.06 pH	24.74 °C	109.74 µS/cm	0.71 mg/L	1.64 NTU	67.0 mV	18.55 ft	100.00 ml/min
8/2/2022 3:29 PM	01:10:00	6.06 pH	24.78 °C	112.12 µS/cm	0.71 mg/L	1.68 NTU	67.0 mV	18.90 ft	100.00 ml/min
8/2/2022 3:34 PM	01:15:00	6.05 pH	24.79 °C	112.61 µS/cm	0.71 mg/L	1.15 NTU	78.1 mV	19.25 ft	100.00 ml/min
8/2/2022 3:39 PM	01:20:00	6.06 pH	24.84 °C	111.31 µS/cm	0.71 mg/L	1.43 NTU	67.0 mV	19.60 ft	100.00 ml/min
8/2/2022 3:44 PM	01:25:00	6.06 pH	24.85 °C	111.13 µS/cm	0.70 mg/L	1.35 NTU	67.6 mV	19.90 ft	100.00 ml/min
8/2/2022 3:49 PM	01:30:00	6.07 pH	24.78 °C	111.19 µS/cm	0.71 mg/L	0.99 NTU	67.2 mV	20.32 ft	100.00 ml/min
8/2/2022 3:54 PM	01:35:00	6.06 pH	25.46 °C	112.15 µS/cm	0.70 mg/L	1.13 NTU	67.8 mV	20.65 ft	100.00 ml/min
8/2/2022 3:59 PM	01:40:00	6.08 pH	26.02 °C	112.15 µS/cm	0.72 mg/L	1.29 NTU	67.2 mV	20.75 ft	100.00 ml/min
8/2/2022 4:04 PM	01:45:00	6.07 pH	25.98 °C	111.33 µS/cm	0.75 mg/L	2.17 NTU	68.2 mV	20.96 ft	100.00 ml/min
8/2/2022 4:09 PM	01:50:00	6.08 pH	25.51 °C	110.83 µS/cm	0.76 mg/L	1.26 NTU	68.0 mV	21.04 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-113	Grab.

Low-Flow Test Report:

Test Date / Time: 8/10/2022 10:54:48 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-101 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.94 ft** **Total Depth: 37.99 ft** **Initial Depth to Water: 13.22 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 32.94 ft** **Estimated Total Volume Pumped: 4 L** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 2.53 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 884186**

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

Weather Conditions:
Overcast, 75 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/10/2022 10:54 AM	00:00	5.41 pH	19.59 °C	264.36 µS/cm	1.06 mg/L	--	142.6 mV	15.70 ft	200.00 ml/min
8/10/2022 10:59 AM	05:00	5.34 pH	19.57 °C	266.74 µS/cm	0.94 mg/L	--	142.5 mV	15.80 ft	200.00 ml/min
8/10/2022 11:04 AM	10:00	5.34 pH	20.75 °C	270.83 µS/cm	0.98 mg/L	--	163.2 mV	15.75 ft	200.00 ml/min
8/10/2022 11:09 AM	15:00	5.31 pH	21.12 °C	318.40 µS/cm	0.70 mg/L	1.91 NTU	127.7 mV	15.75 ft	200.00 ml/min
8/10/2022 11:14 AM	20:00	5.33 pH	21.54 °C	330.29 µS/cm	0.75 mg/L	1.08 NTU	110.9 mV	15.75 ft	200.00 ml/min
8/10/2022 11:19 AM	25:00	5.33 pH	21.76 °C	339.22 µS/cm	0.72 mg/L	0.87 NTU	123.9 mV	15.75 ft	200.00 ml/min
8/10/2022 11:24 AM	30:00	5.37 pH	21.73 °C	346.46 µS/cm	0.73 mg/L	0.95 NTU	111.9 mV	15.75 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-101	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 2:26:55 PM
Project: GP-Plant Hammond
Operator Name: Tristan Orndorff

Location Name: HGWC-102 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.43 ft** **Total Depth: 36.87 ft** **Initial Depth to Water: 12.94 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 32.43 ft** **Estimated Total Volume Pumped: 7 L** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.28 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883546**

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

Weather Conditions:
Sunny, hot, 91 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 2:26 PM	00:00	5.70 pH	24.30 °C	849.13 µS/cm	0.27 mg/L	2.20 NTU	89.9 mV	13.20 ft	200.00 ml/min
8/5/2022 2:31 PM	05:00	5.72 pH	22.71 °C	873.85 µS/cm	0.14 mg/L	1.86 NTU	90.1 mV	13.21 ft	200.00 ml/min
8/5/2022 2:36 PM	10:00	5.69 pH	22.54 °C	880.79 µS/cm	0.11 mg/L	2.76 NTU	103.9 mV	13.22 ft	200.00 ml/min
8/5/2022 2:41 PM	15:00	5.71 pH	22.11 °C	879.26 µS/cm	0.09 mg/L	2.20 NTU	105.6 mV	13.22 ft	200.00 ml/min
8/5/2022 2:46 PM	20:00	5.69 pH	21.86 °C	881.13 µS/cm	0.09 mg/L	1.91 NTU	90.6 mV	13.22 ft	200.00 ml/min
8/5/2022 2:51 PM	25:00	5.69 pH	21.75 °C	885.65 µS/cm	0.08 mg/L	2.98 NTU	107.7 mV	13.22 ft	200.00 ml/min
8/5/2022 2:56 PM	30:00	5.69 pH	21.66 °C	884.61 µS/cm	0.08 mg/L	2.06 NTU	105.6 mV	13.22 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-102	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 12:21:57 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-103 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.68 ft** **Total Depth: 37.61 ft** **Initial Depth to Water: 13.69 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 32.68 ft** **Estimated Total Volume Pumped: 23 L** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.15 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	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 12:21 PM	00:00	5.74 pH	21.76 °C	844.69 µS/cm	0.95 mg/L	92.90 NTU	49.7 mV	13.84 ft	200.00 ml/min
8/5/2022 12:26 PM	05:00	5.72 pH	20.61 °C	878.86 µS/cm	0.56 mg/L	68.20 NTU	81.9 mV	13.84 ft	200.00 ml/min
8/5/2022 12:31 PM	10:00	5.71 pH	20.57 °C	872.94 µS/cm	0.29 mg/L	65.40 NTU	107.7 mV	13.84 ft	200.00 ml/min
8/5/2022 12:36 PM	15:00	5.71 pH	20.62 °C	866.79 µS/cm	0.26 mg/L	64.30 NTU	109.6 mV	13.84 ft	200.00 ml/min
8/5/2022 12:41 PM	20:00	5.71 pH	20.78 °C	867.22 µS/cm	0.21 mg/L	38.00 NTU	111.4 mV	13.84 ft	200.00 ml/min
8/5/2022 12:46 PM	25:00	5.71 pH	20.55 °C	865.42 µS/cm	0.19 mg/L	27.00 NTU	112.3 mV	13.84 ft	200.00 ml/min
8/5/2022 12:51 PM	30:00	5.71 pH	20.48 °C	870.48 µS/cm	0.16 mg/L	23.50 NTU	113.5 mV	13.84 ft	200.00 ml/min
8/5/2022 12:56 PM	35:00	5.71 pH	20.53 °C	870.59 µS/cm	0.18 mg/L	18.10 NTU	111.9 mV	13.84 ft	200.00 ml/min
8/5/2022 1:01 PM	40:00	5.71 pH	20.68 °C	867.97 µS/cm	0.13 mg/L	17.20 NTU	111.5 mV	13.84 ft	200.00 ml/min
8/5/2022 1:06 PM	45:00	5.71 pH	20.66 °C	868.04 µS/cm	0.12 mg/L	14.60 NTU	112.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:11 PM	50:00	5.71 pH	20.62 °C	867.31 µS/cm	0.12 mg/L	12.80 NTU	112.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:16 PM	55:00	5.71 pH	20.32 °C	867.47 µS/cm	0.11 mg/L	10.69 NTU	112.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:21 PM	01:00:00	5.71 pH	20.15 °C	869.79 µS/cm	0.10 mg/L	9.47 NTU	112.2 mV	13.84 ft	200.00 ml/min

8/5/2022 1:26 PM	01:05:00	5.71 pH	20.05 °C	869.87 µS/cm	0.10 mg/L	8.39 NTU	112.6 mV	13.84 ft	200.00 ml/min
8/5/2022 1:31 PM	01:10:00	5.71 pH	20.14 °C	870.25 µS/cm	0.10 mg/L	7.38 NTU	113.0 mV	13.84 ft	200.00 ml/min
8/5/2022 1:36 PM	01:15:00	5.71 pH	20.17 °C	868.44 µS/cm	0.10 mg/L	7.54 NTU	111.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:41 PM	01:20:00	5.71 pH	19.90 °C	873.37 µS/cm	0.09 mg/L	6.71 NTU	92.0 mV	13.84 ft	200.00 ml/min
8/5/2022 1:46 PM	01:25:00	5.71 pH	19.83 °C	867.19 µS/cm	0.11 mg/L	6.19 NTU	111.5 mV	13.84 ft	200.00 ml/min
8/5/2022 1:51 PM	01:30:00	5.71 pH	19.78 °C	868.73 µS/cm	0.10 mg/L	5.46 NTU	111.9 mV	13.84 ft	200.00 ml/min
8/5/2022 1:56 PM	01:35:00	5.71 pH	19.95 °C	870.00 µS/cm	0.10 mg/L	5.62 NTU	111.3 mV	13.84 ft	200.00 ml/min
8/5/2022 2:01 PM	01:40:00	5.71 pH	20.11 °C	874.26 µS/cm	0.10 mg/L	5.32 NTU	90.0 mV	13.84 ft	200.00 ml/min
8/5/2022 2:06 PM	01:45:00	5.71 pH	19.97 °C	869.79 µS/cm	0.09 mg/L	5.11 NTU	109.1 mV	13.84 ft	200.00 ml/min
8/5/2022 2:11 PM	01:50:00	5.71 pH	19.91 °C	867.78 µS/cm	0.09 mg/L	5.55 NTU	109.5 mV	13.84 ft	200.00 ml/min
8/5/2022 2:16 PM	01:55:00	5.71 pH	19.77 °C	871.59 µS/cm	0.10 mg/L	4.98 NTU	89.1 mV	13.84 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-103	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 11:03:42 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-105 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 34.67 ft** **Total Depth: 44.89 ft** **Initial Depth to Water: 17.79 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 39.67 ft** **Estimated Total Volume Pumped: 7 L** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.26 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	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 11:03 AM	00:00	6.45 pH	20.82 °C	660.62 µS/cm	1.01 mg/L	21.00 NTU	0.9 mV	18.05 ft	200.00 ml/min
8/5/2022 11:08 AM	05:00	6.52 pH	19.77 °C	762.46 µS/cm	0.39 mg/L	13.20 NTU	18.0 mV	18.05 ft	200.00 ml/min
8/5/2022 11:13 AM	10:00	6.50 pH	19.64 °C	742.52 µS/cm	0.39 mg/L	7.52 NTU	10.3 mV	18.05 ft	200.00 ml/min
8/5/2022 11:18 AM	15:00	6.48 pH	19.50 °C	732.60 µS/cm	0.25 mg/L	5.66 NTU	5.3 mV	18.05 ft	200.00 ml/min
8/5/2022 11:23 AM	20:00	6.48 pH	19.46 °C	727.10 µS/cm	0.23 mg/L	4.29 NTU	4.1 mV	18.05 ft	200.00 ml/min
8/5/2022 11:28 AM	25:00	6.47 pH	19.51 °C	721.78 µS/cm	0.19 mg/L	3.46 NTU	3.3 mV	18.05 ft	200.00 ml/min
8/5/2022 11:33 AM	30:00	6.46 pH	19.52 °C	714.73 µS/cm	0.17 mg/L	2.83 NTU	1.3 mV	18.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-105	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 3:06:23 PM
Project: GP-Plant Hammond
Operator Name: Anthony Szwast

Location Name: HGWC-107 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 28.2 ft** **Total Depth: 38.03 ft** **Initial Depth to Water: 15.01 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 33.2 ft** **Estimated Total Volume Pumped: 8 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 843593**

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

Weather Conditions:
Sunny, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 3:06 PM	00:00	5.60 pH	22.85 °C	396.45 µS/cm	0.84 mg/L	2.19 NTU	112.1 mV	15.04 ft	200.00 ml/min
8/5/2022 3:11 PM	05:00	5.53 pH	21.69 °C	402.33 µS/cm	0.46 mg/L	2.15 NTU	153.8 mV	15.05 ft	200.00 ml/min
8/5/2022 3:16 PM	10:00	5.35 pH	21.51 °C	402.91 µS/cm	0.25 mg/L	2.08 NTU	171.6 mV	15.07 ft	200.00 ml/min
8/5/2022 3:21 PM	15:00	5.54 pH	21.37 °C	398.87 µS/cm	0.18 mg/L	2.12 NTU	166.1 mV	15.08 ft	200.00 ml/min
8/5/2022 3:26 PM	20:00	5.80 pH	22.27 °C	397.77 µS/cm	0.17 mg/L	1.68 NTU	163.9 mV	15.08 ft	200.00 ml/min
8/5/2022 3:31 PM	25:00	5.98 pH	21.68 °C	404.22 µS/cm	0.16 mg/L	1.80 NTU	168.4 mV	15.08 ft	200.00 ml/min
8/5/2022 3:36 PM	30:00	6.03 pH	21.28 °C	404.41 µS/cm	0.13 mg/L	1.14 NTU	169.6 mV	15.08 ft	200.00 ml/min
8/5/2022 3:41 PM	35:00	6.07 pH	21.23 °C	404.40 µS/cm	0.12 mg/L	1.08 NTU	204.5 mV	15.08 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-107	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 10:55:45 AM
Project: GP-Plant Hammond
Operator Name: Tristan Orndorff

Location Name: HGWC-109 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 21.36 ft** **Total Depth: 30.96 ft** **Initial Depth to Water: 8.75 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 26.36 ft** **Estimated Total Volume Pumped: 29.8 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883546**

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

Weather Conditions:
Sunny, humid, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 10:55 AM	00:00	6.80 pH	20.39 °C	377.50 µS/cm	1.27 mg/L	732.00 AU	-33.0 mV	8.78 ft	200.00 ml/min
8/5/2022 11:00 AM	05:00	6.83 pH	19.74 °C	381.37 µS/cm	0.68 mg/L	159.00 NTU	-29.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:05 AM	10:00	6.83 pH	19.53 °C	382.48 µS/cm	0.51 mg/L	106.90 NTU	-32.4 mV	8.78 ft	200.00 ml/min
8/5/2022 11:06 AM	10:56	6.83 pH	19.52 °C	382.14 µS/cm	0.48 mg/L	106.90 NTU	-32.9 mV	8.78 ft	200.00 ml/min
8/5/2022 11:11 AM	15:56	6.84 pH	19.48 °C	381.98 µS/cm	0.33 mg/L	47.50 NTU	-35.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:16 AM	20:56	6.83 pH	19.42 °C	381.47 µS/cm	0.25 mg/L	33.40 NTU	-64.4 mV	8.78 ft	200.00 ml/min
8/5/2022 11:21 AM	25:56	6.83 pH	19.34 °C	380.79 µS/cm	0.20 mg/L	20.30 NTU	-64.1 mV	8.78 ft	200.00 ml/min
8/5/2022 11:26 AM	30:56	6.83 pH	19.39 °C	380.41 µS/cm	0.16 mg/L	15.10 NTU	-64.4 mV	8.78 ft	200.00 ml/min
8/5/2022 11:31 AM	35:56	6.83 pH	19.39 °C	378.88 µS/cm	0.14 mg/L	12.70 NTU	-64.3 mV	8.78 ft	200.00 ml/min
8/5/2022 11:36 AM	40:56	6.83 pH	19.43 °C	379.68 µS/cm	0.13 mg/L	14.20 NTU	-64.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:41 AM	45:56	6.82 pH	19.50 °C	379.05 µS/cm	0.12 mg/L	13.14 NTU	-64.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:46 AM	50:56	6.82 pH	19.50 °C	380.32 µS/cm	0.26 mg/L	12.06 NTU	-65.1 mV	8.78 ft	200.00 ml/min
8/5/2022 11:51 AM	55:56	6.82 pH	19.61 °C	379.45 µS/cm	0.12 mg/L	9.88 NTU	-38.7 mV	8.78 ft	200.00 ml/min

8/5/2022 11:56 AM	01:00:56	6.82 pH	19.60 °C	379.55 µS/cm	0.13 mg/L	10.11 NTU	-65.3 mV	8.78 ft	200.00 ml/min
8/5/2022 12:01 PM	01:05:56	6.81 pH	19.57 °C	379.37 µS/cm	0.18 mg/L	10.17 NTU	-39.0 mV	8.78 ft	200.00 ml/min
8/5/2022 12:05 PM	01:09:23	6.81 pH	19.54 °C	379.67 µS/cm	0.11 mg/L	8.07 NTU	-40.7 mV	8.78 ft	200.00 ml/min
8/5/2022 12:10 PM	01:14:23	6.81 pH	19.52 °C	378.58 µS/cm	0.12 mg/L	7.94 NTU	-66.1 mV	8.78 ft	200.00 ml/min
8/5/2022 12:15 PM	01:19:23	6.81 pH	19.57 °C	377.75 µS/cm	0.11 mg/L	6.70 NTU	-66.4 mV	8.78 ft	200.00 ml/min
8/5/2022 12:20 PM	01:24:23	6.81 pH	19.57 °C	377.38 µS/cm	0.11 mg/L	6.79 NTU	-40.4 mV	8.78 ft	200.00 ml/min
8/5/2022 12:25 PM	01:29:23	6.81 pH	19.57 °C	378.61 µS/cm	0.11 mg/L	5.93 NTU	-67.0 mV	8.78 ft	200.00 ml/min
8/5/2022 12:30 PM	01:34:23	6.80 pH	19.66 °C	376.39 µS/cm	0.11 mg/L	7.44 NTU	-66.7 mV	8.78 ft	200.00 ml/min
8/5/2022 12:35 PM	01:39:23	6.80 pH	19.70 °C	377.89 µS/cm	0.17 mg/L	5.81 NTU	-41.3 mV	8.78 ft	200.00 ml/min
8/5/2022 12:40 PM	01:44:23	6.80 pH	20.19 °C	377.71 µS/cm	0.15 mg/L	6.71 NTU	-43.9 mV	8.78 ft	200.00 ml/min
8/5/2022 12:45 PM	01:49:23	6.80 pH	20.81 °C	377.19 µS/cm	0.20 mg/L	7.95 NTU	-44.7 mV	8.78 ft	200.00 ml/min
8/5/2022 12:50 PM	01:54:23	6.79 pH	21.02 °C	376.20 µS/cm	0.22 mg/L	6.68 NTU	-46.6 mV	8.78 ft	200.00 ml/min
8/5/2022 12:55 PM	01:59:23	6.79 pH	21.69 °C	374.83 µS/cm	0.24 mg/L	7.43 NTU	-69.9 mV	8.78 ft	200.00 ml/min
8/5/2022 1:00 PM	02:04:23	6.79 pH	21.91 °C	376.03 µS/cm	0.23 mg/L	6.61 NTU	-70.3 mV	8.78 ft	200.00 ml/min
8/5/2022 1:05 PM	02:09:23	6.79 pH	22.08 °C	376.22 µS/cm	0.23 mg/L	6.57 NTU	-70.4 mV	8.78 ft	200.00 ml/min
8/5/2022 1:10 PM	02:14:23	6.79 pH	22.29 °C	376.10 µS/cm	0.24 mg/L	6.85 NTU	-70.9 mV	8.78 ft	200.00 ml/min
8/5/2022 1:15 PM	02:19:23	6.80 pH	21.64 °C	366.97 µS/cm	0.22 mg/L	6.48 NTU	-68.2 mV	8.78 ft	200.00 ml/min
8/5/2022 1:20 PM	02:24:23	6.81 pH	19.77 °C	377.98 µS/cm	0.08 mg/L	4.07 NTU	-68.7 mV	8.78 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-109	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 12:45:55 PM
Project: GP-Plant Hammond
Operator Name: Anthony Szwast

Location Name: HGWC-117 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.26 ft** **Total Depth: 39.83 ft** **Initial Depth to Water: 16.90 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 35.26 ft** **Estimated Total Volume Pumped: 7 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: 843593**

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

Weather Conditions:
Sunny, 85 degree F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 12:45 PM	00:00	5.30 pH	24.49 °C	200.76 µS/cm	0.31 mg/L	0.29 NTU	167.4 mV	16.92 ft	200.00 ml/min
8/5/2022 12:50 PM	05:00	5.30 pH	23.08 °C	246.36 µS/cm	0.20 mg/L	0.18 NTU	175.8 mV	16.92 ft	200.00 ml/min
8/5/2022 12:55 PM	10:00	5.40 pH	23.01 °C	330.54 µS/cm	0.16 mg/L	0.16 NTU	222.9 mV	16.92 ft	200.00 ml/min
8/5/2022 1:00 PM	15:00	5.47 pH	22.80 °C	365.45 µS/cm	0.15 mg/L	0.00 NTU	184.1 mV	16.92 ft	200.00 ml/min
8/5/2022 1:05 PM	20:00	5.47 pH	22.89 °C	372.07 µS/cm	0.14 mg/L	0.01 NTU	178.8 mV	16.92 ft	200.00 ml/min
8/5/2022 1:10 PM	25:00	5.46 pH	22.35 °C	378.74 µS/cm	0.16 mg/L	0.00 NTU	187.9 mV	16.92 ft	200.00 ml/min
8/5/2022 1:15 PM	30:00	5.46 pH	22.64 °C	385.80 µS/cm	0.14 mg/L	0.07 NTU	185.4 mV	16.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-117	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 10:57:03 AM
Project: GP-Plant Hammond
Operator Name: Anthony Szwast

Location Name: HGWC-117A **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.31 ft** **Total Depth: 40.29 ft** **Initial Depth to Water: 16.69 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 35.31 ft** **Estimated Total Volume Pumped: 10 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 843593**

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

Weather Conditions:
Sunny, 80 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 10:57 AM	00:00	5.49 pH	21.99 °C	259.63 µS/cm	1.15 mg/L	3.31 NTU	135.7 mV	16.72 ft	200.00 ml/min
8/5/2022 11:02 AM	05:00	5.50 pH	21.83 °C	256.65 µS/cm	1.03 mg/L	3.10 NTU	149.0 mV	16.72 ft	200.00 ml/min
8/5/2022 11:07 AM	10:00	5.51 pH	21.77 °C	257.04 µS/cm	0.95 mg/L	1.97 NTU	148.4 mV	16.72 ft	200.00 ml/min
8/5/2022 11:12 AM	15:00	5.66 pH	21.91 °C	266.30 µS/cm	0.89 mg/L	1.39 NTU	134.6 mV	16.72 ft	200.00 ml/min
8/5/2022 11:17 AM	20:00	5.94 pH	21.99 °C	304.70 µS/cm	0.74 mg/L	2.20 NTU	107.3 mV	16.72 ft	200.00 ml/min
8/5/2022 11:22 AM	25:00	6.15 pH	22.09 °C	337.48 µS/cm	0.56 mg/L	1.55 NTU	89.2 mV	16.72 ft	200.00 ml/min
8/5/2022 11:27 AM	30:00	6.29 pH	22.27 °C	362.19 µS/cm	0.48 mg/L	0.90 NTU	77.5 mV	16.72 ft	200.00 ml/min
8/5/2022 11:32 AM	35:00	6.37 pH	22.27 °C	376.82 µS/cm	0.43 mg/L	1.14 NTU	73.8 mV	16.72 ft	200.00 ml/min
8/5/2022 11:37 AM	40:00	6.44 pH	22.22 °C	385.64 µS/cm	0.40 mg/L	1.37 NTU	70.7 mV	16.72 ft	200.00 ml/min
8/5/2022 11:42 AM	45:00	6.44 pH	22.26 °C	387.16 µS/cm	0.38 mg/L	0.97 NTU	72.3 mV	16.72 ft	200.00 ml/min

Samples

Sample ID:	Description:

HGWC-117A	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 3:19:31 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-118 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.91 ft** **Total Depth: 40.70 ft** **Initial Depth to Water: 13.40 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 35.91 ft** **Estimated Total Volume Pumped: 7.5 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.08 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 884186**

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

Weather Conditions:
Sunny, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 3:19 PM	00:00	7.04 pH	25.69 °C	503.24 µS/cm	0.61 mg/L	1.14 NTU	51.6 mV	13.40 ft	200.00 ml/min
8/5/2022 3:24 PM	05:00	7.05 pH	23.25 °C	489.84 µS/cm	0.28 mg/L	1.14 NTU	62.0 mV	13.40 ft	200.00 ml/min
8/5/2022 3:25 PM	05:38	7.05 pH	22.91 °C	505.18 µS/cm	0.24 mg/L	2.00 NTU	60.3 mV	13.40 ft	200.00 ml/min
8/5/2022 3:27 PM	08:13	7.05 pH	22.60 °C	508.67 µS/cm	0.17 mg/L	2.20 NTU	59.5 mV	13.40 ft	200.00 ml/min
8/5/2022 3:32 PM	13:13	7.06 pH	22.44 °C	491.47 µS/cm	0.13 mg/L	1.50 NTU	71.5 mV	13.40 ft	200.00 ml/min
8/5/2022 3:37 PM	18:13	7.06 pH	22.27 °C	491.35 µS/cm	0.11 mg/L	1.42 NTU	73.0 mV	13.40 ft	200.00 ml/min
8/5/2022 3:42 PM	23:13	7.06 pH	22.36 °C	490.60 µS/cm	0.10 mg/L	1.04 NTU	73.0 mV	13.40 ft	200.00 ml/min
8/5/2022 3:47 PM	28:13	7.05 pH	22.31 °C	491.69 µS/cm	0.09 mg/L	1.21 NTU	72.6 mV	13.40 ft	200.00 ml/min
8/5/2022 3:52 PM	33:13	7.07 pH	22.48 °C	488.99 µS/cm	0.09 mg/L	0.98 NTU	70.5 mV	13.40 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-118	Grab.

Dup-4	Grab.

January 2023

Low-Flow Test Report:

Test Date / Time: 1/24/2023 4:40:05 PM
Project:GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWA-47 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33.74 ft** **Total Depth: 43.74 ft** **Initial Depth to Water: 6.33 ft**	**Pump Type: Peri** **Tubing Type: Poly** **Pump Intake From TOC: 38.74 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 6.35 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/24/2023 4:40 PM	00:00	7.40 pH	17.56 °C	338.61 µS/cm	0.98 mg/L	1.86 NTU	7.4 mV	6.35 ft	200.00 ml/min
1/24/2023 4:45 PM	05:00	7.40 pH	17.29 °C	339.26 µS/cm	0.56 mg/L	1.47 NTU	7.6 mV	6.35 ft	200.00 ml/min
1/24/2023 4:50 PM	10:00	7.40 pH	17.26 °C	310.98 µS/cm	0.72 mg/L	1.18 NTU	6.2 mV	6.35 ft	200.00 ml/min
1/24/2023 4:55 PM	15:00	7.39 pH	17.32 °C	345.15 µS/cm	0.56 mg/L	1.50 NTU	8.6 mV	6.35 ft	200.00 ml/min
1/24/2023 5:00 PM	20:00	7.39 pH	17.35 °C	339.54 µS/cm	0.68 mg/L	1.09 NTU	9.5 mV	6.35 ft	200.00 ml/min
1/24/2023 5:05 PM	25:00	7.39 pH	17.40 °C	340.51 µS/cm	0.65 mg/L	1.03 NTU	8.0 mV	6.35 ft	200.00 ml/min
1/24/2023 5:10 PM	30:00	7.38 pH	17.39 °C	338.97 µS/cm	0.55 mg/L	0.85 NTU	8.0 mV	6.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-47	Grab.

Low-Flow Test Report:

Test Date / Time: 1/24/2023 2:20:19 PM
Project: GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWA-48D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 62.97 ft** **Total Depth: 72.97 ft** **Initial Depth to Water: 6.21 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 67.97 ft** **Estimated Total Volume Pumped: 17 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 11.17 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/24/2023 2:20 PM	00:00	7.50 pH	18.38 °C	354.27 µS/cm	2.28 mg/L	0.86 NTU	-7.4 mV	6.57 ft	200.00 ml/min
1/24/2023 2:25 PM	05:00	7.47 pH	17.44 °C	362.16 µS/cm	1.20 mg/L	10.99 NTU	-106.5 mV	7.22 ft	200.00 ml/min
1/24/2023 2:30 PM	10:00	7.47 pH	17.49 °C	362.63 µS/cm	1.08 mg/L	10.43 NTU	-114.0 mV	8.10 ft	200.00 ml/min
1/24/2023 2:34 PM	14:39	7.47 pH	17.53 °C	361.87 µS/cm	0.89 mg/L	4.60 NTU	-116.7 mV	8.64 ft	200.00 ml/min
1/24/2023 2:39 PM	19:39	7.48 pH	17.48 °C	360.31 µS/cm	0.99 mg/L	2.69 NTU	-101.5 mV	9.08 ft	200.00 ml/min
1/24/2023 2:44 PM	24:39	7.45 pH	17.59 °C	359.67 µS/cm	0.94 mg/L	2.09 NTU	-108.3 mV	9.45 ft	200.00 ml/min
1/24/2023 2:49 PM	29:39	7.48 pH	17.54 °C	359.47 µS/cm	1.16 mg/L	3.39 NTU	-156.9 mV	9.75 ft	200.00 ml/min
1/24/2023 2:54 PM	34:39	7.48 pH	17.66 °C	358.65 µS/cm	1.02 mg/L	5.50 NTU	-104.6 mV	10.02 ft	200.00 ml/min
1/24/2023 2:59 PM	39:39	7.45 pH	17.68 °C	359.05 µS/cm	1.16 mg/L	6.87 NTU	-149.6 mV	10.18 ft	200.00 ml/min
1/24/2023 3:04 PM	44:39	7.47 pH	17.82 °C	359.21 µS/cm	1.02 mg/L	6.92 NTU	-99.6 mV	10.37 ft	200.00 ml/min
1/24/2023 3:09 PM	49:39	7.48 pH	17.81 °C	357.67 µS/cm	1.16 mg/L	6.79 NTU	-144.8 mV	10.53 ft	200.00 ml/min
1/24/2023 3:14 PM	54:39	7.49 pH	17.77 °C	357.49 µS/cm	1.03 mg/L	6.63 NTU	-94.5 mV	10.66 ft	200.00 ml/min
1/24/2023 3:19 PM	59:39	7.48 pH	17.78 °C	357.45 µS/cm	0.83 mg/L	7.38 NTU	-92.4 mV	10.76 ft	200.00 ml/min

1/24/2023 3:24 PM	01:04:39	7.47 pH	17.91 °C	358.42 µS/cm	0.86 mg/L	7.10 NTU	-90.8 mV	10.86 ft	200.00 ml/min
1/24/2023 3:29 PM	01:09:39	7.48 pH	17.95 °C	356.92 µS/cm	0.86 mg/L	5.85 NTU	-133.3 mV	10.92 ft	200.00 ml/min
1/24/2023 3:34 PM	01:14:39	7.49 pH	17.97 °C	355.44 µS/cm	0.89 mg/L	5.65 NTU	-87.7 mV	10.98 ft	200.00 ml/min
1/24/2023 3:39 PM	01:19:38	7.47 pH	17.77 °C	355.32 µS/cm	1.05 mg/L	5.17 NTU	-91.9 mV	11.01 ft	200.00 ml/min
1/24/2023 3:44 PM	01:24:38	7.46 pH	17.58 °C	356.20 µS/cm	1.02 mg/L	4.94 NTU	-83.5 mV	11.17 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-48D	Grab.

Low-Flow Test Report:

Test Date / Time: 1/24/2023 12:33:30 PM
Project: GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWA-111 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33.67 ft** **Total Depth: 43.67 ft** **Initial Depth to Water: 10.63 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 38.67 ft** **Estimated Total Volume Pumped: 11 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 12.13 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 40 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/24/2023 12:33 PM	00:00	6.23 pH	17.89 °C	97.65 µS/cm	5.79 mg/L	0.12 NTU	72.9 mV	11.61 ft	200.00 ml/min
1/24/2023 12:38 PM	05:00	6.14 pH	17.84 °C	100.20 µS/cm	5.24 mg/L	0.10 NTU	57.1 mV	11.71 ft	200.00 ml/min
1/24/2023 12:43 PM	10:00	6.15 pH	18.18 °C	102.47 µS/cm	5.06 mg/L	0.12 NTU	52.7 mV	11.80 ft	200.00 ml/min
1/24/2023 12:48 PM	15:00	6.18 pH	18.06 °C	107.51 µS/cm	4.93 mg/L	0.25 NTU	50.3 mV	11.87 ft	200.00 ml/min
1/24/2023 12:53 PM	20:00	6.26 pH	18.11 °C	120.18 µS/cm	4.75 mg/L	0.10 NTU	47.0 mV	11.93 ft	200.00 ml/min
1/24/2023 12:58 PM	25:00	6.77 pH	18.25 °C	223.67 µS/cm	4.09 mg/L	0.04 NTU	33.9 mV	11.95 ft	200.00 ml/min
1/24/2023 1:03 PM	30:00	6.93 pH	18.24 °C	245.41 µS/cm	3.89 mg/L	0.19 NTU	43.6 mV	12.00 ft	200.00 ml/min
1/24/2023 1:08 PM	35:00	6.99 pH	18.47 °C	258.53 µS/cm	3.82 mg/L	0.12 NTU	43.4 mV	12.05 ft	200.00 ml/min
1/24/2023 1:13 PM	40:00	7.04 pH	18.38 °C	271.21 µS/cm	3.73 mg/L	0.28 NTU	42.3 mV	12.08 ft	200.00 ml/min
1/24/2023 1:18 PM	45:00	7.09 pH	18.47 °C	272.25 µS/cm	3.66 mg/L	0.23 NTU	40.9 mV	12.10 ft	200.00 ml/min
1/24/2023 1:23 PM	50:00	7.11 pH	18.47 °C	277.40 µS/cm	3.68 mg/L	0.20 NTU	40.4 mV	12.13 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-111	Grab.

Low-Flow Test Report:

Test Date / Time: 1/24/2023 12:29:11 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-112 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.15 ft** **Total Depth: 40.15 ft** **Initial Depth to Water: 8.32 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 35.15 ft** **Estimated Total Volume Pumped: 11 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.77 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 38 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/24/2023 12:29 PM	00:00	6.11 pH	17.32 °C	7.24 µS/cm	3.44 mg/L	4.83 NTU	112.1 mV	8.72 ft	200.00 ml/min
1/24/2023 12:34 PM	05:00	5.81 pH	16.60 °C	7.22 µS/cm	2.19 mg/L	13.80 NTU	140.6 mV	9.20 ft	200.00 ml/min
1/24/2023 12:39 PM	10:00	5.73 pH	17.49 °C	7.20 µS/cm	1.38 mg/L	10.38 NTU	187.4 mV	9.70 ft	200.00 ml/min
1/24/2023 12:44 PM	15:00	5.71 pH	17.81 °C	7.18 µS/cm	1.18 mg/L	9.47 NTU	145.7 mV	9.85 ft	200.00 ml/min
1/24/2023 12:49 PM	20:00	5.69 pH	17.76 °C	7.16 µS/cm	1.13 mg/L	8.49 NTU	145.2 mV	9.87 ft	200.00 ml/min
1/24/2023 12:54 PM	25:00	5.69 pH	17.94 °C	7.18 µS/cm	1.06 mg/L	7.80 NTU	144.8 mV	9.90 ft	200.00 ml/min
1/24/2023 12:59 PM	30:00	5.68 pH	17.86 °C	7.17 µS/cm	1.05 mg/L	6.85 NTU	144.4 mV	9.95 ft	200.00 ml/min
1/24/2023 1:04 PM	35:00	5.68 pH	18.00 °C	7.17 µS/cm	1.02 mg/L	5.79 NTU	144.4 mV	10.00 ft	200.00 ml/min
1/24/2023 1:09 PM	40:00	5.68 pH	18.16 °C	7.15 µS/cm	1.06 mg/L	5.44 NTU	143.6 mV	10.05 ft	200.00 ml/min
1/24/2023 1:14 PM	45:00	5.68 pH	18.20 °C	7.17 µS/cm	1.04 mg/L	5.17 NTU	143.0 mV	10.09 ft	200.00 ml/min
1/24/2023 1:19 PM	50:00	5.67 pH	18.19 °C	7.17 µS/cm	1.09 mg/L	4.99 NTU	142.7 mV	10.09 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-112	Grab.

Low-Flow Test Report:

Test Date / Time: 1/24/2023 2:10:27 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-113 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 26.11 ft** **Total Depth: 36.11 ft** **Initial Depth to Water: 4.72 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 31.11 ft** **Estimated Total Volume Pumped: 20.5 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 14.04 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 45 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/24/2023 2:10 PM	00:00	6.19 pH	17.10 °C	9.37 µS/cm	2.75 mg/L	20.50 NTU	106.0 mV	5.00 ft	100.00 ml/min
1/24/2023 2:15 PM	05:00	6.29 pH	17.32 °C	9.61 µS/cm	6.17 mg/L	18.70 NTU	140.6 mV	6.00 ft	100.00 ml/min
1/24/2023 2:20 PM	10:00	6.21 pH	16.93 °C	9.28 µS/cm	3.00 mg/L	2.16 NTU	151.4 mV	7.99 ft	100.00 ml/min
1/24/2023 2:25 PM	15:00	6.21 pH	16.33 °C	9.21 µS/cm	2.91 mg/L	1.23 NTU	156.5 mV	8.32 ft	100.00 ml/min
1/24/2023 2:30 PM	20:00	6.19 pH	16.47 °C	9.37 µS/cm	2.76 mg/L	1.19 NTU	144.0 mV	8.75 ft	100.00 ml/min
1/24/2023 2:35 PM	25:00	6.19 pH	16.83 °C	9.27 µS/cm	2.71 mg/L	0.95 NTU	140.6 mV	8.85 ft	100.00 ml/min
1/24/2023 2:40 PM	30:00	6.20 pH	16.56 °C	9.20 µS/cm	2.73 mg/L	1.35 NTU	140.4 mV	8.83 ft	100.00 ml/min
1/24/2023 2:45 PM	35:00	6.20 pH	15.88 °C	9.22 µS/cm	2.89 mg/L	1.10 NTU	140.9 mV	9.05 ft	100.00 ml/min
1/24/2023 2:50 PM	40:00	6.19 pH	16.30 °C	9.38 µS/cm	2.73 mg/L	1.15 NTU	134.4 mV	9.50 ft	100.00 ml/min
1/24/2023 2:55 PM	45:00	6.19 pH	16.87 °C	9.43 µS/cm	2.61 mg/L	1.30 NTU	131.7 mV	10.00 ft	100.00 ml/min
1/24/2023 3:00 PM	50:00	6.19 pH	16.91 °C	9.44 µS/cm	2.57 mg/L	0.85 NTU	130.4 mV	10.70 ft	100.00 ml/min
1/24/2023 3:05 PM	55:00	6.19 pH	17.06 °C	9.46 µS/cm	2.53 mg/L	0.50 NTU	129.0 mV	10.70 ft	100.00 ml/min
1/24/2023 3:10 PM	01:00:00	6.20 pH	17.05 °C	9.49 µS/cm	2.62 mg/L	--	131.5 mV	10.70 ft	100.00 ml/min

1/24/2023 3:15 PM	01:05:00	6.20 pH	17.37 °C	9.61 µS/cm	2.52 mg/L	0.21 NTU	128.5 mV	12.46 ft	100.00 ml/min
1/24/2023 3:20 PM	01:10:00	6.20 pH	17.45 °C	9.51 µS/cm	2.47 mg/L	0.53 NTU	127.8 mV	12.80 ft	100.00 ml/min
1/24/2023 3:25 PM	01:15:00	6.20 pH	17.32 °C	9.56 µS/cm	2.45 mg/L	2.23 NTU	127.4 mV	13.00 ft	100.00 ml/min
1/24/2023 3:30 PM	01:20:00	6.19 pH	17.32 °C	9.56 µS/cm	2.44 mg/L	1.60 NTU	126.5 mV	13.60 ft	100.00 ml/min
1/24/2023 3:35 PM	01:25:00	6.20 pH	17.42 °C	9.56 µS/cm	2.41 mg/L	2.00 NTU	126.0 mV	14.03 ft	100.00 ml/min
1/24/2023 3:40 PM	01:30:00	6.20 pH	17.18 °C	9.62 µS/cm	2.42 mg/L	2.50 NTU	125.4 mV	14.40 ft	100.00 ml/min
1/24/2023 3:45 PM	01:35:00	6.20 pH	16.91 °C	9.62 µS/cm	2.41 mg/L	2.18 NTU	125.0 mV	14.59 ft	100.00 ml/min
1/24/2023 3:50 PM	01:40:00	6.20 pH	16.93 °C	9.64 µS/cm	2.39 mg/L	2.22 NTU	124.8 mV	14.90 ft	100.00 ml/min
1/24/2023 3:55 PM	01:45:00	6.20 pH	17.09 °C	9.57 µS/cm	2.36 mg/L	1.89 NTU	125.0 mV	15.12 ft	100.00 ml/min
1/24/2023 4:00 PM	01:50:00	6.19 pH	17.09 °C	9.59 µS/cm	2.35 mg/L	2.33 NTU	124.9 mV	15.40 ft	100.00 ml/min
1/24/2023 4:05 PM	01:55:00	6.20 pH	17.14 °C	9.61 µS/cm	2.33 mg/L	1.98 NTU	124.3 mV	15.70 ft	100.00 ml/min
1/24/2023 4:10 PM	02:00:00	6.19 pH	17.27 °C	9.57 µS/cm	2.30 mg/L	1.65 NTU	123.6 mV	16.00 ft	100.00 ml/min
1/24/2023 4:15 PM	02:05:00	6.20 pH	17.11 °C	9.60 µS/cm	2.31 mg/L	1.76 NTU	123.0 mV	16.25 ft	100.00 ml/min
1/24/2023 4:20 PM	02:10:00	6.19 pH	17.18 °C	9.65 µS/cm	2.29 mg/L	2.09 NTU	122.6 mV	16.52 ft	100.00 ml/min
1/24/2023 4:25 PM	02:15:00	6.20 pH	17.09 °C	9.58 µS/cm	2.28 mg/L	1.93 NTU	122.7 mV	16.75 ft	100.00 ml/min
1/24/2023 4:30 PM	02:20:00	6.19 pH	16.85 °C	9.61 µS/cm	2.29 mg/L	1.59 NTU	122.1 mV	16.92 ft	100.00 ml/min
1/24/2023 4:35 PM	02:25:00	6.19 pH	16.78 °C	9.65 µS/cm	2.28 mg/L	1.73 NTU	121.7 mV	17.08 ft	100.00 ml/min
1/24/2023 4:40 PM	02:30:00	6.19 pH	16.78 °C	9.70 µS/cm	2.27 mg/L	1.86 NTU	121.7 mV	17.32 ft	100.00 ml/min
1/24/2023 4:45 PM	02:35:00	6.18 pH	16.66 °C	9.66 µS/cm	2.26 mg/L	1.98 NTU	122.1 mV	17.55 ft	100.00 ml/min
1/24/2023 4:50 PM	02:40:00	6.18 pH	16.64 °C	9.66 µS/cm	2.25 mg/L	2.72 NTU	121.8 mV	17.79 ft	100.00 ml/min
1/24/2023 4:55 PM	02:45:00	6.18 pH	16.55 °C	9.66 µS/cm	2.22 mg/L	1.88 NTU	121.3 mV	17.94 ft	100.00 ml/min
1/24/2023 5:00 PM	02:50:00	6.18 pH	16.62 °C	9.70 µS/cm	2.20 mg/L	1.42 NTU	120.6 mV	18.14 ft	100.00 ml/min
1/24/2023 5:05 PM	02:55:00	6.18 pH	16.64 °C	9.65 µS/cm	2.15 mg/L	2.05 NTU	120.1 mV	18.32 ft	100.00 ml/min
1/24/2023 5:10 PM	03:00:00	6.18 pH	16.51 °C	9.68 µS/cm	2.14 mg/L	1.83 NTU	119.8 mV	18.50 ft	100.00 ml/min
1/24/2023 5:15 PM	03:05:00	6.18 pH	16.35 °C	9.61 µS/cm	2.11 mg/L	1.75 NTU	119.7 mV	18.62 ft	100.00 ml/min
1/24/2023 5:20 PM	03:10:00	6.15 pH	16.18 °C	9.61 µS/cm	2.10 mg/L	1.22 NTU	120.9 mV	18.76 ft	100.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-113	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 8:53:10 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-101 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.94 ft** **Total Depth: 37.94 ft** **Initial Depth to Water: 12 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 32.94 ft** **Estimated Total Volume Pumped: 13 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 5.35 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 8:53 AM	00:00	5.38 pH	17.12 °C	281.54 µS/cm	1.16 mg/L	4.65 NTU	133.4 mV	13.82 ft	200.00 ml/min
1/25/2023 8:58 AM	05:00	5.33 pH	17.35 °C	272.51 µS/cm	1.10 mg/L	2.90 NTU	143.5 mV	14.40 ft	200.00 ml/min
1/25/2023 9:03 AM	10:00	5.40 pH	17.37 °C	265.09 µS/cm	1.86 mg/L	2.23 NTU	135.5 mV	15.05 ft	200.00 ml/min
1/25/2023 9:08 AM	15:00	5.41 pH	17.36 °C	274.80 µS/cm	2.19 mg/L	1.33 NTU	146.1 mV	15.62 ft	200.00 ml/min
1/25/2023 9:13 AM	20:00	5.43 pH	17.41 °C	287.64 µS/cm	2.19 mg/L	1.20 NTU	118.4 mV	15.88 ft	200.00 ml/min
1/25/2023 9:18 AM	25:00	5.44 pH	17.45 °C	296.70 µS/cm	2.05 mg/L	0.81 NTU	107.1 mV	16.25 ft	200.00 ml/min
1/25/2023 9:23 AM	30:00	5.47 pH	17.46 °C	304.31 µS/cm	1.94 mg/L	0.98 NTU	99.5 mV	16.50 ft	200.00 ml/min
1/25/2023 9:28 AM	35:00	5.47 pH	17.58 °C	309.55 µS/cm	1.86 mg/L	1.08 NTU	96.2 mV	16.50 ft	200.00 ml/min
1/25/2023 9:33 AM	40:00	5.47 pH	17.65 °C	312.10 µS/cm	1.78 mg/L	0.80 NTU	93.5 mV	16.85 ft	200.00 ml/min
1/25/2023 9:38 AM	45:00	5.48 pH	17.63 °C	313.30 µS/cm	1.70 mg/L	0.65 NTU	92.2 mV	17.05 ft	200.00 ml/min
1/25/2023 9:43 AM	50:00	5.47 pH	17.58 °C	313.88 µS/cm	1.57 mg/L	0.53 NTU	93.1 mV	17.20 ft	200.00 ml/min
1/25/2023 9:48 AM	55:00	5.47 pH	17.61 °C	315.93 µS/cm	1.69 mg/L	0.70 NTU	90.9 mV	17.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGAM-HGWC-101	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 10:34:21 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-102 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.43 ft** **Total Depth: 37.43 ft** **Initial Depth to Water: 12.74 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 32.43 ft** **Estimated Total Volume Pumped: 6000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.22 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 10:34 AM	00:00	5.64 pH	17.15 °C	665.09 µS/cm	0.32 mg/L	12.70 NTU	146.8 mV	12.94 ft	200.00 ml/min
1/25/2023 10:39 AM	05:00	5.64 pH	17.02 °C	671.18 µS/cm	0.22 mg/L	12.10 NTU	142.9 mV	12.96 ft	200.00 ml/min
1/25/2023 10:44 AM	10:00	5.65 pH	17.00 °C	680.05 µS/cm	0.22 mg/L	12.00 NTU	174.1 mV	12.96 ft	200.00 ml/min
1/25/2023 10:49 AM	15:00	5.68 pH	16.99 °C	730.42 µS/cm	0.19 mg/L	4.00 NTU	112.4 mV	12.96 ft	200.00 ml/min
1/25/2023 10:54 AM	20:00	5.75 pH	16.97 °C	851.94 µS/cm	0.26 mg/L	3.85 NTU	85.1 mV	12.96 ft	200.00 ml/min
1/25/2023 10:59 AM	25:00	5.75 pH	17.04 °C	870.43 µS/cm	0.11 mg/L	3.95 NTU	84.0 mV	12.96 ft	200.00 ml/min
1/25/2023 11:04 AM	30:00	5.77 pH	17.23 °C	891.38 µS/cm	0.08 mg/L	0.85 NTU	84.5 mV	12.96 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-102	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 11:51:57 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-103 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.68 ft** **Total Depth: 37.68 ft** **Initial Depth to Water: 11.94 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 32.68 ft** **Estimated Total Volume Pumped: 29 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.16 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 11:51 AM	00:00	5.66 pH	17.09 °C	861.00 µS/cm	1.01 mg/L	28.20 NTU	98.4 mV	12.10 ft	200.00 ml/min
1/25/2023 11:56 AM	05:00	5.66 pH	17.24 °C	642.58 µS/cm	0.92 mg/L	23.90 NTU	98.0 mV	12.10 ft	200.00 ml/min
1/25/2023 12:01 PM	10:00	5.64 pH	17.21 °C	858.58 µS/cm	0.82 mg/L	28.20 NTU	91.9 mV	12.10 ft	200.00 ml/min
1/25/2023 12:06 PM	15:00	5.65 pH	17.27 °C	851.80 µS/cm	0.72 mg/L	33.80 NTU	107.6 mV	12.10 ft	200.00 ml/min
1/25/2023 12:11 PM	20:00	5.65 pH	17.13 °C	851.43 µS/cm	0.67 mg/L	27.90 NTU	109.4 mV	12.10 ft	200.00 ml/min
1/25/2023 12:16 PM	25:00	5.65 pH	17.06 °C	854.02 µS/cm	0.67 mg/L	24.80 NTU	94.5 mV	12.10 ft	200.00 ml/min
1/25/2023 12:21 PM	30:00	5.65 pH	17.14 °C	855.13 µS/cm	0.65 mg/L	27.00 NTU	107.1 mV	12.10 ft	200.00 ml/min
1/25/2023 12:26 PM	35:00	5.65 pH	17.36 °C	854.47 µS/cm	0.67 mg/L	18.60 NTU	106.6 mV	12.10 ft	200.00 ml/min
1/25/2023 12:31 PM	40:00	5.65 pH	17.18 °C	852.68 µS/cm	0.65 mg/L	16.00 NTU	105.8 mV	12.10 ft	200.00 ml/min
1/25/2023 12:36 PM	45:00	5.65 pH	16.78 °C	855.82 µS/cm	0.67 mg/L	14.30 NTU	105.1 mV	12.10 ft	200.00 ml/min
1/25/2023 12:41 PM	50:00	5.65 pH	16.67 °C	859.12 µS/cm	0.64 mg/L	12.40 NTU	105.2 mV	12.10 ft	200.00 ml/min
1/25/2023 12:46 PM	55:00	5.65 pH	16.69 °C	861.31 µS/cm	0.63 mg/L	13.40 NTU	89.9 mV	12.10 ft	200.00 ml/min
1/25/2023 12:51 PM	01:00:00	5.65 pH	17.30 °C	758.70 µS/cm	0.67 mg/L	20.90 NTU	88.1 mV	12.10 ft	200.00 ml/min

1/25/2023 12:56 PM	01:05:00	5.65 pH	17.23 °C	854.53 µS/cm	0.61 mg/L	24.00 NTU	89.3 mV	12.10 ft	200.00 ml/min
1/25/2023 1:01 PM	01:10:00	5.65 pH	17.30 °C	854.22 µS/cm	0.66 mg/L	23.90 NTU	102.7 mV	12.10 ft	200.00 ml/min
1/25/2023 1:06 PM	01:15:00	5.65 pH	17.14 °C	855.48 µS/cm	0.66 mg/L	15.40 NTU	102.8 mV	12.10 ft	200.00 ml/min
1/25/2023 1:11 PM	01:20:00	5.65 pH	16.84 °C	857.62 µS/cm	0.68 mg/L	12.10 NTU	102.3 mV	12.10 ft	200.00 ml/min
1/25/2023 1:16 PM	01:25:00	5.65 pH	16.59 °C	861.76 µS/cm	0.65 mg/L	10.71 NTU	102.5 mV	12.10 ft	200.00 ml/min
1/25/2023 1:21 PM	01:30:00	5.65 pH	16.56 °C	860.58 µS/cm	0.65 mg/L	8.40 NTU	102.0 mV	12.10 ft	200.00 ml/min
1/25/2023 1:26 PM	01:35:00	5.65 pH	16.73 °C	864.20 µS/cm	0.64 mg/L	8.21 NTU	102.1 mV	12.10 ft	200.00 ml/min
1/25/2023 1:31 PM	01:40:00	5.65 pH	16.78 °C	865.24 µS/cm	0.67 mg/L	8.74 NTU	88.9 mV	12.10 ft	200.00 ml/min
1/25/2023 1:36 PM	01:45:00	5.65 pH	16.64 °C	863.95 µS/cm	0.70 mg/L	6.80 NTU	87.9 mV	12.10 ft	200.00 ml/min
1/25/2023 1:41 PM	01:50:00	5.65 pH	16.53 °C	865.07 µS/cm	0.62 mg/L	6.28 NTU	99.7 mV	12.10 ft	200.00 ml/min
1/25/2023 1:46 PM	01:55:00	5.65 pH	16.75 °C	864.93 µS/cm	0.62 mg/L	6.31 NTU	99.8 mV	12.10 ft	200.00 ml/min
1/25/2023 1:51 PM	02:00:00	5.65 pH	16.91 °C	866.04 µS/cm	0.66 mg/L	5.80 NTU	99.8 mV	12.10 ft	200.00 ml/min
1/25/2023 1:56 PM	02:05:00	5.65 pH	16.84 °C	865.92 µS/cm	0.64 mg/L	6.01 NTU	99.5 mV	12.10 ft	200.00 ml/min
1/25/2023 2:01 PM	02:10:00	5.65 pH	16.76 °C	866.90 µS/cm	0.71 mg/L	5.55 NTU	100.1 mV	12.10 ft	200.00 ml/min
1/25/2023 2:06 PM	02:15:00	5.65 pH	16.73 °C	867.78 µS/cm	0.71 mg/L	5.14 NTU	99.6 mV	12.10 ft	200.00 ml/min
1/25/2023 2:11 PM	02:20:00	5.65 pH	16.59 °C	868.08 µS/cm	0.66 mg/L	4.97 NTU	86.5 mV	12.10 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-103	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 3:00:36 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-105 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 34.67 ft** **Total Depth: 44.67 ft** **Initial Depth to Water: 17.35 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 39.67 ft** **Estimated Total Volume Pumped: 7.5 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 5.3 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 3:00 PM	00:00	6.43 pH	16.50 °C	818.34 µS/cm	0.79 mg/L	24.30 NTU	-29.7 mV	17.65 ft	200.00 ml/min
1/25/2023 3:03 PM	02:42	6.44 pH	16.55 °C	840.35 µS/cm	0.53 mg/L	24.30 NTU	-31.7 mV	17.65 ft	200.00 ml/min
1/25/2023 3:08 PM	07:42	6.43 pH	16.56 °C	832.67 µS/cm	0.45 mg/L	11.10 NTU	-30.4 mV	17.65 ft	200.00 ml/min
1/25/2023 3:13 PM	12:42	6.43 pH	16.59 °C	824.94 µS/cm	0.43 mg/L	8.63 NTU	-33.0 mV	17.65 ft	200.00 ml/min
1/25/2023 3:18 PM	17:42	6.42 pH	16.48 °C	815.83 µS/cm	0.39 mg/L	7.48 NTU	-35.6 mV	17.65 ft	200.00 ml/min
1/25/2023 3:23 PM	22:42	6.42 pH	16.46 °C	805.11 µS/cm	0.38 mg/L	6.57 NTU	-32.9 mV	17.65 ft	200.00 ml/min
1/25/2023 3:28 PM	27:42	6.41 pH	16.55 °C	798.04 µS/cm	0.39 mg/L	5.74 NTU	-34.3 mV	17.65 ft	200.00 ml/min
1/25/2023 3:33 PM	32:42	6.41 pH	16.45 °C	791.79 µS/cm	0.33 mg/L	4.92 NTU	-31.8 mV	17.65 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-105	Grab.
HAM-AP-4-FD-04	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 11:25:04 AM
Project: GP- Plant Hammond
Operator Name: Connor Cain

Location Name: HGWC-107 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 28.2 ft** **Total Depth: 38.2 ft** **Initial Depth to Water: 15.03 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 35.2 ft** **Estimated Total Volume Pumped: 10 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: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 55 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 11:25 AM	00:00	6.19 pH	17.76 °C	433.42 µS/cm	3.33 mg/L	6.43 NTU	108.8 mV	15.05 ft	200.00 ml/min
1/25/2023 11:30 AM	05:00	6.17 pH	17.83 °C	439.55 µS/cm	1.21 mg/L	5.59 NTU	93.7 mV	15.05 ft	200.00 ml/min
1/25/2023 11:35 AM	10:00	6.15 pH	17.93 °C	439.72 µS/cm	0.62 mg/L	4.30 NTU	127.0 mV	15.05 ft	200.00 ml/min
1/25/2023 11:40 AM	15:00	6.14 pH	17.99 °C	438.19 µS/cm	0.44 mg/L	4.84 NTU	124.4 mV	15.05 ft	200.00 ml/min
1/25/2023 11:45 AM	20:00	6.14 pH	17.89 °C	437.30 µS/cm	0.49 mg/L	8.35 NTU	120.4 mV	15.05 ft	200.00 ml/min
1/25/2023 11:50 AM	25:00	6.15 pH	18.24 °C	435.34 µS/cm	0.44 mg/L	11.05 NTU	76.2 mV	15.05 ft	200.00 ml/min
1/25/2023 11:55 AM	30:00	6.13 pH	18.60 °C	436.02 µS/cm	0.43 mg/L	10.92 NTU	109.4 mV	15.05 ft	200.00 ml/min
1/25/2023 12:00 PM	35:00	6.14 pH	18.67 °C	434.57 µS/cm	0.41 mg/L	9.05 NTU	109.2 mV	15.05 ft	200.00 ml/min
1/25/2023 12:05 PM	40:00	6.15 pH	18.81 °C	435.31 µS/cm	0.45 mg/L	7.84 NTU	107.2 mV	15.05 ft	200.00 ml/min
1/25/2023 12:10 PM	45:00	6.15 pH	18.29 °C	436.26 µS/cm	0.41 mg/L	6.29 NTU	105.3 mV	15.05 ft	200.00 ml/min
1/25/2023 12:15 PM	50:00	6.13 pH	18.11 °C	435.45 µS/cm	0.50 mg/L	4.43 NTU	104.4 mV	15.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-107	Grab sample.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 9:00:26 AM
Project: GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWC-109 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 21.36 ft** **Total Depth: 31.36 ft** **Initial Depth to Water: 6.78 ft**	**Pump Type: Bladder** **Tubing Type: Poly** **Pump Intake From TOC: 26.36 ft** **Estimated Total Volume Pumped: 18 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: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy 55F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 9:00 AM	00:00	6.48 pH	15.99 °C	293.81 µS/cm	3.85 mg/L	759.00 NTU	76.1 mV	6.80 ft	200.00 ml/min
1/25/2023 9:05 AM	05:00	6.46 pH	16.25 °C	297.97 µS/cm	1.33 mg/L	1,597.0 NTU	65.8 mV	6.80 ft	200.00 ml/min
1/25/2023 9:10 AM	10:00	6.51 pH	16.41 °C	306.60 µS/cm	1.09 mg/L	170.00 NTU	24.7 mV	6.80 ft	200.00 ml/min
1/25/2023 9:15 AM	15:00	6.52 pH	16.48 °C	318.16 µS/cm	1.06 mg/L	106.20 NTU	8.4 mV	6.80 ft	200.00 ml/min
1/25/2023 9:20 AM	20:00	6.56 pH	16.53 °C	321.17 µS/cm	0.91 mg/L	58.80 NTU	0.9 mV	6.80 ft	200.00 ml/min
1/25/2023 9:25 AM	25:00	6.56 pH	16.59 °C	319.96 µS/cm	1.03 mg/L	32.90 NTU	2.7 mV	6.80 ft	200.00 ml/min
1/25/2023 9:30 AM	30:00	6.57 pH	16.63 °C	321.90 µS/cm	0.96 mg/L	22.40 NTU	0.9 mV	6.80 ft	200.00 ml/min
1/25/2023 9:35 AM	35:00	6.55 pH	16.76 °C	323.52 µS/cm	0.82 mg/L	17.40 NTU	4.4 mV	6.80 ft	200.00 ml/min
1/25/2023 9:40 AM	40:00	6.59 pH	16.59 °C	327.80 µS/cm	0.94 mg/L	13.60 NTU	-6.0 mV	6.80 ft	200.00 ml/min
1/25/2023 9:45 AM	45:00	6.60 pH	16.64 °C	329.13 µS/cm	0.87 mg/L	11.46 NTU	-8.9 mV	6.80 ft	200.00 ml/min
1/25/2023 9:50 AM	50:00	6.63 pH	16.66 °C	330.38 µS/cm	0.96 mg/L	10.60 NTU	-12.5 mV	6.80 ft	200.00 ml/min
1/25/2023 9:55 AM	55:00	6.60 pH	16.68 °C	333.61 µS/cm	0.85 mg/L	10.46 NTU	-5.7 mV	6.80 ft	200.00 ml/min
1/25/2023 10:00 AM	01:00:00	6.63 pH	16.63 °C	334.76 µS/cm	0.96 mg/L	8.79 NTU	-16.1 mV	6.80 ft	200.00 ml/min

1/25/2023 10:05 AM	01:05:00	6.64 pH	16.66 °C	336.65 µS/cm	1.06 mg/L	7.29 NTU	-18.4 mV	6.80 ft	200.00 ml/min
1/25/2023 10:10 AM	01:10:00	6.63 pH	16.78 °C	336.23 µS/cm	0.88 mg/L	7.26 NTU	-8.7 mV	6.80 ft	200.00 ml/min
1/25/2023 10:15 AM	01:15:00	6.62 pH	16.76 °C	337.00 µS/cm	1.26 mg/L	5.80 NTU	-17.3 mV	6.80 ft	200.00 ml/min
1/25/2023 10:20 AM	01:20:00	6.65 pH	16.74 °C	338.65 µS/cm	0.94 mg/L	5.43 NTU	-20.2 mV	6.80 ft	200.00 ml/min
1/25/2023 10:25 AM	01:25:00	6.65 pH	16.73 °C	338.83 µS/cm	0.94 mg/L	4.29 NTU	-20.7 mV	6.80 ft	200.00 ml/min
1/25/2023 10:30 AM	01:30:00	6.66 pH	16.77 °C	339.58 µS/cm	1.07 mg/L	4.22 NTU	-22.0 mV	6.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-109	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 3:20:04 PM
Project: GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWC-117 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.26 ft** **Total Depth: 40.26 ft** **Initial Depth to Water: 16.51 ft**	**Pump Type: Peri** **Tubing Type: Poly** **Pump Intake From TOC: 35.26 ft** **Estimated Total Volume Pumped: 7 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.01 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 3:20 PM	00:00	5.33 pH	17.17 °C	191.24 µS/cm	0.75 mg/L	2.74 NTU	116.9 mV	16.52 ft	200.00 ml/min
1/25/2023 3:25 PM	05:00	5.32 pH	17.40 °C	197.74 µS/cm	0.71 mg/L	0.74 NTU	157.6 mV	16.52 ft	200.00 ml/min
1/25/2023 3:30 PM	10:00	5.32 pH	17.53 °C	211.18 µS/cm	0.57 mg/L	0.47 NTU	104.9 mV	16.52 ft	200.00 ml/min
1/25/2023 3:35 PM	15:00	5.46 pH	17.57 °C	295.01 µS/cm	0.73 mg/L	0.14 NTU	91.9 mV	16.52 ft	200.00 ml/min
1/25/2023 3:40 PM	20:00	5.53 pH	18.06 °C	337.69 µS/cm	0.86 mg/L	0.19 NTU	78.9 mV	16.52 ft	200.00 ml/min
1/25/2023 3:45 PM	25:00	5.54 pH	17.44 °C	353.88 µS/cm	0.88 mg/L	0.06 NTU	73.1 mV	16.52 ft	200.00 ml/min
1/25/2023 3:50 PM	30:00	5.58 pH	17.36 °C	363.82 µS/cm	0.83 mg/L	0.08 NTU	69.0 mV	16.52 ft	200.00 ml/min
1/25/2023 3:55 PM	35:00	5.56 pH	17.26 °C	368.89 µS/cm	0.91 mg/L	0.12 NTU	66.7 mV	16.52 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-117	Grab.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 1:20:03 PM
Project: GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWC-117A **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.31 ft** **Total Depth: 40.31 ft** **Initial Depth to Water: 16.35 ft**	**Pump Type: Peri** **Tubing Type: Poly** **Pump Intake From TOC: 35.31 ft** **Estimated Total Volume Pumped: 13 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 966090**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy 55F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/25/2023 1:20 PM	00:00	5.52 pH	17.50 °C	250.46 µS/cm	4.10 mg/L	0.66 NTU	118.5 mV	16.35 ft	200.00 ml/min
1/25/2023 1:25 PM	05:00	5.54 pH	17.46 °C	261.77 µS/cm	1.84 mg/L	0.27 NTU	83.5 mV	16.35 ft	200.00 ml/min
1/25/2023 1:30 PM	10:00	5.57 pH	17.99 °C	264.44 µS/cm	1.92 mg/L	0.04 NTU	73.9 mV	16.35 ft	200.00 ml/min
1/25/2023 1:35 PM	15:00	5.52 pH	17.84 °C	267.17 µS/cm	2.23 mg/L	0.05 NTU	71.2 mV	16.35 ft	200.00 ml/min
1/25/2023 1:40 PM	20:00	5.83 pH	17.68 °C	288.75 µS/cm	1.96 mg/L	0.10 NTU	57.0 mV	16.35 ft	200.00 ml/min
1/25/2023 1:45 PM	25:00	6.09 pH	17.98 °C	327.79 µS/cm	2.55 mg/L	0.11 NTU	42.4 mV	16.35 ft	200.00 ml/min
1/25/2023 1:50 PM	30:00	6.22 pH	18.34 °C	352.51 µS/cm	2.88 mg/L	0.05 NTU	36.3 mV	16.35 ft	200.00 ml/min
1/25/2023 1:55 PM	35:00	6.31 pH	18.02 °C	370.67 µS/cm	1.31 mg/L	0.06 NTU	30.8 mV	16.35 ft	200.00 ml/min
1/25/2023 2:00 PM	40:00	6.40 pH	18.27 °C	366.32 µS/cm	2.34 mg/L	0.14 NTU	27.6 mV	16.35 ft	200.00 ml/min
1/25/2023 2:05 PM	45:00	6.45 pH	18.26 °C	392.19 µS/cm	1.55 mg/L	0.11 NTU	25.4 mV	16.35 ft	200.00 ml/min
1/25/2023 2:10 PM	50:00	6.50 pH	17.93 °C	392.51 µS/cm	2.16 mg/L	0.09 NTU	24.3 mV	16.35 ft	200.00 ml/min
1/25/2023 2:15 PM	55:00	6.50 pH	17.80 °C	396.68 µS/cm	1.97 mg/L	0.12 NTU	23.4 mV	16.35 ft	200.00 ml/min
1/25/2023 2:20 PM	01:00:00	6.50 pH	17.93 °C	390.62 µS/cm	1.94 mg/L	0.11 NTU	23.4 mV	16.35 ft	200.00 ml/min

1/25/2023 2:25 PM	01:05:00	6.53 pH	17.89 °C	385.45 µS/cm	1.96 mg/L	0.07 NTU	22.3 mV	16.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-117	Grab sample.

Low-Flow Test Report:

Test Date / Time: 1/25/2023 2:54:14 PM
Project: GP-Plant Hammond
Operator Name: Anthony Szwast

Location Name: HGWC-118 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.91 ft** **Total Depth: 40.91 ft** **Initial Depth to Water: 12.61 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 35.91 ft** **Estimated Total Volume Pumped: 7 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883533**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, windy, 50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/25/2023 2:54 PM	00:00	6.50 pH	17.81 °C	509.59 µS/cm	0.18 mg/L	0.19 NTU	37.9 mV	12.70 ft	200.00 ml/min
1/25/2023 2:59 PM	05:00	6.53 pH	17.54 °C	511.34 µS/cm	0.17 mg/L	0.90 NTU	36.3 mV	12.69 ft	200.00 ml/min
1/25/2023 3:04 PM	10:00	6.60 pH	17.45 °C	518.98 µS/cm	0.14 mg/L	1.54 NTU	34.9 mV	12.69 ft	200.00 ml/min
1/25/2023 3:09 PM	15:00	6.61 pH	17.45 °C	518.42 µS/cm	0.11 mg/L	0.34 NTU	34.7 mV	12.69 ft	200.00 ml/min
1/25/2023 3:14 PM	20:00	6.64 pH	17.41 °C	521.69 µS/cm	0.10 mg/L	0.80 NTU	34.4 mV	12.69 ft	200.00 ml/min
1/25/2023 3:19 PM	25:00	6.66 pH	17.37 °C	523.47 µS/cm	0.09 mg/L	0.40 NTU	34.5 mV	12.68 ft	200.00 ml/min
1/25/2023 3:24 PM	30:00	6.67 pH	17.41 °C	524.88 µS/cm	0.08 mg/L	0.63 NTU	34.3 mV	12.68 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-118	Grab.

CALIBRATION REPORTS

August 2022

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Tristan O | Date: 8/2/22 | Time (start): 718 | Time (finish): 740

smarTroll SN: 883546 | Turbidity Meter Type: LaMote 2020we | SN: 1603

Weather Conditions: Cloudy, 80° | Facility and Unit: Plant Hammond | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032 04/2023	25°	4490	4291	4490	+/- 5 %	Yes / No	
pH (4)			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 04/23	24.1	7.00	7.16	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)	20080056 04/23	23.9	10.00	10.47	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check			10.00	9.95	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	21140143 04/23	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	Yes / No	
Turbidity 10 NTU			10.00	10.18	9.99	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 8/2/2022 | Time (start): 0715 | Time (finish): ~~0730~~ 0745

smarTroll SN: 884186 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2672

Weather Conditions: Cloudy, 75° | Facility and Unit: Plant Hammond | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032 04/23	25	4490	4537	4490	+/- 5 %	Yes No	
pH (4)			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	
pH (7)	21380652 04/23	23.91	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)	20060656 4/23	24.12	10.00	10.91	10.0	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check		~~24.24~~	10.00	9.96		+/- 0.1 SU	Yes No	
ORP (mV)	21140143 4/23	24.24	228	215	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	104.83	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.94	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	0.98	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.85	10.01	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Anthony S. | Date: 8/5/2022 | Time (start): 8:00 | Time (finish): 8:25

smarTroll SN: 843593 | Turbidity Meter Type: LaMote 2020we | SN: 1511-4111

Weather Conditions: Sunny, 75°F | Facility and Unit: Plant Hammond | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21070193 08/2022	25.95	4490	~~4500~~ 4476.8 @ 8/5/2022	4490.0	+/- 5 %	Yes / No	
pH (4)		26.72	4.00	4.11	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	21070193 08/2022	35.63	4.00	4.04	—	+/- 0.1 SU	Yes / No	
pH (7)	21380102 04/2023	27.37	7.00	7.09	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	21380102 04/2023	35.17	7.00	6.98	—	+/- 0.1 SU	Yes / No	
pH (10)	20080056 04/2023	27.63	10.00	10.06	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	20080056 04/2023	34.38	10.00	9.92	—	+/- 0.1 SU	Yes / No	
ORP (mV)	21140143 04/2023	27.48	228	221.3	228.0	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	101.29	100.0	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.01	0.0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.88	1.0	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	~~9.59~~ 8.59 @ 8/5/2022	10.0	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Tristan Orndorff | Date: 8/5/22 | Time (start): 8:00 | Time (finish): 8:20 TO 8/5/22

smarTroll SN: 8835546 | Turbidity Meter Type: LaMote 2020we | SN: 1603

Weather Conditions: partly cloudy, 90° | Facility and Unit: Plant Hammond | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21476032 04/2023	25.56	4490	4508	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.91	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check			4.00	4.10	4.00	+/- 0.1 SU	Yes / No	
pH (7)	21380102 04/23	25.98	7.00	6.99	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check			7.00	6.99	7.00	+/- 0.1 SU	Yes / No	
pH (10)	20080056 04/23	26.27	10.00	9.93	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check			10.00	9.94	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	2140143 04/23	26.40	228	226.5	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	99.67	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.04	0.0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.08	0.96	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.95	10.00	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 8/5/22 | Time (start): 0800 | Time (finish): 0830

smarTroll SN: 884184 | Turbidity Meter Type: LaMote 2020we | SN: 22E97677

Weather Conditions: Clear/overcast, 75° | Facility and Unit: Plant Hammond | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032 04/23	24.5	4490	4592	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.02	4.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	/	/	4.00	4.02	4.0	+/- 0.1 SU	(Yes) No	
pH (7)	21386102 04/23	26.0	7.00	7.00	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	/	/	7.00	6.98	/	+/- 0.1 SU	(Yes) No	
pH (10)	20086656 4/23	26.4	10.00	9.98	10.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	/	/	10.00	10.00	/	+/- 0.1 SU	(Yes) No	
ORP (mV)	21140143 4/23	26.5	228	225.9	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	98.49	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	1.5	0.0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.5	1.1	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	7.71	9.97	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kressler | Date: 8/10/2022 | Time (start): 0710 | Time (finish): 0730

smarTroll SN: 884180 | Turbidity Meter Type: LaMote 2020we | SN: 22892477

Weather Conditions: Overcast, 75° | Facility and Unit: Plant Hammond | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032 04/23	23.54	4490	~~4458~~ 4470.8	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.03	4.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check			4.00	4.00		+/- 0.1 SU	~~Yes~~ / No	
pH (7)	21360102 04/23	23.77	7.00	7.05	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	20050056 02/23		7.00	6.98		+/- 0.1 SU	~~Yes~~ / No	
pH (10)		23.96	10.00	9.93	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check			10.00	10.0		+/- 0.1 SU	~~Yes~~ / No	
ORP (mV)	21401145 4/23	24.06	228	231.3	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	99.62	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	1.69	0.0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.32	1.21	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	11.3	10.00	+/- 0.5 NTU	Yes / No	

January 2023

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Anthony S. | Date: 1/24/2023 | Time (start): 755 | Time (finish): 815

smarTroll SN: 883533 | Turbidity Meter Type: LaMote 2020we | SN: 7007-1416

Weather Conditions: Clear, 25°F | Facility and Unit: Plant Hammond | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	22250153 11/2023	-0.14	4490	4315.5	4490	+/- 5 %	(Yes) No	
pH (4)		-0.11	4.00	4.74	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	22250153 11/2023	19.36	4.00	3.37	4.00	+/- 0.1 SU	(Yes) No	
pH (7)	2216893 11/2023	0.41	7.00	7.31	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	2216893 11/2023	11.01	7.00	6.93	7.06	+/- 0.1 SU	(Yes) No	
pH (10)	21320202 12/2023	1.01	10.00	10.21	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	21320202 12/2023	10.55	10.00	10.07	10.14	+/- 0.1 SU	(Yes) No	
ORP (mV)	21340144 11/2023	1.11	228	248.0	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	94.50	100.0	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.00	—	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.45	0.59	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	11.79	9.99	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN

Date: 1/24/23

Time (start): 0716

Time (finish): 0735

smarTroll SN: 966040

Turbidity Meter Type: LaMote 2020we

SN: 709

Weather Conditions: Cloudy 28F

Facility and Unit: Plant Hammond

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	222501153 11/23	6.33	4490	~~3900~~	4490	+/- 5 %	Yes No	
pH (4)	↓		4.00	3.92 ~~3.96~~	4.0	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check		/	4.00	~~3.90~~ 3.96	~~4.06~~ 4.0	+/- 0.1 SU	Yes No	
pH (7)	2216893 11/23	7.42	7.00	7.05	7.0	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	↓	/	7.00	7.06	7.0	+/- 0.1 SU	Yes No	
pH (10)	2123202.02 12/23	7.69	10.00	10.19	10.0	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	↓	/	10.00	9.97	10.0	+/- 0.1 SU	Yes No	
ORP (mV)	213901.44 11/23	7.59	228	242.8	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]	[redacted]	100	100.02	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU	[redacted]	[redacted]	0	0.35	0.0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU	[redacted]	[redacted]	1.00	0.72	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU	[redacted]	[redacted]	10.00	10.83	10.00	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 11/24/2023

Time (start): 0700

Time (finish): 0750

smarTroll SN: 850724

Turbidity Meter Type: LaMote 2020we

SN: 5896-3715

Weather Conditions: Sunny, 27°F

Facility and Unit: Plant Hammond

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	22750153	7.55	4490	4166.0	4490	+/- 5 %	Yes / No	
pH (4)	11/23		4.00	3.91	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	2216893	9.22	4.00	4.01	—	+/- 0.1 SU	Yes / No	
pH (7)	2216893 11/23	9.76	7.00	7.00	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check			7.00	6.98	—	+/- 0.1 SU	Yes / No	
pH (10)	21270602 12/23	9.94	10.00	10.13	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check			10.00	10.00	—	+/- 0.1 SU	Yes / No	
ORP (mV)	213901441 11/23	10.09	228	240.4	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	100.4	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.11	0.00	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.07	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.34	9.98	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: A. Szwast | Date: 1/25/2023 | Time (start): 740 | Time (finish): 805

smarTroll SN: 883533 | Turbidity Meter Type: LaMote 2020we | SN: 7007-146

Weather Conditions: cloudy/rainy, 40-55°F | Facility and Unit: Plant Hammond | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	22250153	10.08	4490	4562.2	4490	+/- 5 %	(Yes) No	
pH (4)	11/2023	10.16	4.00	3.89	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	22250153 11/2023	16.17	4.00	4.10	4.00	+/- 0.1 SU	(Yes) No	
pH (7)	2216893 11/2023	10.69	7.00	6.97	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	2216893 11/2023	15.08	7.00	7.10	7.00	+/- 0.1 SU	(Yes) No	
pH (10)	21320202 12/2023	10.73	10.00	10.09	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	21320202 12/2023	14.62	10.00	10.13	10.00	+/- 0.1 SU	(Yes) No	
ORP (mV)	21390144 11/2023	10.82	228	211.6	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	103.70	100.0	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.02	—	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.46	0.86	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	11.68	10.09	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN | Date: 1/25/23 | Time (start): 0745 | Time (finish): 0820

smarTroll SN: 966040 | Turbidity Meter Type: LaMote 2020we | SN: 7009

Weather Conditions: Cloudy 55 | Facility and Unit: Plant Hammond | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	22250153 11/23	12.89	4490	3948	4490	+/- 5 %	Yes / No	
pH (4)	↓		4.00	4.13	4.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	↓	16.78	4.00	4.08	4.0	+/- 0.1 SU	Yes / No	
pH (7)	22168893 11/23	13.36	7.00	7.07	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	↓	16.14	7.00	7.04	7.0	+/- 0.1 SU	Yes / No	
pH (10)	21232 0202 12/23	12.92	10.00	10.11	10.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	↓	15.48	10.00	10.04	10.0	+/- 0.1 SU	Yes / No	
ORP (mV)	21390144 11/23	13.03	228	217.5	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	100.06	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU	[redacted]		0	0.02	0.0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]		1.00	0.76	1.0	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]		10.00	9.98	10.0	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Hessler | Date: 1/25/2023 | Time (start): 0730 | Time (finish): 0815

smarTroll SN: 656724 | Turbidity Meter Type: LaMote 2020we | SN: 5896-3703

Weather Conditions: Sunny/Cloudy, 40° | Facility and Unit: Plant Hammond | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2278053	13.26	4490	4477.9	4490	+/- 5 %	Yes / No	
pH (4)	11/23		4.00	4.06	4.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	—		4.00	4.05	—	+/- 0.1 SU	Yes / No	
pH (7)	2216543 11/23	14.03	7.00	7.07	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	—		7.00	6.99	—	+/- 0.1 SU	Yes / No	
pH (10)	2132062 12/23		10.00	10.09	10.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	—		10.00	9.98	—	+/- 0.1 SU	Yes / No	
ORP (mV)	2139014/4 11/23	14.22	228	229.6	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	100.62	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.71	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.87	0.98	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.53	9.97	+/- 0.5 NTU	Yes / No	

APPENDIX D

Statistical Analyses Reports

August 2022

GROUNDWATER STATS CONSULTING

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 4 (AP-4)
August 2022 Semi-Annual Statistical Analysis

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August 2022 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-4. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for Hammond AP-4 in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells analyzed in this report. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113
- **Downgradient wells:** HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, and HGWC-118
- **Piezometer:** HGWC-117A

Note that downgradient well HGWC-102 was first sampled in October 2019 and upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and

currently have at least 8 samples; therefore, data from this well were evaluated during this statistical analysis. Upgradient well data are included in construction of interwell prediction limits when a minimum of 2 samples are available and downgradient wells are evaluated with prediction limits once they have reached a minimum of 8 samples.

Piezometer HGWC-117A was first sampled in February 2021 and currently has four samples. Therefore, this well is included on the time series graphs and box plots, and also has reached the minimum number of samples for Appendix IV parameters to be evaluated with confidence intervals.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting.

The Coal Combustion Residuals (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

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. This generally gives the most conservative limit in each case. 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 initially 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 all 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% non-detects (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 non-detect 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 will be 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 April 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.

Using the Tukey box plot method, a few outliers were identified. Often, when the most recent value is identified as an outlier, values are not flagged in the database at this time as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged as all other values are similar to remaining measurements within a given well or neighboring wells, or were reported non-detects.

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data

pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

Seasonality

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 Tests

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 were included with the screening and showed a few statistically significant decreasing and increasing trends for the Appendix III parameters. Most trends noted were relatively low in magnitude when compared to average concentrations, and the background period is short; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. However, interwell methods are currently implemented in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Evaluation of Appendix III Parameters – 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 using all historical upgradient well data through August 2022 (Figure D). Interwell prediction limits pool 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 a resample confirms the initial exceedance, a statistically significant increase 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 exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Several prediction limit exceedances were noted for Appendix III parameters. A summary table of the interwell prediction limits follows this letter.

Trend Test Evaluation – Appendix III

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 wells 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 trends, it is an indication of natural variability in groundwater 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: HGWC-101

- Calcium: HGWA-113 (upgradient), HGWC-103, and HGWC-105
- Chloride: HGWC-103
- TDS: HGWC-105

Decreasing trends:

- Boron: HGWC-109
- Sulfate: HGWC-109, HGWC-112 (upgradient), and HGWA-113 (upgradient)

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 (Maximum Containment Limits (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 that have 100% non-detects do not require analysis. Data from upgradient 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 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 to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well (Figure H). As mentioned above, well/constituent pairs with 100% non-detects did not require statistics, which includes all downgradient wells for molybdenum.

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. 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. A confidence interval exceedance was identified for the following well/constituent pair:

- Cobalt: HGWC-117

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-4. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Tristan Clark
Groundwater Analyst

Andrew T. Collins
Project Manager

100% Non-Detects: Appendix IV Downgradient & Piezometer

Analysis Run 10/7/2022 1:12 PM View: AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Antimony (mg/L)
HGWC-101, HGWC-105, HGWC-109, HGWC-117A, HGWC-118

Arsenic (mg/L)
HGWC-103, HGWC-105, HGWC-107, HGWC-117A

Beryllium (mg/L)
HGWC-102, HGWC-105, HGWC-107, HGWC-109, HGWC-117A

Cadmium (mg/L)
HGWC-105, HGWC-109, HGWC-118

Chromium (mg/L)
HGWC-117A

Cobalt (mg/L)
HGWC-107

Lead (mg/L)
HGWC-117A

Lithium (mg/L)
HGWC-101

Molybdenum (mg/L)
HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-117A, HGWC-118

Selenium (mg/L)
HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-117A, HGWC-118

Thallium (mg/L)
HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-117A, HGWC-118

Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-101	0.01907	n/a	8/10/2022	0.17	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.01907	n/a	8/5/2022	2.9	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.01907	n/a	8/5/2022	3.6	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.01907	n/a	8/5/2022	1.3	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.01907	n/a	8/5/2022	0.79	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.01907	n/a	8/5/2022	0.25	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.01907	n/a	8/5/2022	0.85	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.01907	n/a	8/5/2022	0.57	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	8/5/2022	127	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	8/5/2022	128	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	8/5/2022	121	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	8/5/2022	88.5	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	8/5/2022	7.7	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	8/5/2022	7.8	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	8/10/2022	5.37	Yes	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	8/10/2022	99.5	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	8/5/2022	358	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	8/5/2022	369	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	8/5/2022	217	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	8/5/2022	120	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	8/5/2022	23	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	8/5/2022	132	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	8/5/2022	69.8	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	8/5/2022	696	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	8/5/2022	692	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	8/5/2022	514	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.01907**	**n/a**	**8/10/2022**	**0.17**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-102**	**0.01907**	**n/a**	**8/5/2022**	**2.9**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-103**	**0.01907**	**n/a**	**8/5/2022**	**3.6**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-105**	**0.01907**	**n/a**	**8/5/2022**	**1.3**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-107**	**0.01907**	**n/a**	**8/5/2022**	**0.79**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-109**	**0.01907**	**n/a**	**8/5/2022**	**0.25**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-117**	**0.01907**	**n/a**	**8/5/2022**	**0.85**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-118**	**0.01907**	**n/a**	**8/5/2022**	**0.57**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-101	73.8	n/a	8/10/2022	24.6	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-102**	**73.8**	**n/a**	**8/5/2022**	**127**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-103**	**73.8**	**n/a**	**8/5/2022**	**128**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-105**	**73.8**	**n/a**	**8/5/2022**	**121**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-107	73.8	n/a	8/5/2022	63	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.8	n/a	8/5/2022	50.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-117	73.8	n/a	8/5/2022	44.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-118**	**73.8**	**n/a**	**8/5/2022**	**88.5**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-101	5.7	n/a	8/10/2022	5.5	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	**HGWC-102**	**5.7**	**n/a**	**8/5/2022**	**7.7**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-103**	**5.7**	**n/a**	**8/5/2022**	**7.8**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-105	5.7	n/a	8/5/2022	5	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-107	5.7	n/a	8/5/2022	2.7	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109	5.7	n/a	8/5/2022	3.7	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	5.7	n/a	8/5/2022	4.4	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	8/5/2022	3.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1718	n/a	8/10/2022	0.065J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.1718	n/a	8/5/2022	0.076J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1718	n/a	8/5/2022	0.071J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1718	n/a	8/5/2022	0.075J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1718	n/a	8/5/2022	0.093J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1718	n/a	8/5/2022	0.14	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.1718	n/a	8/5/2022	0.075J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1718	n/a	8/5/2022	0.12	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	**HGWC-101**	**7.54**	**5.43**	**8/10/2022**	**5.37**	**Yes**	**70**	**0**	**n/a**	**n/a**	**0.0007718**	**NP Inter (normality) 1 of 2**
pH (s.u.)	HGWC-102	7.54	5.43	8/5/2022	5.69	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.43	8/5/2022	5.71	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.43	8/5/2022	6.46	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.43	8/5/2022	6.07	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.43	8/5/2022	6.81	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.43	8/5/2022	5.46	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.43	8/5/2022	7.07	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-101**	**14**	**n/a**	**8/10/2022**	**99.5**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-102**	**14**	**n/a**	**8/5/2022**	**358**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-103**	**14**	**n/a**	**8/5/2022**	**369**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-105**	**14**	**n/a**	**8/5/2022**	**217**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-107**	**14**	**n/a**	**8/5/2022**	**120**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-109**	**14**	**n/a**	**8/5/2022**	**23**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-117**	**14**	**n/a**	**8/5/2022**	**132**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-118**	**14**	**n/a**	**8/5/2022**	**69.8**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-101	345	n/a	8/10/2022	232	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-102**	**345**	**n/a**	**8/5/2022**	**696**	**Yes**	**63**	**0**	**n/a**	**n/a**	**0.0004792**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-103**	**345**	**n/a**	**8/5/2022**	**692**	**Yes**	**63**	**0**	**n/a**	**n/a**	**0.0004792**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-105**	**345**	**n/a**	**8/5/2022**	**514**	**Yes**	**63**	**0**	**n/a**	**n/a**	**0.0004792**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-107	345	n/a	8/5/2022	274	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	345	n/a	8/5/2022	195	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	345	n/a	8/5/2022	285	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	345	n/a	8/5/2022	329	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Appendix III Trend Test - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.009687**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.0308**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3418**	**76**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-103**	**5.956**	**74**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.246**	**106**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-103**	**0.3864**	**70**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-112 (bg)**	**-0.02278**	**-62**	**-58**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.014**	**-66**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWC-109**	**-3.076**	**-74**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-105**	**19.84**	**66**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Test - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0.00007638	9	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.0003539	-17	-58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.000724	18	58	No	16	18.75	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.005573	12	21	No	8	50	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.002125	-13	-21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-101**	**0.009687**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-102	-0.2643	-27	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.1032	56	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.0106	20	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.02644	53	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-109**	**-0.0308**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-117	0.01627	27	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.007608	-12	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.818	36	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.1075	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3418**	**76**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWA-47 (bg)	0.78	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	1.284	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-2.773	-9	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-103**	**5.956**	**74**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.246**	**106**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-118	1.33	58	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.04964	-14	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	-0.009605	-13	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.05023	-45	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	-0.1139	-12	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	0	3	38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-103**	**0.3864**	**70**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (s.u.)	HGWA-111 (bg)	0.05655	26	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.0274	-58	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02397	52	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-47 (bg)	-0.02056	-3	-21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-48D (bg)	0	0	21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01429	47	74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	-0.0222	-24	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-112 (bg)**	**-0.02278**	**-62**	**-58**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.014**	**-66**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-47 (bg)	-0.8098	-14	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-0.7764	-8	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.614	-42	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-11.09	-10	-38	No	12	8.333	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	3.311	21	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-3.257	-21	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.917	-61	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWC-109**	**-3.076**	**-74**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWC-117	-3.182	-33	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-1.699	-45	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	4.343	13	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.537	-19	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	0	1	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	11.65	8	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-38.24	-21	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	9.656	24	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWC-105**	**19.84**	**66**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	53	n/a	n/a	92.45	n/a	n/a	0.06597	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	92.54	n/a	n/a	0.03217	NP Inter(NDs)
Barium (mg/L)	n/a	0.11	n/a	n/a	n/a	67	n/a	n/a	0	n/a	n/a	0.03217	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0019	n/a	n/a	n/a	67	n/a	n/a	89.55	n/a	n/a	0.03217	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	67	n/a	n/a	100	n/a	n/a	0.03217	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0061	n/a	n/a	n/a	67	n/a	n/a	35.82	n/a	n/a	0.03217	NP Inter(normality)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	88.06	n/a	n/a	0.03217	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	n/a	1.303	n/a	n/a	n/a	67	0.606	0.3494	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.1743	n/a	n/a	n/a	70	0.2617	0.07844	24.29	Kaplan-Meier	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.0016	n/a	n/a	n/a	67	n/a	n/a	68.66	n/a	n/a	0.03217	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	67	n/a	n/a	38.81	n/a	n/a	0.03217	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	53	n/a	n/a	77.36	n/a	n/a	0.06597	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	53	n/a	n/a	84.91	n/a	n/a	0.06597	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	53	n/a	n/a	79.25	n/a	n/a	0.06597	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	53	n/a	n/a	100	n/a	n/a	0.06597	NP Inter(NDs)

PLANT HAMMOND AP-4 GWPS				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background 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		0.11	2
Beryllium, Total (mg/L)	0.004		0.0019	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0061	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.005	0.006
Combined Radium, Total (pCi/L)	5		1.3	5
Fluoride, Total (mg/L)	4		0.17	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-117**	**0.01281**	**0.006091**	**0.006**	**Yes**	**18**	**0**	**sqrt(x)**	**0.01**	**Param.**

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.003	0.006	No	11	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-117	0.003	0.0012	0.006	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	17	94.12	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	12	66.67	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-109	0.002838	0.001558	0.01	No	17	5.882	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	18	94.44	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	17	94.12	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04568	0.03977	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03307	0.0271	2	No	12	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04044	0.03555	2	No	17	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.075	0.066	2	No	17	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03917	0.0363	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08767	0.08086	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.04931	0.04073	2	No	18	0	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.0907	0.0318	2	No	4	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.0618	0.05074	2	No	17	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	17	47.06	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	17	76.47	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.0005	0.000068	0.004	No	18	55.56	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	17	94.12	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.00011	0.005	No	17	17.65	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006894	0.0003139	0.005	No	12	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007959	0.0006841	0.005	No	17	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.0001	0.005	No	17	58.82	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0009479	0.0006476	0.005	No	18	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	4	75	No	0.0625	NP (normality)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	12	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00081	0.1	No	17	58.82	No	0.01	NP (normality)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	17	94.12	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	17	88.24	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.0012	0.1	No	18	77.78	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0017	0.1	No	17	70.59	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-101	0.002794	0.002112	0.006	No	17	5.882	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002006	0.001008	0.006	No	12	0	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.0023	0.001829	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00047	0.006	No	17	35.29	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002092	0.001246	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	**HGWC-117**	**0.01281**	**0.006091**	**0.006**	**Yes**	**18**	**0**	**sqrt(x)**	**0.01**	**Param.**
Cobalt (mg/L)	HGWC-117A	0.00314	-0.0006348	0.006	No	4	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.0025	0.00045	0.006	No	17	47.06	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8728	0.4168	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.227	0.5519	5	No	11	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8936	0.4295	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8923	0.4959	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.08	0.5012	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8037	0.49	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.99	0.198	5	No	18	0	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	1.489	-0.6524	5	No	4	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.094	0.4393	5	No	16	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.065	4	No	18	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.22	0.076	4	No	12	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.071	4	No	18	72.22	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-105	0.13	0.074	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-107	0.16	0.064	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-109	0.1205	0.0777	4	No	18	11.11	No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.09	4	No	19	57.89	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-117A	0.1349	0.009082	4	No	4	50	No	0.01	Param.
Fluoride (mg/L)	HGWC-118	0.18	0.072	4	No	19	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	17	94.12	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	12	91.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	17	70.59	No	0.01	NP (normality)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	17	88.24	No	0.01	NP (NDs)

Confidence Intervals - All Results

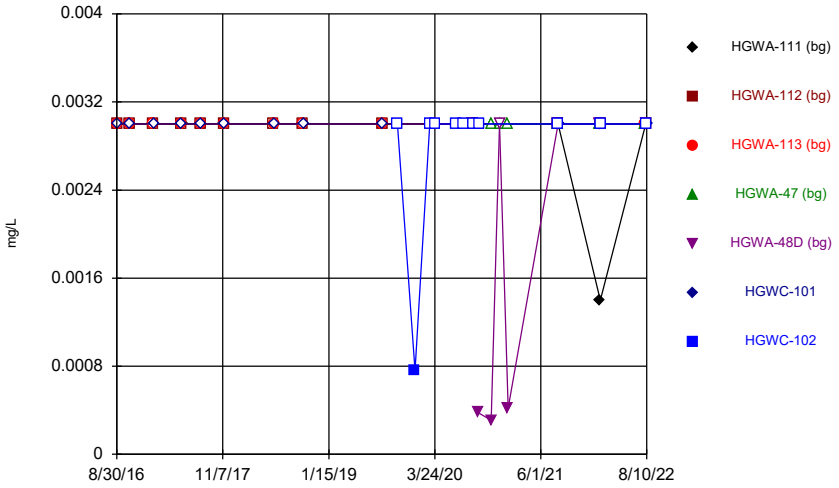
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lead (mg/L)	HGWC-117	0.001	0.00025	0.015	No	18	72.22	No	0.01	NP (normality)
Lead (mg/L)	HGWC-118	0.001	0.00036	0.015	No	17	70.59	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-102	0.0013	0.00084	0.04	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	17	17.65	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.0042	0.003847	0.04	No	17	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117	0.0035	0.0017	0.04	No	18	16.67	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117A	0.005858	0.002668	0.04	No	4	0	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.04	No	17	35.29	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0002	0.002	No	11	90.91	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00027	0.00017	0.002	No	13	76.92	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117	0.0003	0.00015	0.002	No	14	71.43	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	4	75	No	0.0625	NP (normality)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	13	84.62	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.005	0.05	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.001	0.002	No	11	90.91	No	0.006	NP (NDs)

FIGURE A.

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

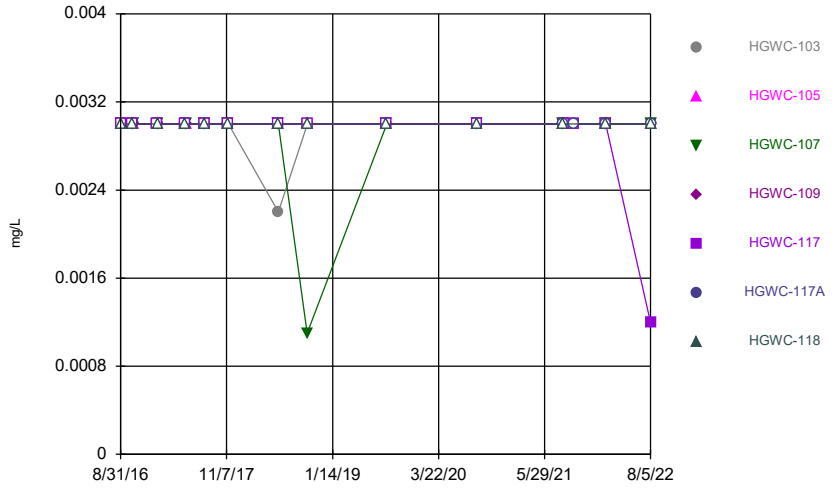
Time Series



Constituent: Antimony Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

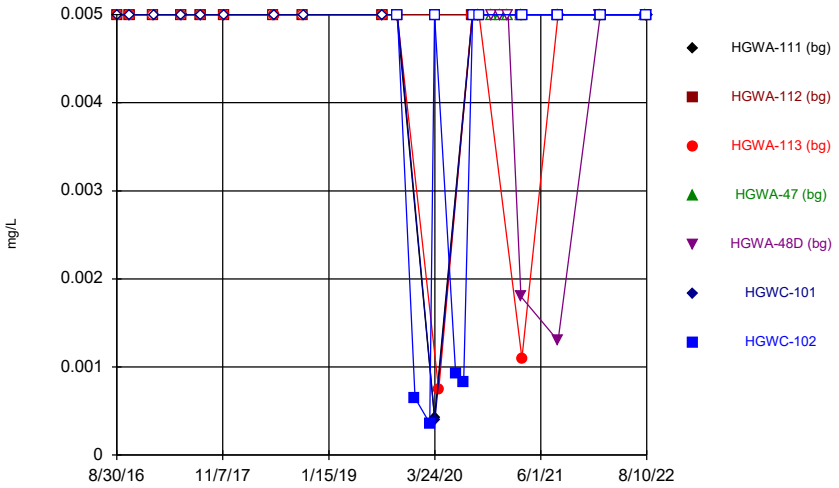
Time Series



Constituent: Antimony Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

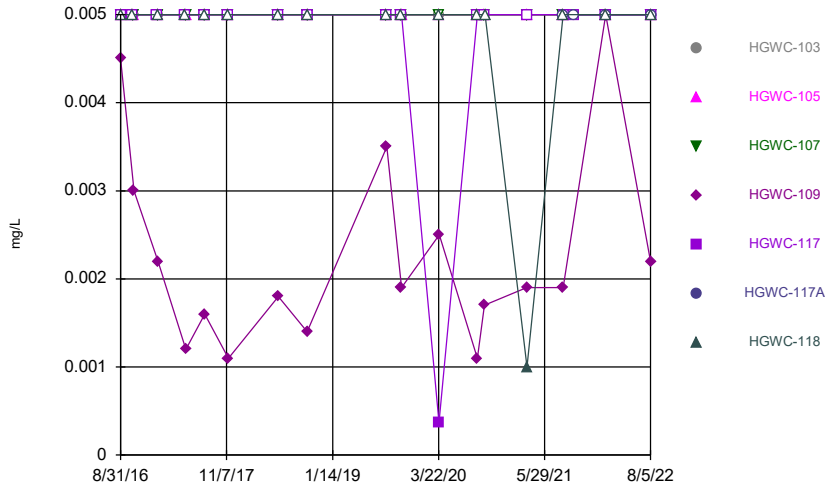
Time Series



Constituent: Arsenic Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

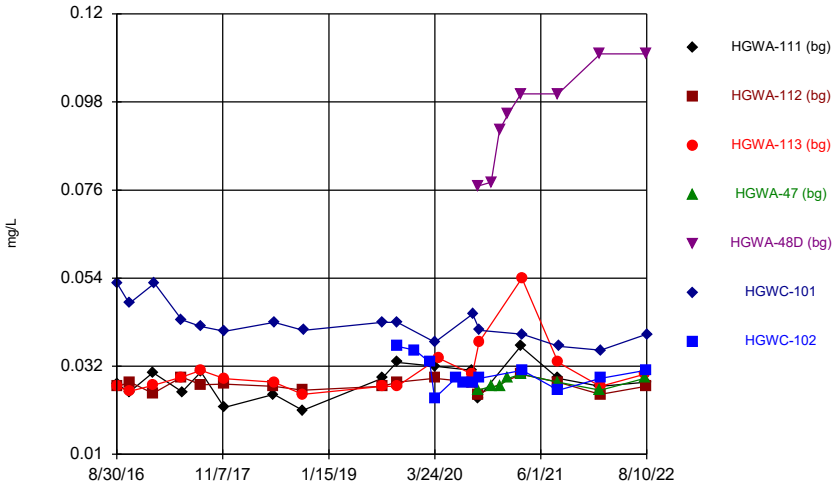
Time Series



Constituent: Arsenic Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

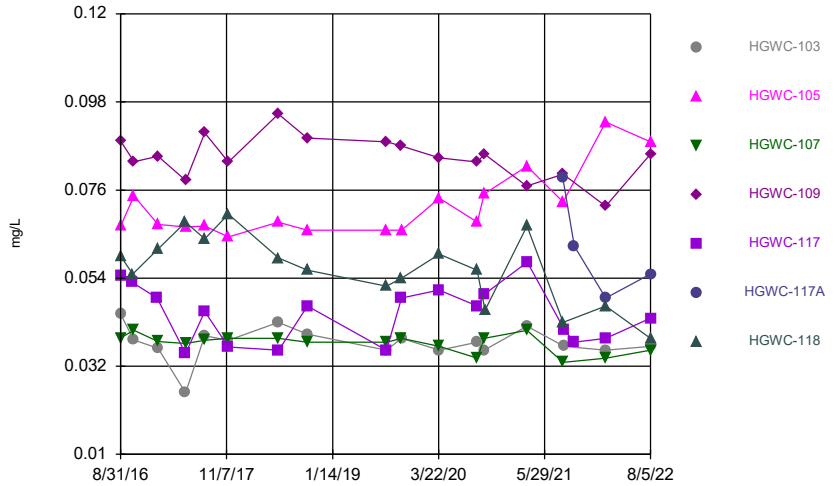
Time Series



Constituent: Barium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

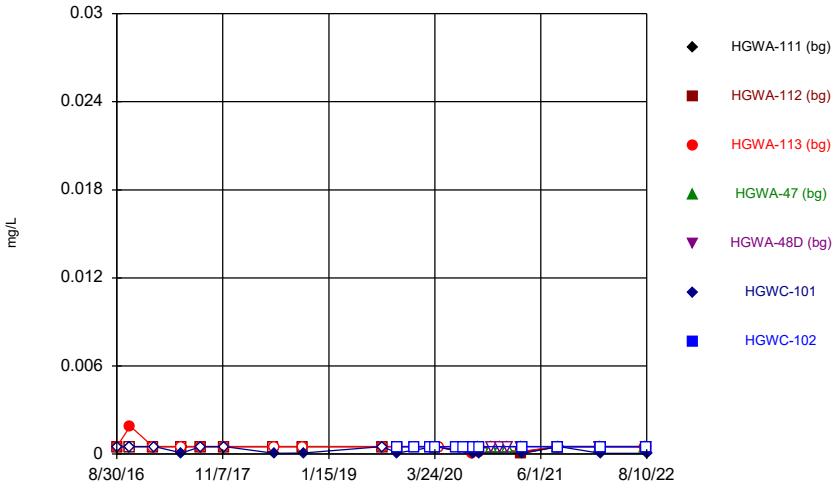
Time Series



Constituent: Barium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

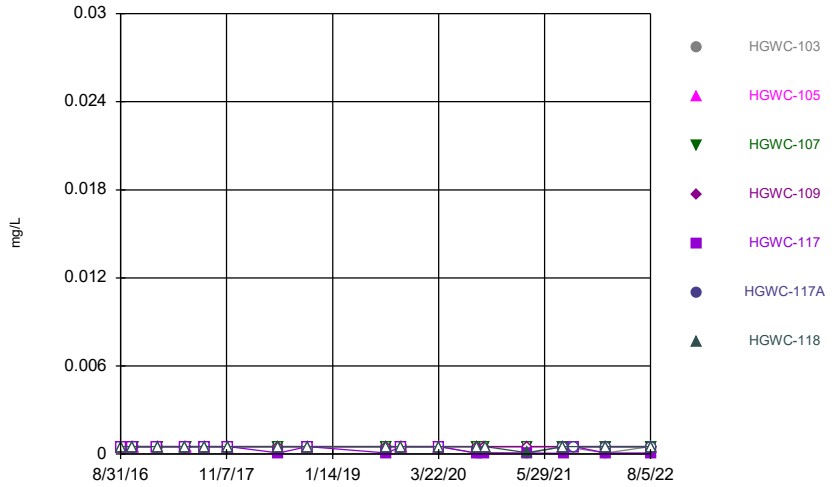
Time Series



Constituent: Beryllium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

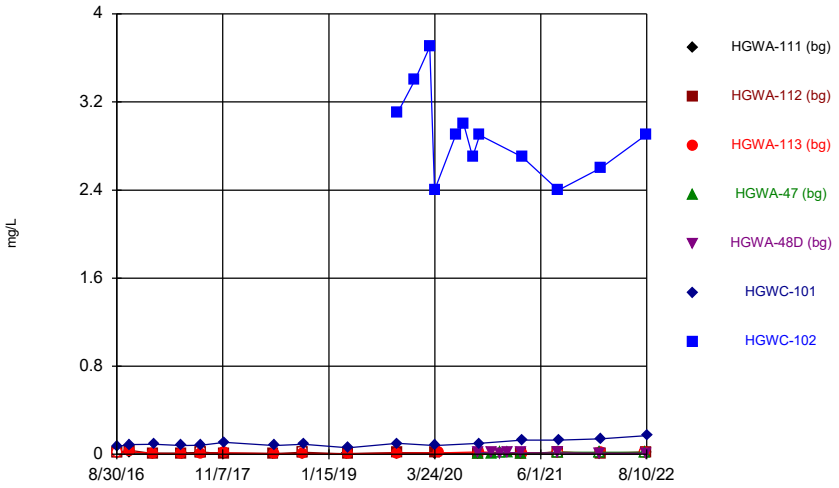
Time Series



Constituent: Beryllium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

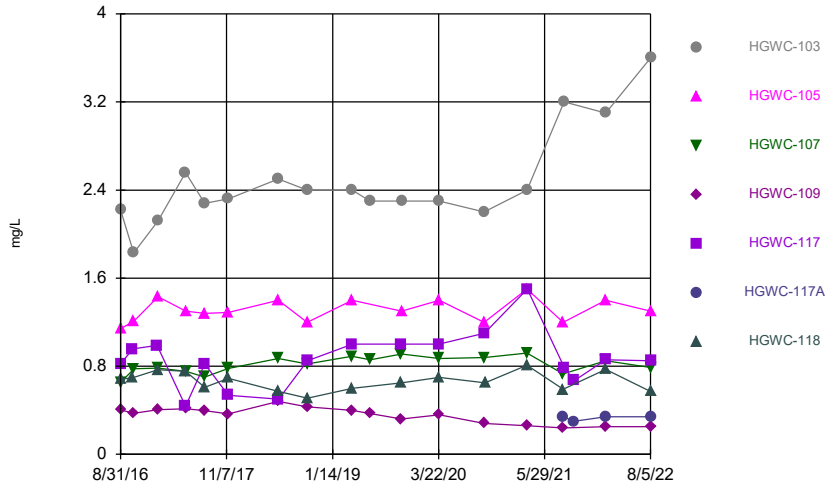
Time Series



Constituent: Boron Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

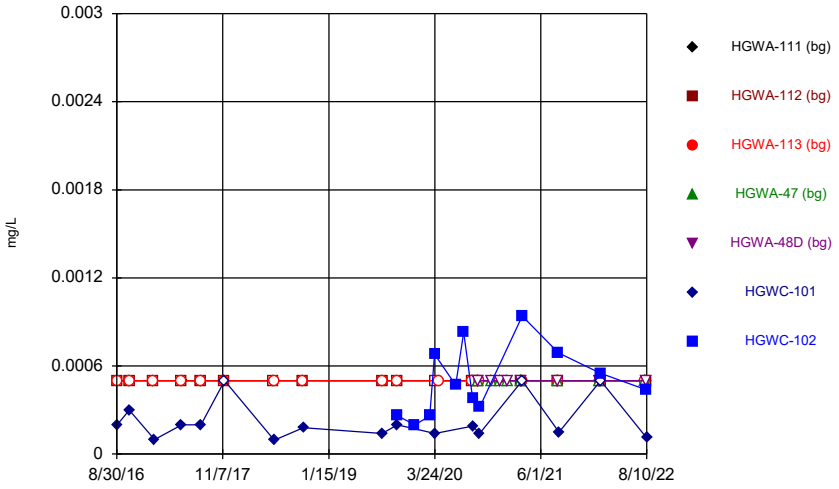
Time Series



Constituent: Boron Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

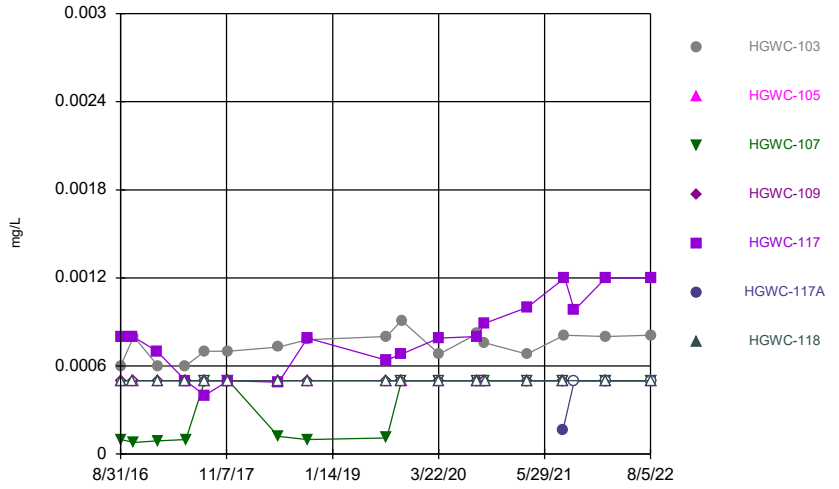
Time Series



Constituent: Cadmium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

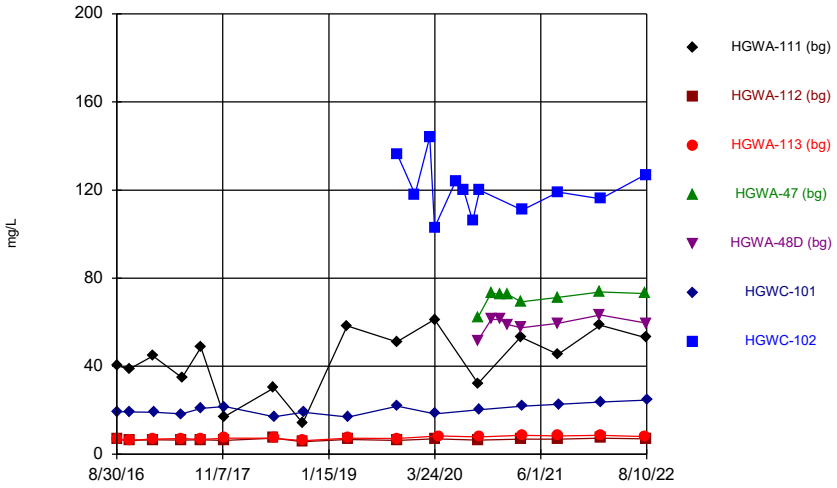
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Cadmium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

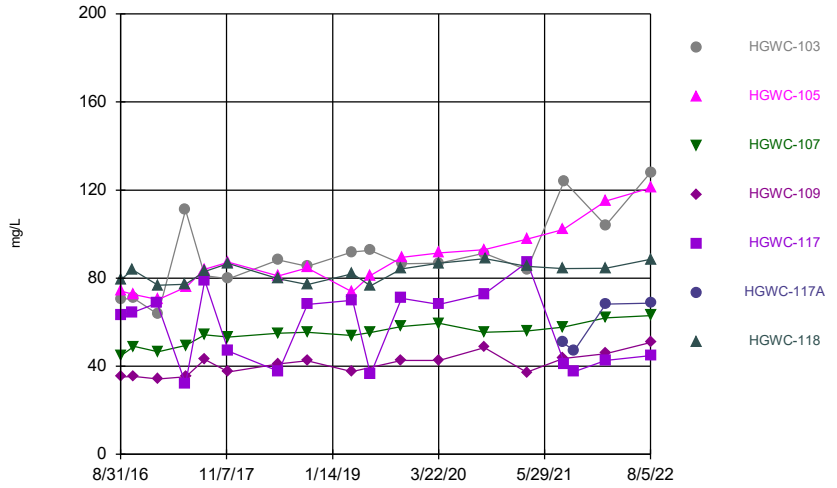
Time Series



Constituent: Calcium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

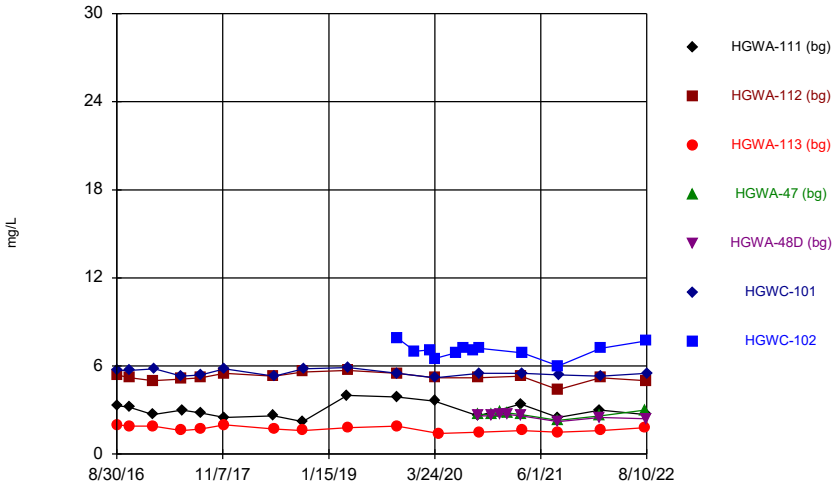
Time Series



Constituent: Calcium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

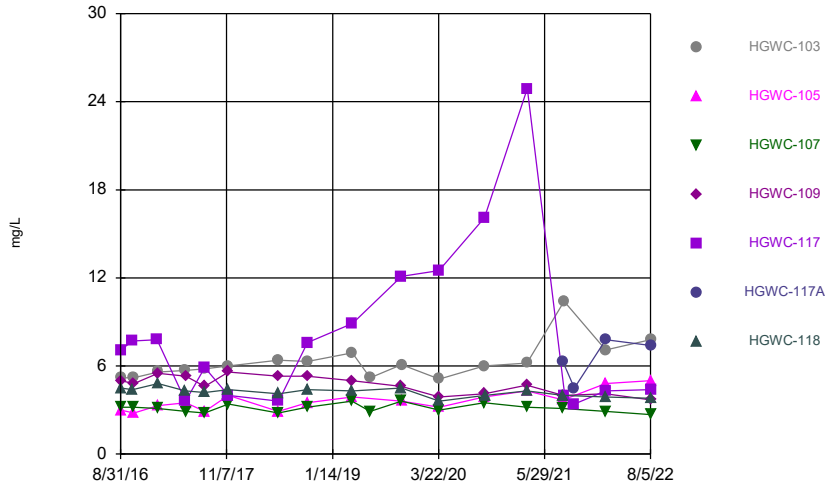
Time Series



Constituent: Chloride Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

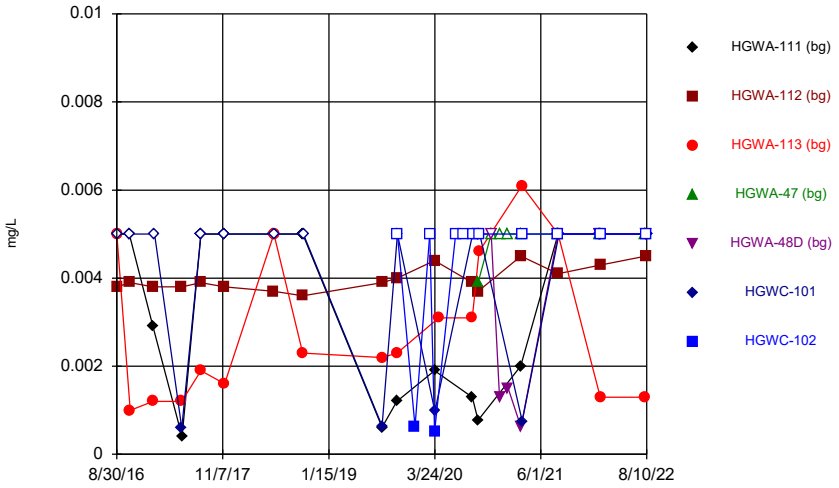
Time Series



Constituent: Chloride Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

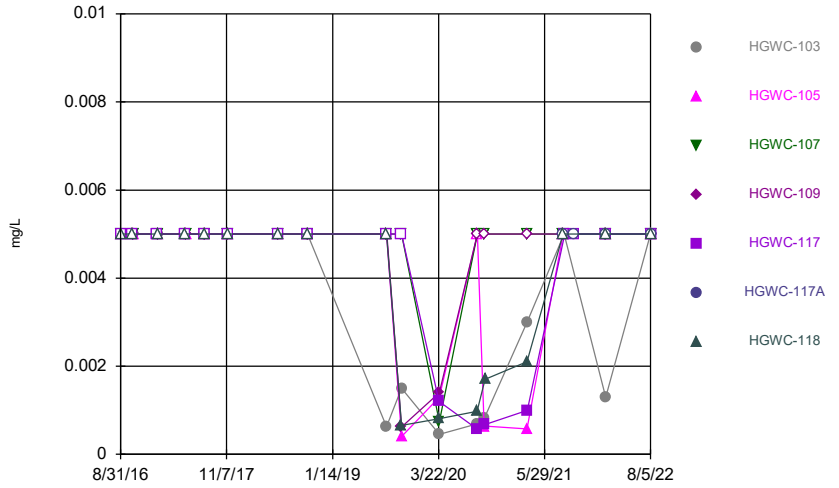
Time Series



Constituent: Chromium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

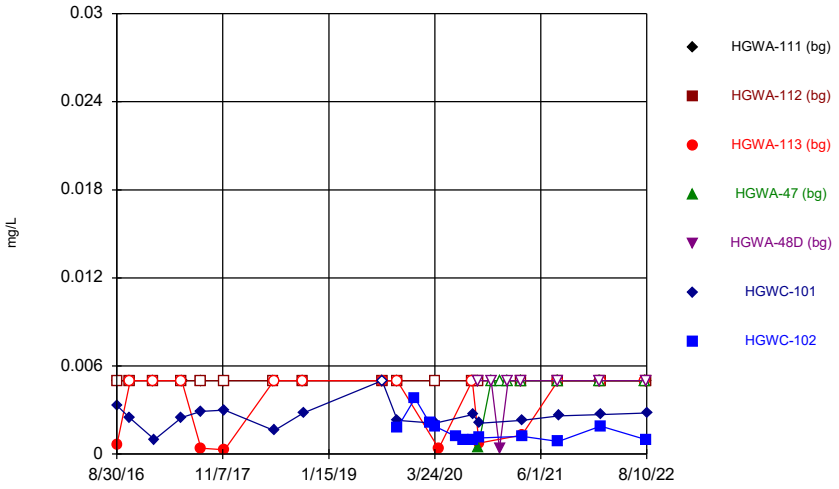
Time Series



Constituent: Chromium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

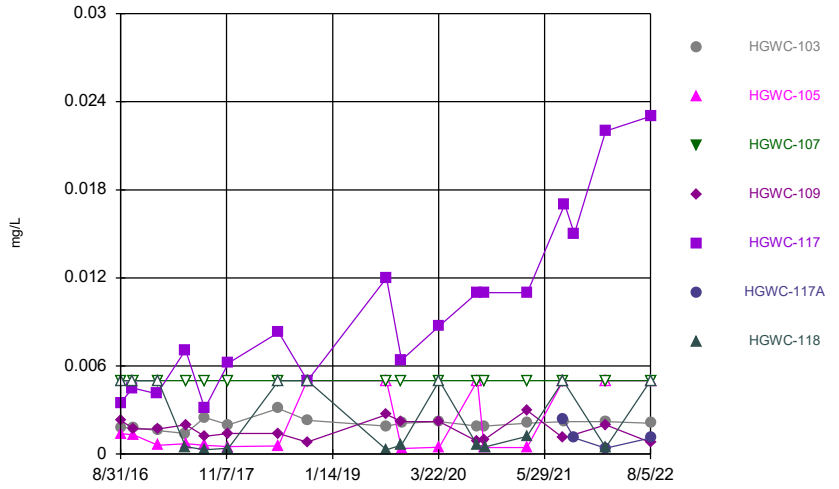
Time Series



Constituent: Cobalt Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

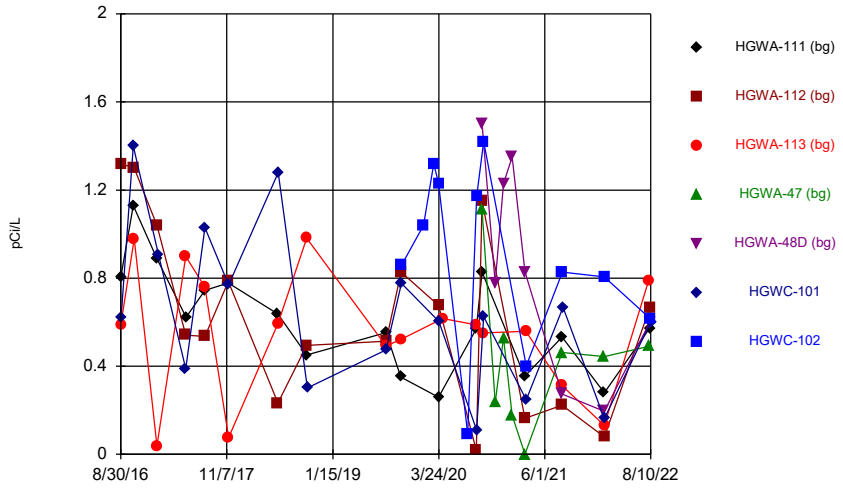
Time Series



Constituent: Cobalt Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

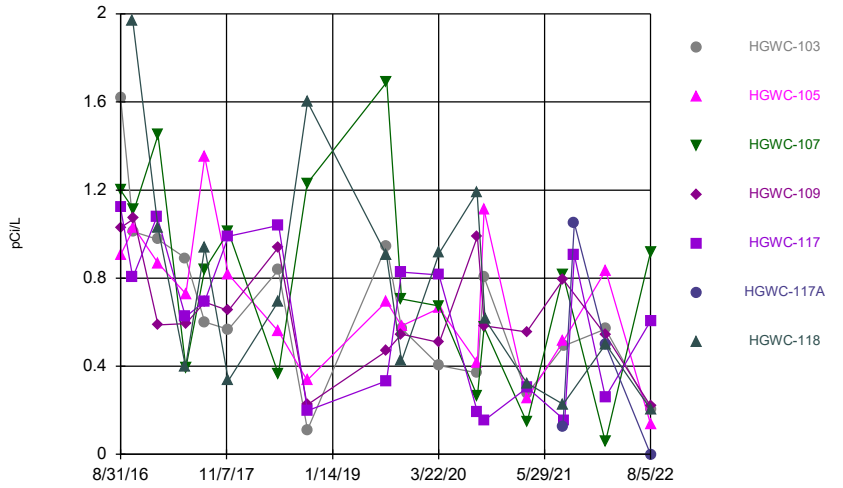
Time Series



Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

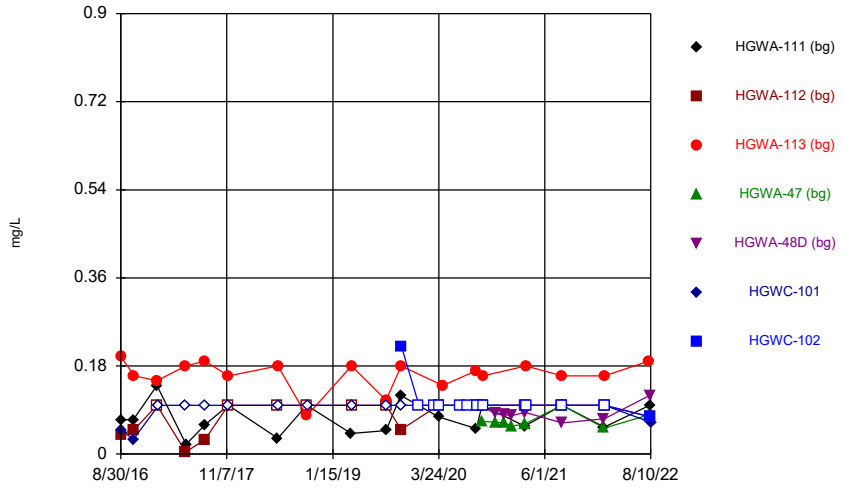
Time Series



Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

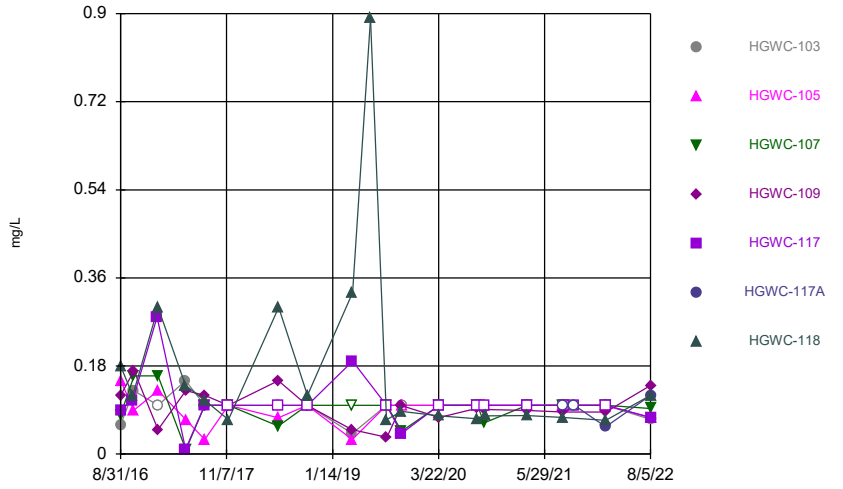
Time Series



Constituent: Fluoride Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

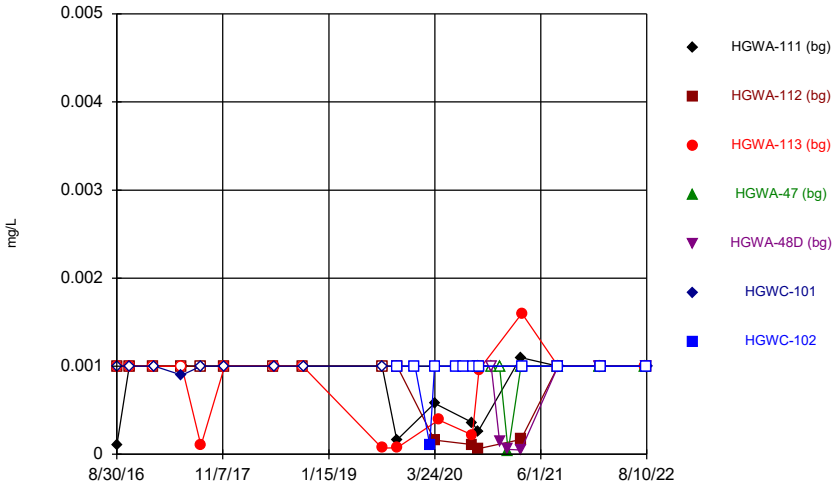
Time Series



Constituent: Fluoride Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

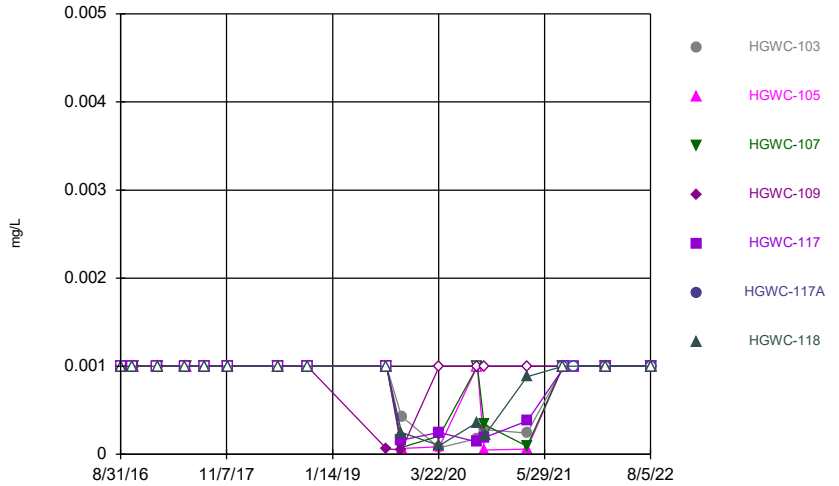
Time Series



Constituent: Lead Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

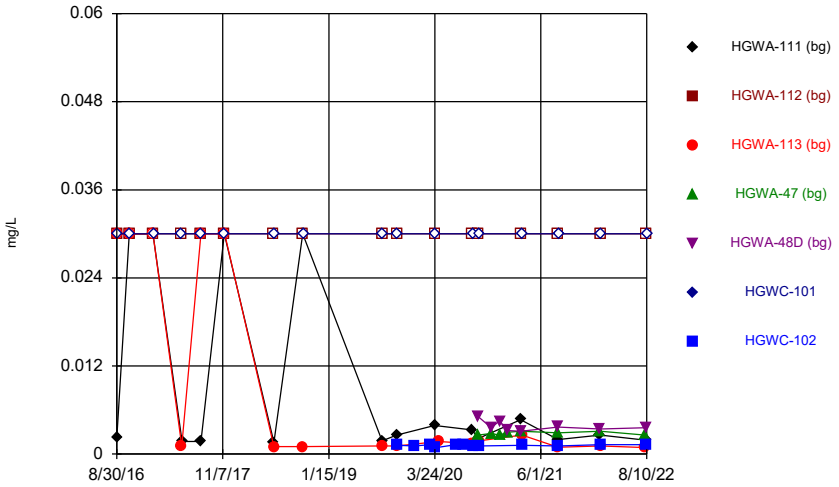
Time Series



Constituent: Lead Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

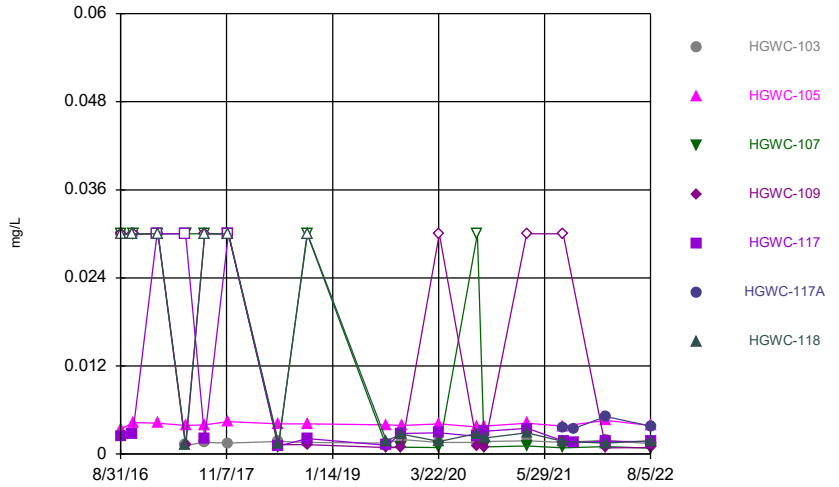
Time Series



Constituent: Lithium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

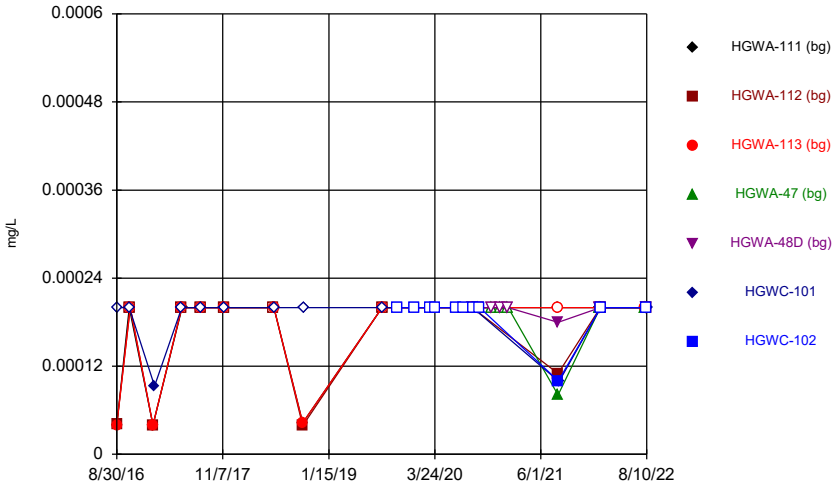
Time Series



Constituent: Lithium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

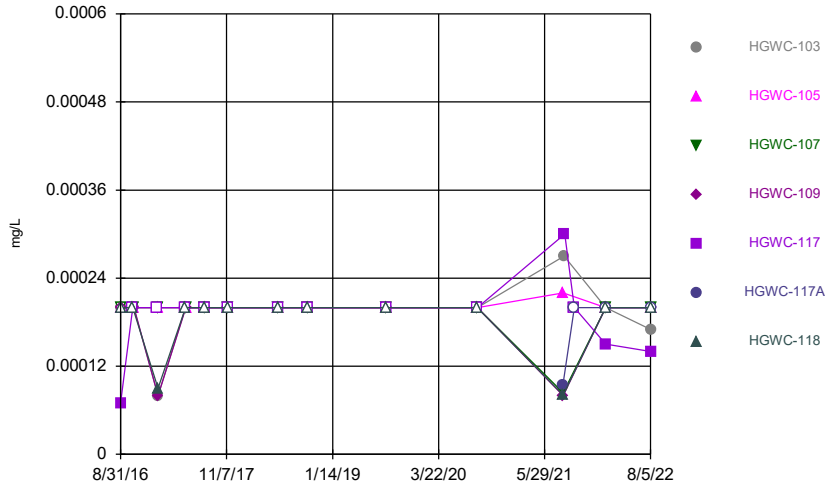
Time Series



Constituent: Mercury Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

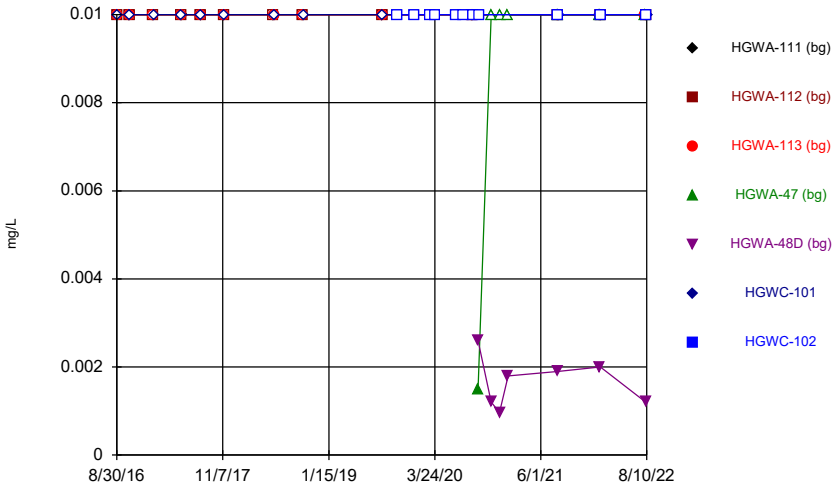
Time Series



Constituent: Mercury Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

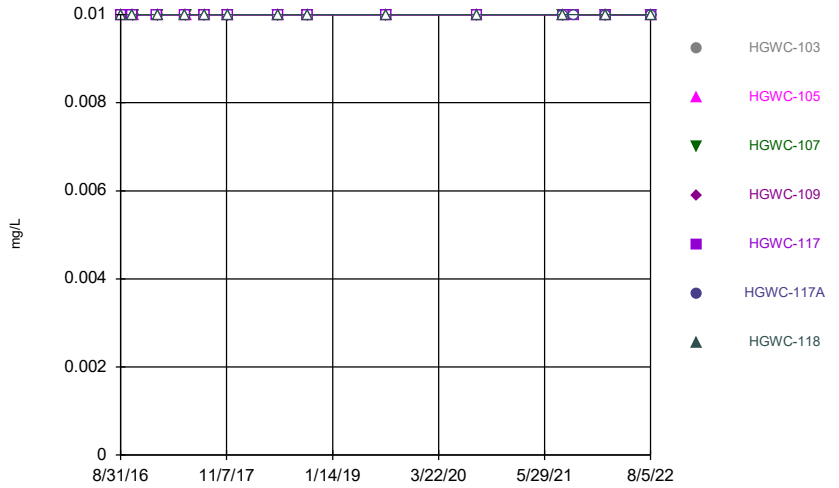
Time Series



Constituent: Molybdenum Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

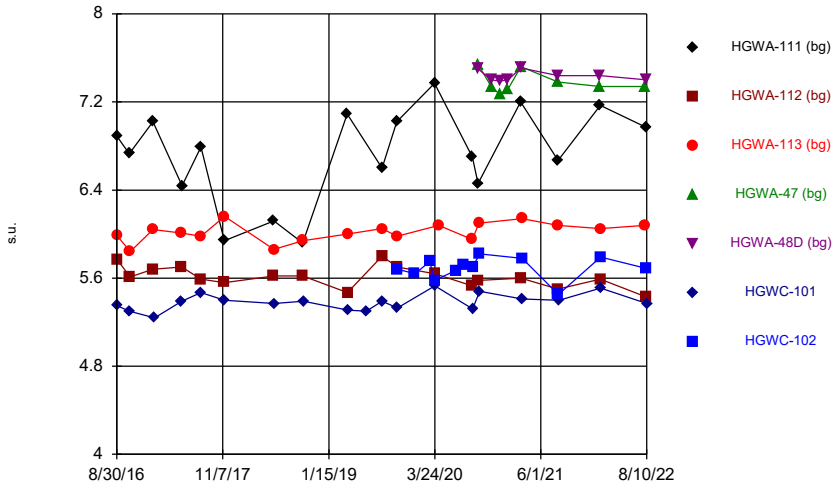
Time Series



Constituent: Molybdenum Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

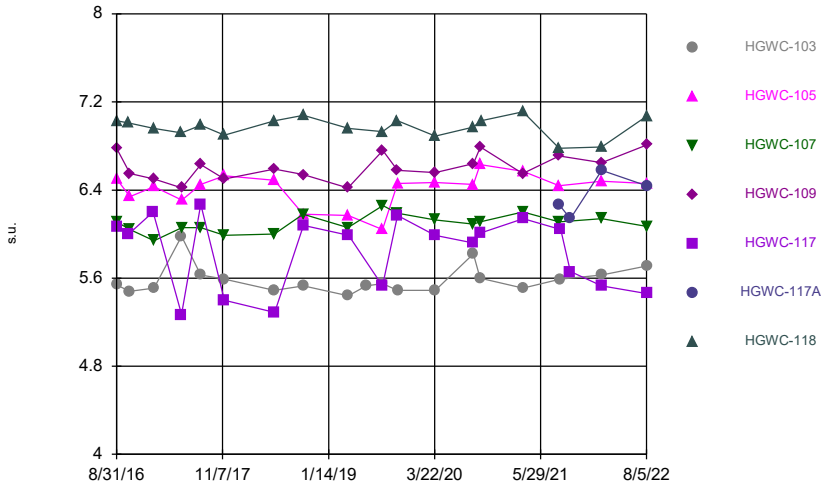
Time Series



Constituent: pH Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

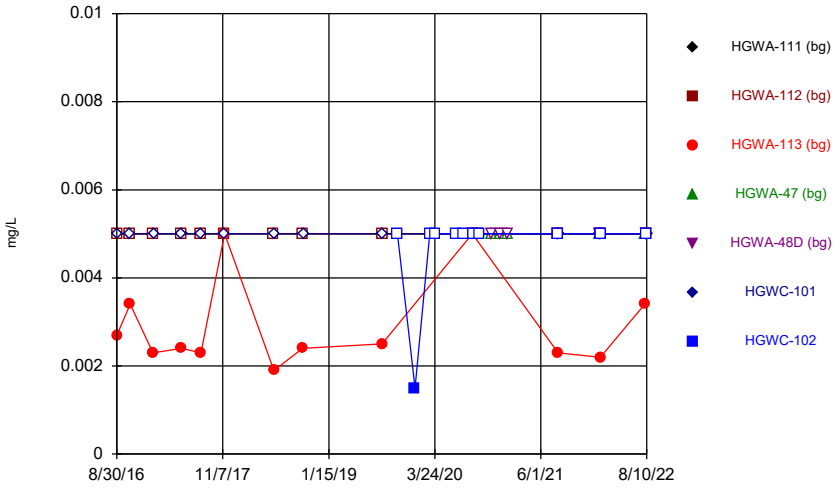
Time Series



Constituent: pH Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

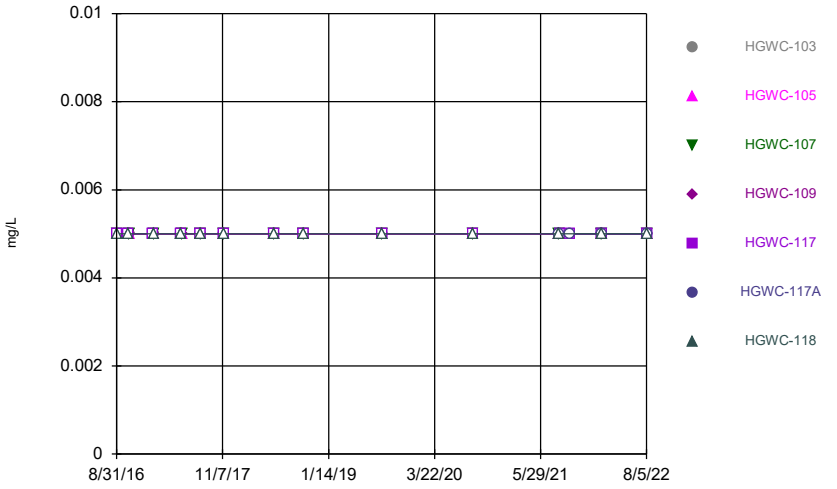
Time Series



Constituent: Selenium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

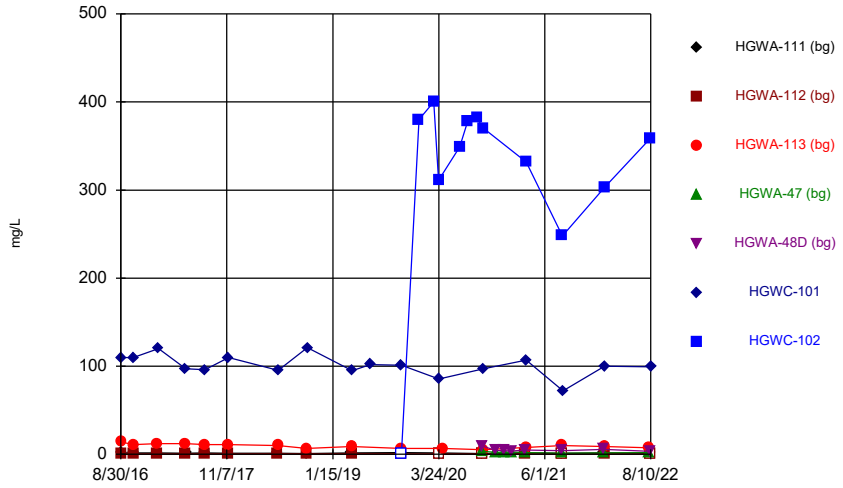
Time Series



Constituent: Selenium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

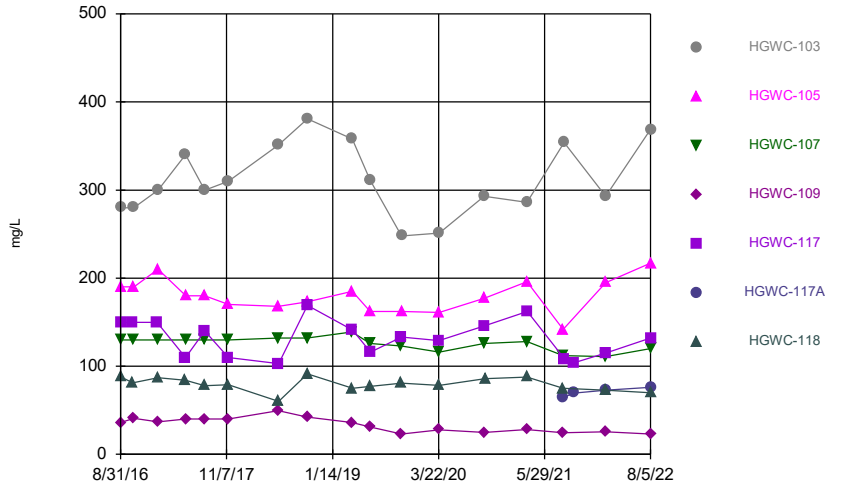
Time Series



Constituent: Sulfate Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

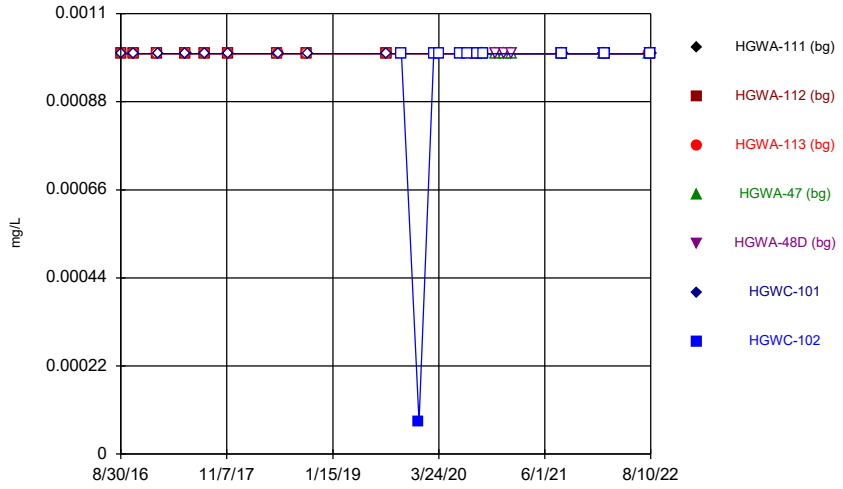
Time Series



Constituent: Sulfate Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

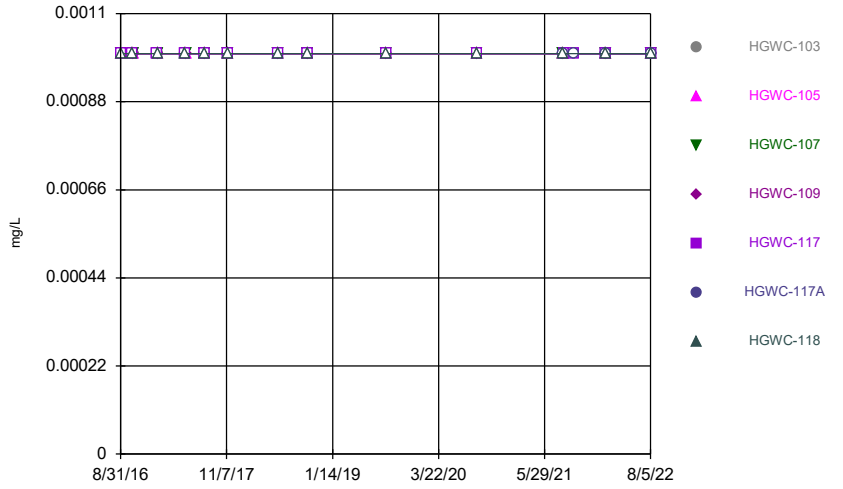
Time Series



Constituent: Thallium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

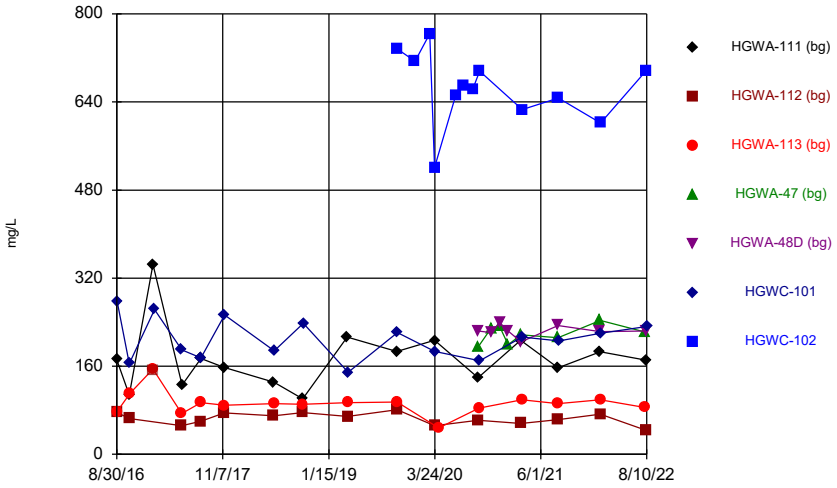
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

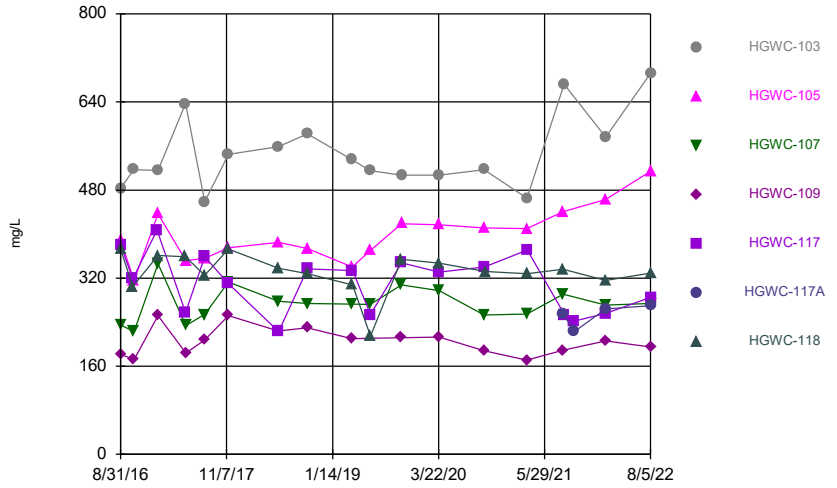
Time Series



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:16 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.003	<0.003	<0.003				
8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	<0.003				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			<0.003	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						<0.003	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						<0.003	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/23/2019							<0.003
1/3/2020							0.00076 (J)
3/4/2020							<0.003
3/24/2020							<0.003
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	<0.003	<0.003	<0.003				
8/27/2020						<0.003	<0.003
9/18/2020				<0.003	0.00038 (J)		
9/24/2020							<0.003
11/10/2020				<0.003			
11/11/2020					0.00031 (J)		
12/15/2020				<0.003	<0.003		
1/19/2021				<0.003	0.00042 (J)		
8/12/2021	<0.003	<0.003	<0.003	<0.003	<0.003		
8/13/2021							<0.003
8/16/2021						<0.003	
1/31/2022	0.0014 (J)			<0.003	<0.003		
2/1/2022		<0.003	<0.003				
2/2/2022						<0.003	<0.003
8/2/2022			<0.003	<0.003			
8/5/2022	<0.003	<0.003			<0.003		<0.003
8/10/2022						<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
10/20/2016					<0.003		<0.003
10/24/2016	<0.003						
10/25/2016		<0.003	<0.003	<0.003			
1/27/2017					<0.003		
1/31/2017	<0.003	<0.003	<0.003	<0.003			<0.003
5/23/2017	<0.003				<0.003		<0.003
5/24/2017		<0.003	<0.003	<0.003			
8/10/2017	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
11/14/2017	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
6/6/2018	0.0022 (J)	<0.003	<0.003	<0.003			
6/7/2018					<0.003		<0.003
10/2/2018		<0.003	0.0011 (J)	<0.003			
10/3/2018	<0.003				<0.003		<0.003
8/22/2019	<0.003	<0.003			<0.003		<0.003
8/23/2019			<0.003	<0.003			
8/26/2020							<0.003
8/27/2020	<0.003	<0.003	<0.003	<0.003	<0.003		
8/12/2021						<0.003	
8/13/2021		<0.003	<0.003	<0.003			<0.003
8/16/2021	<0.003						
8/19/2021					<0.003		
9/27/2021					<0.003	<0.003	
2/2/2022	<0.003		<0.003	<0.003	<0.003		
2/3/2022		<0.003				<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003	<0.003	0.0012 (J)	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						<0.005	
5/23/2017		<0.005	<0.005			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	<0.005			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						<0.005	<0.005
1/3/2020							0.00065 (J)
3/4/2020							0.00036 (J)
3/24/2020	0.00042 (J)	<0.005					<0.005
3/25/2020						0.00039 (J)	
4/9/2020			0.00074 (J)				
6/18/2020							0.00092 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020	<0.005	<0.005		<0.005	<0.005		
9/22/2020			<0.005				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	0.0018 (J)		
3/16/2021			0.0011 (J)				
3/17/2021						<0.005	<0.005
8/12/2021	<0.005	<0.005	<0.005	<0.005	0.0013 (J)		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						<0.005	<0.005
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	0.0045 (J)	<0.005		<0.005
10/20/2016					<0.005		<0.005
10/24/2016	<0.005						
10/25/2016		<0.005	<0.005	0.003 (J)			
1/27/2017					<0.005		
1/31/2017	<0.005	<0.005	<0.005	0.0022 (J)			<0.005
5/23/2017	<0.005				<0.005		<0.005
5/24/2017		<0.005	<0.005	0.0012 (J)			
8/10/2017	<0.005	<0.005	<0.005	0.0016 (J)	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	0.0011 (J)	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	0.0018 (J)			
6/7/2018					<0.005		<0.005
10/2/2018		<0.005	<0.005	0.0014 (J)			
10/3/2018	<0.005				<0.005		<0.005
8/22/2019	<0.005	<0.005			<0.005		<0.005
8/23/2019			<0.005	0.0035 (J)			
10/22/2019			<0.005	0.0019 (J)	<0.005		<0.005
10/23/2019	<0.005	<0.005					
3/24/2020					0.00037 (J)		
3/25/2020	<0.005	<0.005	<0.005	0.0025 (J)			<0.005
8/26/2020							<0.005
8/27/2020	<0.005	<0.005	<0.005	0.0011 (J)	<0.005		
9/24/2020	<0.005	<0.005	<0.005				
9/25/2020				0.0017 (J)	<0.005		
9/28/2020							<0.005
3/17/2021				0.0019 (J)			
3/18/2021	<0.005	<0.005	<0.005				0.001 (J)
3/19/2021					<0.005		
8/12/2021						<0.005	
8/13/2021		<0.005	<0.005	0.0019 (J)			<0.005
8/16/2021	<0.005						
8/19/2021					<0.005		
9/27/2021					<0.005	<0.005	
2/2/2022	<0.005		<0.005	<0.005	<0.005		
2/3/2022		<0.005				<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	0.0022 (J)	<0.005	<0.005	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0275	0.0269	0.0269				
8/31/2016						0.0527	
10/20/2016	0.0255					0.0477	
10/24/2016		0.028	0.0258				
1/25/2017	0.0304	0.0252	0.0272				
1/31/2017						0.0527	
5/23/2017		0.0293	0.0293			0.0436	
5/24/2017	0.0256						
8/10/2017	0.0306	0.0274	0.031			0.0419	
11/13/2017	0.0217	0.0275					
11/14/2017			0.0289			0.0407	
6/4/2018	0.025	0.027					
6/5/2018			0.028				
6/6/2018						0.043	
10/1/2018	0.021	0.026	0.025				
10/3/2018						0.041	
8/21/2019	0.029	0.027	0.027				
8/22/2019						0.043	
10/21/2019	0.033						
10/22/2019		0.028	0.027				
10/23/2019						0.043	0.037
1/3/2020							0.036
3/4/2020							0.033
3/24/2020	0.032	0.029					0.024
3/25/2020						0.038	
4/9/2020			0.034				
6/18/2020							0.029
7/21/2020							0.028
8/25/2020	0.031	0.028	0.03				
8/27/2020						0.045	0.028
9/18/2020	0.024	0.025		0.026	0.077		
9/22/2020			0.038				
9/24/2020						0.041	0.029
11/10/2020				0.027			
11/11/2020					0.078		
12/15/2020				0.027	0.091		
1/19/2021				0.029	0.095		
3/11/2021	0.037						
3/12/2021		0.03		0.03	0.1		
3/16/2021			0.054				
3/17/2021						0.04	0.031
8/12/2021	0.029	0.028	0.033	0.028	0.1		
8/13/2021							0.026
8/16/2021						0.037	
1/31/2022	0.027			0.026	0.11		
2/1/2022		0.025	0.027				
2/2/2022						0.036	0.029
8/2/2022			0.03	0.029			
8/5/2022	0.028	0.027			0.11		0.031
8/10/2022						0.04	

Time Series

Constituent: Barium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.045	0.067	0.0391	0.0883	0.0547		0.0595
10/20/2016					0.0529		0.055
10/24/2016	0.0386						
10/25/2016		0.0745	0.041	0.0831			
1/27/2017					0.049		
1/31/2017	0.0365	0.0674	0.0382	0.0844			0.0613
5/23/2017	0.0254				0.0352		0.068
5/24/2017		0.0668	0.0377	0.0784			
8/10/2017	0.0396	0.067	0.0385	0.0903	0.0457		0.0638
11/14/2017	0.0385	0.0643	0.039	0.083	0.0368		0.07
6/6/2018	0.043	0.068	0.039	0.095			
6/7/2018					0.036		0.059
10/2/2018		0.066	0.038	0.089			
10/3/2018	0.04				0.047		0.056
8/22/2019	0.036	0.066			0.036		0.052
8/23/2019			0.038	0.088			
10/22/2019			0.039	0.087	0.049		0.054
10/23/2019	0.039	0.066					
3/24/2020					0.051		
3/25/2020	0.036	0.074	0.037	0.084			0.06
8/26/2020							0.056
8/27/2020	0.038	0.068	0.034	0.083	0.047		
9/24/2020	0.036	0.075	0.039				
9/25/2020				0.085	0.05		
9/28/2020							0.046
3/17/2021				0.077			
3/18/2021	0.042	0.082	0.041				0.067
3/19/2021					0.058		
8/12/2021						0.079	
8/13/2021		0.073	0.033	0.08			0.043
8/16/2021	0.037						
8/19/2021					0.041		
9/27/2021					0.038	0.062	
2/2/2022	0.036		0.034	0.072	0.039		
2/3/2022		0.093				0.049	0.047
8/5/2022	0.037	0.088	0.036	0.085	0.044	0.055	0.039

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	0.0019 (J)				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						<0.0005	
5/23/2017		<0.0005	<0.0005			7E-05 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						5.9E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						6.5E-05 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						7.5E-05 (J)	<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020	<0.0005	<0.0005					<0.0005
3/25/2020						<0.0005	
4/9/2020			<0.0005				
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	4.7E-05 (J)	<0.0005	4.6E-05 (J)				
8/27/2020						5.7E-05 (J)	<0.0005
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			9.9E-05 (J)				
9/24/2020						4.8E-05 (J)	<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	0.00014 (J)						
3/12/2021		5.4E-05 (J)		<0.0005	<0.0005		
3/16/2021			0.00018 (J)				
3/17/2021						5.9E-05 (J)	<0.0005
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							<0.0005
8/16/2021						<0.0005	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						6.2E-05 (J)	<0.0005
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		<0.0005
8/10/2022						6.4E-05 (J)	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
10/20/2016					<0.0005		<0.0005
10/24/2016	<0.0005						
10/25/2016		<0.0005	<0.0005	<0.0005			
1/27/2017					<0.0005		
1/31/2017	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005
5/23/2017	<0.0005				<0.0005		<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005			
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005			
6/7/2018					6.8E-05 (J)		<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005			
10/3/2018	<0.0005				<0.0005		<0.0005
8/22/2019	<0.0005	<0.0005			7.9E-05 (J)		<0.0005
8/23/2019			<0.0005	<0.0005			
10/22/2019			<0.0005	<0.0005	<0.0005		<0.0005
10/23/2019	<0.0005	<0.0005					
3/24/2020					<0.0005		
3/25/2020	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005
8/26/2020							<0.0005
8/27/2020	5E-05 (J)	<0.0005	<0.0005	<0.0005	4.9E-05 (J)		
9/24/2020	8.8E-05 (J)	<0.0005	<0.0005				
9/25/2020				<0.0005	6.6E-05 (J)		
9/28/2020							<0.0005
3/17/2021				<0.0005			
3/18/2021	6.1E-05 (J)	<0.0005	<0.0005				9.3E-05 (J)
3/19/2021					8.1E-05 (J)		
8/12/2021						<0.0005	
8/13/2021		<0.0005	<0.0005	<0.0005			<0.0005
8/16/2021	<0.0005						
8/19/2021					5.6E-05 (J)		
9/27/2021					<0.0005	<0.0005	
2/2/2022	7.7E-05 (J)		<0.0005	<0.0005	8.3E-05 (J)		
2/3/2022		<0.0005				<0.0005	<0.0005
8/5/2022	<0.0005	<0.0005	<0.0005	<0.0005	7.8E-05 (J)	<0.0005	<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.04	<0.04	<0.04				
8/31/2016						0.0724 (J)	
10/20/2016	0.016 (J)					0.0877 (J)	
10/24/2016		0.0367 (J)	0.0226 (J)				
1/25/2017	0.0095 (J)	0.0075 (J)	0.009 (J)				
1/31/2017						0.0928	
5/23/2017		0.0073 (J)	0.0082 (J)			0.0795	
5/24/2017	0.0094 (J)						
8/10/2017	<0.04	<0.04	0.0061 (J)			0.0814	
11/13/2017	0.0103 (J)	0.0089 (J)					
11/14/2017			0.012 (J)			0.108	
6/4/2018	0.0065 (J)	0.007 (J)					
6/5/2018			0.0085 (J)				
6/6/2018						0.081	
10/1/2018	0.0054 (J)	<0.04	0.0042 (J)				
10/3/2018						0.092	
4/1/2019	0.0076 (J)						
4/2/2019		0.0043 (J)	0.0059 (J)				
4/4/2019						0.06 (X)	
10/21/2019	0.0097 (J)						
10/22/2019		0.016 (J)	0.01 (J)				
10/23/2019						0.1	3.1
1/3/2020							3.4
3/4/2020							3.7
3/24/2020	0.011 (J)	0.012 (J)					2.4
3/25/2020						0.08 (J)	
4/9/2020			0.012 (J)				
6/18/2020							2.9
7/21/2020							3
8/27/2020							2.7
9/18/2020	0.011 (J)	0.008 (J)		0.0082 (J)	0.015 (J)		
9/22/2020			0.021 (J)				
9/24/2020						0.1	2.9
11/10/2020				0.0064 (J)			
11/11/2020					0.014 (J)		
12/15/2020				<0.04	0.0083 (J)		
1/19/2021				0.015 (J)	0.015 (J)		
3/11/2021	0.01 (J)						
3/12/2021		0.0061 (J)		0.0067 (J)	0.012 (J)		
3/16/2021			0.011 (J)				
3/17/2021						0.13	2.7
8/12/2021	<0.04	<0.04	<0.04	<0.04	0.012 (J)		
8/13/2021							2.4
8/16/2021						0.13	
1/31/2022	0.0099 (J)			<0.04	0.011 (J)		
2/1/2022		0.011 (J)	0.012 (J)				
2/2/2022						0.14	2.6
8/2/2022			<0.04	<0.04			
8/5/2022	<0.04	0.012 (J)			0.011 (J)		2.9
8/10/2022						0.17	

Time Series

Constituent: Boron (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	2.22	1.14	0.651	0.402	0.821		0.681
10/20/2016					0.956		0.697
10/24/2016	1.83						
10/25/2016		1.21	0.778	0.372			
1/27/2017					0.99		
1/31/2017	2.12	1.43	0.782	0.404			0.768
5/23/2017	2.56				0.438		0.754
5/24/2017		1.3	0.753	0.415			
8/10/2017	2.28	1.28	0.702	0.397	0.821		0.608
11/14/2017	2.32	1.29	0.78	0.366	0.536		0.691
6/6/2018	2.5	1.4	0.87	0.48			
6/7/2018					0.5		0.57
10/2/2018		1.2	0.82	0.43			
10/3/2018	2.4				0.85		0.51
4/3/2019			0.89	0.4			
4/4/2019	2.4	1.4 (X)					
4/5/2019					1 (X)		0.6 (X)
6/17/2019	2.3		0.86	0.37			
10/22/2019			0.91	0.32	1		0.65
10/23/2019	2.3	1.3					
3/24/2020					1		
3/25/2020	2.3	1.4	0.87	0.36			0.7
9/24/2020	2.2	1.2	0.88				
9/25/2020				0.28	1.1		
9/28/2020							0.65
3/17/2021				0.26			
3/18/2021	2.4	1.5	0.92				0.81
3/19/2021					1.5		
8/12/2021						0.34	
8/13/2021		1.2	0.73	0.24			0.59
8/16/2021	3.2						
8/19/2021					0.78		
9/27/2021					0.67	0.3	
2/2/2022	3.1		0.85	0.25	0.86		
2/3/2022		1.4				0.34	0.77
8/5/2022	3.6	1.3	0.79	0.25	0.85	0.34	0.57

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						0.0002 (J)	
10/20/2016	<0.0005					0.0003 (J)	
10/24/2016		<0.0005	<0.0005				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						0.0001 (J)	
5/23/2017		<0.0005	<0.0005			0.0002 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			0.0002 (J)	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						9.5E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						0.00018 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						0.00014 (J)	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						0.0002 (J)	0.00026 (J)
1/3/2020							0.0002 (J)
3/4/2020							0.00026 (J)
3/24/2020	<0.0005	<0.0005					0.00068 (J)
3/25/2020						0.00014 (J)	
4/9/2020			<0.0005				
6/18/2020							0.00047 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						0.00019 (J)	0.00038 (J)
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			<0.0005				
9/24/2020						0.00014 (J)	0.00032 (J)
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	<0.0005						
3/12/2021		<0.0005		<0.0005	<0.0005		
3/16/2021			<0.0005				
3/17/2021						<0.0005	0.00094
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							0.00069
8/16/2021						0.00015 (J)	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						<0.0005	0.00055
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		0.00044 (J)
8/10/2022						0.00011 (J)	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0006 (J)	<0.0005	0.0001 (J)	<0.0005	0.0008 (J)		<0.0005
10/20/2016					0.0008 (J)		<0.0005
10/24/2016	0.0008 (J)						
10/25/2016		<0.0005	8E-05 (J)	<0.0005			
1/27/2017					0.0007 (J)		
1/31/2017	0.0006 (J)	<0.0005	9E-05 (J)	<0.0005			<0.0005
5/23/2017	0.0006 (J)				0.0005 (J)		<0.0005
5/24/2017		<0.0005	0.0001 (J)	<0.0005			
8/10/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005	0.0004 (J)		<0.0005
11/14/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005	0.0005 (J)		<0.0005
6/6/2018	0.00073 (J)	<0.0005	0.00012 (J)	<0.0005			
6/7/2018					0.00049 (J)		<0.0005
10/2/2018		<0.0005	0.0001 (J)	<0.0005			
10/3/2018	0.00078 (J)				0.00079 (J)		<0.0005
8/22/2019	0.0008 (J)	<0.0005			0.00064 (J)		<0.0005
8/23/2019			0.00011 (J)	<0.0005			
10/22/2019			<0.0005	<0.0005	0.00068 (J)		<0.0005
10/23/2019	0.00091 (J)	<0.0005					
3/24/2020					0.00079 (J)		
3/25/2020	0.00068 (J)	<0.0005	<0.0005	<0.0005			<0.0005
8/26/2020							<0.0005
8/27/2020	0.00082 (J)	<0.0005	<0.0005	<0.0005	0.0008 (J)		
9/24/2020	0.00076 (J)	<0.0005	<0.0005				
9/25/2020				<0.0005	0.00089 (J)		
9/28/2020							<0.0005
3/17/2021				<0.0005			
3/18/2021	0.00068	<0.0005	<0.0005				<0.0005
3/19/2021					0.001		
8/12/2021						0.00016 (J)	
8/13/2021		<0.0005	<0.0005	<0.0005			<0.0005
8/16/2021	0.00081						
8/19/2021					0.0012		
9/27/2021					0.00098	<0.0005	
2/2/2022	0.0008		<0.0005	<0.0005	0.0012		
2/3/2022		<0.0005				<0.0005	<0.0005
8/5/2022	0.00081	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	40.3	6.69	6.72				
8/31/2016						19.4	
10/20/2016	38.7					19.3	
10/24/2016		6.25	6.4				
1/25/2017	44.6	6.58	6.87				
1/31/2017						19.1	
5/23/2017		6.4	7.13			18.3	
5/24/2017	34.8						
8/10/2017	48.6	6.54	6.71			20.9	
11/13/2017	17.1	6.26					
11/14/2017			7.4			21.7	
6/4/2018	30.1	7.4					
6/5/2018			7.4				
6/6/2018						17	
10/1/2018	14.2 (J)	5.8	6.2				
10/3/2018						19.1 (J)	
4/1/2019	58.4						
4/2/2019		6.7	7.4				
4/4/2019						16.9	
10/21/2019	51						
10/22/2019		6.3	7.2				
10/23/2019						21.9	136
1/3/2020							118
3/4/2020							144
3/24/2020	61.2	7					103
3/25/2020						18.4	
4/9/2020			8.3				
6/18/2020							124
7/21/2020							120
8/27/2020							106
9/18/2020	32.2	6.5		62.2	51.8		
9/22/2020			7.9				
9/24/2020						20.3	120
11/10/2020				73.3			
11/11/2020					61.3		
12/15/2020				72.5	61.3		
1/19/2021				72.5	58.9		
3/11/2021	53.2						
3/12/2021		6.9		69.2	57.5		
3/16/2021			8.6				
3/17/2021						21.8	111
8/12/2021	45.4	6.9	8.4	71.2	59.5		
8/13/2021							119
8/16/2021						22.8	
1/31/2022	58.6			73.8	63.2		
2/1/2022		7.4	8.6				
2/2/2022						23.8	116
8/2/2022			8	73			
8/5/2022	53	7.1			59.6		127
8/10/2022						24.6	

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	70.4	74.2	44.7	35.1	63.4		79.3
10/20/2016					64.4		83.7
10/24/2016	70.9						
10/25/2016		72.5	49	35.4			
1/27/2017					68.6		
1/31/2017	63.6	70.3	46.6	34.2			76.8
5/23/2017	111				32		77.2
5/24/2017		75.9	49.5	35.3			
8/10/2017	81.2	84	54.2	43.1	78.9		83.1
11/14/2017	79.7	87.2	53.2	37.4	46.9		86.7
6/6/2018	88.3	81	55	41.1			
6/7/2018					37.7		79.7
10/2/2018		84.7	55.4	42.5			
10/3/2018	85.3				68		77.1
4/3/2019			54	37.5			
4/4/2019	91.9	73.8					
4/5/2019					70		82
6/17/2019	92.6	81.2	55.3				
6/18/2019					36.3		76.5
10/22/2019			58.1	42.6	70.9		84.2
10/23/2019	86.5	89.4					
3/24/2020					68		
3/25/2020	86.8	91.4	59.5	42.6			86.8
9/24/2020	91.3	92.9	55.4				
9/25/2020				48.5	72.8		
9/28/2020							88.9
3/17/2021				37.3			
3/18/2021	83.7	97.7	56				85.4
3/19/2021					87.3		
8/12/2021						50.7	
8/13/2021		102	57.8	43.5			84.3
8/16/2021	124						
8/19/2021					40.9		
9/27/2021					37.5	47.2	
2/2/2022	104		62	45.7	42.6		
2/3/2022		115				68.2	84.5
8/5/2022	128	121	63	50.8	44.8	68.6	88.5

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	3.3	5.4	2				
8/31/2016						5.7	
10/20/2016	3.2					5.7	
10/24/2016		5.2	1.9				
1/25/2017	2.7	5	1.9				
1/31/2017						5.8	
5/23/2017		5.1	1.6			5.3	
5/24/2017	3						
8/10/2017	2.8	5.2	1.7			5.4	
11/13/2017	2.5	5.5					
11/14/2017			2			5.8	
6/4/2018	2.6	5.3					
6/5/2018			1.7				
6/6/2018						5.3	
10/1/2018	2.2	5.6	1.6				
10/3/2018						5.8	
4/1/2019	4						
4/2/2019		5.7	1.8				
4/4/2019						5.9	
10/21/2019	3.9						
10/22/2019		5.5	1.9				
10/23/2019						5.5	7.9
1/3/2020							7
3/4/2020							7.1
3/24/2020	3.6	5.2					6.5
3/25/2020						5.2	
4/9/2020			1.4				
6/18/2020							6.9
7/21/2020							7.2
8/27/2020							7.1
9/18/2020	2.6	5.2		2.7	2.6		
9/22/2020			1.5				
9/24/2020						5.5	7.2
11/10/2020				2.7			
11/11/2020					2.6		
12/15/2020				2.9	2.7		
1/19/2021				2.8	2.7		
3/11/2021	3.4						
3/12/2021		5.3		2.7	2.6		
3/16/2021			1.6				
3/17/2021						5.5	6.9
8/12/2021	2.5	4.4	1.5	2.3	2.2		
8/13/2021							6
8/16/2021						5.4	
1/31/2022	3			2.6	2.5		
2/1/2022		5.2	1.6				
2/2/2022						5.3	7.2
8/2/2022			1.8	3			
8/5/2022	2.7	5			2.4		7.7
8/10/2022						5.5	

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	5.2	3	3.2	5	7.1		4.5
10/20/2016					7.7		4.4
10/24/2016	5.2						
10/25/2016		2.8	3.2	4.8			
1/27/2017					7.8		
1/31/2017	5.6	3.3	3.1	5.5			4.8
5/23/2017	5.7				3.6		4.3
5/24/2017		3.5	2.9	5.3			
8/10/2017	5.8	2.9	2.8	4.6	5.9		4.2
11/14/2017	6	4	3.4	5.6	4		4.4
6/6/2018	6.4	2.9	2.8	5.3			
6/7/2018					3.6		4.1
10/2/2018		3.5	3.2	5.3			
10/3/2018	6.3				7.6		4.4
4/3/2019			3.6	5			
4/4/2019	6.9	3.9					
4/5/2019					8.9		4.3
6/17/2019	5.2		2.9				
10/22/2019			3.6	4.6	12.1		4.5
10/23/2019	6.1	3.6					
3/24/2020					12.5		
3/25/2020	5.1	3.2	3	3.9			3.6
9/24/2020	6	3.9	3.5				
9/25/2020				4.1	16.1		
9/28/2020							4
3/17/2021				4.7			
3/18/2021	6.2	4.3	3.2				4.3
3/19/2021					24.9		
8/12/2021						6.3	
8/13/2021		3.7	3.1	4			4
8/16/2021	10.4						
8/19/2021					4		
9/27/2021					3.4	4.5	
2/2/2022	7.1		2.9	4.1	4.3		
2/3/2022		4.8				7.8	3.9
8/5/2022	7.8	5	2.7	3.7	4.4	7.4	3.8

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	0.0038 (J)	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		0.0039 (J)	0.001 (J)				
1/25/2017	0.0029 (J)	0.0038 (J)	0.0012 (J)				
1/31/2017						<0.005	
5/23/2017		0.0038 (J)	0.0012 (J)			0.0006 (J)	
5/24/2017	0.0004 (J)						
8/10/2017	<0.005	0.0039 (J)	0.0019 (J)			<0.005	
11/13/2017	<0.005	0.0038 (J)					
11/14/2017			0.0016 (J)			<0.005	
6/4/2018	<0.005	0.0037 (J)					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	0.0036 (J)	0.0023 (J)				
10/3/2018						<0.005	
8/21/2019	0.00061 (J)	0.0039 (J)	0.0022 (J)				
8/22/2019						0.00064 (J)	
10/21/2019	0.0012 (J)						
10/22/2019		0.004 (J)	0.0023 (J)				
10/23/2019						<0.005	<0.005
1/3/2020							0.00063 (J)
3/4/2020							<0.005
3/24/2020	0.0019 (J)	0.0044 (J)					0.00051 (J)
3/25/2020						0.00098 (J)	
4/9/2020			0.0031 (J)				
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	0.0013 (J)	0.0039 (J)	0.0031 (J)				
8/27/2020						<0.005	<0.005
9/18/2020	0.00077 (J)	0.0037 (J)		0.0039 (J)	<0.005		
9/22/2020			0.0046 (J)				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.0013 (J)		
1/19/2021				<0.005	0.0015 (J)		
3/11/2021	0.002 (J)						
3/12/2021		0.0045 (J)		<0.005	0.00062 (J)		
3/16/2021			0.0061				
3/17/2021						0.00075 (J)	<0.005
8/12/2021	<0.005	0.0041 (J)	<0.005	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		0.0043 (J)	0.0013 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0013 (J)	<0.005			
8/5/2022	<0.005	0.0045 (J)			<0.005		<0.005
8/10/2022						<0.005	

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
10/20/2016					<0.005		<0.005
10/24/2016	<0.005						
10/25/2016		<0.005	<0.005	<0.005			
1/27/2017					<0.005		
1/31/2017	<0.005	<0.005	<0.005	<0.005			<0.005
5/23/2017	<0.005				<0.005		<0.005
5/24/2017		<0.005	<0.005	<0.005			
8/10/2017	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005			
6/7/2018					<0.005		<0.005
10/2/2018		<0.005	<0.005	<0.005			
10/3/2018	<0.005				<0.005		<0.005
8/22/2019	0.00063 (J)	<0.005			<0.005		<0.005
8/23/2019			<0.005	<0.005			
10/22/2019			<0.005	0.00062 (J)	<0.005		0.00066 (J)
10/23/2019	0.0015 (J)	0.0004 (J)					
3/24/2020					0.0012 (J)		
3/25/2020	0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)			0.00081 (J)
8/26/2020							0.00098 (J)
8/27/2020	0.00069 (J)	<0.005	<0.005	<0.005	0.00057 (J)		
9/24/2020	0.00081 (J)	0.00064 (J)	<0.005				
9/25/2020				<0.005	0.00067 (J)		
9/28/2020							0.0017 (J)
3/17/2021				<0.005			
3/18/2021	0.003 (J)	0.00058 (J)	<0.005				0.0021 (J)
3/19/2021					0.001 (J)		
8/12/2021						<0.005	
8/13/2021		<0.005	<0.005	<0.005			<0.005
8/16/2021	<0.005						
8/19/2021					<0.005		
9/27/2021					<0.005	<0.005	
2/2/2022	0.0013 (J)		<0.005	<0.005	<0.005		
2/3/2022		<0.005				<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0006 (J)				
8/31/2016						0.0033 (J)	
10/20/2016	<0.005					0.0025 (J)	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						0.001 (J)	
5/23/2017		<0.005	<0.005			0.0025 (J)	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0004 (J)			0.0029 (J)	
11/13/2017	<0.005	<0.005					
11/14/2017			0.0003 (J)			0.003 (J)	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						0.0016 (J)	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						0.0028 (J)	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						0.0023 (J)	0.0018 (J)
1/3/2020							0.0038 (J)
3/4/2020							0.0021 (J)
3/24/2020	<0.005	<0.005					0.0019 (J)
3/25/2020						0.0021 (J)	
4/9/2020			0.00037 (J)				
6/18/2020							0.0012 (J)
7/21/2020							0.00098 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						0.0027 (J)	0.001 (J)
9/18/2020	<0.005	<0.005		0.00049 (J)	<0.005		
9/22/2020			0.00074 (J)				
9/24/2020						0.0021 (J)	0.0011 (J)
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.00039 (J)		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	<0.005		
3/16/2021			0.0013 (J)				
3/17/2021						0.0023 (J)	0.0012 (J)
8/12/2021	<0.005	<0.005	<0.005	<0.005	<0.005		
8/13/2021							0.00085 (J)
8/16/2021						0.0026 (J)	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						0.0027 (J)	0.0019 (J)
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		0.001 (J)
8/10/2022						0.0028 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023 (J)	0.0035 (J)		<0.005
10/20/2016					0.0045 (J)		<0.005
10/24/2016	0.0018 (J)						
10/25/2016		0.0013 (J)	<0.005	0.0017 (J)			
1/27/2017					0.0041 (J)		
1/31/2017	0.0016 (J)	0.0006 (J)	<0.005	0.0017 (J)			<0.005
5/23/2017	0.0014 (J)				0.0071 (J)		0.0005 (J)
5/24/2017		0.0007 (J)	<0.005	0.002 (J)			
8/10/2017	0.0025 (J)	0.0006 (J)	<0.005	0.0012 (J)	0.0031 (J)		0.0003 (J)
11/14/2017	0.002 (J)	0.0005 (J)	<0.005	0.0014 (J)	0.0062 (J)		0.0004 (J)
6/6/2018	0.0031 (J)	0.00056 (J)	<0.005	0.0014 (J)			
6/7/2018					0.0083 (J)		<0.005
10/2/2018		<0.005	<0.005	0.00081 (J)			
10/3/2018	0.0023 (J)				0.005 (J)		<0.005
8/22/2019	0.0019 (J)	<0.005			0.012		0.0003 (J)
8/23/2019			<0.005	0.0027 (J)			
10/22/2019			<0.005	0.0022 (J)	0.0064		0.00061 (J)
10/23/2019	0.0021 (J)	0.00038 (J)					
3/24/2020					0.0087		
3/25/2020	0.0022 (J)	0.00047 (J)	<0.005	0.0022 (J)			<0.005
8/26/2020							0.00061 (J)
8/27/2020	0.0019 (J)	<0.005	<0.005	0.00086 (J)	0.011		
9/24/2020	0.0019 (J)	0.00044 (J)	<0.005				
9/25/2020				0.001 (J)	0.011		
9/28/2020							0.00048 (J)
3/17/2021				0.003 (J)			
3/18/2021	0.0021 (J)	0.00045 (J)	<0.005				0.0012 (J)
3/19/2021					0.011		
8/12/2021						0.0024 (J)	
8/13/2021		<0.005	<0.005	0.0011 (J)			<0.005
8/16/2021	0.0022 (J)						
8/19/2021					0.017		
9/27/2021					0.015	0.0011 (J)	
2/2/2022	0.0022 (J)		<0.005	0.002 (J)	0.022		
2/3/2022		<0.005				0.00041 (J)	0.00045 (J)
8/5/2022	0.0021 (J)	<0.005	<0.005	0.0008 (J)	0.023	0.0011 (J)	<0.005

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.804 (U)	1.32 (U)	0.587 (U)				
8/31/2016						0.621 (U)	
10/20/2016	1.13 (U)					1.4	
10/24/2016		1.3 (U)	0.979 (U)				
1/25/2017	0.888 (U)	1.04 (U)	0.038 (U)				
1/31/2017						0.906 (U)	
5/23/2017		0.541 (U)	0.898 (U)			0.388 (U)	
5/24/2017	0.622 (U)						
8/10/2017	0.745 (U)	0.536 (U)	0.759 (U)			1.03 (U)	
11/13/2017	0.778 (U)	0.786 (U)					
11/14/2017			0.0762 (U)			0.769 (U)	
6/4/2018	0.637 (U)	0.233 (U)					
6/5/2018			0.594 (U)				
6/6/2018						1.28 (U)	
10/1/2018	0.451 (U)	0.494 (U)	0.982				
10/3/2018						0.302 (U)	
8/21/2019	0.553 (U)	0.514 (U)	0.492 (U)				
8/22/2019						0.474 (U)	
10/21/2019	0.351 (U)						
10/22/2019		0.828 (U)	0.523 (U)				
10/23/2019						0.776 (U)	0.858 (U)
1/22/2020							1.04 (U)
3/4/2020							1.32
3/24/2020	0.26 (U)	0.677 (U)					1.23 (U)
3/25/2020						0.603 (U)	
4/9/2020			0.617 (U)				
7/21/2020							0.0938 (U)
8/25/2020	0.57 (U)	0.0182 (U)	0.587 (U)				
8/27/2020						0.109 (U)	1.17 (U)
9/18/2020	0.828 (U)	1.15 (U)		1.11 (U)	1.5 (U)		
9/22/2020			0.551 (U)				
9/24/2020						0.625 (U)	1.42
11/10/2020				0.234 (U)			
11/11/2020					0.776 (U)		
12/15/2020				0.529 (U)	1.23 (U)		
1/19/2021				0.176 (U)	1.35 (U)		
3/11/2021	0.354 (U)						
3/12/2021		0.164 (U)		0 (U)	0.829 (U)		
3/16/2021			0.559 (U)				
3/17/2021						0.248 (U)	0.401 (U)
8/12/2021	0.532 (U)	0.223 (U)	0.312 (U)	0.462 (U)	0.274 (U)		
8/13/2021							0.828 (U)
8/16/2021						0.667 (U)	
1/31/2022	0.279 (U)			0.444 (U)	0.196 (U)		
2/1/2022		0.0793 (U)	0.132 (U)			0.162 (U)	0.806 (U)
8/2/2022			0.791 (U)	0.491 (U)			
8/5/2022	0.573 (U)	0.665 (U)			0.599 (U)		0.618 (U)
8/10/2022						0.601 (U)	

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	1.62	0.906 (U)	1.2	1.03	1.12		
10/20/2016					0.803 (U)		1.97
10/24/2016	1.01 (U)						
10/25/2016		1.03	1.11 (U)	1.07			
1/27/2017					1.08 (U)		
1/31/2017	0.976 (U)	0.868 (U)	1.45	0.588 (U)			1.03
5/23/2017	0.891 (U)				0.624 (U)		0.398 (U)
5/24/2017		0.728 (U)	0.393 (U)	0.593 (U)			
8/10/2017	0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.695 (U)		0.938 (U)
11/14/2017	0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.99 (U)		0.335 (U)
6/6/2018	0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)			
6/7/2018					1.04 (U)		0.696 (U)
10/2/2018		0.336 (U)	1.23	0.225 (U)			
10/3/2018	0.111 (U)				0.198 (U)		1.6 (U)
8/22/2019	0.946 (U)	0.694 (U)			0.333 (U)		0.904 (U)
8/23/2019			1.69	0.47 (U)			
10/22/2019			0.705 (U)	0.545 (U)	0.827 (U)		0.424 (U)
10/23/2019	0.571 (U)	0.584 (U)					
3/24/2020					0.815 (U)		
3/25/2020	0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)			0.915 (U)
8/26/2020							1.19
8/27/2020	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	0.193 (U)		
9/24/2020	0.804 (U)	1.11 (U)	0.576 (U)				
9/25/2020				0.584 (U)	0.155 (U)		
9/28/2020							0.613 (U)
3/17/2021				0.556 (U)			
3/18/2021	0.274 (U)	0.252 (U)	0.145 (U)				0.323 (U)
3/19/2021					0.303 (U)		
8/12/2021						0.124 (U)	
8/13/2021		0.513 (U)	0.815 (U)	0.794 (U)			0.228 (U)
8/16/2021	0.493 (U)						
8/19/2021					0.155 (U)		
9/27/2021					0.905	1.05 (U)	
2/1/2022	0.569 (U)		0.0564 (U)	0.542 (U)	0.26 (U)		
2/3/2022		0.835				0.499 (U)	0.5 (U)
8/5/2022	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0.605 (U)	0 (U)	0.206 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)				
8/31/2016						0.05 (J)	
10/20/2016	0.07 (J)					0.03 (J)	
10/24/2016		0.05 (J)	0.16 (J)				
1/25/2017	0.14 (J)	<0.1	0.15 (J)				
1/31/2017						<0.1	
5/23/2017		0.004 (J)	0.18 (J)			<0.1	
5/24/2017	0.02 (J)						
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)			<0.1	
11/13/2017	<0.1	<0.1					
11/14/2017			0.16 (J)			<0.1	
6/4/2018	0.032 (J)	<0.1					
6/5/2018			0.18 (J)				
6/6/2018						<0.1	
10/1/2018	<0.1	<0.1	0.078 (J)				
10/3/2018						<0.1	
4/1/2019	0.042 (J)						
4/2/2019		<0.1	0.18 (J)				
4/4/2019						<0.1	
8/21/2019	0.048 (J)	<0.1	0.11 (J)				
8/22/2019						<0.1	
10/21/2019	0.12 (J)						
10/22/2019		0.05 (J)	0.18 (J)				
10/23/2019						<0.1	0.22 (J)
1/3/2020							<0.1
3/4/2020							<0.1
3/24/2020	0.076 (J)	<0.1					<0.1
3/25/2020						<0.1	
4/9/2020			0.14 (J)				
6/18/2020							<0.1
7/21/2020							<0.1
8/25/2020	0.052 (J)	<0.1	0.17				
8/27/2020						<0.1	<0.1
9/18/2020	<0.1	<0.1		0.067 (J)	0.098 (J)		
9/22/2020			0.16				
9/24/2020						<0.1	<0.1
11/10/2020				0.065 (J)			
11/11/2020					0.083 (J)		
12/15/2020				0.064 (J)	0.081 (J)		
1/19/2021				0.057 (J)	0.079 (J)		
3/11/2021	0.057 (J)						
3/12/2021		<0.1		0.062 (J)	0.085 (J)		
3/16/2021			0.18				
3/17/2021						<0.1	<0.1
8/12/2021	<0.1	<0.1	0.16	<0.1	0.064 (J)		
8/13/2021							<0.1
8/16/2021						<0.1	
1/31/2022	0.055 (J)			0.053 (J)	0.072 (J)		
2/1/2022		<0.1	0.16				
2/2/2022						<0.1	<0.1
8/2/2022			0.19	0.08 (J)			
8/5/2022	0.1	0.077 (J)			0.12		0.076 (J)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2022						0.065 (J)	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)		0.18 (J)
10/20/2016					0.11 (J)		0.12 (J)
10/24/2016	0.13 (J)						
10/25/2016		0.09 (J)	0.16 (J)	0.17 (J)			
1/27/2017					0.28 (J)		
1/31/2017	<0.1	0.13 (J)	0.16 (J)	0.05 (J)			0.3
5/23/2017	0.15 (J)				0.01 (J)		0.14 (J)
5/24/2017		0.07 (J)	0.009 (J)	0.13 (J)			
8/10/2017	<0.1	0.03 (J)	<0.1	0.12 (J)	0.1 (J)		0.11 (J)
11/14/2017	<0.1	<0.1	<0.1	<0.1	<0.1		0.07 (J)
6/6/2018	<0.1	0.074 (J)	0.057 (J)	0.15 (J)			
6/7/2018					<0.1		0.3
10/2/2018		<0.1	<0.1	<0.1			
10/3/2018	<0.1				<0.1		0.12 (J)
4/3/2019			<0.1	0.05 (J)			
4/4/2019	0.042 (J)	0.03 (J)					
4/5/2019					0.19 (J)		0.33
6/18/2019							0.89
8/22/2019	<0.1	<0.1			<0.1		0.07 (J)
8/23/2019			<0.1	0.034 (J)			
10/22/2019			0.047 (J)	0.099 (J)	0.042 (J)		0.087 (J)
10/23/2019	<0.1	<0.1					
3/24/2020					<0.1		
3/25/2020	<0.1	<0.1	<0.1	0.075 (J)			0.078 (J)
8/26/2020							0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	0.094 (J)	<0.1		
9/24/2020	<0.1	<0.1	0.064 (J)				
9/25/2020				0.091 (J)	<0.1		
9/28/2020							0.078 (J)
3/17/2021				0.089 (J)			
3/18/2021	<0.1	<0.1	<0.1				0.079 (J)
3/19/2021					<0.1		
8/12/2021						<0.1	
8/13/2021		<0.1	<0.1	0.086 (J)			0.075 (J)
8/16/2021	<0.1						
8/19/2021					<0.1		
9/27/2021					<0.1	<0.1	
2/2/2022	<0.1		<0.1	0.086 (J)	<0.1		
2/3/2022		<0.1				0.056 (J)	0.069 (J)
8/5/2022	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.075 (J)	0.12	0.12

Time Series

Constituent: Lead (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0001 (J)	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			0.0009 (J)	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	0.0001 (J)			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	7.1E-05 (J)				
8/22/2019						<0.001	
10/21/2019	0.00016 (J)						
10/22/2019		<0.001	7.3E-05 (J)				
10/23/2019						<0.001	<0.001
1/3/2020							<0.001
3/4/2020							0.00011 (J)
3/24/2020	0.00058 (J)	0.00016 (J)					<0.001
3/25/2020						<0.001	
4/9/2020			0.00039 (J)				
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	0.00036 (J)	0.00011 (J)	0.00022 (J)				
8/27/2020						<0.001	<0.001
9/18/2020	0.00026 (J)	6.5E-05 (J)		<0.001	<0.001		
9/22/2020			0.00096 (J)				
9/24/2020						<0.001	<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	0.00015 (J)		
1/19/2021				3.8E-05 (J)	5.6E-05 (J)		
3/11/2021	0.0011						
3/12/2021		0.00017 (J)		<0.001	4.8E-05 (J)		
3/16/2021			0.0016				
3/17/2021						<0.001	<0.001
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	

Time Series

Constituent: Lead (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
10/20/2016					<0.001		<0.001
10/24/2016	<0.001						
10/25/2016		<0.001	<0.001	<0.001			
1/27/2017					<0.001		
1/31/2017	<0.001	<0.001	<0.001	<0.001			<0.001
5/23/2017	<0.001				<0.001		<0.001
5/24/2017		<0.001	<0.001	<0.001			
8/10/2017	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001			
6/7/2018					<0.001		<0.001
10/2/2018		<0.001	<0.001	<0.001			
10/3/2018	<0.001				<0.001		<0.001
8/22/2019	<0.001	<0.001			<0.001		<0.001
8/23/2019			<0.001	5.8E-05 (J)			
10/22/2019			7.9E-05 (J)	5.4E-05 (J)	0.00016 (J)		0.00025 (J)
10/23/2019	0.00043 (J)	6.8E-05 (J)					
3/24/2020					0.00025 (J)		
3/25/2020	7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001			0.0001 (J)
8/26/2020							0.00036 (J)
8/27/2020	0.00018 (J)	<0.001	<0.001	<0.001	0.00014 (J)		
9/24/2020	0.00028 (J)	4.9E-05 (J)	0.00034 (J)				
9/25/2020				<0.001	0.00019 (J)		
9/28/2020							0.00022 (J)
3/17/2021				<0.001			
3/18/2021	0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)				0.00088 (J)
3/19/2021					0.00038 (J)		
8/12/2021						<0.001	
8/13/2021		<0.001	<0.001	<0.001			<0.001
8/16/2021	<0.001						
8/19/2021					<0.001		
9/27/2021					<0.001	<0.001	
2/2/2022	<0.001		<0.001	<0.001	<0.001		
2/3/2022		<0.001				<0.001	<0.001
8/5/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0022 (J)	<0.03	<0.03				
8/31/2016						<0.03	
10/20/2016	<0.03					<0.03	
10/24/2016		<0.03	<0.03				
1/25/2017	<0.03	<0.03	<0.03				
1/31/2017						<0.03	
5/23/2017		<0.03	0.0011 (J)			<0.03	
5/24/2017	0.0017 (J)						
8/10/2017	0.0017 (J)	<0.03	<0.03			<0.03	
11/13/2017	<0.03	<0.03					
11/14/2017			<0.03			<0.03	
6/4/2018	0.0016 (J)	<0.03					
6/5/2018			0.001 (J)				
6/6/2018						<0.03	
10/1/2018	<0.03	<0.03	0.001 (J)				
10/3/2018						<0.03	
8/21/2019	0.0018 (J)	<0.03	0.0011 (J)				
8/22/2019						<0.03	
10/21/2019	0.0026 (J)						
10/22/2019		<0.03	0.0011 (J)				
10/23/2019						<0.03	0.0012 (J)
1/3/2020							0.0011 (J)
3/4/2020							0.0013 (J)
3/24/2020	0.0039 (J)	<0.03					0.00084 (J)
3/25/2020						<0.03	
4/9/2020			0.0017 (J)				
6/18/2020							0.0013 (J)
7/21/2020							0.0013 (J)
8/25/2020	0.0033 (J)	<0.03	0.0014 (J)				
8/27/2020						<0.03	0.0011 (J)
9/18/2020	0.0021 (J)	<0.03		0.0026 (J)	0.0051 (J)		
9/22/2020			0.0018 (J)				
9/24/2020						<0.03	0.0011 (J)
11/10/2020				0.0028 (J)			
11/11/2020					0.0036 (J)		
12/15/2020				0.0026 (J)	0.0045 (J)		
1/19/2021				0.003 (J)	0.0032 (J)		
3/11/2021	0.0047 (J)						
3/12/2021		<0.03		0.0031 (J)	0.0031 (J)		
3/16/2021			0.0026 (J)				
3/17/2021						<0.03	0.0012 (J)
8/12/2021	0.002 (J)	<0.03	0.00094 (J)	0.0029 (J)	0.0037 (J)		
8/13/2021							0.0011 (J)
8/16/2021						<0.03	
1/31/2022	0.0026 (J)			0.0031 (J)	0.0034 (J)		
2/1/2022		<0.03	0.0011 (J)				
2/2/2022						<0.03	0.0013 (J)
8/2/2022			0.00089 (J)	0.0026 (J)			
8/5/2022	0.0019 (J)	<0.03			0.0036 (J)		0.0013 (J)
8/10/2022						<0.03	

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.03	0.0034 (J)	<0.03	<0.03	0.0024 (J)		<0.03
10/20/2016					0.0027 (J)		<0.03
10/24/2016	<0.03						
10/25/2016		0.0043 (J)	<0.03	<0.03			
1/27/2017					<0.03		
1/31/2017	<0.03	0.0042 (J)	<0.03	<0.03			<0.03
5/23/2017	0.0012 (J)				<0.03		0.0012 (J)
5/24/2017		0.0039 (J)	<0.03	0.0012 (J)			
8/10/2017	0.0016 (J)	0.004 (J)	<0.03	<0.03	0.0021 (J)		<0.03
11/14/2017	0.0015 (J)	0.0044 (J)	<0.03	<0.03	<0.03		<0.03
6/6/2018	0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)			
6/7/2018					0.0011 (J)		0.0015 (J)
10/2/2018		0.0041 (J)	<0.03	0.0013 (J)			
10/3/2018	0.0016 (J)				0.0021 (J)		<0.03
8/22/2019	0.0015 (J)	0.004 (J)			0.0012 (J)		0.0018 (J)
8/23/2019			0.00092 (J)	0.0009 (J)			
10/22/2019			0.00094 (J)	0.00088 (J)	0.0028 (J)		0.0027 (J)
10/23/2019	0.002 (J)	0.0039 (J)					
3/24/2020					0.0029 (J)		
3/25/2020	0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03			0.0017 (J)
8/26/2020							0.0028 (J)
8/27/2020	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)	0.0024 (J)		
9/24/2020	0.0017 (J)	0.0038 (J)	0.00098 (J)				
9/25/2020				0.001 (J)	0.0031 (J)		
9/28/2020							0.0022 (J)
3/17/2021				<0.03			
3/18/2021	0.0018 (J)	0.0042 (J)	0.0011 (J)				0.0029 (J)
3/19/2021					0.0035 (J)		
8/12/2021						0.0036 (J)	
8/13/2021		0.0038 (J)	0.00084 (J)	<0.03			0.0017 (J)
8/16/2021	0.0016 (J)						
8/19/2021					0.0017 (J)		
9/27/2021					0.0016 (J)	0.0035 (J)	
2/2/2022	0.0019 (J)		0.001 (J)	0.00084 (J)	0.0017 (J)		
2/3/2022		0.0046 (J)				0.0051 (J)	0.0015 (J)
8/5/2022	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0017 (J)	0.0038 (J)	0.0018 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	4E-05 (J)	4.1E-05 (J)	4E-05 (J)				
8/31/2016						<0.0002	
10/20/2016	<0.0002					<0.0002	
10/24/2016		<0.0002	<0.0002				
1/25/2017	4E-05 (J)	4E-05 (J)	4E-05 (J)				
1/31/2017						9.3E-05 (J)	
5/23/2017		<0.0002	<0.0002			<0.0002	
5/24/2017	<0.0002						
8/10/2017	<0.0002	<0.0002	<0.0002			<0.0002	
11/13/2017	<0.0002	<0.0002					
11/14/2017			<0.0002			<0.0002	
6/4/2018	<0.0002	<0.0002					
6/5/2018			<0.0002				
6/6/2018						<0.0002	
10/1/2018	4.3E-05 (J)	3.9E-05 (J)	4.3E-05 (J)				
10/3/2018						<0.0002	
8/21/2019	<0.0002	<0.0002	<0.0002				
8/22/2019						<0.0002	
10/23/2019							<0.0002
1/3/2020							<0.0002
3/4/2020							<0.0002
3/24/2020							<0.0002
6/18/2020							<0.0002
7/21/2020							<0.0002
8/25/2020	<0.0002	<0.0002	<0.0002				
8/27/2020						<0.0002	<0.0002
9/18/2020				<0.0002	<0.0002		
9/24/2020							<0.0002
11/10/2020				<0.0002			
11/11/2020					<0.0002		
12/15/2020				<0.0002	<0.0002		
1/19/2021				<0.0002	<0.0002		
8/12/2021	<0.0002 (ND)	0.00011 (J)	<0.0002	8.1E-05 (J)	0.00018 (J)		
8/13/2021							0.0001 (J)
8/16/2021						9.9E-05 (J)	
1/31/2022	<0.0002			<0.0002	<0.0002		
2/1/2022		<0.0002	<0.0002				
2/2/2022						<0.0002	<0.0002
8/2/2022			<0.0002	<0.0002			
8/5/2022	<0.0002	<0.0002			<0.0002		<0.0002
8/10/2022						<0.0002	

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.0002	<0.0002	<0.0002	<0.0002	7E-05 (J)		<0.0002
10/20/2016					<0.0002		<0.0002
10/24/2016	<0.0002						
10/25/2016		<0.0002	<0.0002	<0.0002			
1/27/2017					<0.0002		
1/31/2017	8E-05 (J)	<0.0002	<0.0002	8E-05 (J)			9E-05 (J)
5/23/2017	<0.0002				<0.0002		<0.0002
5/24/2017		<0.0002	<0.0002	<0.0002			
8/10/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002	<0.0002	<0.0002	<0.0002			
6/7/2018					<0.0002		<0.0002
10/2/2018		<0.0002	<0.0002	<0.0002			
10/3/2018	<0.0002				<0.0002		<0.0002
8/22/2019	<0.0002	<0.0002			<0.0002		<0.0002
8/23/2019			<0.0002	<0.0002			
8/26/2020							<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
8/12/2021						9.4E-05 (J)	
8/13/2021		0.00022	8.4E-05 (J)	8E-05 (J)			8.1E-05 (J)
8/16/2021	0.00027						
8/19/2021					0.0003		
9/27/2021					<0.0002	<0.0002	
2/2/2022	<0.0002		<0.0002	<0.0002	0.00015 (J)		
2/3/2022		<0.0002				<0.0002	<0.0002
8/5/2022	0.00017 (J)	<0.0002	<0.0002	<0.0002	0.00014 (J)	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	<0.01				
1/25/2017	<0.01	<0.01	<0.01				
1/31/2017						<0.01	
5/23/2017		<0.01	<0.01			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	<0.01			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	<0.01				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	<0.01				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							<0.01
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				0.0015 (J)	0.0026 (J)		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					0.0012 (J)		
12/15/2020				<0.01	0.00097 (J)		
1/19/2021				<0.01	0.0018 (J)		
8/12/2021	<0.01	<0.01	<0.01	<0.01	0.0019 (J)		
8/13/2021							<0.01
8/16/2021						<0.01	
1/31/2022	<0.01			<0.01	0.002 (J)		
2/1/2022		<0.01	<0.01				
2/2/2022						<0.01	<0.01
8/2/2022			<0.01	<0.01			
8/5/2022	<0.01	<0.01			0.0012 (J)		<0.01
8/10/2022						<0.01	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01
10/20/2016					<0.01		<0.01
10/24/2016	<0.01						
10/25/2016		<0.01	<0.01	<0.01			
1/27/2017					<0.01		
1/31/2017	<0.01	<0.01	<0.01	<0.01			<0.01
5/23/2017	<0.01				<0.01		<0.01
5/24/2017		<0.01	<0.01	<0.01			
8/10/2017	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01			
6/7/2018					<0.01		<0.01
10/2/2018		<0.01	<0.01	<0.01			
10/3/2018	<0.01				<0.01		<0.01
8/22/2019	<0.01	<0.01			<0.01		<0.01
8/23/2019			<0.01	<0.01			
8/26/2020							<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01		
8/12/2021						<0.01	
8/13/2021		<0.01	<0.01	<0.01			<0.01
8/16/2021	<0.01						
8/19/2021					<0.01		
9/27/2021					<0.01	<0.01	
2/2/2022	<0.01		<0.01	<0.01	<0.01		
2/3/2022		<0.01				<0.01	<0.01
8/5/2022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Time Series

Constituent: pH (s.u.) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	6.89	5.77	5.99				
8/31/2016						5.35	
10/20/2016	6.73					5.3	
10/24/2016		5.61	5.84				
1/25/2017	7.02	5.68	6.04				
1/31/2017						5.24	
5/23/2017		5.7	6.01			5.39	
5/24/2017	6.44						
8/10/2017	6.79	5.59	5.98			5.47	
11/13/2017	5.94	5.56					
11/14/2017			6.16			5.4	
6/4/2018	6.12	5.62					
6/5/2018			5.86				
6/6/2018						5.37	
10/1/2018	5.92	5.62	5.94				
10/3/2018						5.39	
4/1/2019	7.09						
4/2/2019		5.47	6				
4/4/2019						5.31	
6/18/2019						5.3	
8/21/2019	6.6	5.8	6.05				
8/22/2019						5.39	
10/21/2019	7.02						
10/22/2019		5.7	5.98				
10/23/2019						5.33	5.68
1/3/2020							5.64
3/4/2020							5.75
3/24/2020	7.37	5.64					5.58
3/25/2020						5.53	
4/9/2020			6.08				
6/18/2020							5.67
7/21/2020							5.72
8/25/2020	6.7	5.53	5.95				
8/27/2020						5.32	5.7
9/18/2020	6.46	5.58		7.54	7.5		
9/22/2020			6.1				
9/24/2020						5.48	5.82
11/10/2020				7.34			
11/11/2020					7.4		
12/15/2020				7.27	7.39		
1/19/2021				7.32	7.4		
3/11/2021	7.2						
3/12/2021		5.6		7.52	7.51		
3/16/2021			6.14				
3/17/2021						5.41	5.78
8/12/2021	6.67	5.5	6.08	7.38	7.44		
8/13/2021							5.45
8/16/2021						5.4	
1/31/2022	7.17			7.34	7.44		
2/1/2022		5.59	6.05				
2/2/2022						5.51	5.79
8/2/2022			6.08	7.34			

Time Series

Constituent: pH (s.u.) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/5/2022	6.97	5.43			7.4		5.69
8/10/2022						5.37	

Time Series

Constituent: pH (s.u.) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	5.54	6.5	6.11	6.78	6.07		7.03
10/20/2016					6		7.01
10/24/2016	5.48						
10/25/2016		6.34	6.04	6.55			
1/27/2017					6.2		
1/31/2017	5.51	6.43	5.94	6.5			6.96
5/23/2017	5.98				5.27		6.92
5/24/2017		6.31	6.06	6.42			
8/10/2017	5.63	6.45	6.06	6.63	6.27		6.99
11/14/2017	5.59	6.53	5.99	6.5	5.4		6.9
6/6/2018	5.49	6.49	6	6.59			
6/7/2018					5.29		7.03
10/2/2018		6.18	6.18	6.54			
10/3/2018	5.53				6.08		7.08
4/3/2019			6.06	6.42			
4/4/2019	5.44	6.17					
4/5/2019					5.99		6.96
6/17/2019	5.53						
8/22/2019	5.55	6.04			5.53		6.93
8/23/2019			6.26	6.76			
10/22/2019			6.19	6.58	6.17		7.03
10/23/2019	5.49	6.46					
3/24/2020					5.99		
3/25/2020	5.49	6.47	6.13	6.56			6.89
8/26/2020							6.97
8/27/2020	5.82	6.45	6.09	6.64	5.92		
9/24/2020	5.6	6.63	6.11				
9/25/2020				6.79	6.01		
9/28/2020							7.03
3/17/2021				6.55			
3/18/2021	5.51	6.57	6.2				7.11
3/19/2021					6.14		
8/12/2021						6.27	
8/13/2021		6.44	6.11	6.71			6.78
8/16/2021	5.59						
8/19/2021					6.04		
9/27/2021					5.66	6.14	
2/2/2022	5.63		6.14	6.65	5.53		
2/3/2022		6.48				6.58	6.79
8/5/2022	5.71	6.46	6.07	6.81	5.46	6.44	7.07

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0027 (J)				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	0.0034 (J)				
1/25/2017	<0.005	<0.005	0.0023 (J)				
1/31/2017						<0.005	
5/23/2017		<0.005	0.0024 (J)			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0023 (J)			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			0.0019 (J)				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	0.0024 (J)				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	0.0025 (J)				
8/22/2019						<0.005	
10/23/2019							<0.005
1/3/2020							0.0015 (J)
3/4/2020							<0.005
3/24/2020							<0.005
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020				<0.005	<0.005		
9/24/2020							<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
8/12/2021	<0.005	<0.005	0.0023 (J)	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	0.0022 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0034 (J)	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
10/20/2016					<0.005		<0.005
10/24/2016	<0.005						
10/25/2016		<0.005	<0.005	<0.005			
1/27/2017					<0.005		
1/31/2017	<0.005	<0.005	<0.005	<0.005			<0.005
5/23/2017	<0.005				<0.005		<0.005
5/24/2017		<0.005	<0.005	<0.005			
8/10/2017	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005			
6/7/2018					<0.005		<0.005
10/2/2018		<0.005	<0.005	<0.005			
10/3/2018	<0.005				<0.005		<0.005
8/22/2019	<0.005	<0.005			<0.005		<0.005
8/23/2019			<0.005	<0.005			
8/26/2020							<0.005
8/27/2020	<0.005	<0.005	<0.005	<0.005	<0.005		
8/12/2021						<0.005	
8/13/2021		<0.005	<0.005	<0.005			<0.005
8/16/2021	<0.005						
8/19/2021					<0.005		
9/27/2021					<0.005	<0.005	
2/2/2022	<0.005		<0.005	<0.005	<0.005		
2/3/2022		<0.005				<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	1.6	0.63 (J)	14				
8/31/2016						110	
10/20/2016	1.6					110	
10/24/2016		0.62 (J)	11				
1/25/2017	1.6	0.62 (J)	12				
1/31/2017						120	
5/23/2017		0.55 (J)	12			97	
5/24/2017	1.4						
8/10/2017	1.6	0.66 (J)	11			96	
11/13/2017	1.3	0.61 (J)					
11/14/2017			11			110	
6/4/2018	1.4	0.73 (J)					
6/5/2018			9.9				
6/6/2018						95.5	
10/1/2018	1	0.52 (J)	6.7				
10/3/2018						121	
4/1/2019	1.7						
4/2/2019		0.78 (J)	8.7				
4/4/2019						95.1	
6/18/2019						102	
10/21/2019	1.8						
10/22/2019		0.6 (J)	6.8				
10/23/2019						101	<1
1/3/2020							380
3/4/2020							400
3/24/2020	1.6	<1					311
3/25/2020						85.5	
4/9/2020			6.6				
6/18/2020							349
7/21/2020							378
8/27/2020							382
9/18/2020	1	<1		3.5	9.5		
9/22/2020			5.3				
9/24/2020						97	370
11/10/2020				2.3			
11/11/2020					4.5		
12/15/2020				2.4	4.2		
1/19/2021				2.6	3.9		
3/11/2021	1.5						
3/12/2021		0.52 (J)		1.9	4.7		
3/16/2021			7.7				
3/17/2021						107	332
8/12/2021	1.3	<1	10	1.4	4.3		
8/13/2021							248
8/16/2021						72.1	
1/31/2022	1.5			1.7	5.6		
2/1/2022		0.5 (J)	8.9				
2/2/2022						100	303
8/2/2022			7.5	2.1			
8/5/2022	1.4	<1			3.4		358
8/10/2022						99.5	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	280	190	130	36	150		88
10/20/2016					150		81
10/24/2016	280						
10/25/2016		190	130	41			
1/27/2017					150		
1/31/2017	300	210	130	37			87
5/23/2017	340				110		84
5/24/2017		180	130	40			
8/10/2017	300	180	130	40	140		78
11/14/2017	310	170	130	40	110		79
6/6/2018	351	168	132	49.7			
6/7/2018					103		60.1
10/2/2018		173	132	42.3			
10/3/2018	381				169		91.5
4/3/2019			139	36			
4/4/2019	358	185					
4/5/2019					141		75.1
6/17/2019	311	162	126	30.9			
6/18/2019					116		77
10/22/2019			123	23.2	133		80.9
10/23/2019	248	162					
3/24/2020					129		
3/25/2020	251	161	116	27.9			78.4
9/24/2020	293	177	126				
9/25/2020				24.7	146		
9/28/2020							86
3/17/2021				28.3			
3/18/2021	286	196	128				87.8
3/19/2021					162		
8/12/2021						64.6	
8/13/2021		142	112	24.4			75.1
8/16/2021	354						
8/19/2021					108		
9/27/2021					104	69.7	
2/2/2022	293		111	25.5	115		
2/3/2022		195				72.9	72.7
8/5/2022	369	217	120	23	132	76.1	69.8

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.001	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			<0.001	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	<0.001			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	<0.001				
8/22/2019						<0.001	
10/23/2019							<0.001
1/3/2020							8E-05 (J)
3/4/2020							<0.001
3/24/2020							<0.001
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	<0.001	<0.001	<0.001				
8/27/2020						<0.001	<0.001
9/18/2020				<0.001	<0.001		
9/24/2020							<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	<0.001		
1/19/2021				<0.001	<0.001		
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
10/20/2016					<0.001		<0.001
10/24/2016	<0.001						
10/25/2016		<0.001	<0.001	<0.001			
1/27/2017					<0.001		
1/31/2017	<0.001	<0.001	<0.001	<0.001			<0.001
5/23/2017	<0.001				<0.001		<0.001
5/24/2017		<0.001	<0.001	<0.001			
8/10/2017	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001			
6/7/2018					<0.001		<0.001
10/2/2018		<0.001	<0.001	<0.001			
10/3/2018	<0.001				<0.001		<0.001
8/22/2019	<0.001	<0.001			<0.001		<0.001
8/23/2019			<0.001	<0.001			
8/26/2020							<0.001
8/27/2020	<0.001	<0.001	<0.001	<0.001	<0.001		
8/12/2021						<0.001	
8/13/2021		<0.001	<0.001	<0.001			<0.001
8/16/2021	<0.001						
8/19/2021					<0.001		
9/27/2021					<0.001	<0.001	
2/2/2022	<0.001		<0.001	<0.001	<0.001		
2/3/2022		<0.001				<0.001	<0.001
8/5/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	172	76	77				
8/31/2016						278	
10/20/2016	108					165	
10/24/2016		65	111				
1/25/2017	345	152 (o)	155				
1/31/2017						263	
5/23/2017		52	74			190	
5/24/2017	126						
8/10/2017	174	60	94			175	
11/13/2017	158	75					
11/14/2017			89			253	
6/4/2018	131	70					
6/5/2018			92				
6/6/2018						188	
10/1/2018	101	76	91				
10/3/2018						238	
4/1/2019	213						
4/2/2019		69	94				
4/4/2019						149	
10/21/2019	187						
10/22/2019		81	95				
10/23/2019						221	736
1/3/2020							714
3/4/2020							764
3/24/2020	207	52					521
3/25/2020						187	
4/9/2020			48				
6/18/2020							652
7/21/2020							669
8/27/2020							663
9/18/2020	139	62		195	224		
9/22/2020			84				
9/24/2020						170	696
11/10/2020				229			
11/11/2020					221		
12/15/2020				233	239		
1/19/2021				199	224		
3/11/2021	207						
3/12/2021		56		217	204		
3/16/2021			99				
3/17/2021						213	626
8/12/2021	157	63	92	212	234		
8/13/2021							647
8/16/2021						206	
1/31/2022	186			243	223		
2/1/2022		73	99				
2/2/2022						220	602
8/2/2022			85	222			
8/5/2022	171	44			224		696
8/10/2022						232	

Time Series

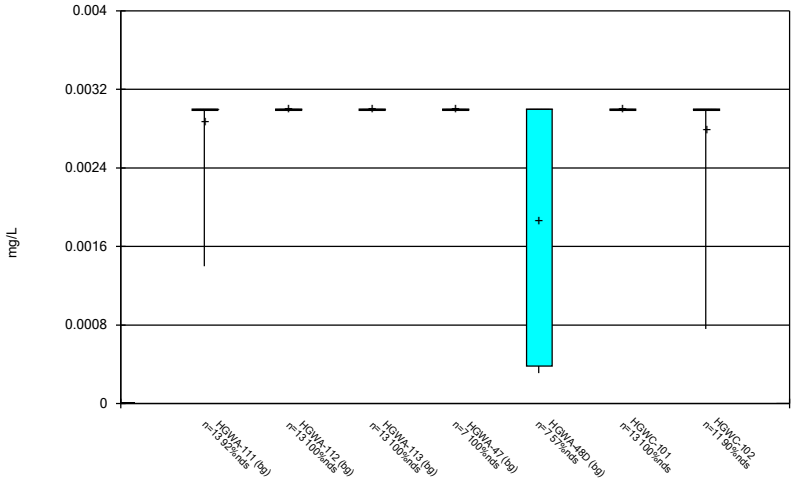
Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 1:17 PM View: AIII & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	483	389	235	182	381		373
10/20/2016					319		305
10/24/2016	517						
10/25/2016		316	223	172			
1/27/2017					407		
1/31/2017	516	437	346	252			361
5/23/2017	637				258		359
5/24/2017		352	234	184			
8/10/2017	459	356	254	208	359		325
11/14/2017	545	375	313	252	310		373
6/6/2018	559	385	278	224			
6/7/2018					223		338
10/2/2018		374	274	230			
10/3/2018	582				337		328
4/3/2019			273	210			
4/4/2019	535	340					
4/5/2019					334		308
6/17/2019	515	370	272				
6/18/2019					254		215
10/22/2019			308	212	348		354
10/23/2019	507	419					
3/24/2020					331		
3/25/2020	507	417	297	213			347
9/24/2020	517	411	253				
9/25/2020				188	340		
9/28/2020							332
3/17/2021				171			
3/18/2021	465	410	255				328
3/19/2021					371		
8/12/2021						256	
8/13/2021		441	291	189			336
8/16/2021	672						
8/19/2021					253		
9/27/2021					242	223	
2/2/2022	576		271	206	256		
2/3/2022		463				264	316
8/5/2022	692	514	274	195	285	270	329

FIGURE B.

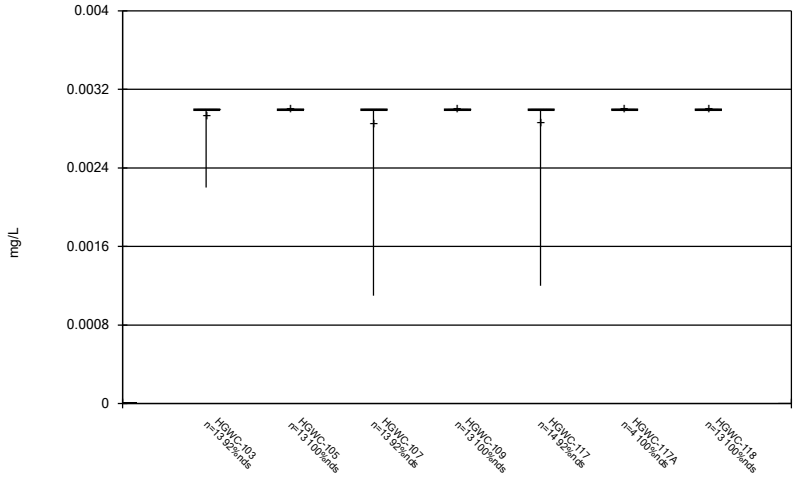
Box & Whiskers Plot



Constituent: Antimony Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

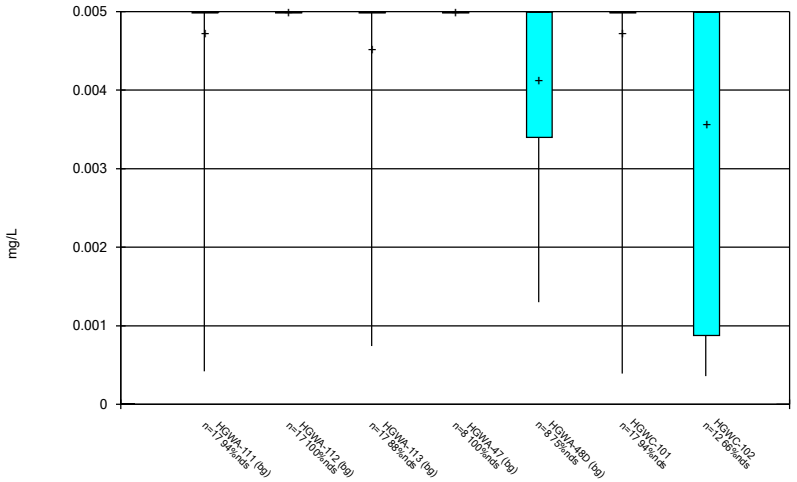
Box & Whiskers Plot



Constituent: Antimony Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

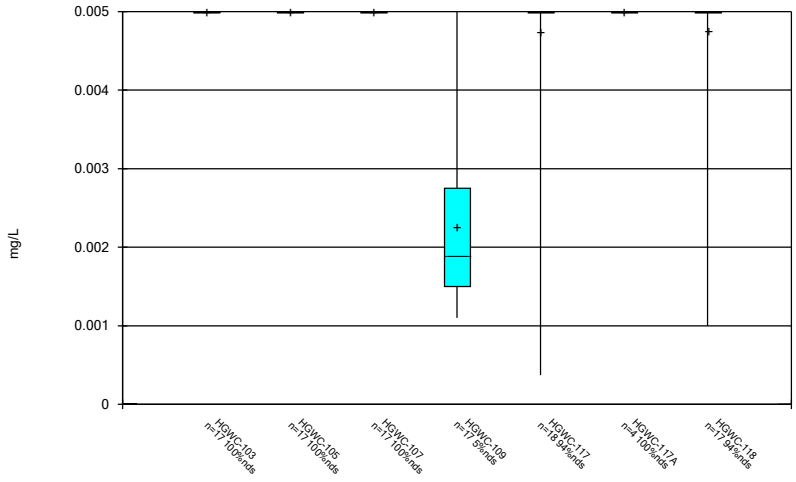
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Box & Whiskers Plot



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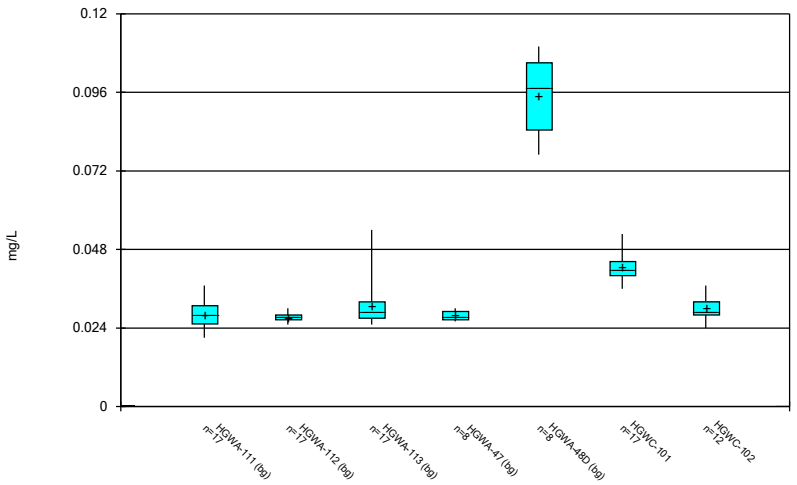
Plant Hammond Client: Southern Company Data: Hammond AP-4

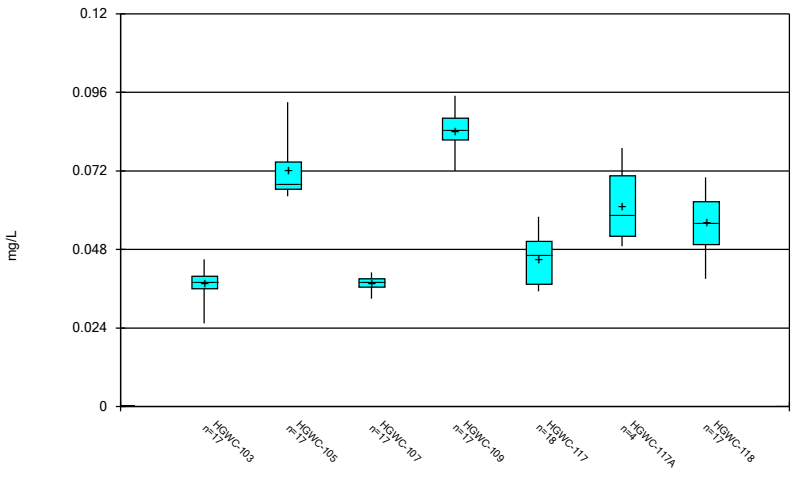
Box & Whiskers Plot



Constituent: Barium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

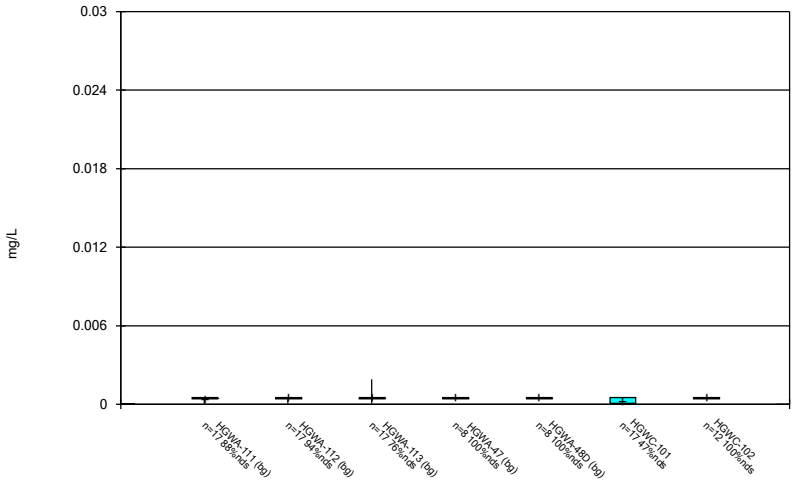
Box & Whiskers Plot



Constituent: Barium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

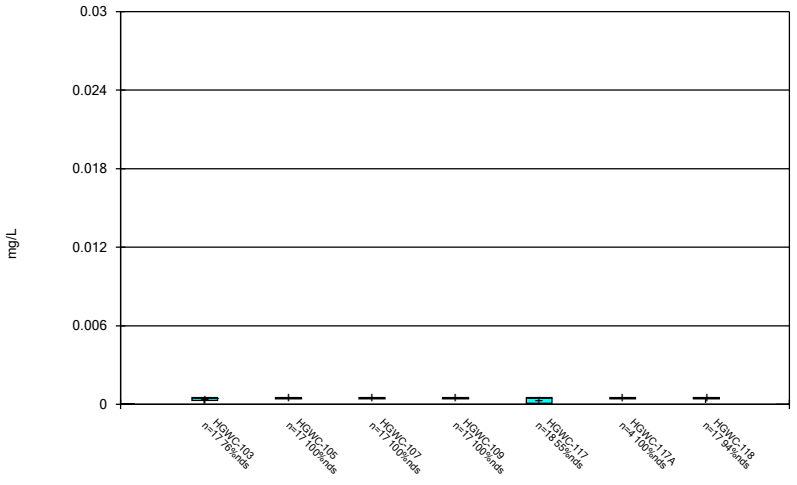
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Box & Whiskers Plot



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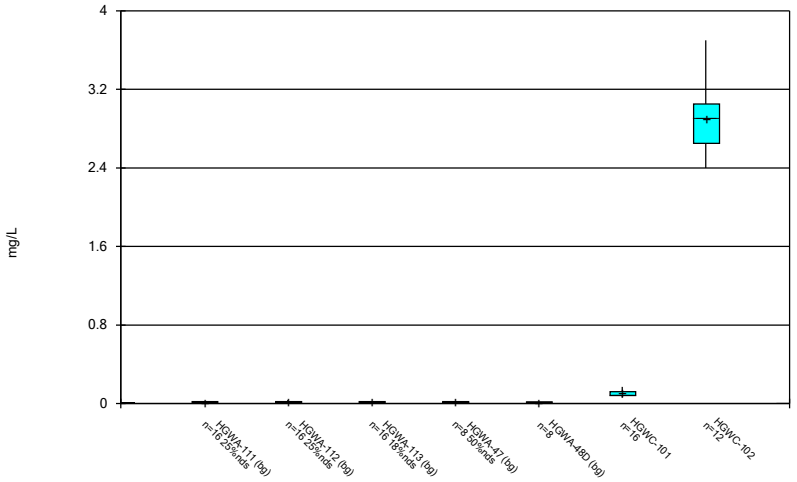
Plant Hammond Client: Southern Company Data: Hammond AP-4

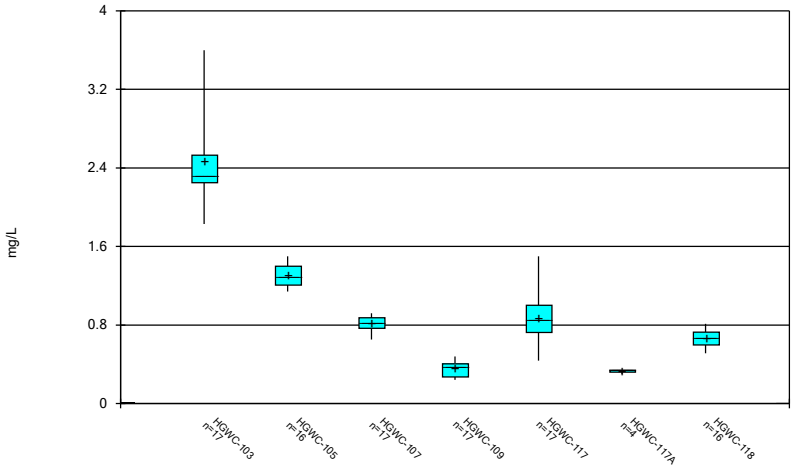
Box & Whiskers Plot



Constituent: Boron Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

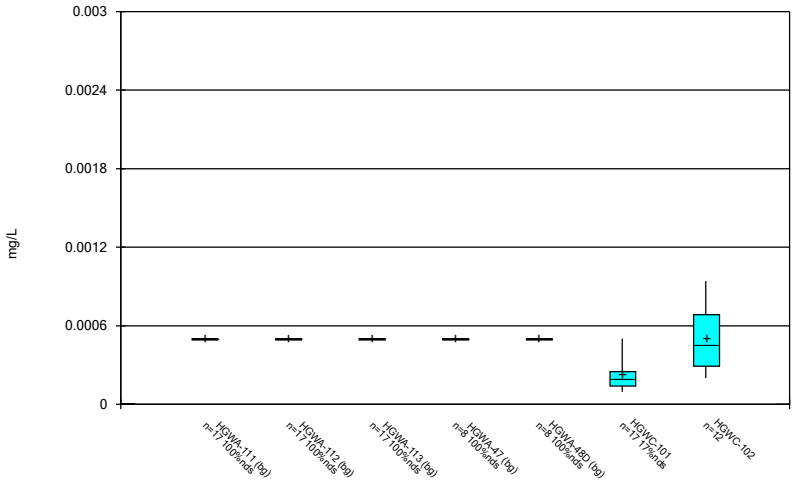
Box & Whiskers Plot



Constituent: Boron Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

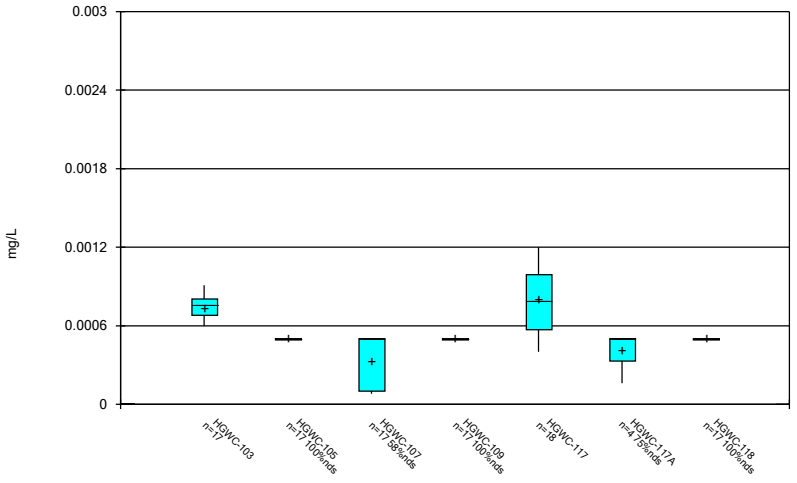
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

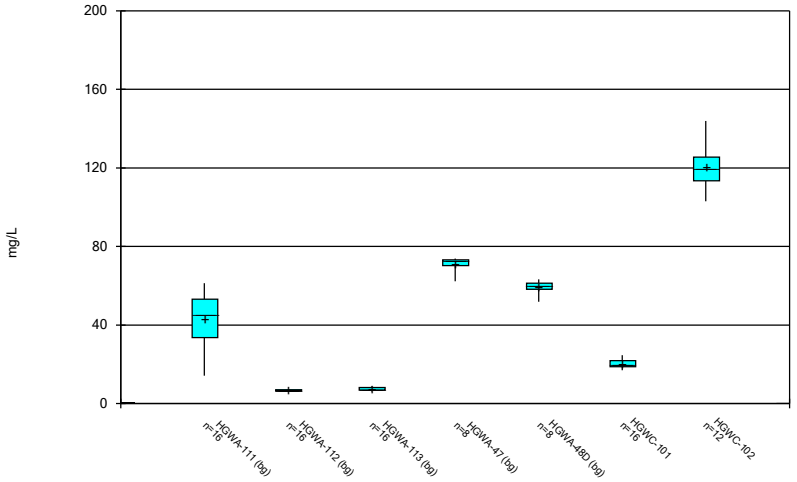
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cadmium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

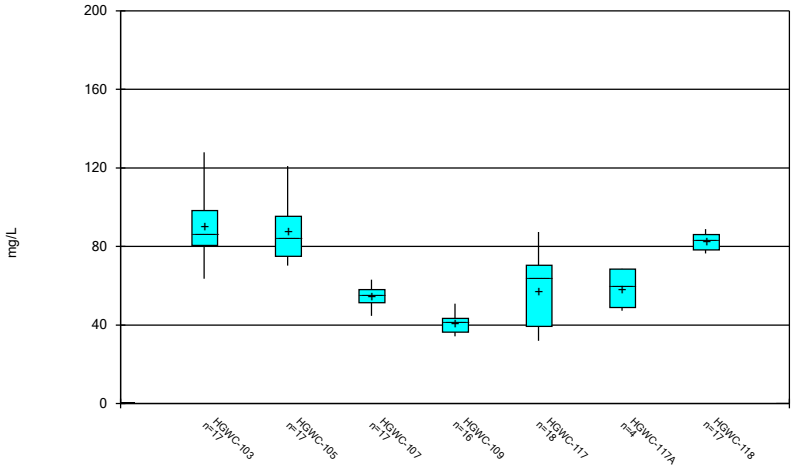
Box & Whiskers Plot



Constituent: Calcium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

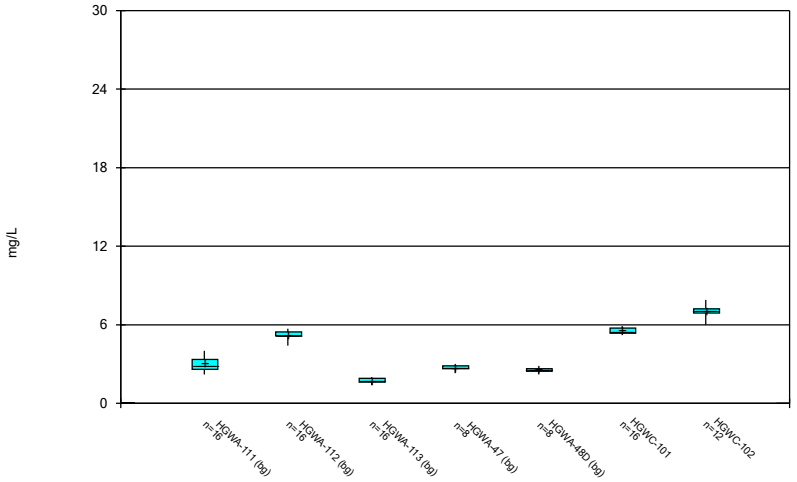
Box & Whiskers Plot



Constituent: Calcium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

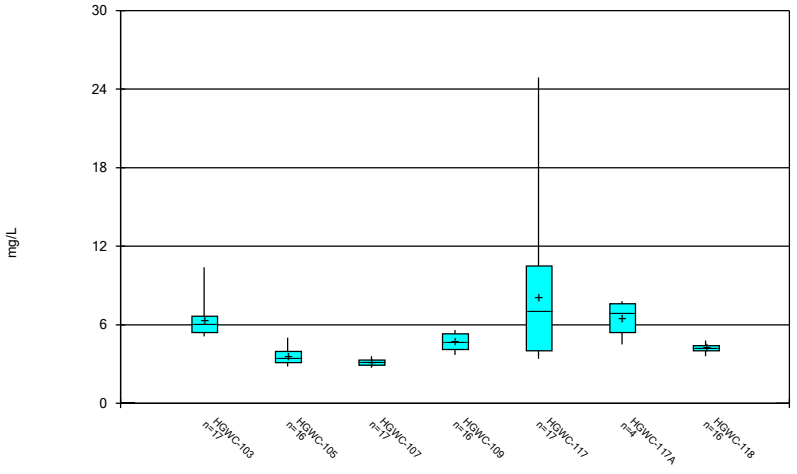
Box & Whiskers Plot



Constituent: Chloride Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Box & Whiskers Plot



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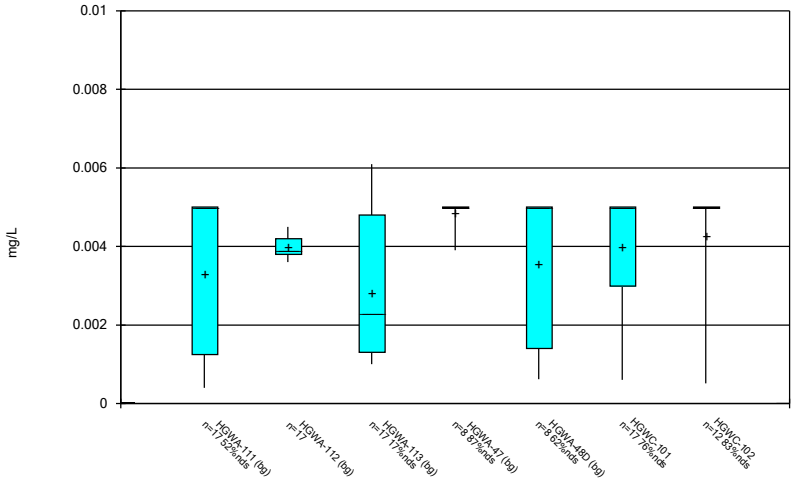
Plant Hammond Client: Southern Company Data: Hammond AP-4

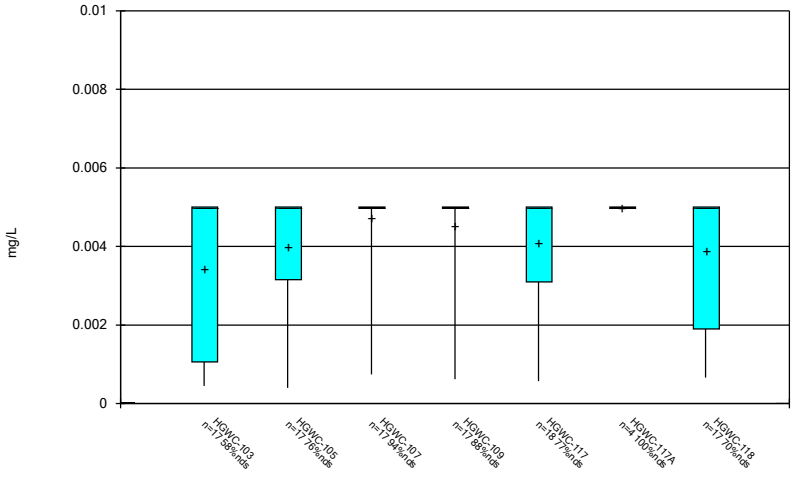
Box & Whiskers Plot



Constituent: Chromium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

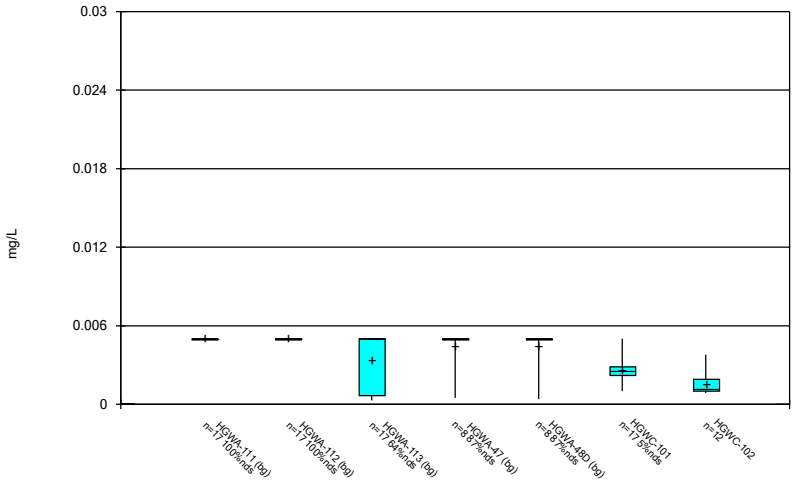
Box & Whiskers Plot



Constituent: Chromium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

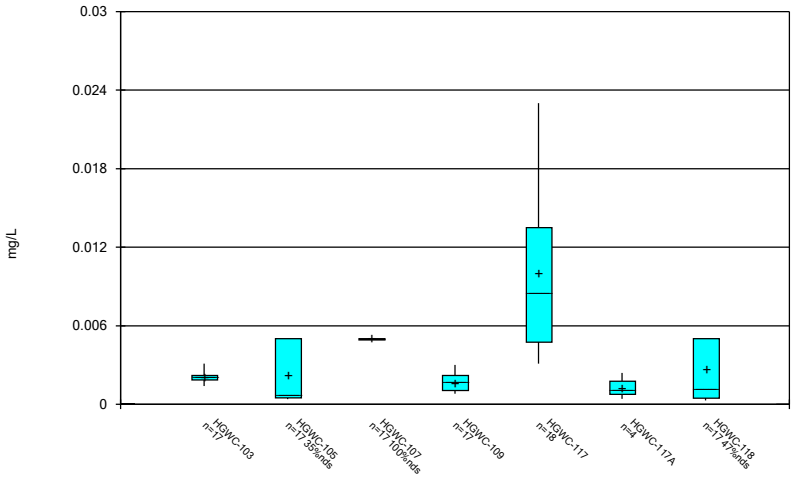
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Box & Whiskers Plot



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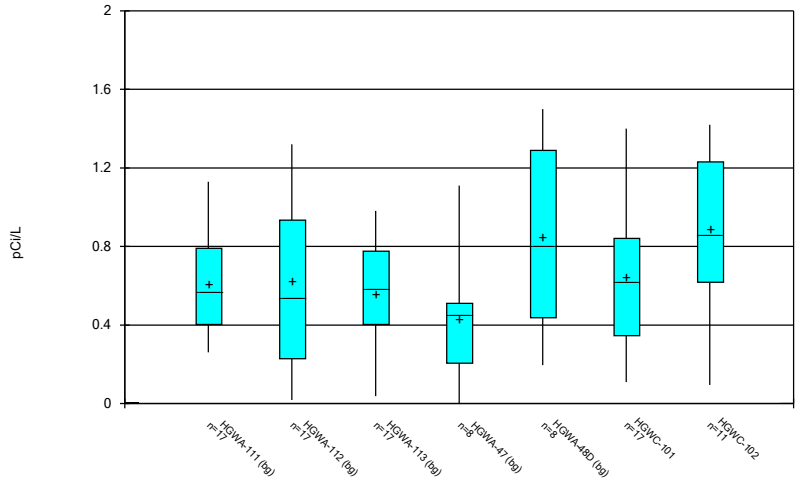
Plant Hammond Client: Southern Company Data: Hammond AP-4

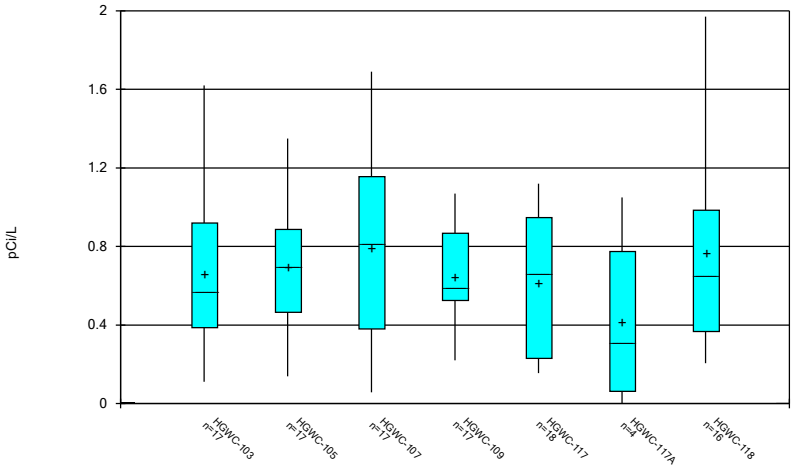
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

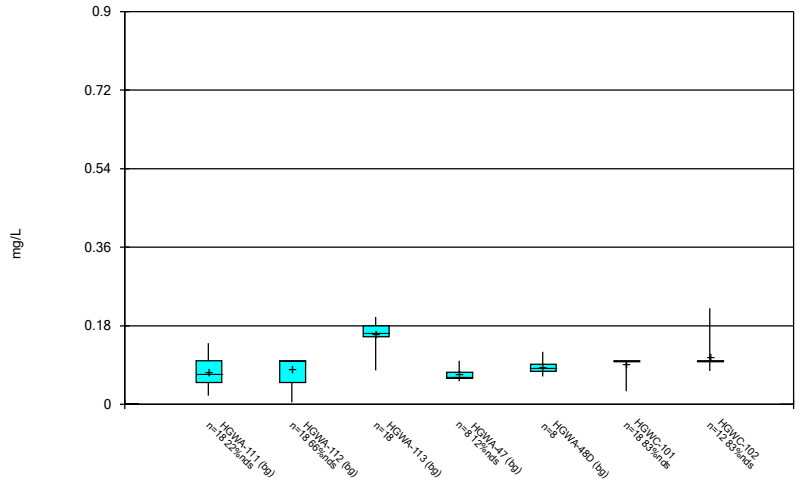
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

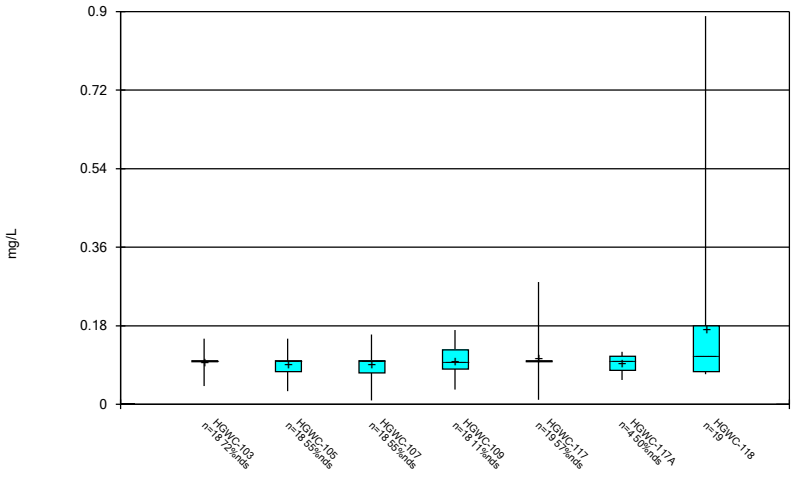
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

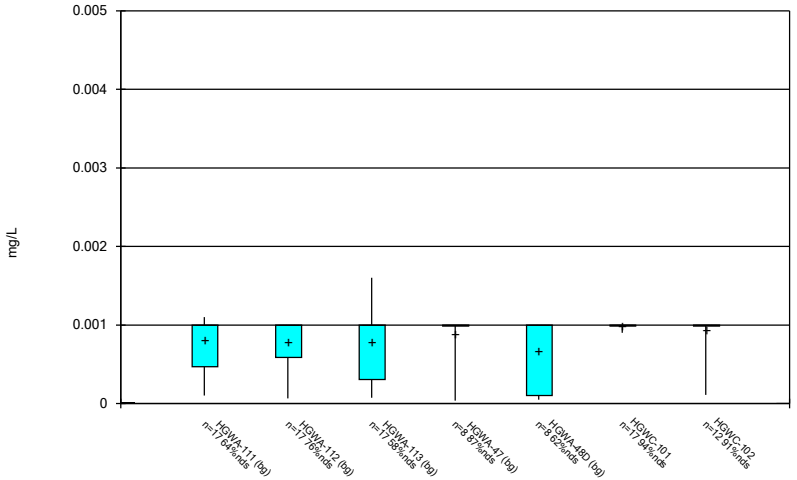
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

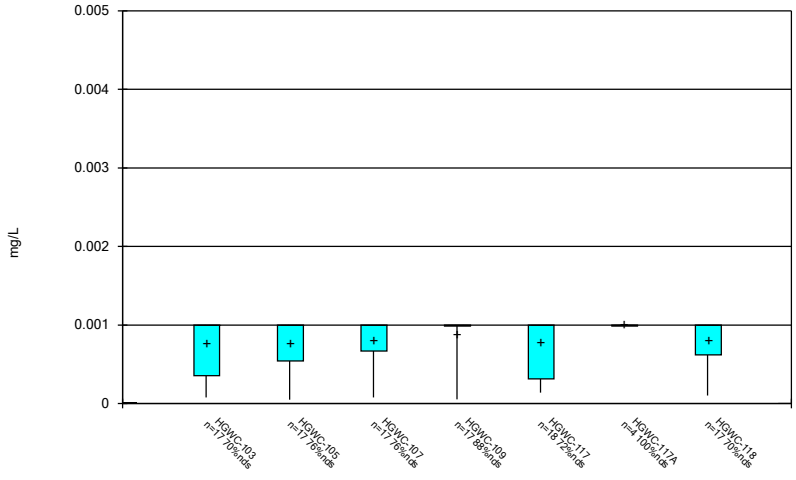
Box & Whiskers Plot



Constituent: Lead Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

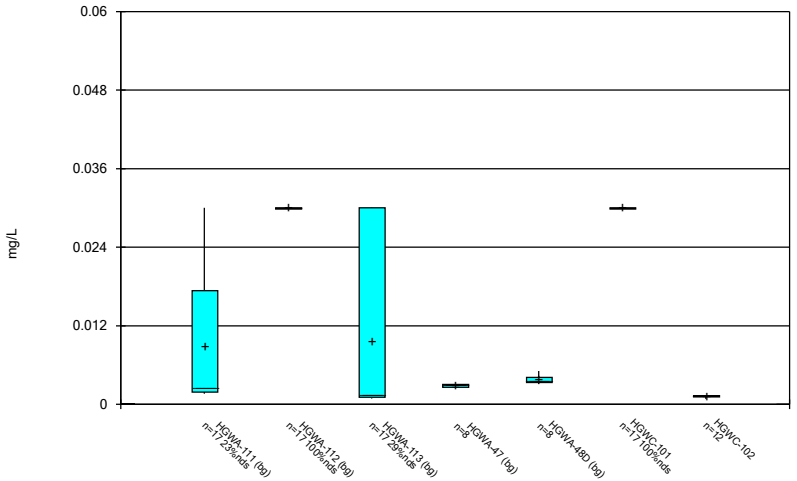
Box & Whiskers Plot



Constituent: Lead Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

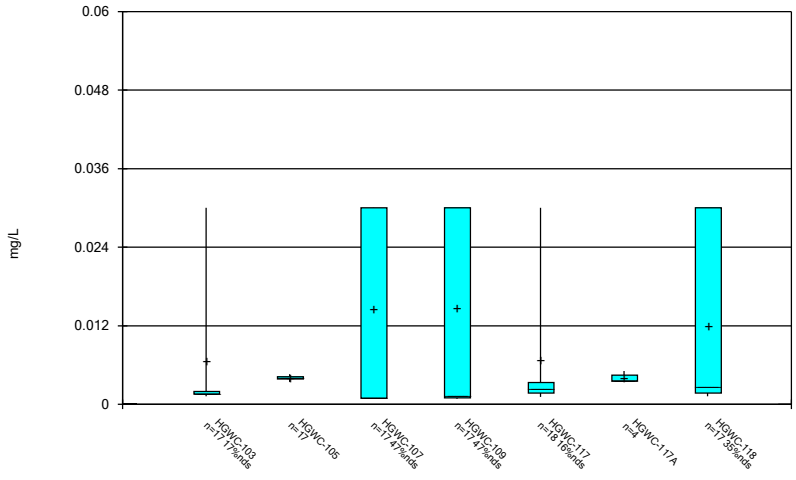
Box & Whiskers Plot



Constituent: Lithium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

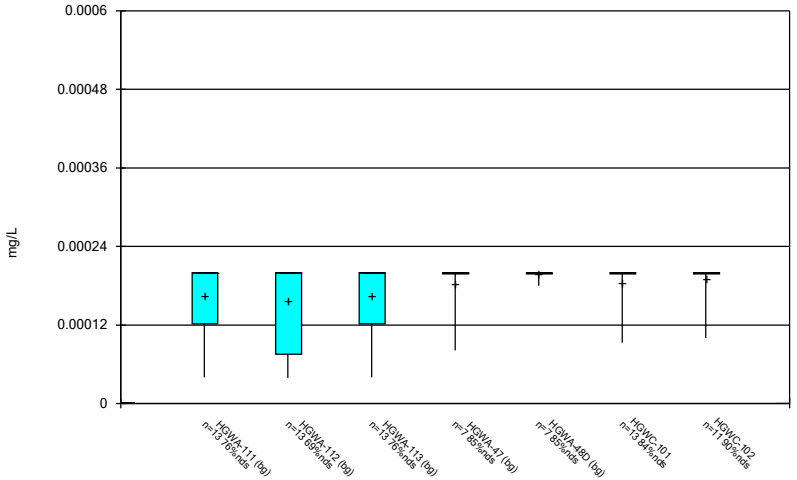
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

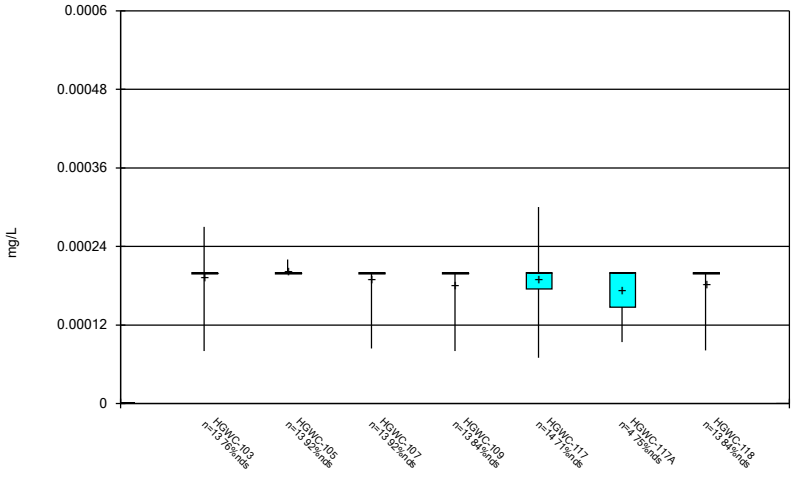
Box & Whiskers Plot



Constituent: Mercury Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

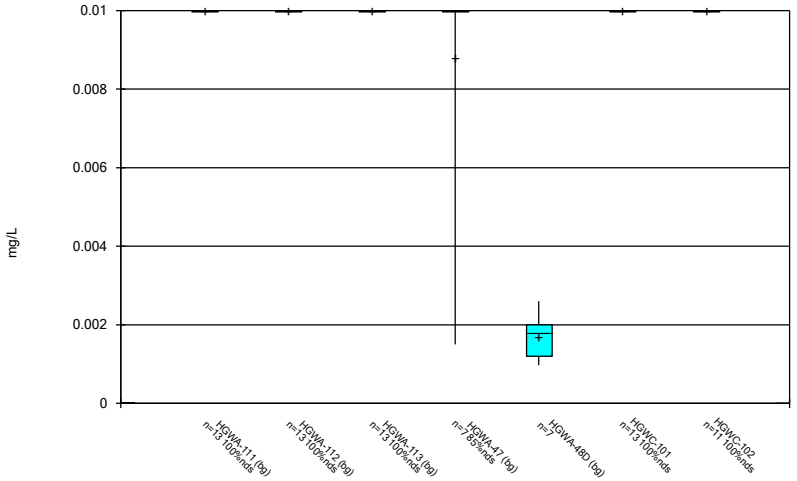
Box & Whiskers Plot



Constituent: Mercury Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

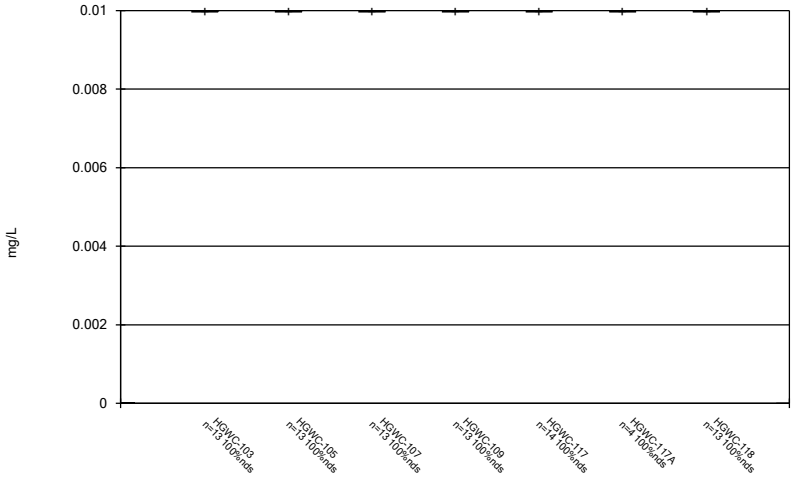
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Box & Whiskers Plot



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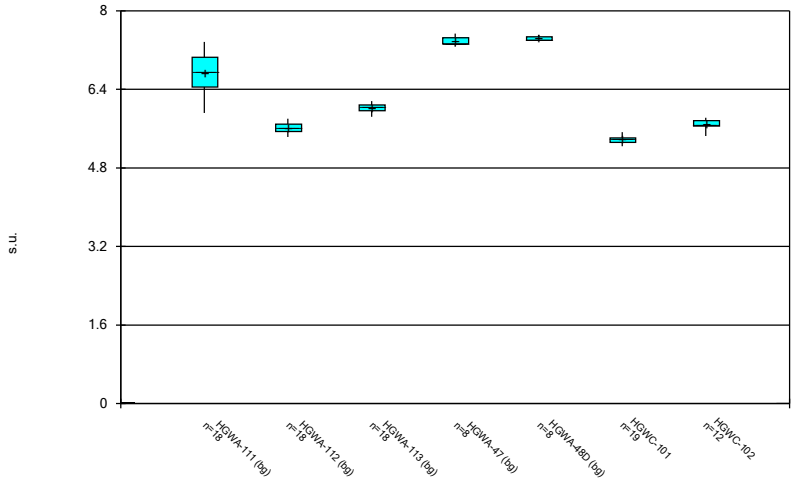
Plant Hammond Client: Southern Company Data: Hammond AP-4

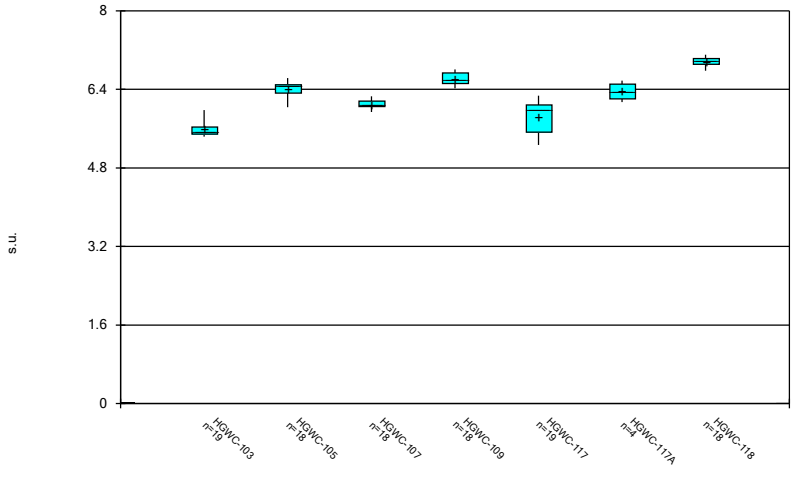
Box & Whiskers Plot



Constituent: pH Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

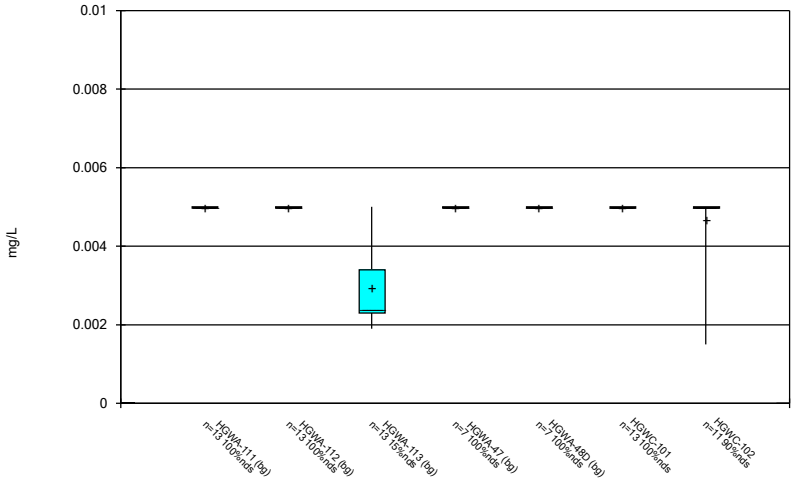
Box & Whiskers Plot



Constituent: pH Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

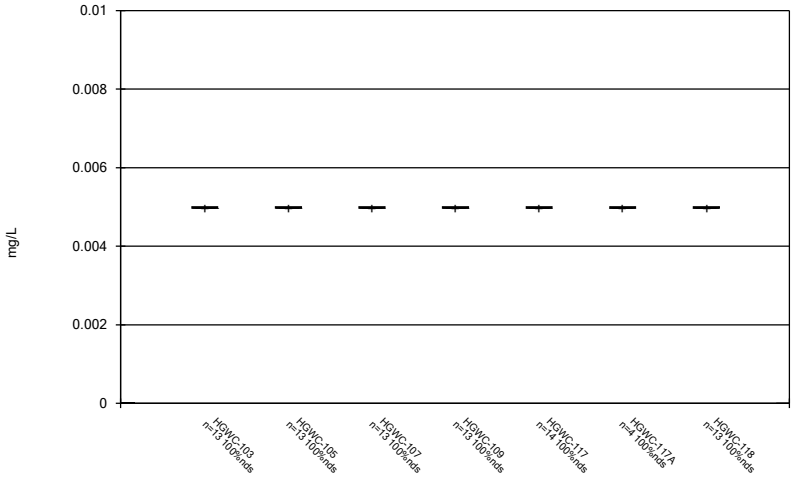
Box & Whiskers Plot



Constituent: Selenium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

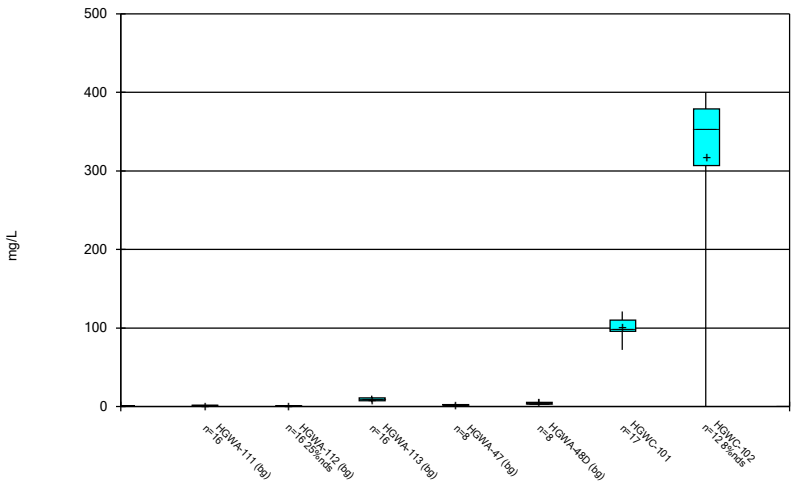
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Selenium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

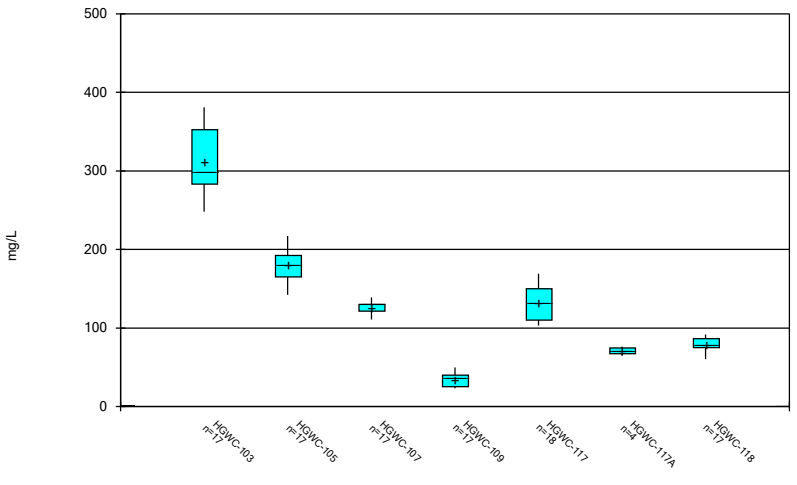
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

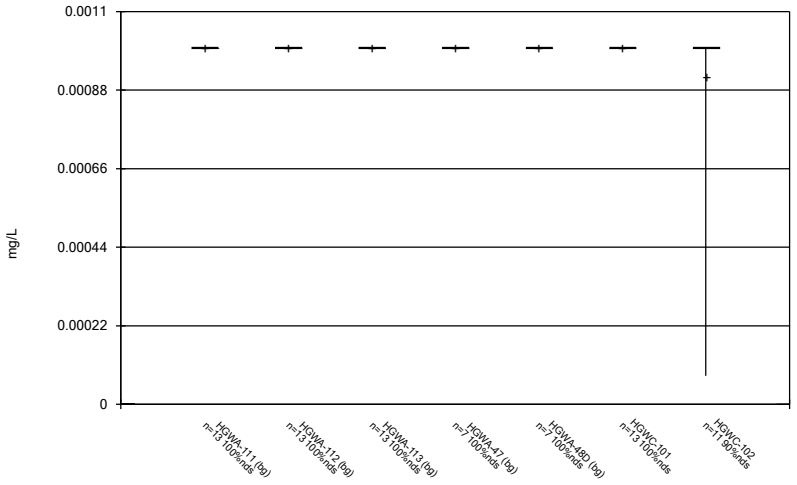
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

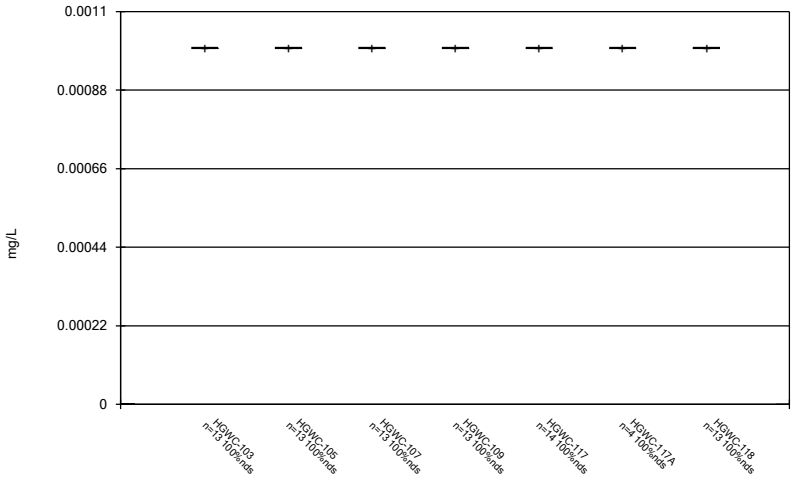
Box & Whiskers Plot



Constituent: Thallium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

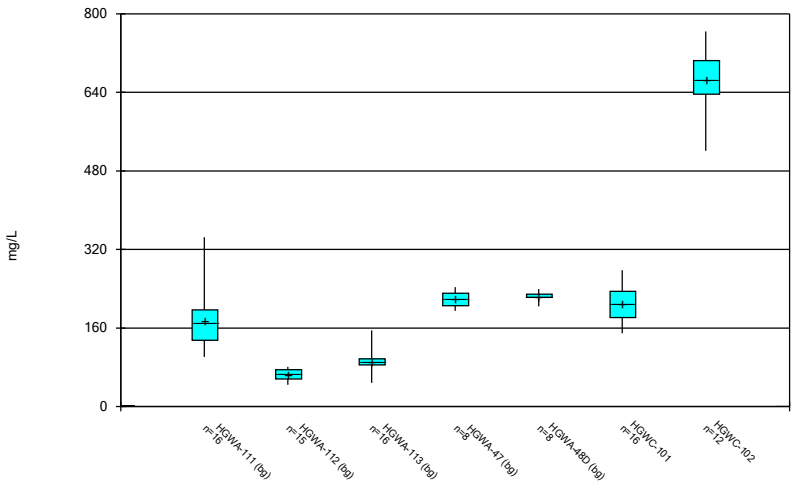
Sanitas™ v.9.6.33 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

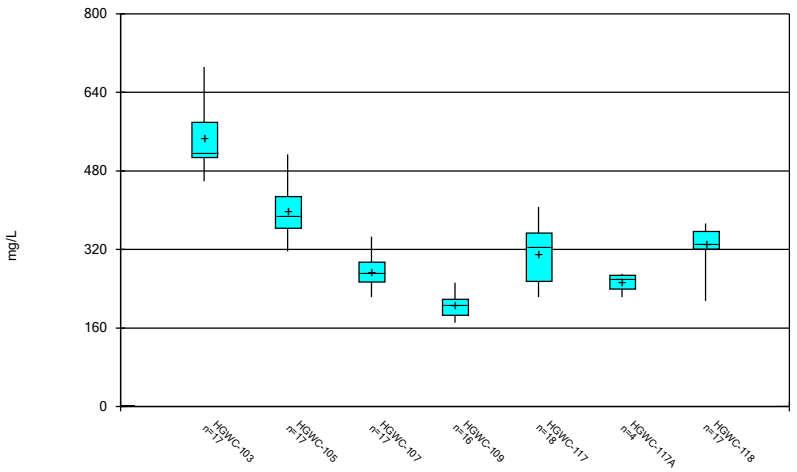
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:18 PM View: AIII & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 11:51 AM

	HGWA-112 Total Dissolved Solids (mg/L)
1/25/2017	152 (o)

FIGURE D.

Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-101	0.01907	n/a	8/10/2022	0.17	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.01907	n/a	8/5/2022	2.9	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.01907	n/a	8/5/2022	3.6	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.01907	n/a	8/5/2022	1.3	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.01907	n/a	8/5/2022	0.79	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.01907	n/a	8/5/2022	0.25	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.01907	n/a	8/5/2022	0.85	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.01907	n/a	8/5/2022	0.57	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	8/5/2022	127	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	8/5/2022	128	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	8/5/2022	121	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	8/5/2022	88.5	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	8/5/2022	7.7	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	8/5/2022	7.8	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	8/10/2022	5.37	Yes	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	8/10/2022	99.5	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	8/5/2022	358	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	8/5/2022	369	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	8/5/2022	217	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	8/5/2022	120	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	8/5/2022	23	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	8/5/2022	132	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	8/5/2022	69.8	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	8/5/2022	696	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	8/5/2022	692	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	8/5/2022	514	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Interwell Prediction Limit - All Results

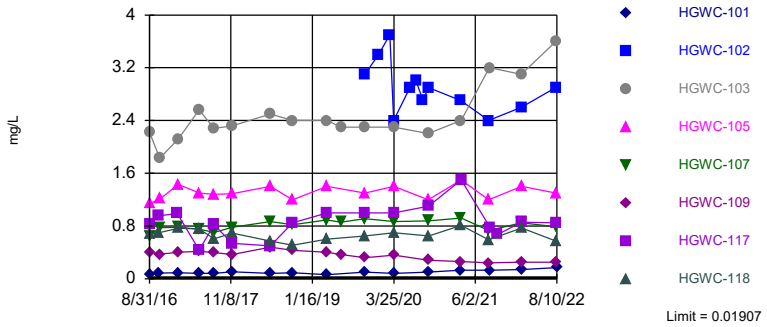
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.01907**	**n/a**	**8/10/2022**	**0.17**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-102**	**0.01907**	**n/a**	**8/5/2022**	**2.9**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-103**	**0.01907**	**n/a**	**8/5/2022**	**3.6**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-105**	**0.01907**	**n/a**	**8/5/2022**	**1.3**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-107**	**0.01907**	**n/a**	**8/5/2022**	**0.79**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-109**	**0.01907**	**n/a**	**8/5/2022**	**0.25**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-117**	**0.01907**	**n/a**	**8/5/2022**	**0.85**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-118**	**0.01907**	**n/a**	**8/5/2022**	**0.57**	**Yes**	**64**	**23.44**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-101	73.8	n/a	8/10/2022	24.6	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-102**	**73.8**	**n/a**	**8/5/2022**	**127**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-103**	**73.8**	**n/a**	**8/5/2022**	**128**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-105**	**73.8**	**n/a**	**8/5/2022**	**121**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-107	73.8	n/a	8/5/2022	63	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.8	n/a	8/5/2022	50.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-117	73.8	n/a	8/5/2022	44.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-118**	**73.8**	**n/a**	**8/5/2022**	**88.5**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-101	5.7	n/a	8/10/2022	5.5	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	**HGWC-102**	**5.7**	**n/a**	**8/5/2022**	**7.7**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-103**	**5.7**	**n/a**	**8/5/2022**	**7.8**	**Yes**	**64**	**0**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-105	5.7	n/a	8/5/2022	5	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-107	5.7	n/a	8/5/2022	2.7	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109	5.7	n/a	8/5/2022	3.7	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	5.7	n/a	8/5/2022	4.4	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	8/5/2022	3.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1718	n/a	8/10/2022	0.065J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.1718	n/a	8/5/2022	0.076J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1718	n/a	8/5/2022	0.071J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1718	n/a	8/5/2022	0.075J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1718	n/a	8/5/2022	0.093J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1718	n/a	8/5/2022	0.14	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.1718	n/a	8/5/2022	0.075J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1718	n/a	8/5/2022	0.12	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	**HGWC-101**	**7.54**	**5.43**	**8/10/2022**	**5.37**	**Yes**	**70**	**0**	**n/a**	**n/a**	**0.0007718**	**NP Inter (normality) 1 of 2**
pH (s.u.)	HGWC-102	7.54	5.43	8/5/2022	5.69	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.43	8/5/2022	5.71	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.43	8/5/2022	6.46	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.43	8/5/2022	6.07	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.43	8/5/2022	6.81	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.43	8/5/2022	5.46	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.43	8/5/2022	7.07	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-101**	**14**	**n/a**	**8/10/2022**	**99.5**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-102**	**14**	**n/a**	**8/5/2022**	**358**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-103**	**14**	**n/a**	**8/5/2022**	**369**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-105**	**14**	**n/a**	**8/5/2022**	**217**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-107**	**14**	**n/a**	**8/5/2022**	**120**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-109**	**14**	**n/a**	**8/5/2022**	**23**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-117**	**14**	**n/a**	**8/5/2022**	**132**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-118**	**14**	**n/a**	**8/5/2022**	**69.8**	**Yes**	**64**	**6.25**	**n/a**	**n/a**	**0.0004659**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-101	345	n/a	8/10/2022	232	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-102**	**345**	**n/a**	**8/5/2022**	**696**	**Yes**	**63**	**0**	**n/a**	**n/a**	**0.0004792**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-103**	**345**	**n/a**	**8/5/2022**	**692**	**Yes**	**63**	**0**	**n/a**	**n/a**	**0.0004792**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-105**	**345**	**n/a**	**8/5/2022**	**514**	**Yes**	**63**	**0**	**n/a**	**n/a**	**0.0004792**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-107	345	n/a	8/5/2022	274	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	345	n/a	8/5/2022	195	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	345	n/a	8/5/2022	285	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	345	n/a	8/5/2022	329	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.2056, Std. Dev.=0.03149, n=64, 23.44% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9489, critical = 0.947. Kappa = 1.954 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

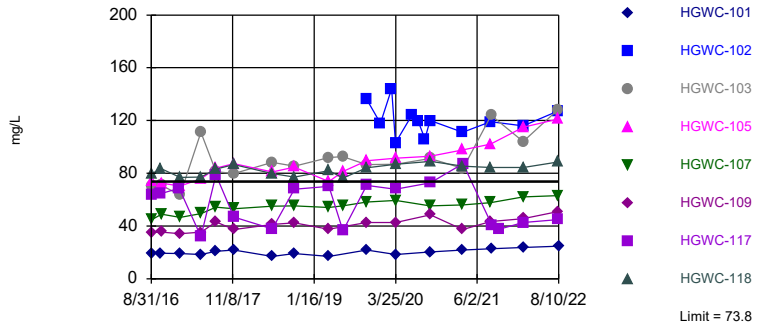
Constituent: Boron Analysis Run 10/11/2022 12:37 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105, HGWC-118

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. Annual per-constituent alpha = 0.007428. Individual comparison alpha = 0.0004659 (1 of 2). Comparing 8 points to limit.

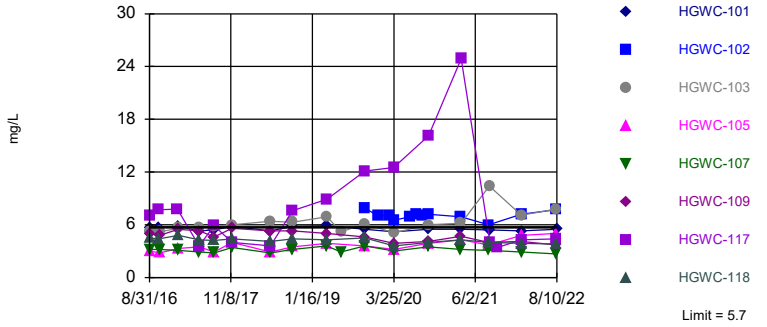
Constituent: Calcium Analysis Run 10/11/2022 12:37 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. Annual per-constituent alpha = 0.007428. Individual comparison alpha = 0.0004659 (1 of 2). Comparing 8 points to limit.

Constituent: Chloride Analysis Run 10/11/2022 12:37 PM View: Interwell PL

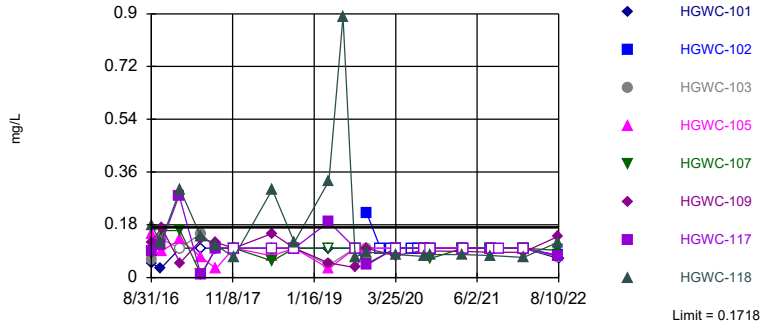
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2617, Std. Dev.=0.07844, n=70, 24.29% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9602, critical = 0.952. Kappa = 1.948 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

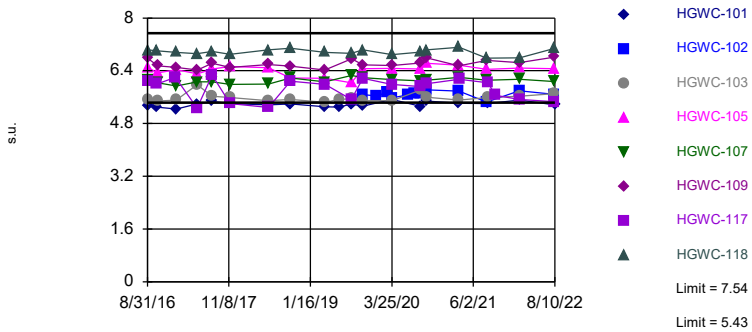
Constituent: Fluoride Analysis Run 10/11/2022 12:37 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limits: HGWC-101

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 70 background values. Annual per-constituent alpha = 0.01231. Individual comparison alpha = 0.0007718 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 10/11/2022 12:37 PM View: Interwell PL

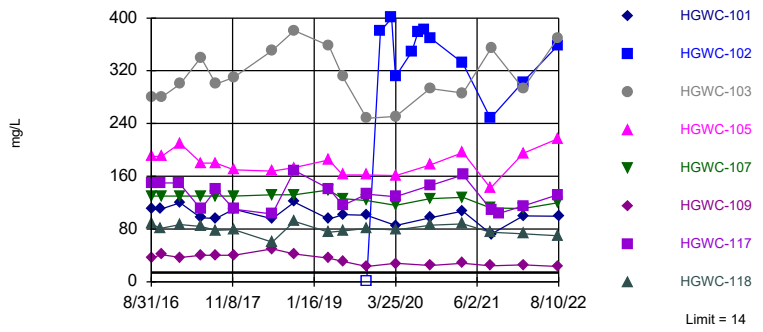
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. 6.25% NDs. Annual per-constituent alpha = 0.007428. Individual comparison alpha = 0.0004659 (1 of 2). Comparing 8 points to limit.

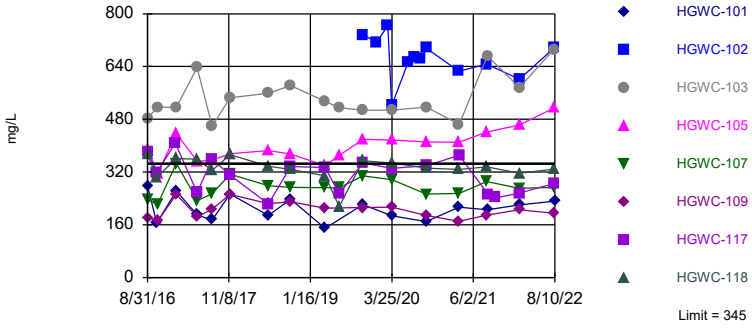
Constituent: Sulfate Analysis Run 10/11/2022 12:37 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 63 background values. Annual per-constituent alpha = 0.00764. Individual comparison alpha = 0.0004792 (1 of 2). Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/11/2022 12:37 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-118	HGWC-101	HGWC-117	HGWC-107
8/30/2016	<0.04	<0.04	<0.04						
8/31/2016				2.22	1.14	0.681	0.0724 (J)	0.821	0.651
10/20/2016	0.016 (J)					0.697	0.0877 (J)	0.956	
10/24/2016		0.0226 (J)	0.0367 (J)	1.83					
10/25/2016					1.21				0.778
1/25/2017	0.0095 (J)	0.009 (J)	0.0075 (J)						
1/27/2017								0.99	
1/31/2017				2.12	1.43	0.768	0.0928		0.782
5/23/2017		0.0082 (J)	0.0073 (J)	2.56		0.754	0.0795	0.438	
5/24/2017	0.0094 (J)				1.3				0.753
8/10/2017	<0.04	0.0061 (J)	<0.04	2.28	1.28	0.608	0.0814	0.821	0.702
11/13/2017	0.0103 (J)		0.0089 (J)						
11/14/2017		0.012 (J)		2.32	1.29	0.691	0.108	0.536	0.78
6/4/2018	0.0065 (J)		0.007 (J)						
6/5/2018		0.0085 (J)							
6/6/2018				2.5	1.4		0.081		0.87
6/7/2018						0.57		0.5	
10/1/2018	0.0054 (J)	0.0042 (J)	<0.04						
10/2/2018					1.2				0.82
10/3/2018				2.4		0.51	0.092	0.85	
4/1/2019	0.0076 (J)								
4/2/2019		0.0059 (J)	0.0043 (J)						
4/3/2019									0.89
4/4/2019				2.4	1.4 (X)		0.06 (X)		
4/5/2019						0.6 (X)		1 (X)	
6/17/2019				2.3					0.86
10/21/2019	0.0097 (J)								
10/22/2019		0.01 (J)	0.016 (J)			0.65		1	0.91
10/23/2019				2.3	1.3		0.1		
1/3/2020									
3/4/2020									
3/24/2020	0.011 (J)		0.012 (J)					1	
3/25/2020				2.3	1.4	0.7	0.08 (J)		0.87
4/9/2020		0.012 (J)							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	0.011 (J)		0.008 (J)						
9/22/2020		0.021 (J)							
9/24/2020				2.2	1.2		0.1		0.88
9/25/2020								1.1	
9/28/2020						0.65			
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.01 (J)								
3/12/2021			0.0061 (J)						
3/16/2021		0.011 (J)							
3/17/2021							0.13		
3/18/2021				2.4	1.5	0.81			0.92
3/19/2021								1.5	

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-118	HGWC-101	HGWC-117	HGWC-107
8/12/2021	<0.04	<0.04	<0.04						
8/13/2021					1.2	0.59			0.73
8/16/2021				3.2			0.13		
8/19/2021								0.78	
9/27/2021								0.67	
1/31/2022	0.0099 (J)								
2/1/2022		0.012 (J)	0.011 (J)						
2/2/2022				3.1			0.14	0.86	0.85
2/3/2022					1.4	0.77			
8/2/2022		<0.04							
8/5/2022	<0.04		0.012 (J)	3.6	1.3	0.57		0.85	0.79
8/10/2022							0.17		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	0.402			
10/20/2016				
10/24/2016				
10/25/2016	0.372			
1/25/2017				
1/27/2017				
1/31/2017	0.404			
5/23/2017				
5/24/2017	0.415			
8/10/2017	0.397			
11/13/2017				
11/14/2017	0.366			
6/4/2018				
6/5/2018				
6/6/2018	0.48			
6/7/2018				
10/1/2018				
10/2/2018	0.43			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019	0.4			
4/4/2019				
4/5/2019				
6/17/2019	0.37			
10/21/2019				
10/22/2019	0.32			
10/23/2019		3.1		
1/3/2020		3.4		
3/4/2020		3.7		
3/24/2020		2.4		
3/25/2020	0.36			
4/9/2020				
6/18/2020		2.9		
7/21/2020		3		
8/27/2020		2.7		
9/18/2020			0.015 (J)	0.0082 (J)
9/22/2020				
9/24/2020		2.9		
9/25/2020	0.28			
9/28/2020				
11/10/2020				0.0064 (J)
11/11/2020			0.014 (J)	
12/15/2020			0.0083 (J)	<0.04
1/19/2021			0.015 (J)	0.015 (J)
3/11/2021				
3/12/2021			0.012 (J)	0.0067 (J)
3/16/2021				
3/17/2021	0.26	2.7		
3/18/2021				
3/19/2021				

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/12/2021			0.012 (J)	<0.04
8/13/2021	0.24	2.4		
8/16/2021				
8/19/2021				
9/27/2021				
1/31/2022			0.011 (J)	<0.04
2/1/2022				
2/2/2022	0.25	2.6		
2/3/2022				
8/2/2022				<0.04
8/5/2022	0.25	2.9	0.011 (J)	
8/10/2022				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	40.3	6.72	6.69						
8/31/2016				70.4	74.2	44.7	63.4	79.3	35.1
10/20/2016	38.7						64.4	83.7	
10/24/2016		6.4	6.25	70.9					
10/25/2016					72.5	49			35.4
1/25/2017	44.6	6.87	6.58						
1/27/2017							68.6		
1/31/2017				63.6	70.3	46.6		76.8	34.2
5/23/2017		7.13	6.4	111			32	77.2	
5/24/2017	34.8				75.9	49.5			35.3
8/10/2017	48.6	6.71	6.54	81.2	84	54.2	78.9	83.1	43.1
11/13/2017	17.1		6.26						
11/14/2017		7.4		79.7	87.2	53.2	46.9	86.7	37.4
6/4/2018	30.1		7.4						
6/5/2018		7.4							
6/6/2018				88.3	81	55			41.1
6/7/2018							37.7	79.7	
10/1/2018	14.2 (J)	6.2	5.8						
10/2/2018					84.7	55.4			42.5
10/3/2018				85.3			68	77.1	
4/1/2019	58.4								
4/2/2019		7.4	6.7						
4/3/2019						54			37.5
4/4/2019				91.9	73.8				
4/5/2019							70	82	
6/17/2019				92.6	81.2	55.3			
6/18/2019							36.3	76.5	
10/21/2019	51								
10/22/2019		7.2	6.3			58.1	70.9	84.2	42.6
10/23/2019				86.5	89.4				
1/3/2020									
3/4/2020									
3/24/2020	61.2		7				68		
3/25/2020				86.8	91.4	59.5		86.8	42.6
4/9/2020		8.3							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	32.2		6.5						
9/22/2020		7.9							
9/24/2020				91.3	92.9	55.4			
9/25/2020							72.8		48.5
9/28/2020								88.9	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	53.2								
3/12/2021			6.9						
3/16/2021		8.6							
3/17/2021									37.3
3/18/2021				83.7	97.7	56		85.4	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
3/19/2021							87.3		
8/12/2021	45.4	8.4	6.9						
8/13/2021					102	57.8		84.3	43.5
8/16/2021				124					
8/19/2021							40.9		
9/27/2021							37.5		
1/31/2022	58.6								
2/1/2022		8.6	7.4						
2/2/2022				104		62	42.6		45.7
2/3/2022					115			84.5	
8/2/2022		8							
8/5/2022	53		7.1	128	121	63	44.8	88.5	50.8
8/10/2022									

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	19.4			
10/20/2016	19.3			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	19.1			
5/23/2017	18.3			
5/24/2017				
8/10/2017	20.9			
11/13/2017				
11/14/2017	21.7			
6/4/2018				
6/5/2018				
6/6/2018	17			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	19.1 (J)			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	16.9			
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	21.9	136		
1/3/2020		118		
3/4/2020		144		
3/24/2020		103		
3/25/2020	18.4			
4/9/2020				
6/18/2020		124		
7/21/2020		120		
8/27/2020		106		
9/18/2020			62.2	51.8
9/22/2020				
9/24/2020	20.3	120		
9/25/2020				
9/28/2020				
11/10/2020			73.3	
11/11/2020				61.3
12/15/2020			72.5	61.3
1/19/2021			72.5	58.9
3/11/2021				
3/12/2021			69.2	57.5
3/16/2021				
3/17/2021	21.8	111		
3/18/2021				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/19/2021				
8/12/2021			71.2	59.5
8/13/2021		119		
8/16/2021	22.8			
8/19/2021				
9/27/2021				
1/31/2022			73.8	63.2
2/1/2022				
2/2/2022	23.8	116		
2/3/2022				
8/2/2022			73	
8/5/2022		127		59.6
8/10/2022	24.6			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-118	HGWC-101	HGWC-117	HGWC-107
8/30/2016	3.3	2	5.4						
8/31/2016				5.2	3	4.5	5.7	7.1	3.2
10/20/2016	3.2					4.4	5.7	7.7	
10/24/2016		1.9	5.2	5.2					
10/25/2016					2.8				3.2
1/25/2017	2.7	1.9	5						
1/27/2017								7.8	
1/31/2017				5.6	3.3	4.8	5.8		3.1
5/23/2017		1.6	5.1	5.7		4.3	5.3	3.6	
5/24/2017	3				3.5				2.9
8/10/2017	2.8	1.7	5.2	5.8	2.9	4.2	5.4	5.9	2.8
11/13/2017	2.5		5.5						
11/14/2017		2		6	4	4.4	5.8	4	3.4
6/4/2018	2.6		5.3						
6/5/2018		1.7							
6/6/2018				6.4	2.9		5.3		2.8
6/7/2018						4.1		3.6	
10/1/2018	2.2	1.6	5.6						
10/2/2018					3.5				3.2
10/3/2018				6.3		4.4	5.8	7.6	
4/1/2019	4								
4/2/2019		1.8	5.7						
4/3/2019									3.6
4/4/2019				6.9	3.9		5.9		
4/5/2019						4.3		8.9	
6/17/2019				5.2					2.9
10/21/2019	3.9								
10/22/2019		1.9	5.5			4.5		12.1	3.6
10/23/2019				6.1	3.6		5.5		
1/3/2020									
3/4/2020									
3/24/2020	3.6		5.2					12.5	
3/25/2020				5.1	3.2	3.6	5.2		3
4/9/2020		1.4							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	2.6		5.2						
9/22/2020		1.5							
9/24/2020				6	3.9		5.5		3.5
9/25/2020								16.1	
9/28/2020						4			
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	3.4								
3/12/2021			5.3						
3/16/2021		1.6							
3/17/2021							5.5		
3/18/2021				6.2	4.3	4.3			3.2
3/19/2021								24.9	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-118	HGWC-101	HGWC-117	HGWC-107
8/12/2021	2.5	1.5	4.4						
8/13/2021					3.7	4			3.1
8/16/2021				10.4			5.4		
8/19/2021								4	
9/27/2021								3.4	
1/31/2022	3								
2/1/2022		1.6	5.2						
2/2/2022				7.1			5.3	4.3	2.9
2/3/2022					4.8	3.9			
8/2/2022		1.8							
8/5/2022	2.7		5	7.8	5	3.8		4.4	2.7
8/10/2022							5.5		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	5			
10/20/2016				
10/24/2016				
10/25/2016	4.8			
1/25/2017				
1/27/2017				
1/31/2017	5.5			
5/23/2017				
5/24/2017	5.3			
8/10/2017	4.6			
11/13/2017				
11/14/2017	5.6			
6/4/2018				
6/5/2018				
6/6/2018	5.3			
6/7/2018				
10/1/2018				
10/2/2018	5.3			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019	5			
4/4/2019				
4/5/2019				
6/17/2019				
10/21/2019				
10/22/2019	4.6			
10/23/2019		7.9		
1/3/2020		7		
3/4/2020		7.1		
3/24/2020		6.5		
3/25/2020	3.9			
4/9/2020				
6/18/2020		6.9		
7/21/2020		7.2		
8/27/2020		7.1		
9/18/2020			2.6	2.7
9/22/2020				
9/24/2020		7.2		
9/25/2020	4.1			
9/28/2020				
11/10/2020				2.7
11/11/2020			2.6	
12/15/2020			2.7	2.9
1/19/2021			2.7	2.8
3/11/2021				
3/12/2021			2.6	2.7
3/16/2021				
3/17/2021	4.7	6.9		
3/18/2021				
3/19/2021				

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/12/2021			2.2	2.3
8/13/2021	4	6		
8/16/2021				
8/19/2021				
9/27/2021				
1/31/2022			2.5	2.6
2/1/2022				
2/2/2022	4.1	7.2		
2/3/2022				
8/2/2022				3
8/5/2022	3.7	7.7	2.4	
8/10/2022				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	0.07 (J)	0.2 (J)	0.04 (J)						
8/31/2016				0.06 (J)	0.15 (J)	0.08 (J)	0.09 (J)	0.18 (J)	0.12 (J)
10/20/2016	0.07 (J)						0.11 (J)	0.12 (J)	
10/24/2016		0.16 (J)	0.05 (J)	0.13 (J)					
10/25/2016					0.09 (J)	0.16 (J)			0.17 (J)
1/25/2017	0.14 (J)	0.15 (J)	<0.1						
1/27/2017							0.28 (J)		
1/31/2017				<0.1	0.13 (J)	0.16 (J)		0.3	0.05 (J)
5/23/2017		0.18 (J)	0.004 (J)	0.15 (J)			0.01 (J)	0.14 (J)	
5/24/2017	0.02 (J)				0.07 (J)	0.009 (J)			0.13 (J)
8/10/2017	0.06 (J)	0.19 (J)	0.03 (J)	<0.1	0.03 (J)	<0.1	0.1 (J)	0.11 (J)	0.12 (J)
11/13/2017	<0.1		<0.1						
11/14/2017		0.16 (J)		<0.1	<0.1	<0.1	<0.1	0.07 (J)	<0.1
6/4/2018	0.032 (J)		<0.1						
6/5/2018		0.18 (J)							
6/6/2018				<0.1	0.074 (J)	0.057 (J)			0.15 (J)
6/7/2018							<0.1	0.3	
10/1/2018	<0.1	0.078 (J)	<0.1						
10/2/2018					<0.1	<0.1			<0.1
10/3/2018				<0.1			<0.1	0.12 (J)	
4/1/2019	0.042 (J)								
4/2/2019		0.18 (J)	<0.1						
4/3/2019						<0.1			0.05 (J)
4/4/2019				0.042 (J)	0.03 (J)				
4/5/2019							0.19 (J)	0.33	
6/18/2019								0.89	
8/21/2019	0.048 (J)	0.11 (J)	<0.1						
8/22/2019				<0.1	<0.1		<0.1	0.07 (J)	
8/23/2019						<0.1			0.034 (J)
10/21/2019	0.12 (J)								
10/22/2019		0.18 (J)	0.05 (J)			0.047 (J)	0.042 (J)	0.087 (J)	0.099 (J)
10/23/2019				<0.1	<0.1				
1/3/2020									
3/4/2020									
3/24/2020	0.076 (J)		<0.1				<0.1		
3/25/2020				<0.1	<0.1	<0.1		0.078 (J)	0.075 (J)
4/9/2020		0.14 (J)							
6/18/2020									
7/21/2020									
8/25/2020	0.052 (J)	0.17	<0.1						
8/26/2020								0.072 (J)	
8/27/2020				<0.1	<0.1	<0.1	<0.1		0.094 (J)
9/18/2020	<0.1		<0.1						
9/22/2020		0.16							
9/24/2020				<0.1	<0.1	0.064 (J)			
9/25/2020							<0.1		0.091 (J)
9/28/2020								0.078 (J)	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.057 (J)								

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
3/12/2021			<0.1						
3/16/2021		0.18							
3/17/2021									0.089 (J)
3/18/2021				<0.1	<0.1	<0.1		0.079 (J)	
3/19/2021							<0.1		
8/12/2021	<0.1	0.16	<0.1						
8/13/2021					<0.1	<0.1		0.075 (J)	0.086 (J)
8/16/2021				<0.1					
8/19/2021							<0.1		
9/27/2021							<0.1		
1/31/2022	0.055 (J)								
2/1/2022		0.16	<0.1						
2/2/2022				<0.1		<0.1	<0.1		0.086 (J)
2/3/2022					<0.1			0.069 (J)	
8/2/2022		0.19							
8/5/2022	0.1		0.077 (J)	0.071 (J)	0.075 (J)	0.093 (J)	0.075 (J)	0.12	0.14
8/10/2022									

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	0.05 (J)			
10/20/2016	0.03 (J)			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	<0.1			
5/23/2017	<0.1			
5/24/2017				
8/10/2017	<0.1			
11/13/2017				
11/14/2017	<0.1			
6/4/2018				
6/5/2018				
6/6/2018	<0.1			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	<0.1			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	<0.1			
4/5/2019				
6/18/2019				
8/21/2019				
8/22/2019	<0.1			
8/23/2019				
10/21/2019				
10/22/2019				
10/23/2019	<0.1	0.22 (J)		
1/3/2020		<0.1		
3/4/2020		<0.1		
3/24/2020		<0.1		
3/25/2020	<0.1			
4/9/2020				
6/18/2020		<0.1		
7/21/2020		<0.1		
8/25/2020				
8/26/2020				
8/27/2020	<0.1	<0.1		
9/18/2020			0.067 (J)	0.098 (J)
9/22/2020				
9/24/2020	<0.1	<0.1		
9/25/2020				
9/28/2020				
11/10/2020			0.065 (J)	
11/11/2020				0.083 (J)
12/15/2020			0.064 (J)	0.081 (J)
1/19/2021			0.057 (J)	0.079 (J)
3/11/2021				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/12/2021			0.062 (J)	0.085 (J)
3/16/2021				
3/17/2021	<0.1	<0.1		
3/18/2021				
3/19/2021				
8/12/2021			<0.1	0.064 (J)
8/13/2021		<0.1		
8/16/2021	<0.1			
8/19/2021				
9/27/2021				
1/31/2022			0.053 (J)	0.072 (J)
2/1/2022				
2/2/2022	<0.1	<0.1		
2/3/2022				
8/2/2022			0.08 (J)	
8/5/2022		0.076 (J)		0.12
8/10/2022	0.065 (J)			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	6.89	5.99	5.77						
8/31/2016				5.54	6.5	6.11	6.07	7.03	6.78
10/20/2016	6.73						6	7.01	
10/24/2016		5.84	5.61	5.48					
10/25/2016					6.34	6.04			6.55
1/25/2017	7.02	6.04	5.68						
1/27/2017							6.2		
1/31/2017				5.51	6.43	5.94		6.96	6.5
5/23/2017		6.01	5.7	5.98			5.27	6.92	
5/24/2017	6.44				6.31	6.06			6.42
8/10/2017	6.79	5.98	5.59	5.63	6.45	6.06	6.27	6.99	6.63
11/13/2017	5.94		5.56						
11/14/2017		6.16		5.59	6.53	5.99	5.4	6.9	6.5
6/4/2018	6.12		5.62						
6/5/2018		5.86							
6/6/2018				5.49	6.49	6			6.59
6/7/2018							5.29	7.03	
10/1/2018	5.92	5.94	5.62						
10/2/2018					6.18	6.18			6.54
10/3/2018				5.53			6.08	7.08	
4/1/2019	7.09								
4/2/2019		6	5.47						
4/3/2019						6.06			6.42
4/4/2019				5.44	6.17				
4/5/2019							5.99	6.96	
6/17/2019				5.53					
6/18/2019									
8/21/2019	6.6	6.05	5.8						
8/22/2019				5.55	6.04		5.53	6.93	
8/23/2019						6.26			6.76
10/21/2019	7.02								
10/22/2019		5.98	5.7			6.19	6.17	7.03	6.58
10/23/2019				5.49	6.46				
1/3/2020									
3/4/2020									
3/24/2020	7.37		5.64				5.99		
3/25/2020				5.49	6.47	6.13		6.89	6.56
4/9/2020		6.08							
6/18/2020									
7/21/2020									
8/25/2020	6.7	5.95	5.53						
8/26/2020								6.97	
8/27/2020				5.82	6.45	6.09	5.92		6.64
9/18/2020	6.46		5.58						
9/22/2020		6.1							
9/24/2020				5.6	6.63	6.11			
9/25/2020							6.01		6.79
9/28/2020								7.03	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
3/11/2021	7.2								
3/12/2021			5.6						
3/16/2021		6.14							
3/17/2021									6.55
3/18/2021				5.51	6.57	6.2		7.11	
3/19/2021							6.14		
8/12/2021	6.67	6.08	5.5						
8/13/2021					6.44	6.11		6.78	6.71
8/16/2021				5.59					
8/19/2021							6.04		
9/27/2021							5.66		
1/31/2022	7.17								
2/1/2022		6.05	5.59						
2/2/2022				5.63		6.14	5.53		6.65
2/3/2022					6.48			6.79	
8/2/2022		6.08							
8/5/2022	6.97		5.43	5.71	6.46	6.07	5.46	7.07	6.81
8/10/2022									

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	5.35			
10/20/2016	5.3			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	5.24			
5/23/2017	5.39			
5/24/2017				
8/10/2017	5.47			
11/13/2017				
11/14/2017	5.4			
6/4/2018				
6/5/2018				
6/6/2018	5.37			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	5.39			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	5.31			
4/5/2019				
6/17/2019				
6/18/2019	5.3			
8/21/2019				
8/22/2019	5.39			
8/23/2019				
10/21/2019				
10/22/2019				
10/23/2019	5.33	5.68		
1/3/2020		5.64		
3/4/2020		5.75		
3/24/2020		5.58		
3/25/2020	5.53			
4/9/2020				
6/18/2020		5.67		
7/21/2020		5.72		
8/25/2020				
8/26/2020				
8/27/2020	5.32	5.7		
9/18/2020			7.54	7.5
9/22/2020				
9/24/2020	5.48	5.82		
9/25/2020				
9/28/2020				
11/10/2020			7.34	
11/11/2020				7.4
12/15/2020			7.27	7.39
1/19/2021			7.32	7.4

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/11/2021				
3/12/2021			7.52	7.51
3/16/2021				
3/17/2021	5.41	5.78		
3/18/2021				
3/19/2021				
8/12/2021			7.38	7.44
8/13/2021		5.45		
8/16/2021	5.4			
8/19/2021				
9/27/2021				
1/31/2022			7.34	7.44
2/1/2022				
2/2/2022	5.51	5.79		
2/3/2022				
8/2/2022			7.34	
8/5/2022		5.69		7.4
8/10/2022	5.37			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	1.6	14	0.63 (J)						
8/31/2016				280	190	130	150	88	36
10/20/2016	1.6						150	81	
10/24/2016		11	0.62 (J)	280					
10/25/2016					190	130			41
1/25/2017	1.6	12	0.62 (J)						
1/27/2017							150		
1/31/2017				300	210	130		87	37
5/23/2017		12	0.55 (J)	340			110	84	
5/24/2017	1.4				180	130			40
8/10/2017	1.6	11	0.66 (J)	300	180	130	140	78	40
11/13/2017	1.3		0.61 (J)						
11/14/2017		11		310	170	130	110	79	40
6/4/2018	1.4		0.73 (J)						
6/5/2018		9.9							
6/6/2018				351	168	132			49.7
6/7/2018							103	60.1	
10/1/2018	1	6.7	0.52 (J)						
10/2/2018					173	132			42.3
10/3/2018				381			169	91.5	
4/1/2019	1.7								
4/2/2019		8.7	0.78 (J)						
4/3/2019						139			36
4/4/2019				358	185				
4/5/2019							141	75.1	
6/17/2019				311	162	126			30.9
6/18/2019							116	77	
10/21/2019	1.8								
10/22/2019		6.8	0.6 (J)			123	133	80.9	23.2
10/23/2019				248	162				
1/3/2020									
3/4/2020									
3/24/2020	1.6		<1				129		
3/25/2020				251	161	116		78.4	27.9
4/9/2020		6.6							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	1		<1						
9/22/2020		5.3							
9/24/2020				293	177	126			
9/25/2020							146		24.7
9/28/2020								86	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	1.5								
3/12/2021			0.52 (J)						
3/16/2021		7.7							
3/17/2021									28.3
3/18/2021				286	196	128		87.8	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
3/19/2021							162		
8/12/2021	1.3	10	<1						
8/13/2021					142	112		75.1	24.4
8/16/2021				354					
8/19/2021							108		
9/27/2021							104		
1/31/2022	1.5								
2/1/2022		8.9	0.5 (J)						
2/2/2022				293		111	115		25.5
2/3/2022					195			72.7	
8/2/2022		7.5							
8/5/2022	1.4		<1	369	217	120	132	69.8	23
8/10/2022									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	110			
10/20/2016	110			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	120			
5/23/2017	97			
5/24/2017				
8/10/2017	96			
11/13/2017				
11/14/2017	110			
6/4/2018				
6/5/2018				
6/6/2018	95.5			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	121			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	95.1			
4/5/2019				
6/17/2019				
6/18/2019	102			
10/21/2019				
10/22/2019				
10/23/2019	101	<1		
1/3/2020		380		
3/4/2020		400		
3/24/2020		311		
3/25/2020	85.5			
4/9/2020				
6/18/2020		349		
7/21/2020		378		
8/27/2020		382		
9/18/2020			3.5	9.5
9/22/2020				
9/24/2020	97	370		
9/25/2020				
9/28/2020				
11/10/2020			2.3	
11/11/2020				4.5
12/15/2020			2.4	4.2
1/19/2021			2.6	3.9
3/11/2021				
3/12/2021			1.9	4.7
3/16/2021				
3/17/2021	107	332		
3/18/2021				

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/19/2021				
8/12/2021			1.4	4.3
8/13/2021		248		
8/16/2021	72.1			
8/19/2021				
9/27/2021				
1/31/2022			1.7	5.6
2/1/2022				
2/2/2022	100	303		
2/3/2022				
8/2/2022			2.1	
8/5/2022		358		3.4
8/10/2022	99.5			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	172	77	76						
8/31/2016				483	389	235	381	373	182
10/20/2016	108						319	305	
10/24/2016		111	65	517					
10/25/2016					316	223			172
1/25/2017	345	155	152 (o)						
1/27/2017							407		
1/31/2017				516	437	346		361	252
5/23/2017		74	52	637			258	359	
5/24/2017	126				352	234			184
8/10/2017	174	94	60	459	356	254	359	325	208
11/13/2017	158		75						
11/14/2017		89		545	375	313	310	373	252
6/4/2018	131		70						
6/5/2018		92							
6/6/2018				559	385	278			224
6/7/2018							223	338	
10/1/2018	101	91	76						
10/2/2018					374	274			230
10/3/2018				582			337	328	
4/1/2019	213								
4/2/2019		94	69						
4/3/2019						273			210
4/4/2019				535	340				
4/5/2019							334	308	
6/17/2019				515	370	272			
6/18/2019							254	215	
10/21/2019	187								
10/22/2019		95	81			308	348	354	212
10/23/2019				507	419				
1/3/2020									
3/4/2020									
3/24/2020	207		52				331		
3/25/2020				507	417	297		347	213
4/9/2020		48							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	139		62						
9/22/2020		84							
9/24/2020				517	411	253			
9/25/2020							340		188
9/28/2020								332	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	207								
3/12/2021			56						
3/16/2021		99							
3/17/2021									171
3/18/2021				465	410	255		328	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
3/19/2021							371		
8/12/2021	157	92	63						
8/13/2021					441	291		336	189
8/16/2021				672					
8/19/2021							253		
9/27/2021							242		
1/31/2022	186								
2/1/2022		99	73						
2/2/2022				576		271	256		206
2/3/2022					463			316	
8/2/2022		85							
8/5/2022	171		44	692	514	274	285	329	195
8/10/2022									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	278			
10/20/2016	165			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	263			
5/23/2017	190			
5/24/2017				
8/10/2017	175			
11/13/2017				
11/14/2017	253			
6/4/2018				
6/5/2018				
6/6/2018	188			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	238			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	149			
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	221	736		
1/3/2020		714		
3/4/2020		764		
3/24/2020		521		
3/25/2020	187			
4/9/2020				
6/18/2020		652		
7/21/2020		669		
8/27/2020		663		
9/18/2020			224	195
9/22/2020				
9/24/2020	170	696		
9/25/2020				
9/28/2020				
11/10/2020				229
11/11/2020			221	
12/15/2020			239	233
1/19/2021			224	199
3/11/2021				
3/12/2021			204	217
3/16/2021				
3/17/2021	213	626		
3/18/2021				

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
3/19/2021				
8/12/2021			234	212
8/13/2021		647		
8/16/2021	206			
8/19/2021				
9/27/2021				
1/31/2022			223	243
2/1/2022				
2/2/2022	220	602		
2/3/2022				
8/2/2022				222
8/5/2022		696	224	
8/10/2022	232			

FIGURE E.

Appendix III Trend Test - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.009687**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.0308**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3418**	**76**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-103**	**5.956**	**74**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.246**	**106**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-103**	**0.3864**	**70**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-112 (bg)**	**-0.02278**	**-62**	**-58**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.014**	**-66**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWC-109**	**-3.076**	**-74**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-105**	**19.84**	**66**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Test - All Results

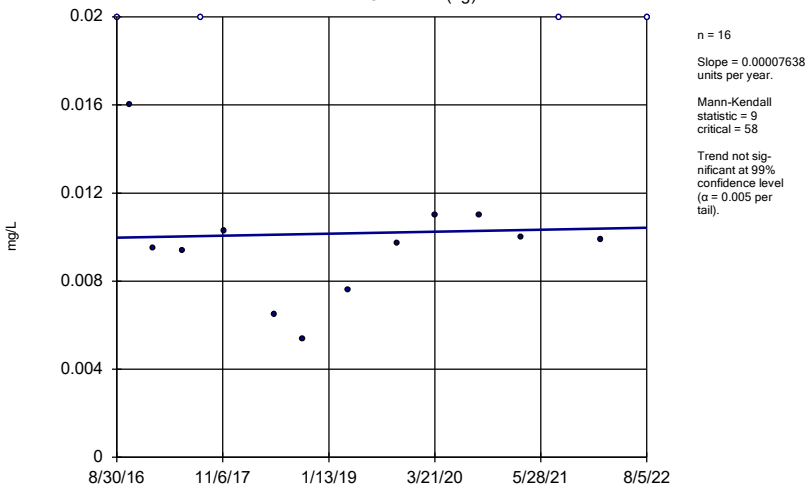
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0.00007638	9	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.0003539	-17	-58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.000724	18	58	No	16	18.75	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.005573	12	21	No	8	50	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.002125	-13	-21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-101**	**0.009687**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-102	-0.2643	-27	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.1032	56	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.0106	20	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.02644	53	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-109**	**-0.0308**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-117	0.01627	27	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.007608	-12	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.818	36	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.1075	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3418**	**76**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWA-47 (bg)	0.78	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	1.284	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-2.773	-9	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-103**	**5.956**	**74**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.246**	**106**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-118	1.33	58	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.04964	-14	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	-0.009605	-13	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.05023	-45	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	-0.1139	-12	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	0	3	38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-103**	**0.3864**	**70**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (s.u.)	HGWA-111 (bg)	0.05655	26	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.0274	-58	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02397	52	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-47 (bg)	-0.02056	-3	-21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-48D (bg)	0	0	21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01429	47	74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	-0.0222	-24	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-112 (bg)**	**-0.02278**	**-62**	**-58**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.014**	**-66**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-47 (bg)	-0.8098	-14	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-0.7764	-8	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.614	-42	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-11.09	-10	-38	No	12	8.333	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	3.311	21	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-3.257	-21	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.917	-61	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWC-109**	**-3.076**	**-74**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWC-117	-3.182	-33	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-1.699	-45	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	4.343	13	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.537	-19	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	0	1	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	11.65	8	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-38.24	-21	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	9.656	24	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWC-105**	**19.84**	**66**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

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

Sen's Slope Estimator

HGWA-111 (bg)



n = 16

Slope = 0.00007638 units per year.

Mann-Kendall statistic = 9
critical = 58

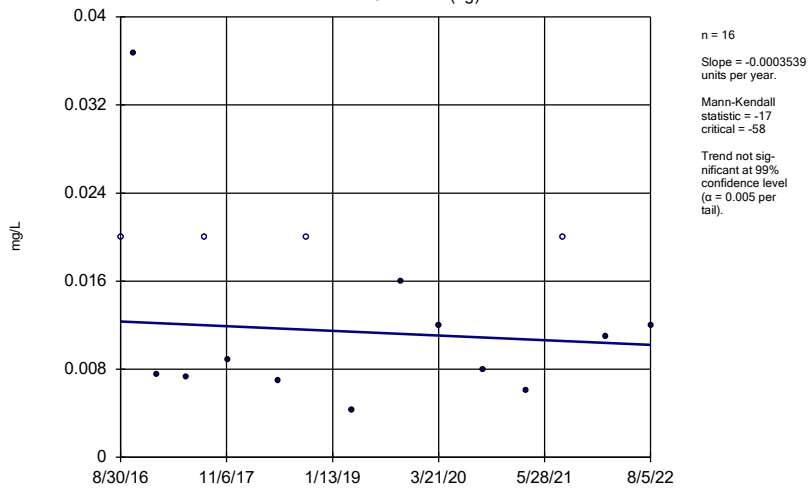
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-112 (bg)



n = 16

Slope = -0.0003539 units per year.

Mann-Kendall statistic = -17
critical = -58

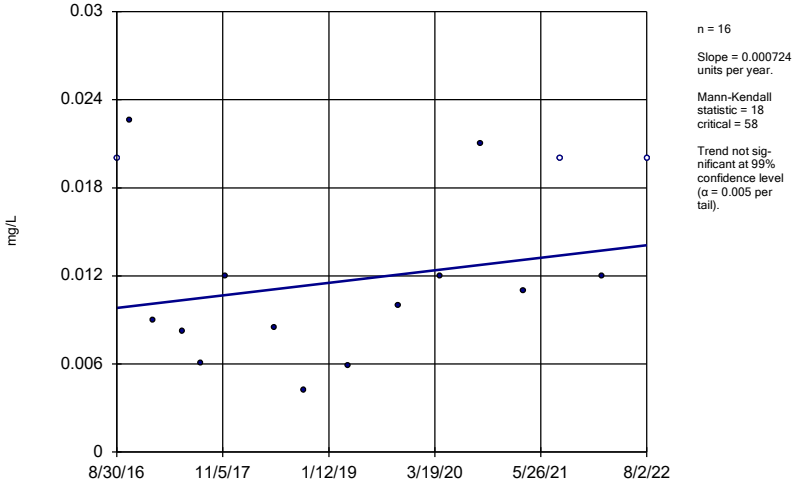
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-113 (bg)



n = 16

Slope = 0.000724 units per year.

Mann-Kendall statistic = 18
critical = 58

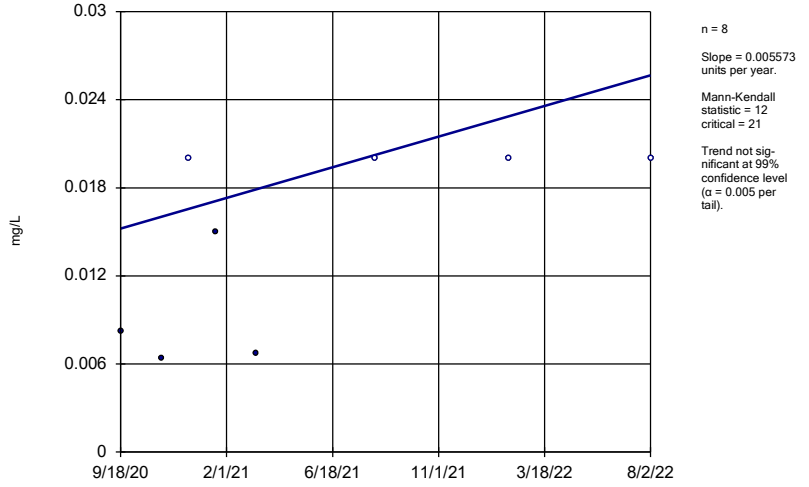
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-47 (bg)



n = 8

Slope = 0.005573 units per year.

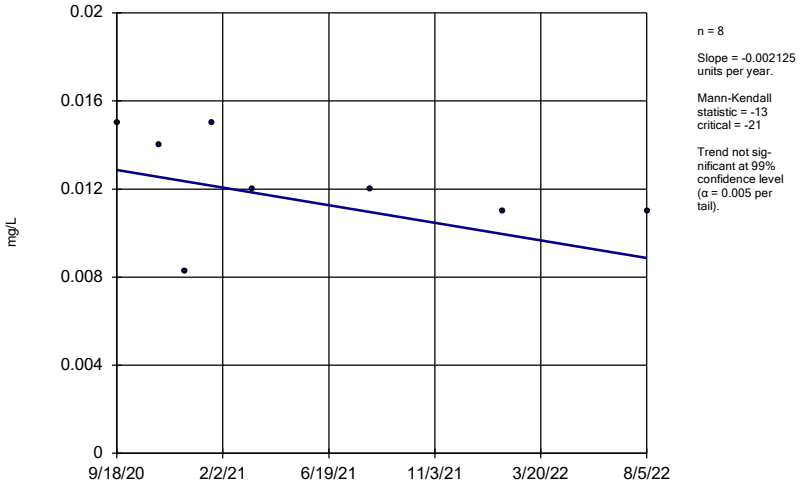
Mann-Kendall statistic = 12
critical = 21

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)



n = 8

Slope = -0.002125 units per year.

Mann-Kendall statistic = -13
critical = -21

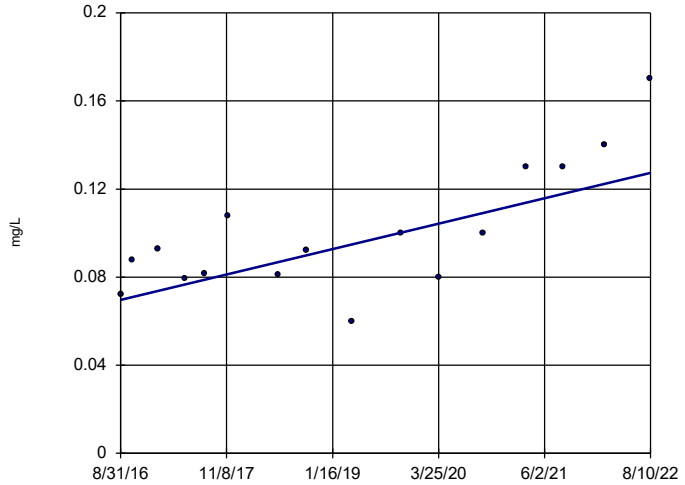
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-101



n = 16

Slope = 0.009687 units per year.

Mann-Kendall statistic = 64
critical = 58

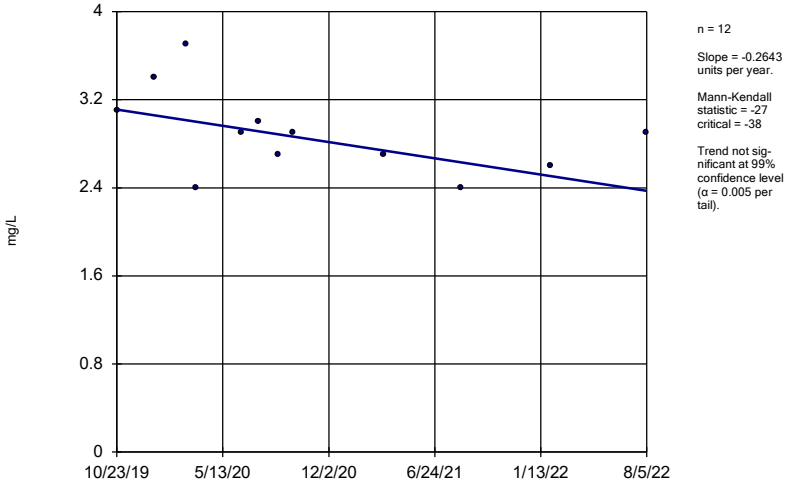
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-102



n = 12

Slope = -0.2643 units per year.

Mann-Kendall statistic = -27
critical = -38

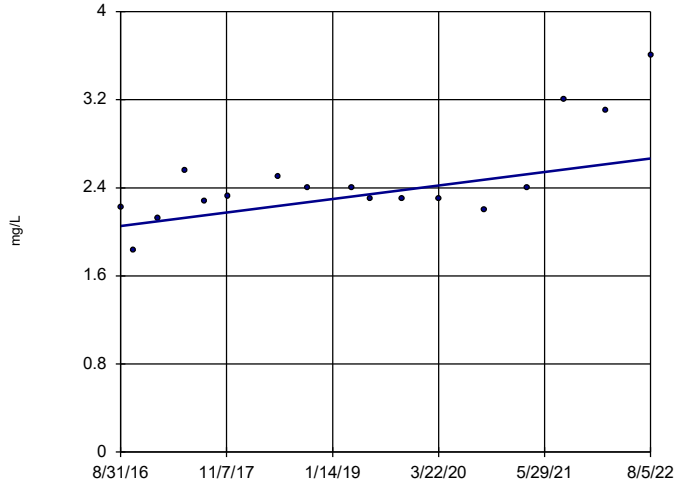
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-103



n = 17

Slope = 0.1032 units per year.

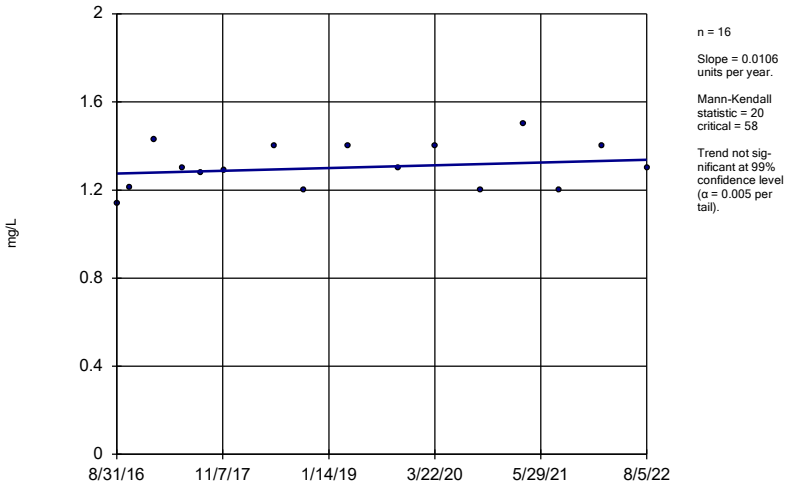
Mann-Kendall statistic = 56
critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 16

Slope = 0.0106 units per year.

Mann-Kendall statistic = 20 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

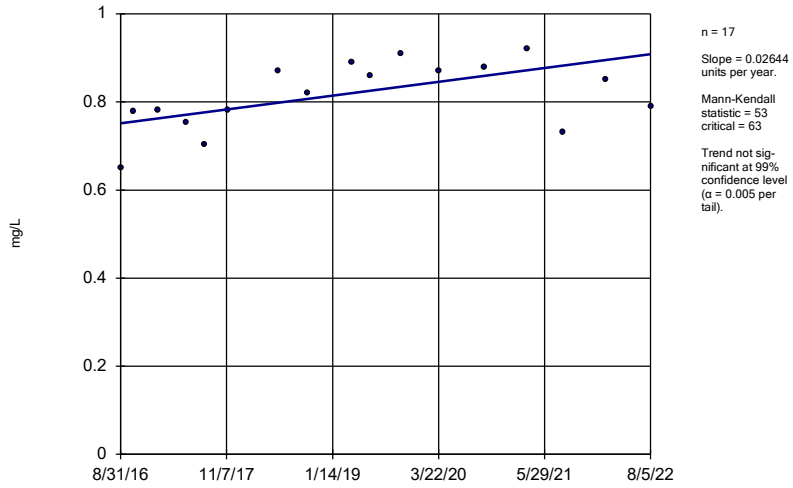
Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-107



n = 17

Slope = 0.02644 units per year.

Mann-Kendall statistic = 53 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

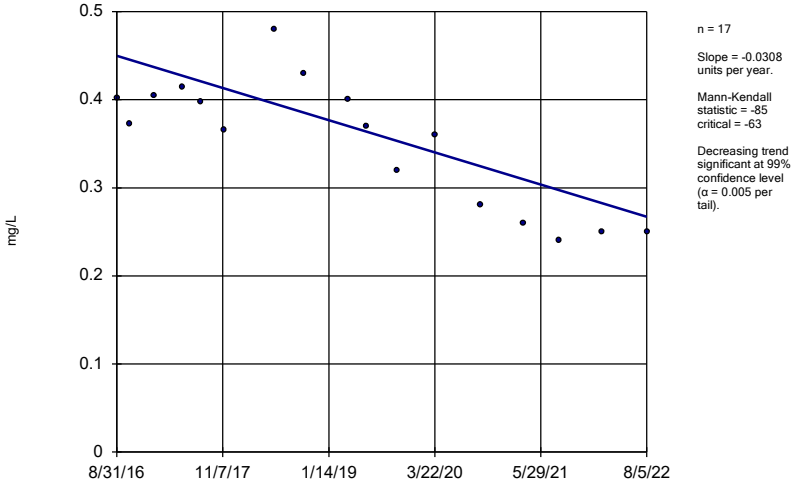
Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-109



n = 17

Slope = -0.0308 units per year.

Mann-Kendall statistic = -85 critical = -63

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

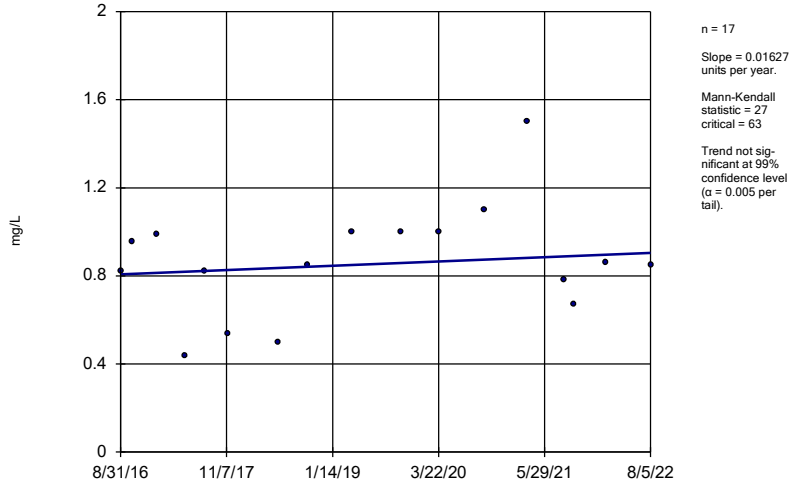
Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-117



n = 17

Slope = 0.01627 units per year.

Mann-Kendall statistic = 27 critical = 63

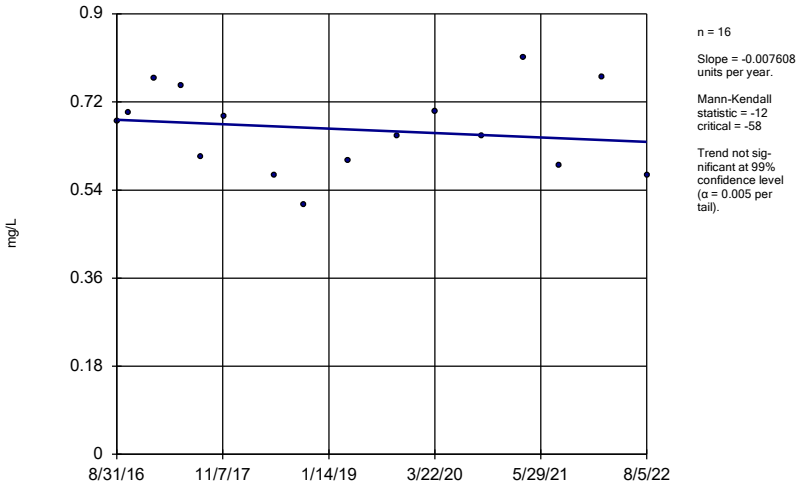
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-118



n = 16

Slope = -0.007608 units per year.

Mann-Kendall statistic = -12
critical = -58

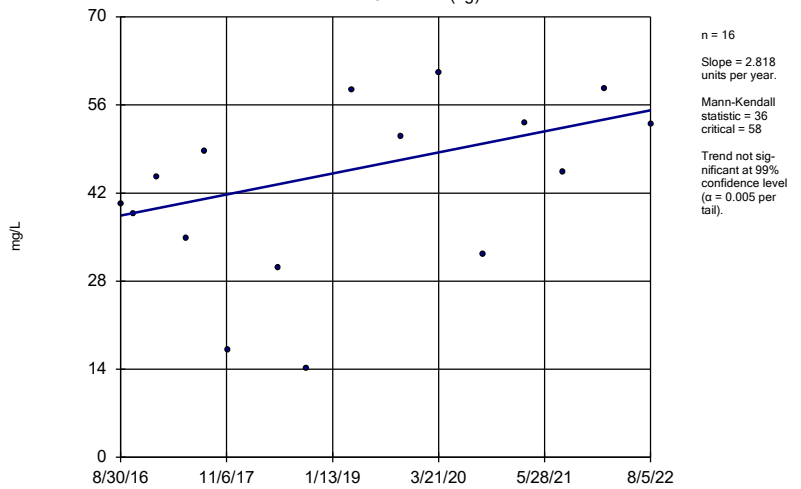
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-111 (bg)



n = 16

Slope = 2.818 units per year.

Mann-Kendall statistic = 36
critical = 58

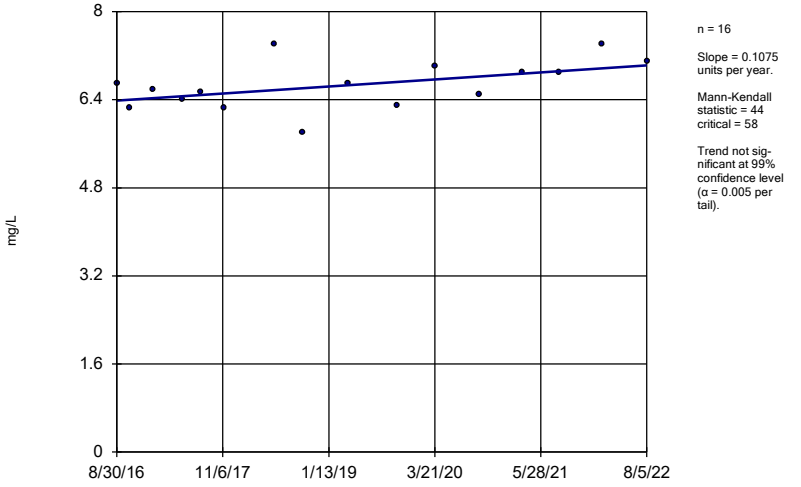
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-112 (bg)



n = 16

Slope = 0.1075 units per year.

Mann-Kendall statistic = 44
critical = 58

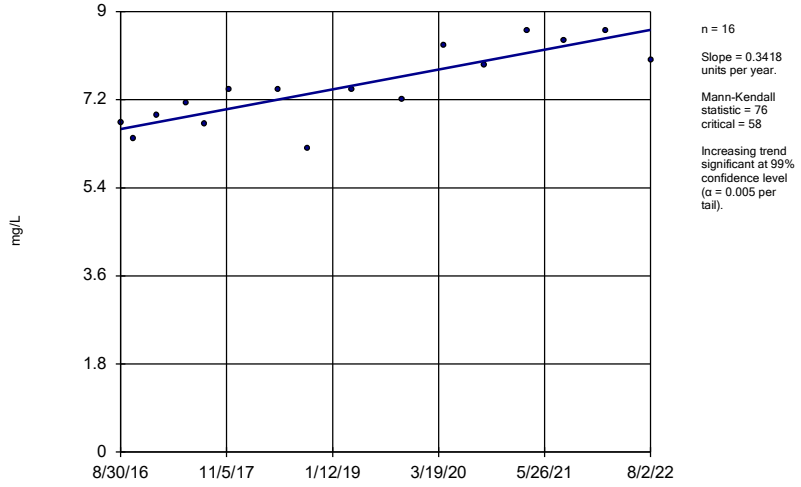
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-113 (bg)



n = 16

Slope = 0.3418 units per year.

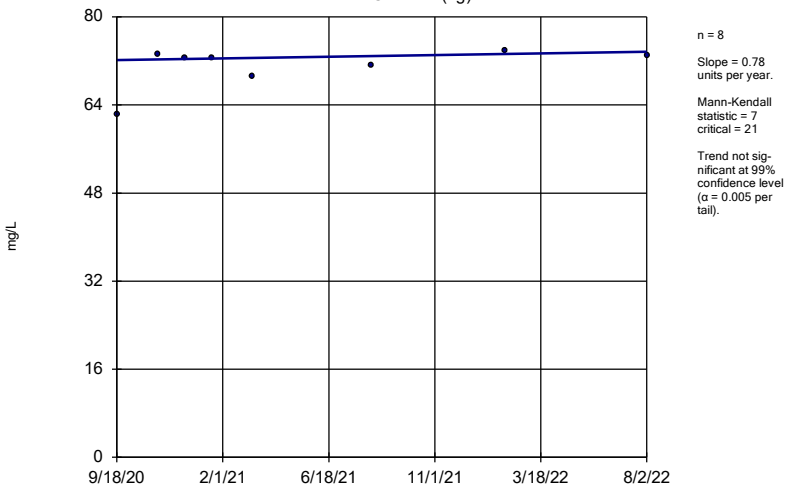
Mann-Kendall statistic = 76
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)



n = 8

Slope = 0.78 units per year.

Mann-Kendall statistic = 7 critical = 21

Trend not significant at 99% confidence level (α = 0.005 per tail).

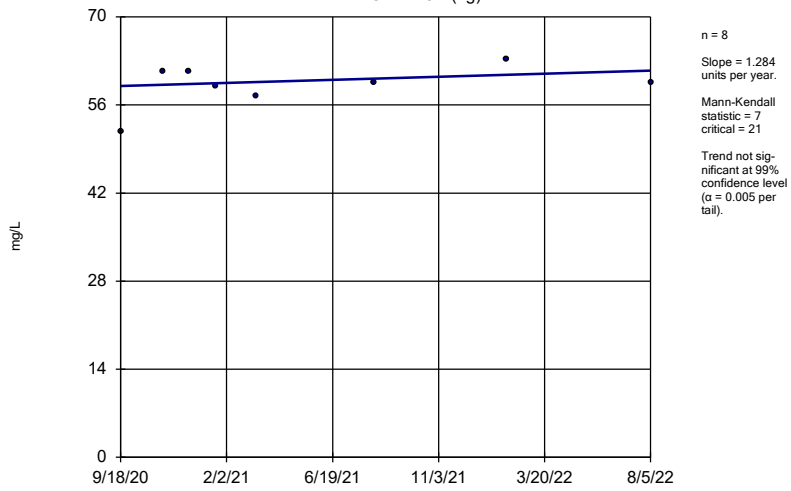
Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-48D (bg)



n = 8

Slope = 1.284 units per year.

Mann-Kendall statistic = 7 critical = 21

Trend not significant at 99% confidence level (α = 0.005 per tail).

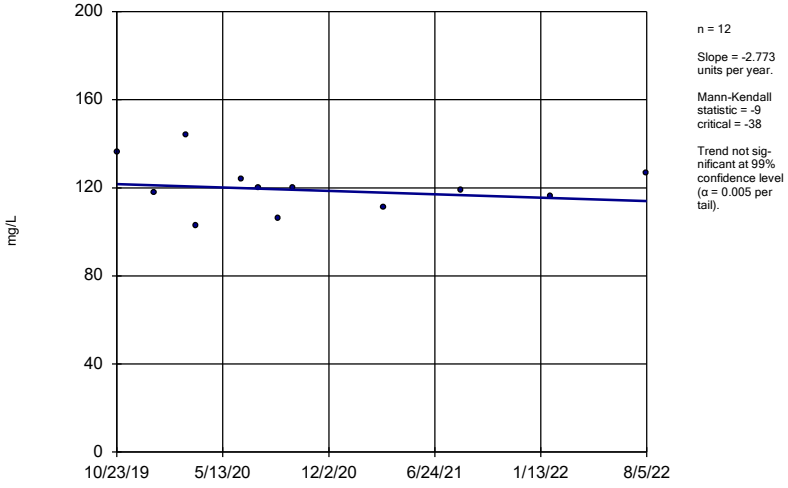
Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-102



n = 12

Slope = -2.773 units per year.

Mann-Kendall statistic = -9 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

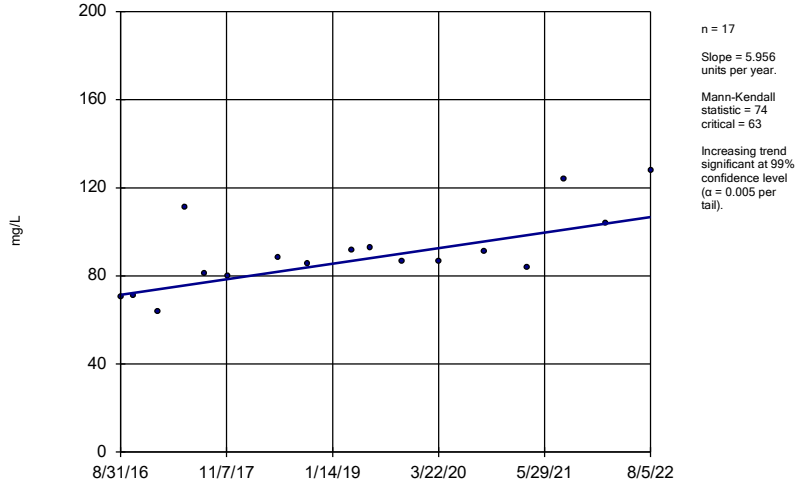
Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-103



n = 17

Slope = 5.956 units per year.

Mann-Kendall statistic = 74 critical = 63

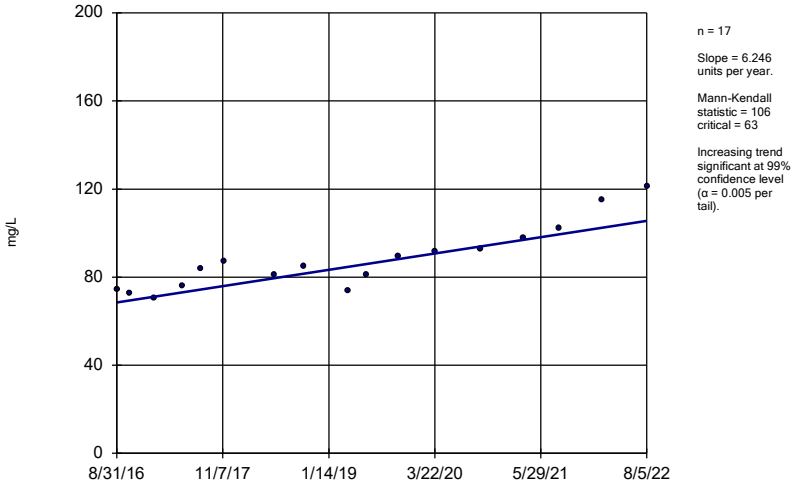
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 17

Slope = 6.246 units per year.

Mann-Kendall statistic = 106 critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

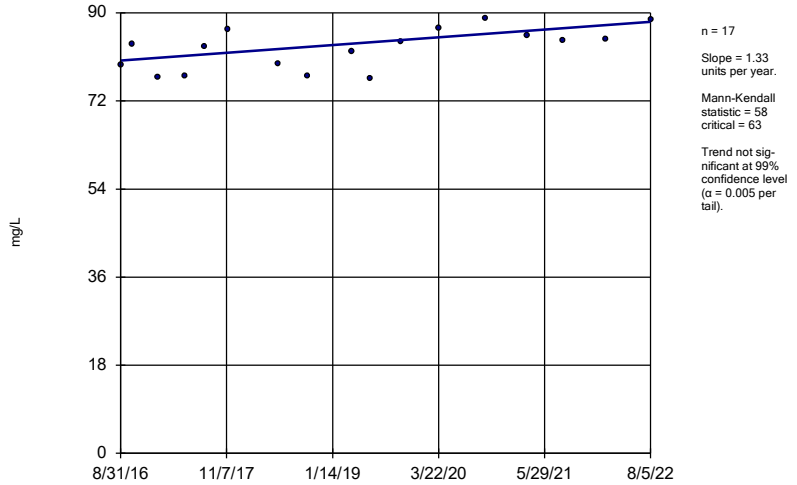
Constituent: Calcium Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-118



n = 17

Slope = 1.33 units per year.

Mann-Kendall statistic = 58 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

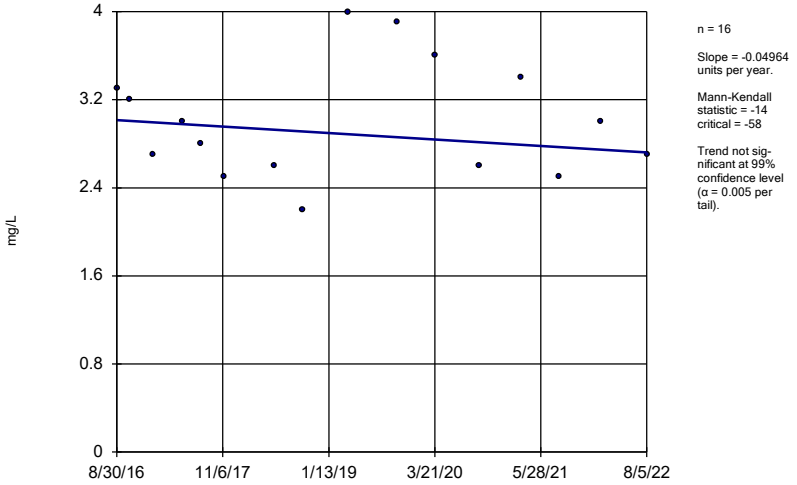
Constituent: Calcium Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-111 (bg)



n = 16

Slope = -0.04964 units per year.

Mann-Kendall statistic = -14 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

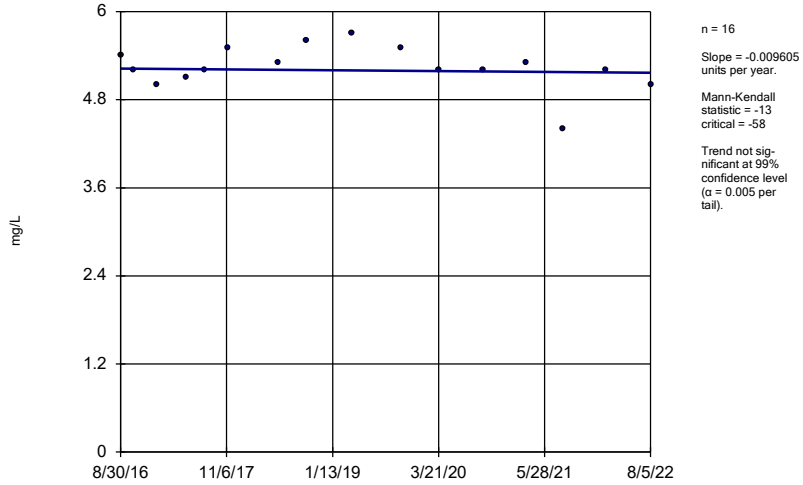
Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-112 (bg)



n = 16

Slope = -0.009605 units per year.

Mann-Kendall statistic = -13 critical = -58

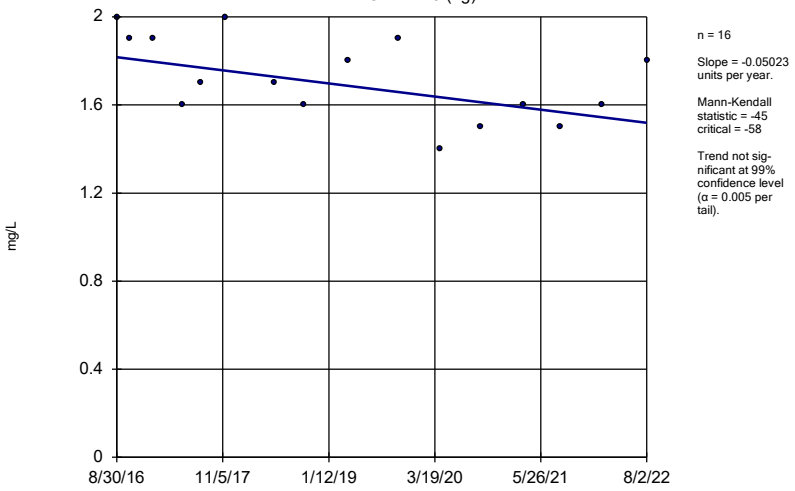
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-113 (bg)



n = 16

Slope = -0.05023 units per year.

Mann-Kendall statistic = -45
critical = -58

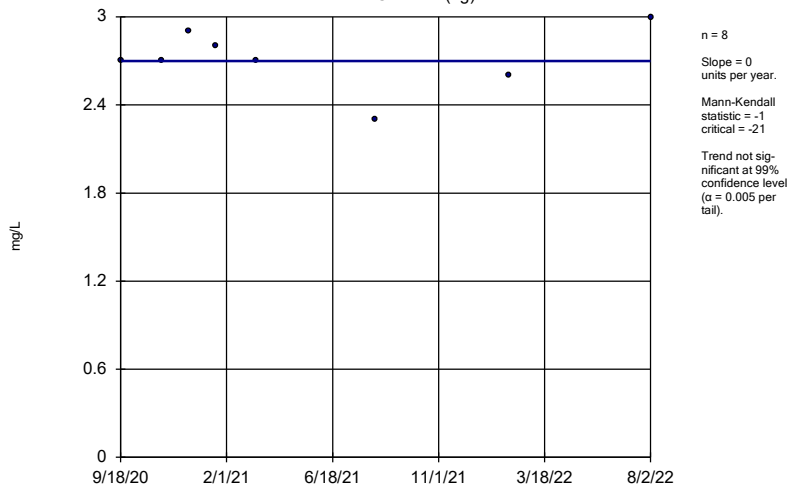
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-47 (bg)



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -21

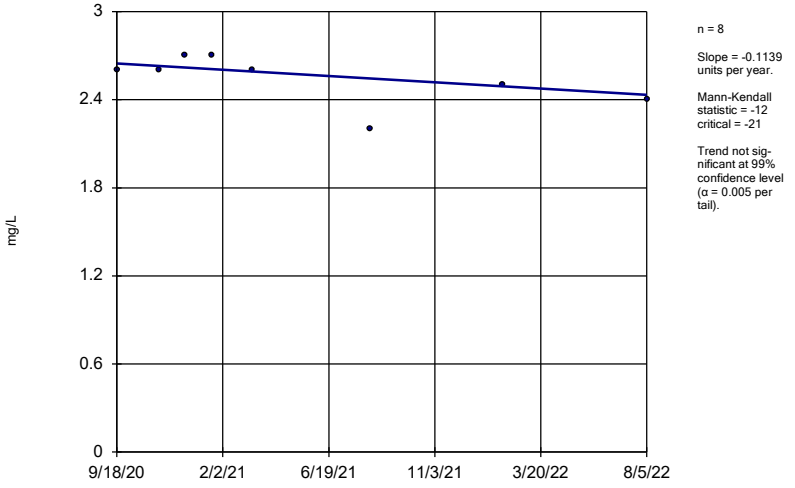
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-48D (bg)



n = 8

Slope = -0.1139 units per year.

Mann-Kendall statistic = -12
critical = -21

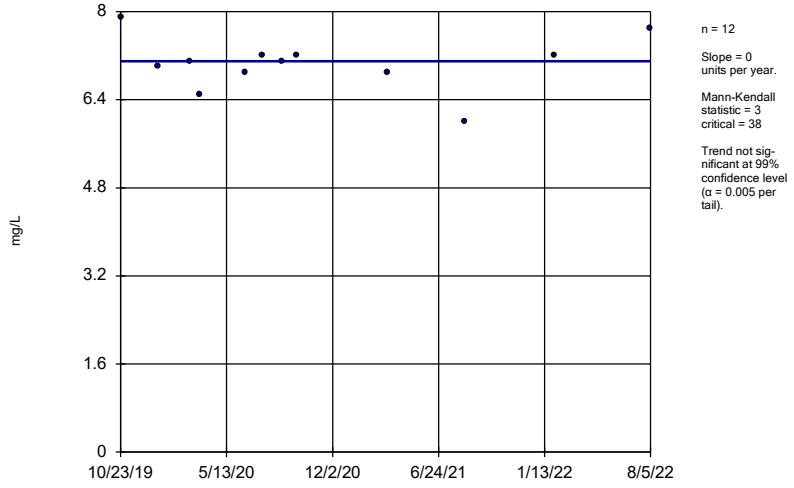
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-102



n = 12

Slope = 0 units per year.

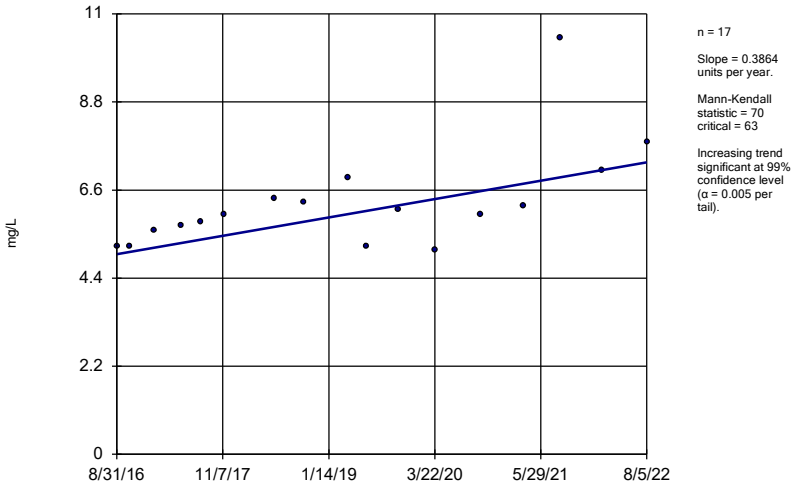
Mann-Kendall statistic = 3
critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-103



n = 17

Slope = 0.3864 units per year.

Mann-Kendall statistic = 70 critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

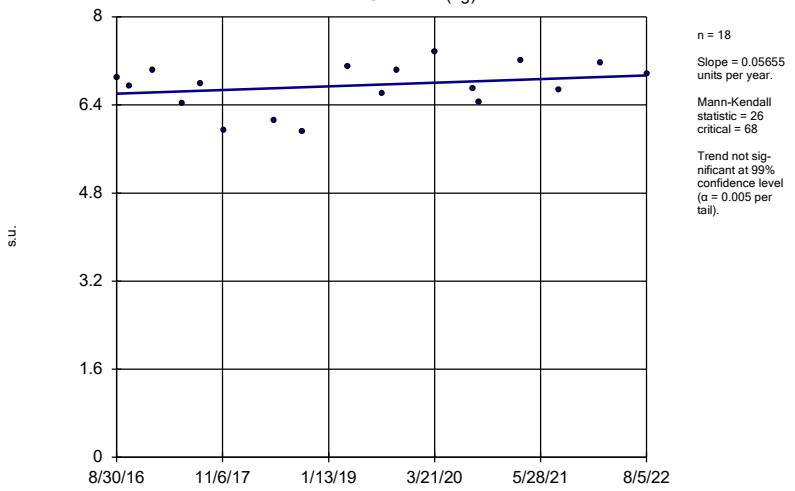
Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-111 (bg)



n = 18

Slope = 0.05655 units per year.

Mann-Kendall statistic = 26 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

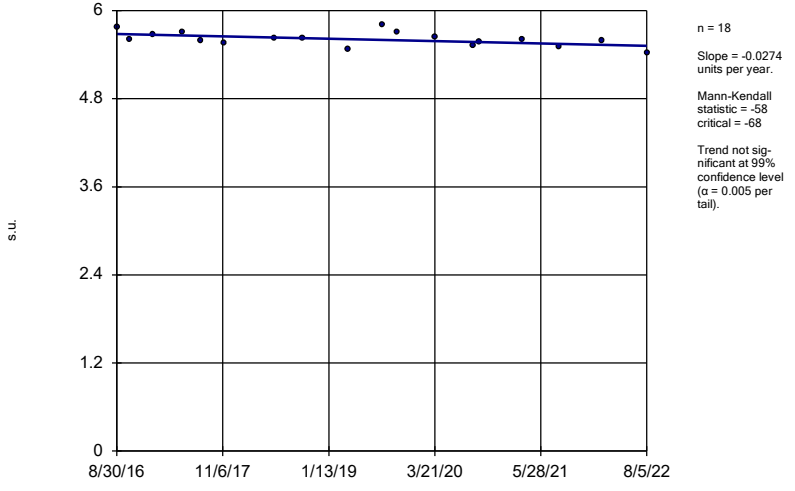
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-112 (bg)



n = 18

Slope = -0.0274 units per year.

Mann-Kendall statistic = -58 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

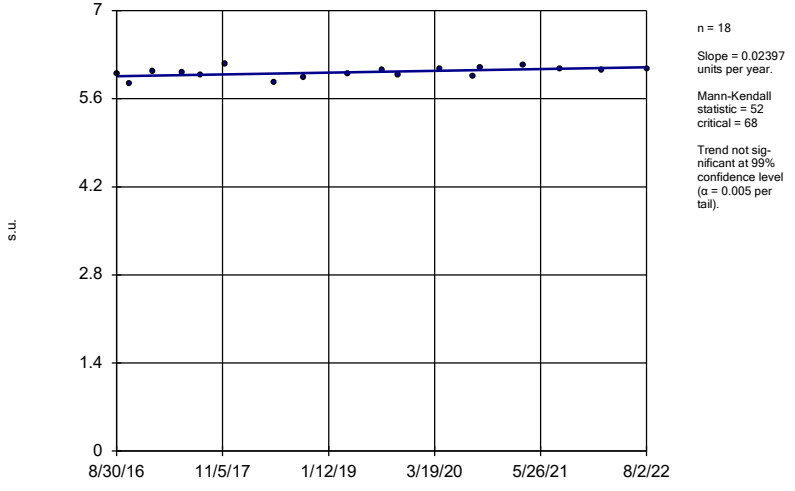
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-113 (bg)



n = 18

Slope = 0.02397 units per year.

Mann-Kendall statistic = 52 critical = 68

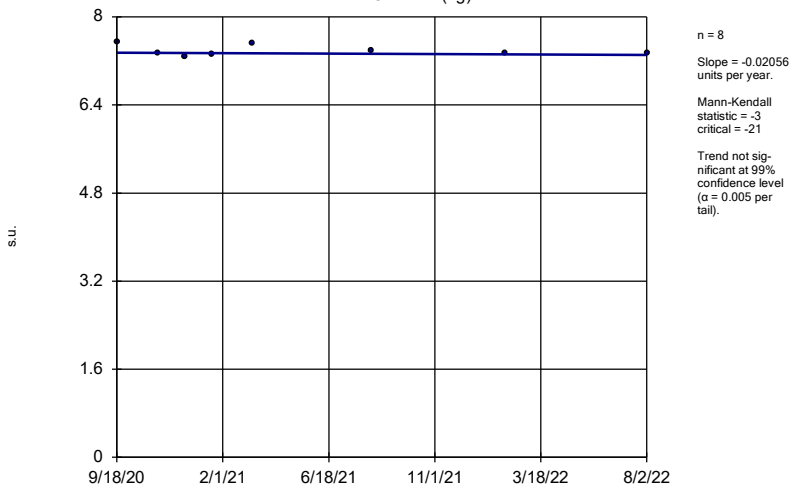
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)



n = 8

Slope = -0.02056 units per year.

Mann-Kendall statistic = -3 critical = -21

Trend not significant at 99% confidence level (α = 0.005 per tail).

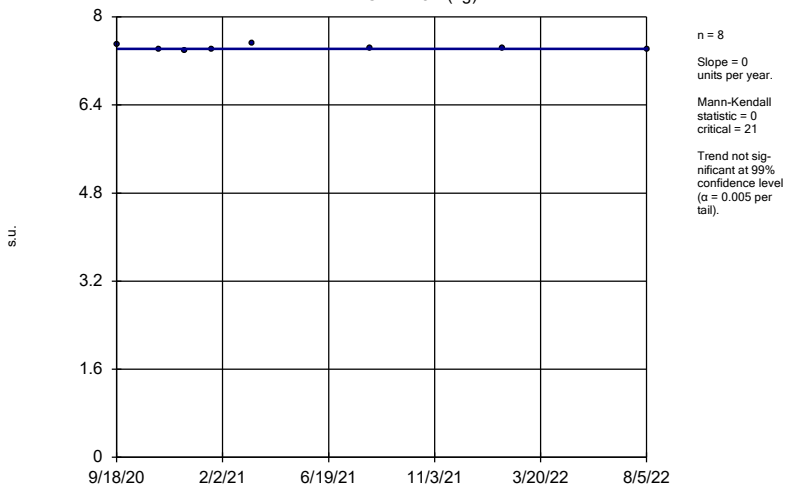
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-48D (bg)



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 21

Trend not significant at 99% confidence level (α = 0.005 per tail).

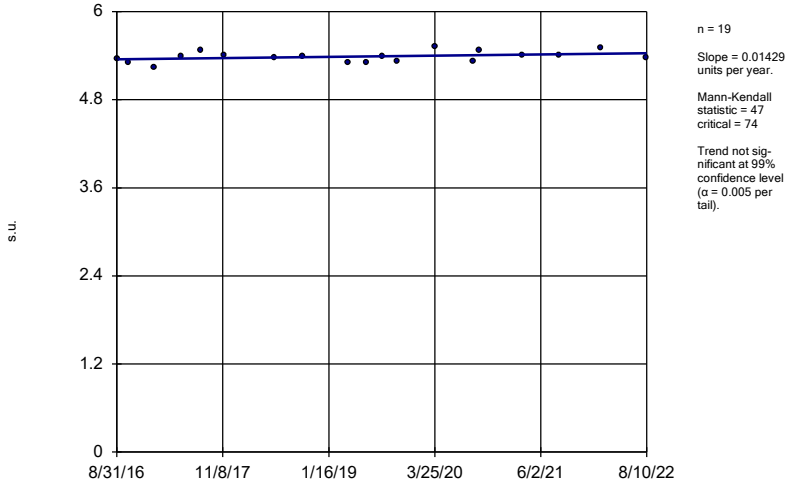
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-101



n = 19

Slope = 0.01429 units per year.

Mann-Kendall statistic = 47 critical = 74

Trend not significant at 99% confidence level (α = 0.005 per tail).

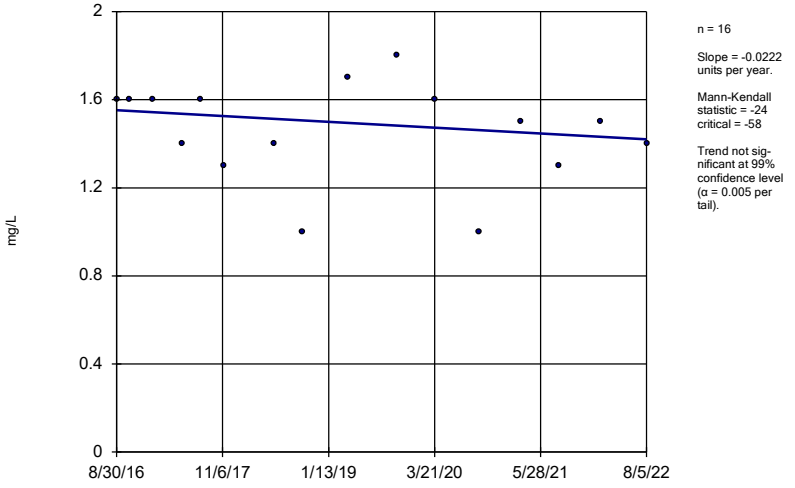
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-111 (bg)



n = 16

Slope = -0.0222 units per year.

Mann-Kendall statistic = -24 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

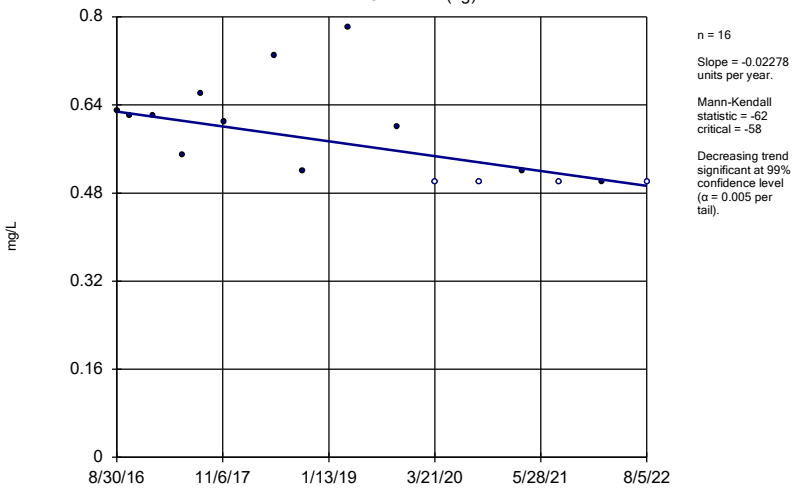
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-112 (bg)



n = 16

Slope = -0.02278 units per year.

Mann-Kendall statistic = -62
critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

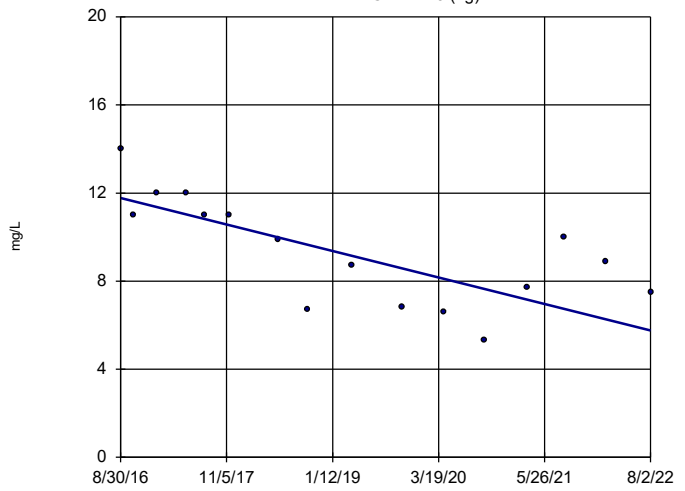
Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-113 (bg)



n = 16

Slope = -1.014 units per year.

Mann-Kendall statistic = -66
critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

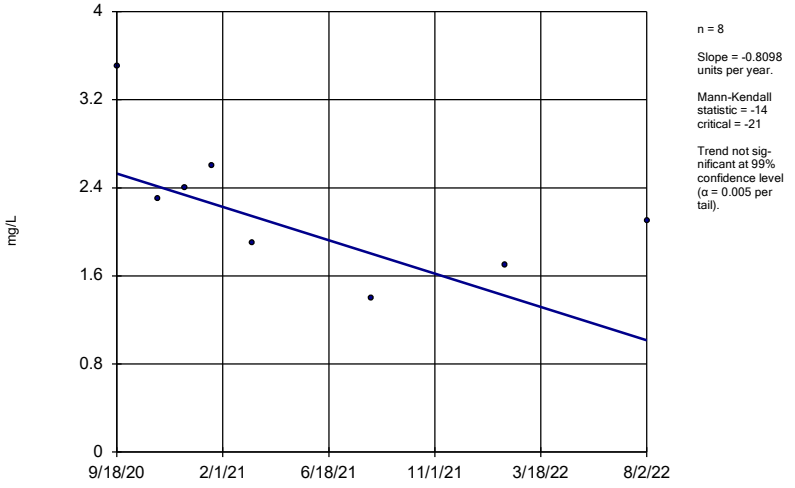
Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-47 (bg)



n = 8

Slope = -0.8098 units per year.

Mann-Kendall statistic = -14
critical = -21

Trend not significant at 99% confidence level (α = 0.005 per tail).

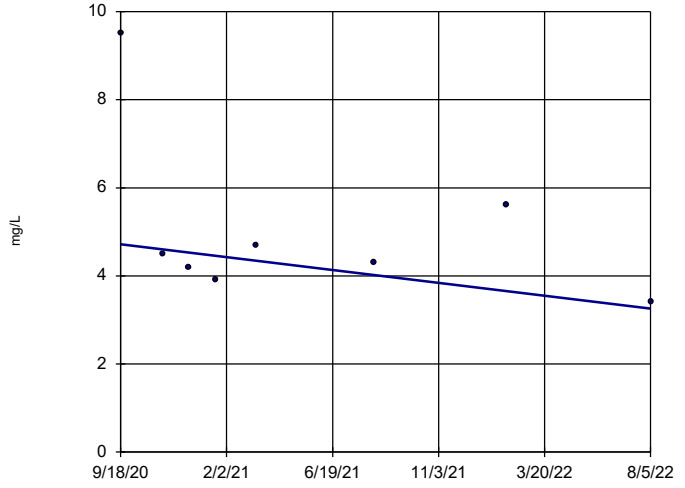
Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-48D (bg)



n = 8

Slope = -0.7764 units per year.

Mann-Kendall statistic = -8
critical = -21

Trend not significant at 99% confidence level (α = 0.005 per tail).

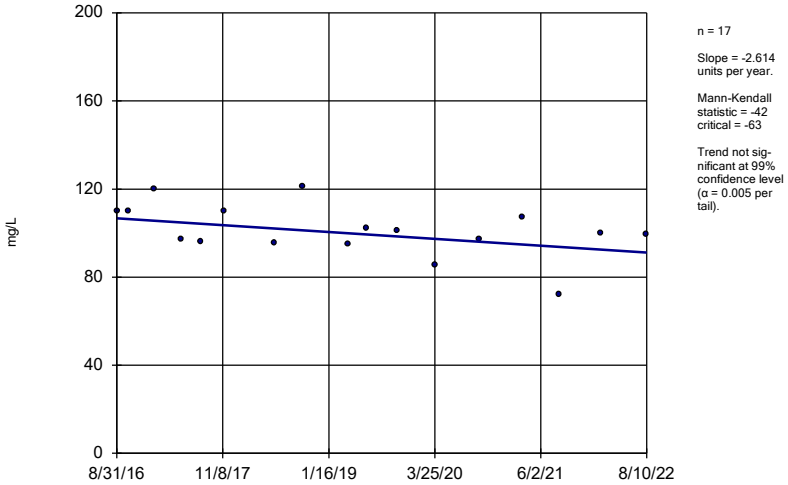
Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-101



n = 17

Slope = -2.614 units per year.

Mann-Kendall statistic = -42
critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

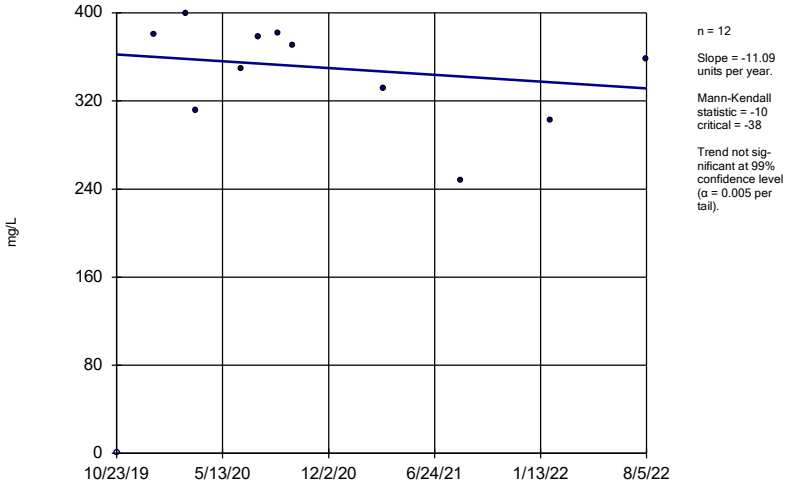
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWC-102



n = 12

Slope = -11.09 units per year.

Mann-Kendall statistic = -10
critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

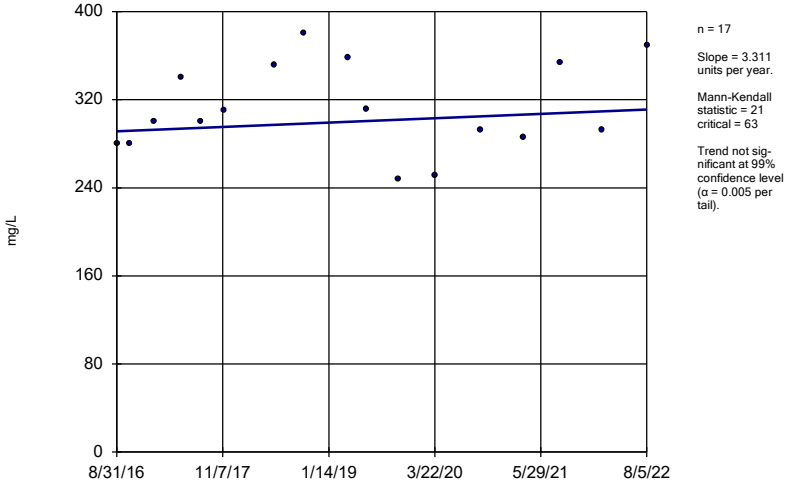
Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-103



n = 17

Slope = 3.311 units per year.

Mann-Kendall statistic = 21
critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

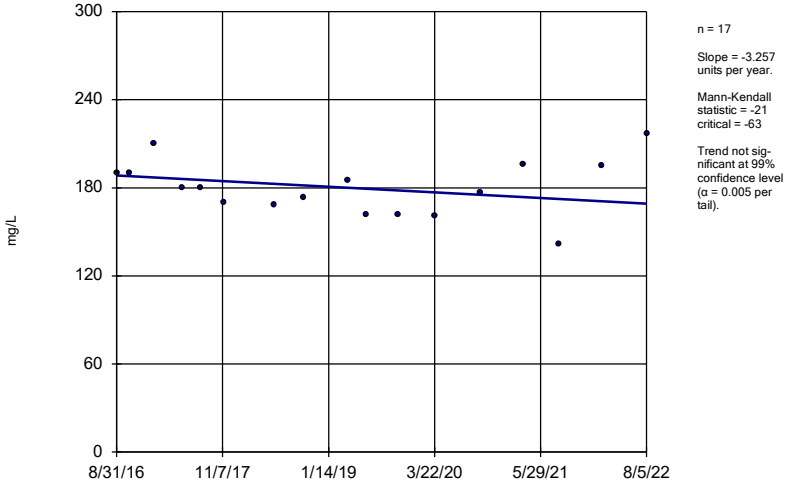
Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-105



n = 17

Slope = -3.257 units per year.

Mann-Kendall statistic = -21
critical = -63

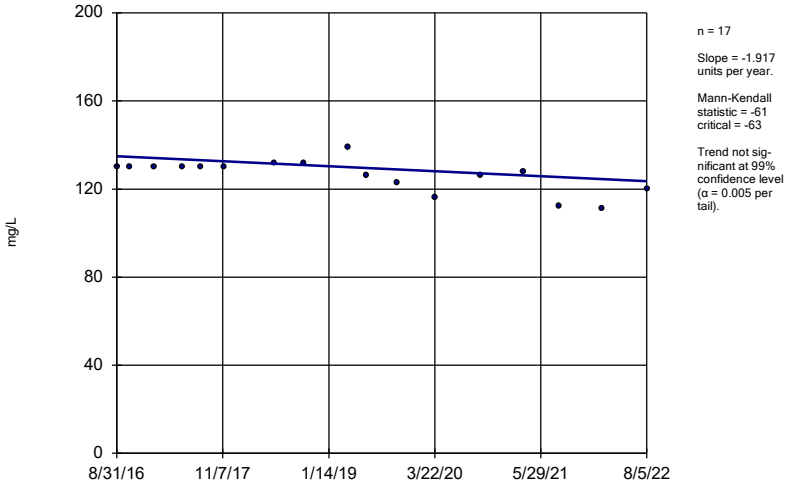
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-107



n = 17

Slope = -1.917 units per year.

Mann-Kendall statistic = -61
critical = -63

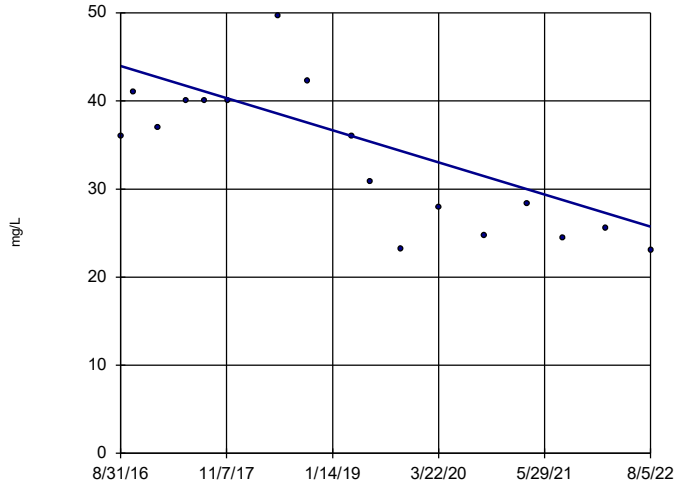
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-109



n = 17

Slope = -3.076 units per year.

Mann-Kendall statistic = -74
critical = -63

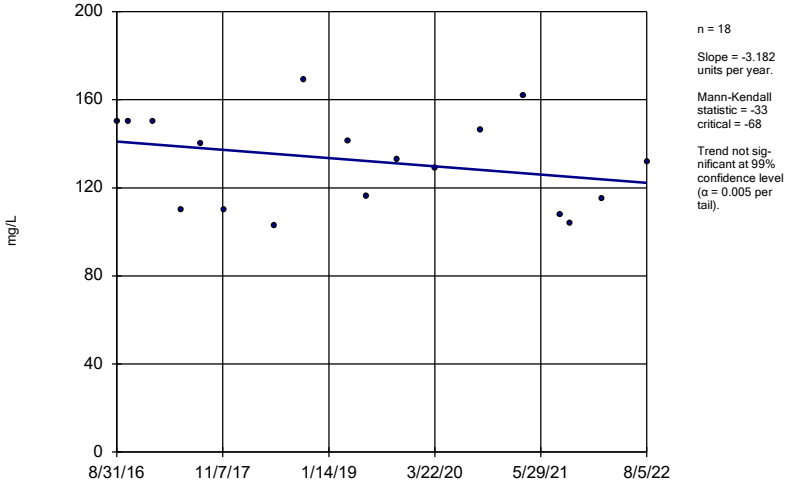
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-117



n = 18

Slope = -3.182 units per year.

Mann-Kendall statistic = -33
critical = -68

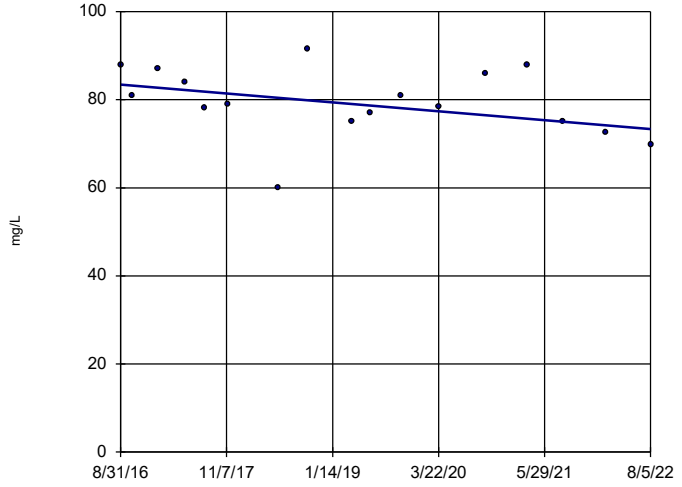
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-118



n = 17

Slope = -1.699 units per year.

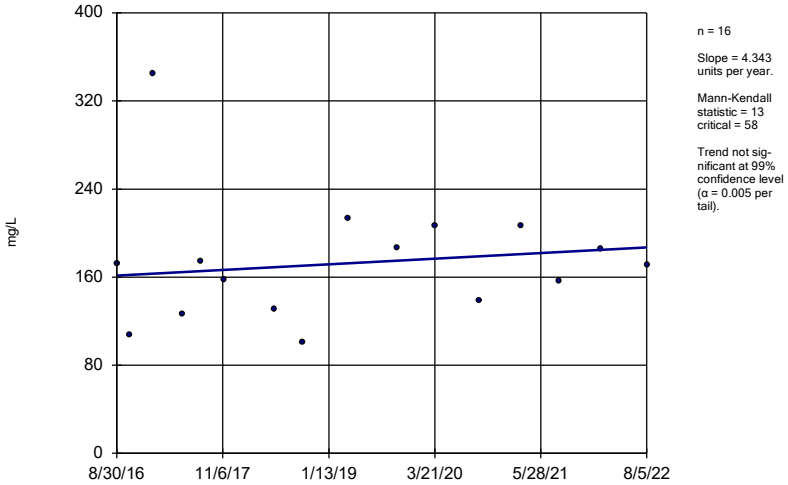
Mann-Kendall statistic = -45
critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-111 (bg)



n = 16

Slope = 4.343 units per year.

Mann-Kendall statistic = 13 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

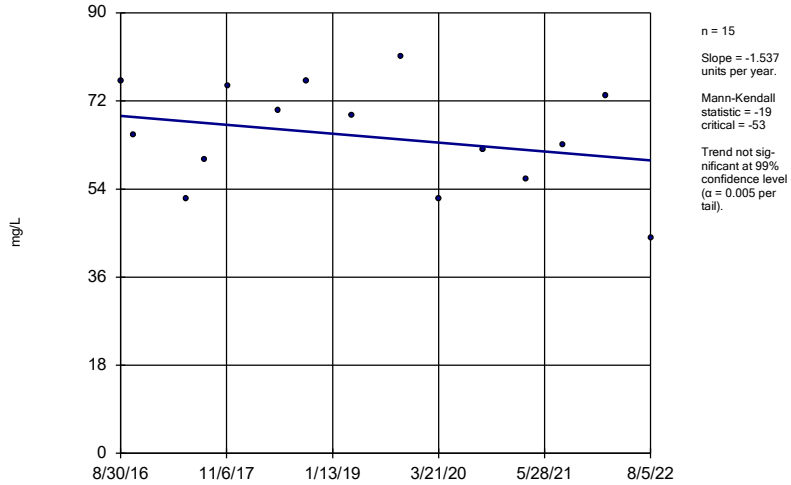
Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-112 (bg)



n = 15

Slope = -1.537 units per year.

Mann-Kendall statistic = -19 critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

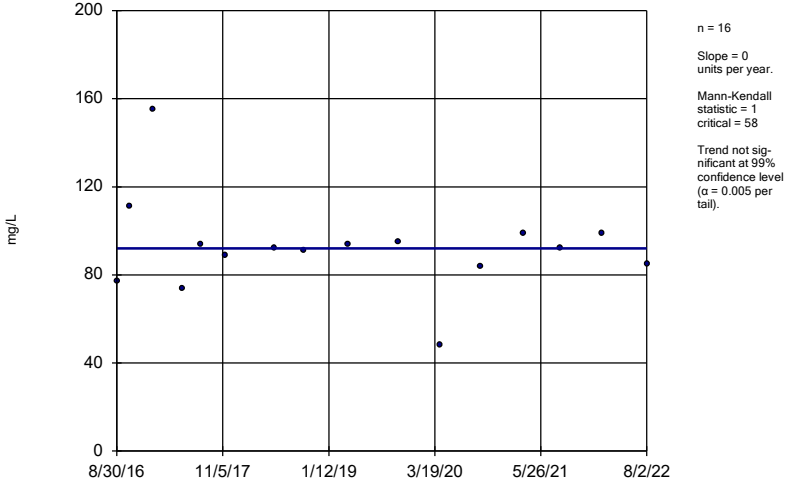
Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-113 (bg)



n = 16

Slope = 0 units per year.

Mann-Kendall statistic = 1 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

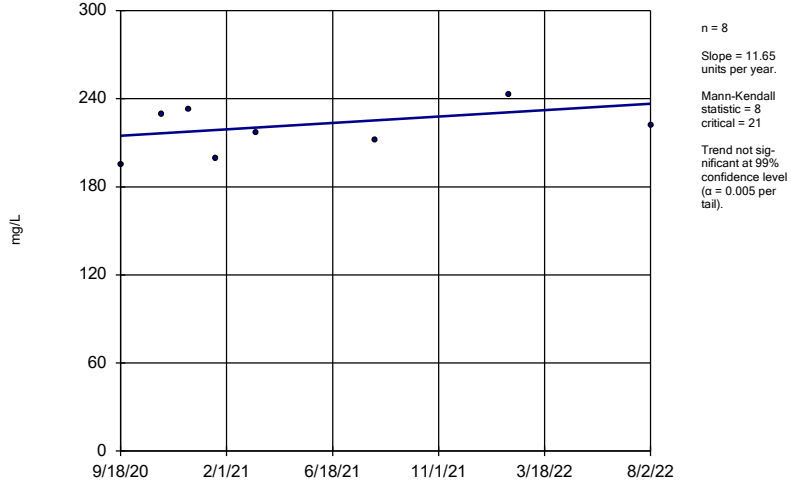
Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWA-47 (bg)



n = 8

Slope = 11.65 units per year.

Mann-Kendall statistic = 8 critical = 21

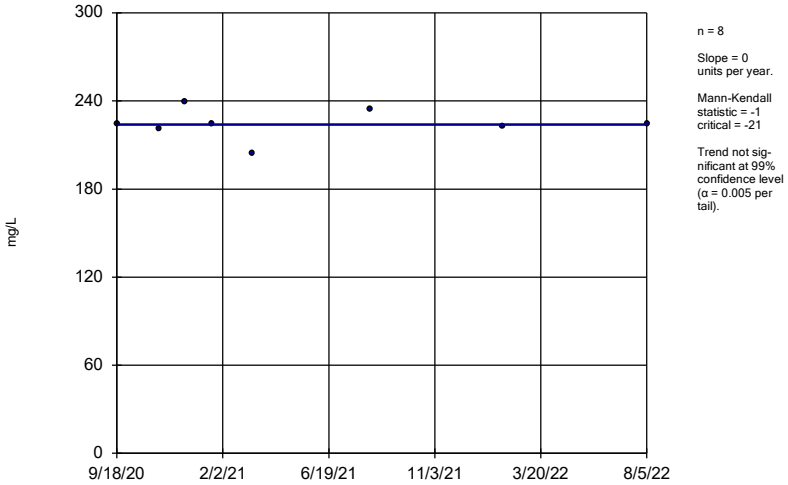
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1 critical = -21

Trend not significant at 99% confidence level (α = 0.005 per tail).

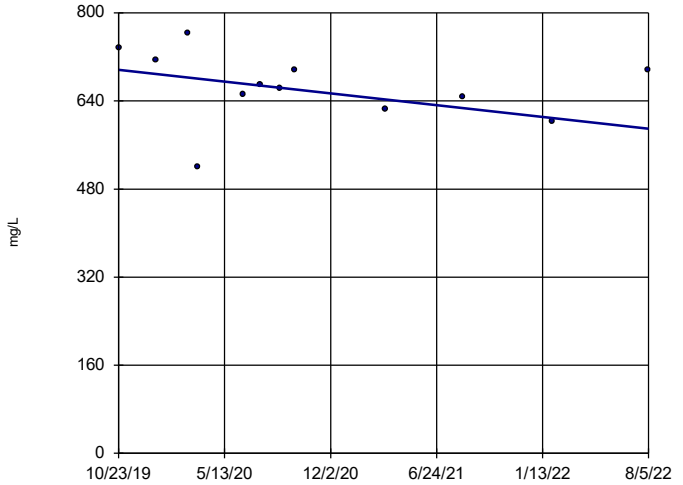
Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-102



n = 12

Slope = -38.24 units per year.

Mann-Kendall statistic = -21 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

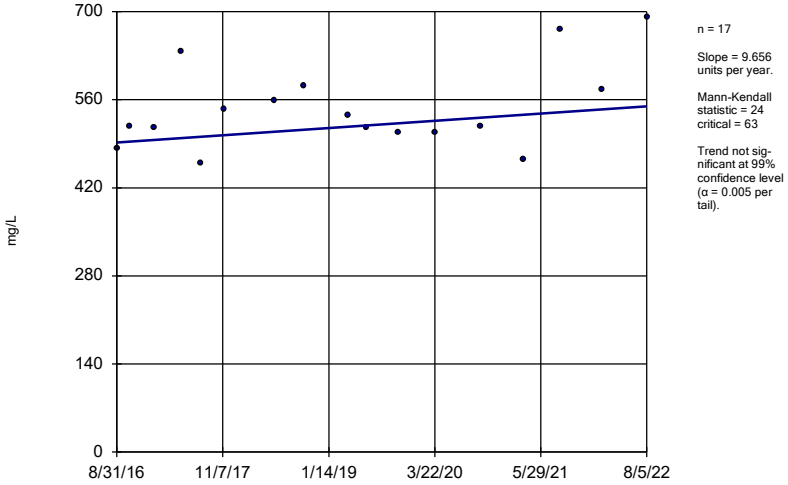
Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-103



n = 17

Slope = 9.656 units per year.

Mann-Kendall statistic = 24 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

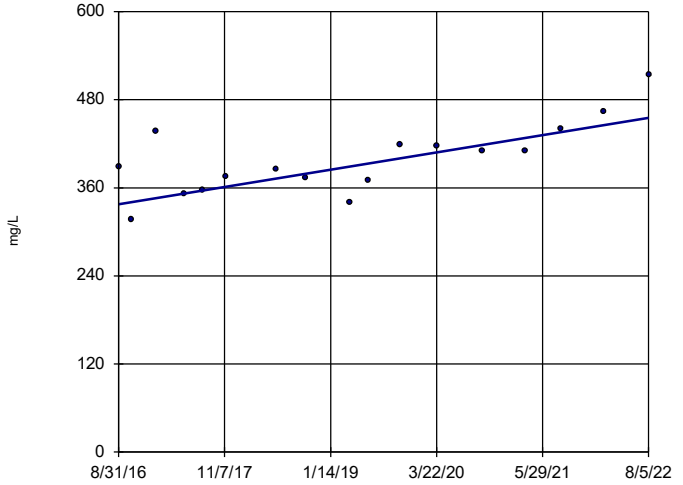
Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Sen's Slope Estimator

HGWC-105



n = 17

Slope = 19.84 units per year.

Mann-Kendall statistic = 66 critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	53	n/a	n/a	92.45	n/a	n/a	0.06597	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	92.54	n/a	n/a	0.03217	NP Inter(NDs)
Barium (mg/L)	n/a	0.11	n/a	n/a	n/a	67	n/a	n/a	0	n/a	n/a	0.03217	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0019	n/a	n/a	n/a	67	n/a	n/a	89.55	n/a	n/a	0.03217	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	67	n/a	n/a	100	n/a	n/a	0.03217	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0061	n/a	n/a	n/a	67	n/a	n/a	35.82	n/a	n/a	0.03217	NP Inter(normality)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	88.06	n/a	n/a	0.03217	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	n/a	1.303	n/a	n/a	n/a	67	0.606	0.3494	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.1743	n/a	n/a	n/a	70	0.2617	0.07844	24.29	Kaplan-Meier	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.0016	n/a	n/a	n/a	67	n/a	n/a	68.66	n/a	n/a	0.03217	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	67	n/a	n/a	38.81	n/a	n/a	0.03217	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	53	n/a	n/a	77.36	n/a	n/a	0.06597	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	53	n/a	n/a	84.91	n/a	n/a	0.06597	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	53	n/a	n/a	79.25	n/a	n/a	0.06597	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	53	n/a	n/a	100	n/a	n/a	0.06597	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-4 GWPS				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background 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		0.11	2
Beryllium, Total (mg/L)	0.004		0.0019	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0061	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.005	0.006
Combined Radium, Total (pCi/L)	5		1.3	5
Fluoride, Total (mg/L)	4		0.17	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-117**	**0.01281**	**0.006091**	**0.006**	**Yes**	**18**	**0**	**sqrt(x)**	**0.01**	**Param.**

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.003	0.006	No	11	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-117	0.003	0.0012	0.006	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	17	94.12	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	12	66.67	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-109	0.002838	0.001558	0.01	No	17	5.882	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	18	94.44	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	17	94.12	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04568	0.03977	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03307	0.0271	2	No	12	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04044	0.03555	2	No	17	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.075	0.066	2	No	17	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03917	0.0363	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08767	0.08086	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.04931	0.04073	2	No	18	0	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.0907	0.0318	2	No	4	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.0618	0.05074	2	No	17	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	17	47.06	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	17	76.47	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.0005	0.000068	0.004	No	18	55.56	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	17	94.12	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.00011	0.005	No	17	17.65	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006894	0.0003139	0.005	No	12	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007959	0.0006841	0.005	No	17	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.0001	0.005	No	17	58.82	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0009479	0.0006476	0.005	No	18	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	4	75	No	0.0625	NP (normality)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	12	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00081	0.1	No	17	58.82	No	0.01	NP (normality)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	17	94.12	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	17	88.24	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.0012	0.1	No	18	77.78	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0017	0.1	No	17	70.59	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-101	0.002794	0.002112	0.006	No	17	5.882	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002006	0.001008	0.006	No	12	0	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.0023	0.001829	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00047	0.006	No	17	35.29	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002092	0.001246	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	**HGWC-117**	**0.01281**	**0.006091**	**0.006**	**Yes**	**18**	**0**	**sqrt(x)**	**0.01**	**Param.**
Cobalt (mg/L)	HGWC-117A	0.00314	-0.0006348	0.006	No	4	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.0025	0.00045	0.006	No	17	47.06	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8728	0.4168	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.227	0.5519	5	No	11	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8936	0.4295	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8923	0.4959	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.08	0.5012	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8037	0.49	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.99	0.198	5	No	18	0	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	1.489	-0.6524	5	No	4	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.094	0.4393	5	No	16	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.065	4	No	18	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.22	0.076	4	No	12	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.071	4	No	18	72.22	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-105	0.13	0.074	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-107	0.16	0.064	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-109	0.1205	0.0777	4	No	18	11.11	No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.09	4	No	19	57.89	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-117A	0.1349	0.009082	4	No	4	50	No	0.01	Param.
Fluoride (mg/L)	HGWC-118	0.18	0.072	4	No	19	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	17	94.12	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	12	91.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	17	70.59	No	0.01	NP (normality)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	17	88.24	No	0.01	NP (NDs)

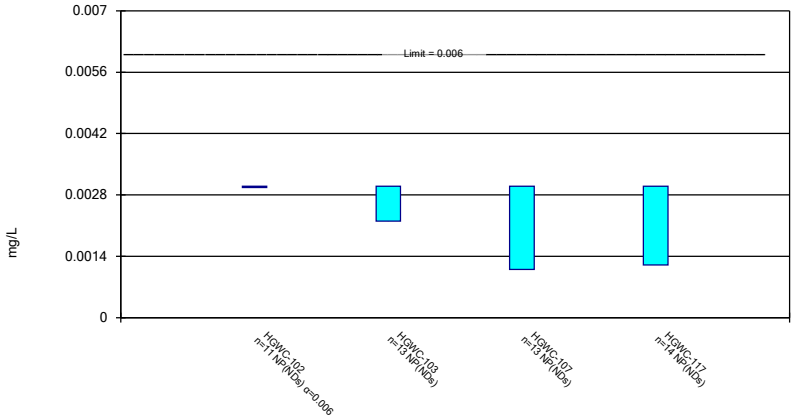
Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lead (mg/L)	HGWC-117	0.001	0.00025	0.015	No	18	72.22	No	0.01	NP (normality)
Lead (mg/L)	HGWC-118	0.001	0.00036	0.015	No	17	70.59	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-102	0.0013	0.00084	0.04	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	17	17.65	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.0042	0.003847	0.04	No	17	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117	0.0035	0.0017	0.04	No	18	16.67	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117A	0.005858	0.002668	0.04	No	4	0	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.04	No	17	35.29	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0002	0.002	No	11	90.91	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00027	0.00017	0.002	No	13	76.92	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117	0.0003	0.00015	0.002	No	14	71.43	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	4	75	No	0.0625	NP (normality)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	13	84.62	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.005	0.05	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.001	0.002	No	11	90.91	No	0.006	NP (NDs)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

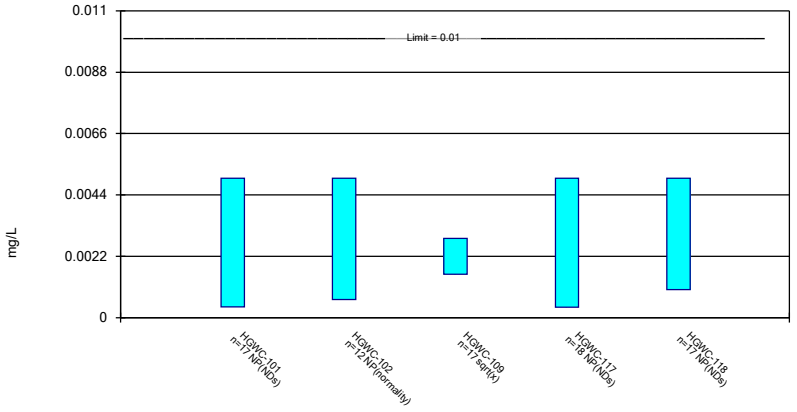


Constituent: Antimony Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

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.

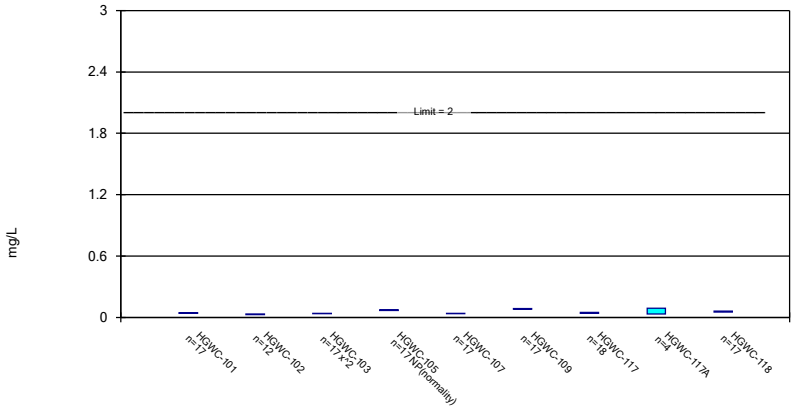


Constituent: Arsenic Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

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.

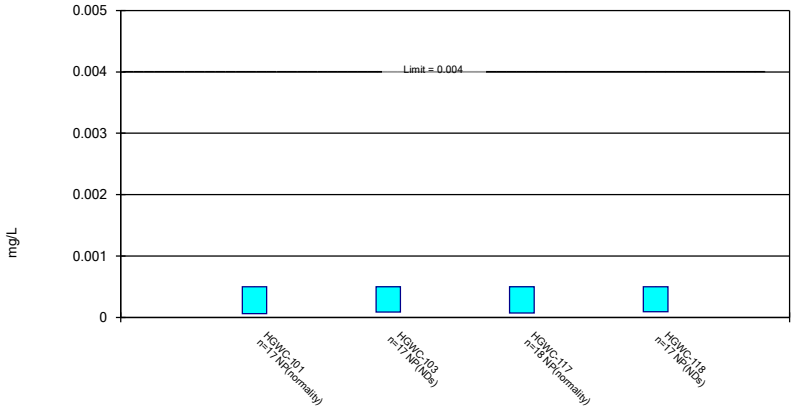


Constituent: Barium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Non-Parametric Confidence Interval

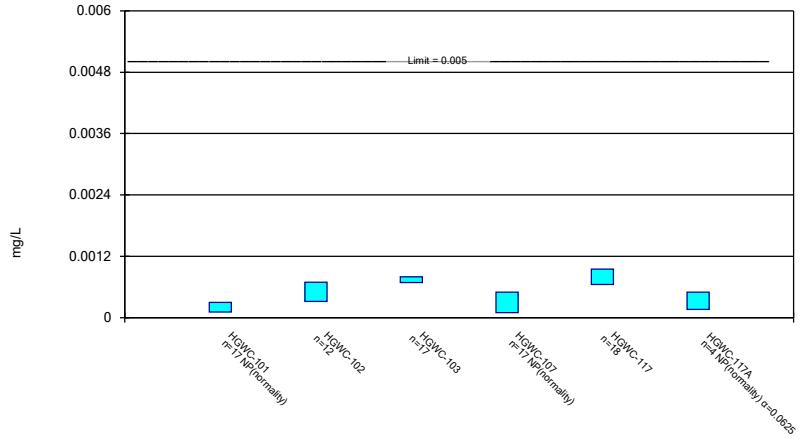
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

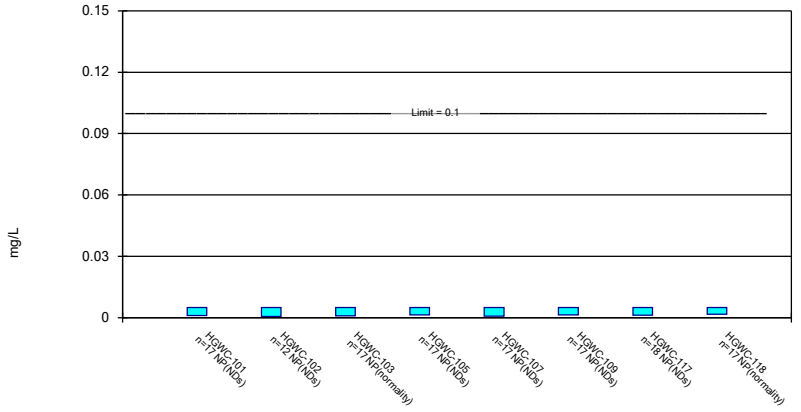
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

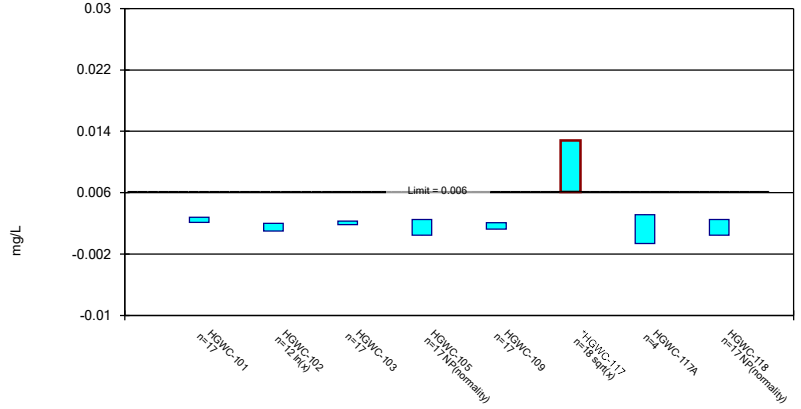
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

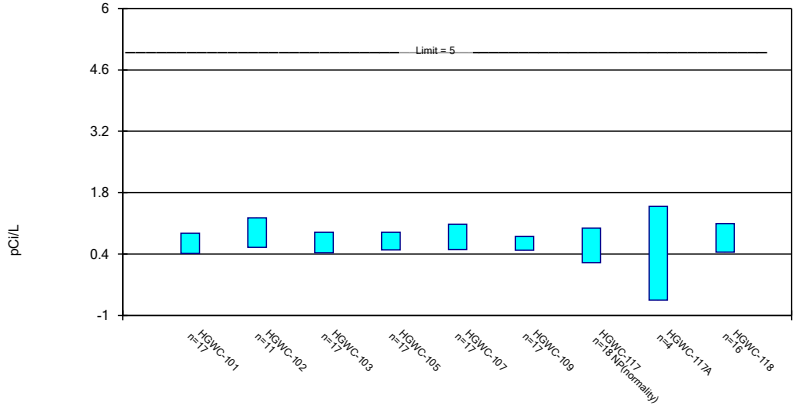
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

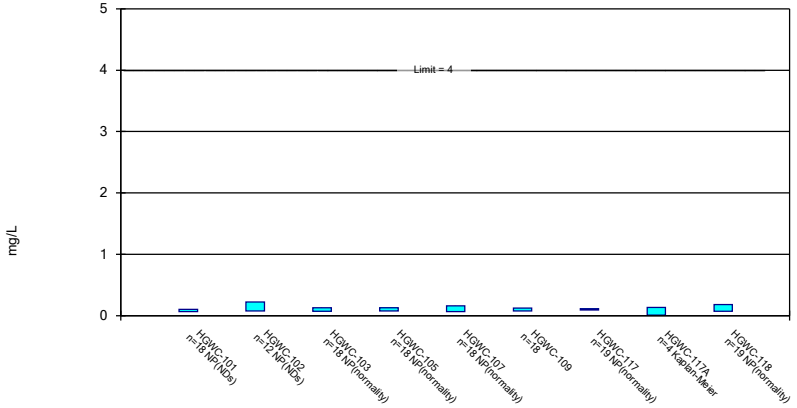
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

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.



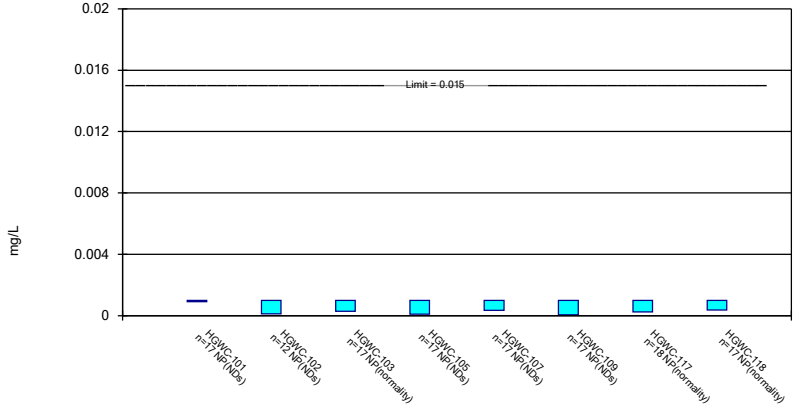
Constituent: Fluoride Analysis Run 10/11/2022 1:21 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

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.



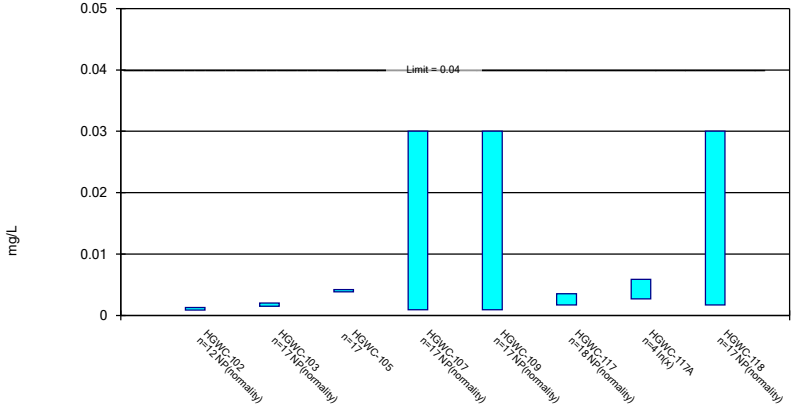
Constituent: Lead Analysis Run 10/11/2022 1:21 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

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.



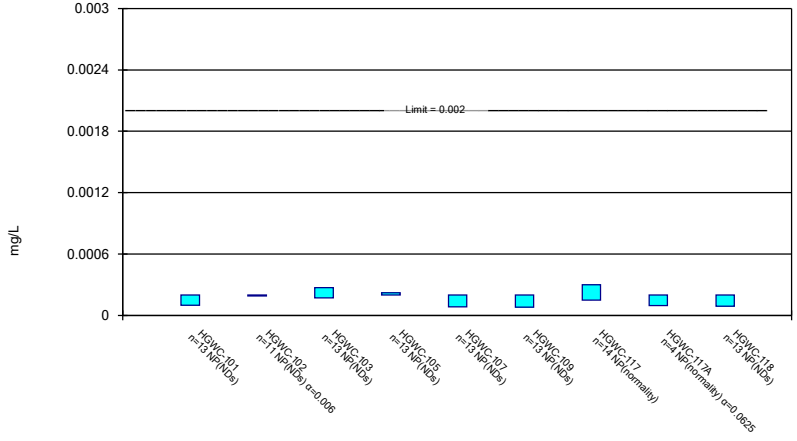
Constituent: Lithium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

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.

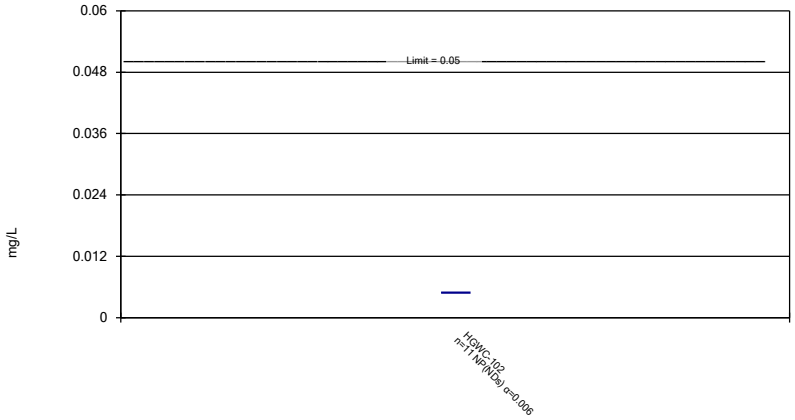


Constituent: Mercury Analysis Run 10/11/2022 1:21 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



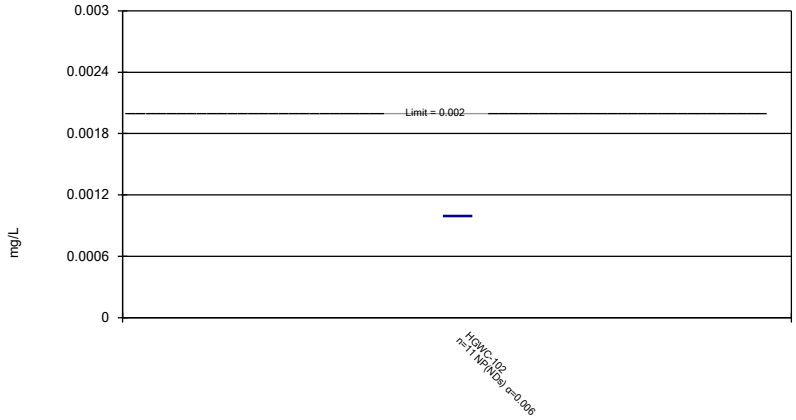
Constituent: Selenium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

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

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-107	HGWC-117
8/31/2016		<0.003	<0.003	<0.003
10/20/2016				<0.003
10/24/2016		<0.003		
10/25/2016			<0.003	
1/27/2017				<0.003
1/31/2017		<0.003	<0.003	
5/23/2017		<0.003		<0.003
5/24/2017			<0.003	
8/10/2017		<0.003	<0.003	<0.003
11/14/2017		<0.003	<0.003	<0.003
6/6/2018		0.0022 (J)	<0.003	
6/7/2018				<0.003
10/2/2018			0.0011 (J)	
10/3/2018		<0.003		<0.003
8/22/2019		<0.003		<0.003
8/23/2019			<0.003	
10/23/2019	<0.003			
1/3/2020	0.00076 (J)			
3/4/2020	<0.003			
3/24/2020	<0.003			
6/18/2020	<0.003			
7/21/2020	<0.003			
8/27/2020	<0.003	<0.003	<0.003	<0.003
9/24/2020	<0.003			
8/13/2021	<0.003		<0.003	
8/16/2021		<0.003		
8/19/2021				<0.003
9/27/2021				<0.003
2/2/2022	<0.003	<0.003	<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003	0.0012 (J)
Mean	0.002796	0.002938	0.002854	0.002871
Std. Dev.	0.0006754	0.0002219	0.000527	0.0004811
Upper Lim.	0.003	0.003	0.003	0.003
Lower Lim.	0.003	0.0022	0.0011	0.0012

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005		0.0045 (J)	<0.005	<0.005
10/20/2016	<0.005			<0.005	<0.005
10/25/2016			0.003 (J)		
1/27/2017				<0.005	
1/31/2017	<0.005		0.0022 (J)		<0.005
5/23/2017	<0.005			<0.005	<0.005
5/24/2017			0.0012 (J)		
8/10/2017	<0.005		0.0016 (J)	<0.005	<0.005
11/14/2017	<0.005		0.0011 (J)	<0.005	<0.005
6/6/2018	<0.005		0.0018 (J)		
6/7/2018				<0.005	<0.005
10/2/2018			0.0014 (J)		
10/3/2018	<0.005			<0.005	<0.005
8/22/2019	<0.005			<0.005	<0.005
8/23/2019			0.0035 (J)		
10/22/2019			0.0019 (J)	<0.005	<0.005
10/23/2019	<0.005	<0.005			
1/3/2020		0.00065 (J)			
3/4/2020		0.00036 (J)			
3/24/2020		<0.005		0.00037 (J)	
3/25/2020	0.00039 (J)		0.0025 (J)		<0.005
6/18/2020		0.00092 (J)			
7/21/2020		0.00083 (J)			
8/26/2020					<0.005
8/27/2020	<0.005	<0.005	0.0011 (J)	<0.005	
9/24/2020	<0.005	<0.005			
9/25/2020			0.0017 (J)	<0.005	
9/28/2020					<0.005
3/17/2021	<0.005	<0.005	0.0019 (J)		
3/18/2021					0.001 (J)
3/19/2021				<0.005	
8/13/2021		<0.005	0.0019 (J)		<0.005
8/16/2021	<0.005				
8/19/2021				<0.005	
9/27/2021				<0.005	
2/2/2022	<0.005	<0.005	<0.005	<0.005	
2/3/2022					<0.005
8/5/2022		<0.005	0.0022 (J)	<0.005	<0.005
8/10/2022	<0.005				
Mean	0.004729	0.003563	0.002265	0.004743	0.004765
Std. Dev.	0.001118	0.002126	0.001134	0.001091	0.0009701
Upper Lim.	0.005	0.005	0.002838	0.005	0.005
Lower Lim.	0.00039	0.00065	0.001558	0.00037	0.001

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0527		0.045	0.067	0.0391	0.0883	0.0547		0.0595
10/20/2016	0.0477						0.0529		0.055
10/24/2016			0.0386						
10/25/2016				0.0745	0.041	0.0831			
1/27/2017							0.049		
1/31/2017	0.0527		0.0365	0.0674	0.0382	0.0844			0.0613
5/23/2017	0.0436		0.0254				0.0352		0.068
5/24/2017				0.0668	0.0377	0.0784			
8/10/2017	0.0419		0.0396	0.067	0.0385	0.0903	0.0457		0.0638
11/14/2017	0.0407		0.0385	0.0643	0.039	0.083	0.0368		0.07
6/6/2018	0.043		0.043	0.068	0.039	0.095			
6/7/2018							0.036		0.059
10/2/2018				0.066	0.038	0.089			
10/3/2018	0.041		0.04				0.047		0.056
8/22/2019	0.043		0.036	0.066			0.036		0.052
8/23/2019					0.038	0.088			
10/22/2019					0.039	0.087	0.049		0.054
10/23/2019	0.043	0.037	0.039	0.066					
1/3/2020		0.036							
3/4/2020		0.033							
3/24/2020		0.024					0.051		
3/25/2020	0.038		0.036	0.074	0.037	0.084			0.06
6/18/2020		0.029							
7/21/2020		0.028							
8/26/2020									0.056
8/27/2020	0.045	0.028	0.038	0.068	0.034	0.083	0.047		
9/24/2020	0.041	0.029	0.036	0.075	0.039				
9/25/2020						0.085	0.05		
9/28/2020									0.046
3/17/2021	0.04	0.031				0.077			
3/18/2021			0.042	0.082	0.041				0.067
3/19/2021							0.058		
8/12/2021								0.079	
8/13/2021		0.026		0.073	0.033	0.08			0.043
8/16/2021	0.037		0.037						
8/19/2021							0.041		
9/27/2021							0.038	0.062	
2/2/2022	0.036	0.029	0.036		0.034	0.072	0.039		
2/3/2022				0.093				0.049	0.047
8/5/2022		0.031	0.037	0.088	0.036	0.085	0.044	0.055	0.039
8/10/2022	0.04								
Mean	0.04272	0.03008	0.03786	0.07212	0.03774	0.08426	0.04502	0.06125	0.05627
Std. Dev.	0.004716	0.003801	0.00416	0.008346	0.002297	0.005439	0.007089	0.01297	0.008824
Upper Lim.	0.04568	0.03307	0.04044	0.075	0.03917	0.08767	0.04931	0.0907	0.0618
Lower Lim.	0.03977	0.0271	0.03555	0.066	0.0363	0.08086	0.04073	0.0318	0.05074

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-103	HGWC-117	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005
10/20/2016	<0.0005		<0.0005	<0.0005
10/24/2016		<0.0005		
1/27/2017			<0.0005	
1/31/2017	<0.0005	<0.0005		<0.0005
5/23/2017	7E-05 (J)	<0.0005	<0.0005	<0.0005
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2018	5.9E-05 (J)	<0.0005		
6/7/2018			6.8E-05 (J)	<0.0005
10/3/2018	6.5E-05 (J)	<0.0005	<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005	7.9E-05 (J)	<0.0005
10/22/2019			<0.0005	<0.0005
10/23/2019	7.5E-05 (J)	<0.0005		
3/24/2020			<0.0005	
3/25/2020	<0.0005	<0.0005		<0.0005
8/26/2020				<0.0005
8/27/2020	5.7E-05 (J)	5E-05 (J)	4.9E-05 (J)	
9/24/2020	4.8E-05 (J)	8.8E-05 (J)		
9/25/2020			6.6E-05 (J)	
9/28/2020				<0.0005
3/17/2021	5.9E-05 (J)			
3/18/2021		6.1E-05 (J)		9.3E-05 (J)
3/19/2021			8.1E-05 (J)	
8/13/2021				<0.0005
8/16/2021	<0.0005	<0.0005		
8/19/2021			5.6E-05 (J)	
9/27/2021			<0.0005	
2/2/2022	6.2E-05 (J)	7.7E-05 (J)	8.3E-05 (J)	
2/3/2022				<0.0005
8/5/2022		<0.0005	7.8E-05 (J)	<0.0005
8/10/2022	6.4E-05 (J)			
Mean	0.0002682	0.0003986	0.0003089	0.0004761
Std. Dev.	0.0002254	0.0001886	0.00022	9.871E-05
Upper Lim.	0.0005	0.0005	0.0005	0.0005
Lower Lim.	5.9E-05	8.8E-05	6.8E-05	9.3E-05

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-107	HGWC-117	HGWC-117A
8/31/2016	0.0002 (J)		0.0006 (J)	0.0001 (J)	0.0008 (J)	
10/20/2016	0.0003 (J)				0.0008 (J)	
10/24/2016			0.0008 (J)			
10/25/2016				8E-05 (J)		
1/27/2017					0.0007 (J)	
1/31/2017	0.0001 (J)		0.0006 (J)	9E-05 (J)		
5/23/2017	0.0002 (J)		0.0006 (J)		0.0005 (J)	
5/24/2017				0.0001 (J)		
8/10/2017	0.0002 (J)		0.0007 (J)	<0.0005	0.0004 (J)	
11/14/2017	<0.0005		0.0007 (J)	<0.0005	0.0005 (J)	
6/6/2018	9.5E-05 (J)		0.00073 (J)	0.00012 (J)		
6/7/2018					0.00049 (J)	
10/2/2018				0.0001 (J)		
10/3/2018	0.00018 (J)		0.00078 (J)		0.00079 (J)	
8/22/2019	0.00014 (J)		0.0008 (J)		0.00064 (J)	
8/23/2019				0.00011 (J)		
10/22/2019				<0.0005	0.00068 (J)	
10/23/2019	0.0002 (J)	0.00026 (J)	0.00091 (J)			
1/3/2020		0.0002 (J)				
3/4/2020		0.00026 (J)				
3/24/2020		0.00068 (J)			0.00079 (J)	
3/25/2020	0.00014 (J)		0.00068 (J)	<0.0005		
6/18/2020		0.00047 (J)				
7/21/2020		0.00083 (J)				
8/27/2020	0.00019 (J)	0.00038 (J)	0.00082 (J)	<0.0005	0.0008 (J)	
9/24/2020	0.00014 (J)	0.00032 (J)	0.00076 (J)	<0.0005		
9/25/2020					0.00089 (J)	
3/17/2021	<0.0005	0.00094				
3/18/2021			0.00068	<0.0005		
3/19/2021					0.001	
8/12/2021						0.00016 (J)
8/13/2021		0.00069		<0.0005		
8/16/2021	0.00015 (J)		0.00081			
8/19/2021					0.0012	
9/27/2021					0.00098	<0.0005
2/2/2022	<0.0005	0.00055	0.0008	<0.0005	0.0012	
2/3/2022						<0.0005
8/5/2022		0.00044 (J)	0.00081	<0.0005	0.0012	<0.0005
8/10/2022	0.00011 (J)					
Mean	0.0002262	0.0005017	0.00074	0.0003353	0.0007978	0.000415
Std. Dev.	0.0001395	0.0002393	8.916E-05	0.0002031	0.0002481	0.00017
Upper Lim.	0.0003	0.0006894	0.0007959	0.0005	0.0009479	0.0005
Lower Lim.	0.00011	0.0003139	0.0006841	0.0001	0.0006476	0.00016

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016	<0.005						<0.005	<0.005
10/24/2016			<0.005					
10/25/2016				<0.005	<0.005	<0.005		
1/27/2017							<0.005	
1/31/2017	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	0.0006 (J)		<0.005				<0.005	<0.005
5/24/2017				<0.005	<0.005	<0.005		
8/10/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/14/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2018	<0.005		<0.005	<0.005	<0.005	<0.005		
6/7/2018							<0.005	<0.005
10/2/2018				<0.005	<0.005	<0.005		
10/3/2018	<0.005		<0.005				<0.005	<0.005
8/22/2019	0.00064 (J)		0.00063 (J)	<0.005			<0.005	<0.005
8/23/2019					<0.005	<0.005		
10/22/2019					<0.005	0.00062 (J)	<0.005	0.00066 (J)
10/23/2019	<0.005	<0.005	0.0015 (J)	0.0004 (J)				
1/3/2020		0.00063 (J)						
3/4/2020		<0.005						
3/24/2020		0.00051 (J)					0.0012 (J)	
3/25/2020	0.00098 (J)		0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)		0.00081 (J)
6/18/2020		<0.005						
7/21/2020		<0.005						
8/26/2020								0.00098 (J)
8/27/2020	<0.005	<0.005	0.00069 (J)	<0.005	<0.005	<0.005	0.00057 (J)	
9/24/2020	<0.005	<0.005	0.00081 (J)	0.00064 (J)	<0.005			
9/25/2020						<0.005	0.00067 (J)	
9/28/2020								0.0017 (J)
3/17/2021	0.00075 (J)	<0.005				<0.005		
3/18/2021			0.003 (J)	0.00058 (J)	<0.005			0.0021 (J)
3/19/2021							0.001 (J)	
8/13/2021		<0.005		<0.005	<0.005	<0.005		<0.005
8/16/2021	<0.005		<0.005					
8/19/2021							<0.005	
9/27/2021							<0.005	
2/2/2022	<0.005	<0.005	0.0013 (J)		<0.005	<0.005	<0.005	
2/3/2022				<0.005				<0.005
8/5/2022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/10/2022	<0.005							
Mean	0.003998	0.004262	0.003434	0.003995	0.004749	0.004531	0.00408	0.003897
Std. Dev.	0.001863	0.001725	0.002003	0.001875	0.001033	0.001332	0.001775	0.001788
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00098	0.00063	0.00081	0.0013	0.00074	0.0014	0.0012	0.0017

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0033 (J)		0.0018 (J)	0.0014 (J)	0.0023 (J)	0.0035 (J)		<0.005
10/20/2016	0.0025 (J)					0.0045 (J)		<0.005
10/24/2016			0.0018 (J)					
10/25/2016				0.0013 (J)	0.0017 (J)			
1/27/2017						0.0041 (J)		
1/31/2017	0.001 (J)		0.0016 (J)	0.0006 (J)	0.0017 (J)			<0.005
5/23/2017	0.0025 (J)		0.0014 (J)			0.0071 (J)		0.0005 (J)
5/24/2017				0.0007 (J)	0.002 (J)			
8/10/2017	0.0029 (J)		0.0025 (J)	0.0006 (J)	0.0012 (J)	0.0031 (J)		0.0003 (J)
11/14/2017	0.003 (J)		0.002 (J)	0.0005 (J)	0.0014 (J)	0.0062 (J)		0.0004 (J)
6/6/2018	0.0016 (J)		0.0031 (J)	0.00056 (J)	0.0014 (J)			
6/7/2018						0.0083 (J)		<0.005
10/2/2018				<0.005	0.00081 (J)			
10/3/2018	0.0028 (J)		0.0023 (J)			0.005 (J)		<0.005
8/22/2019	<0.005		0.0019 (J)	<0.005		0.012		0.0003 (J)
8/23/2019					0.0027 (J)			
10/22/2019					0.0022 (J)	0.0064		0.00061 (J)
10/23/2019	0.0023 (J)	0.0018 (J)	0.0021 (J)	0.00038 (J)				
1/3/2020		0.0038 (J)						
3/4/2020		0.0021 (J)						
3/24/2020		0.0019 (J)				0.0087		
3/25/2020	0.0021 (J)		0.0022 (J)	0.00047 (J)	0.0022 (J)			<0.005
6/18/2020		0.0012 (J)						
7/21/2020		0.00098 (J)						
8/26/2020								0.00061 (J)
8/27/2020	0.0027 (J)	0.001 (J)	0.0019 (J)	<0.005	0.00086 (J)	0.011		
9/24/2020	0.0021 (J)	0.0011 (J)	0.0019 (J)	0.00044 (J)				
9/25/2020					0.001 (J)	0.011		
9/28/2020								0.00048 (J)
3/17/2021	0.0023 (J)	0.0012 (J)			0.003 (J)			
3/18/2021			0.0021 (J)	0.00045 (J)				0.0012 (J)
3/19/2021						0.011		
8/12/2021							0.0024 (J)	
8/13/2021		0.00085 (J)		<0.005	0.0011 (J)			<0.005
8/16/2021	0.0026 (J)		0.0022 (J)					
8/19/2021						0.017		
9/27/2021						0.015	0.0011 (J)	
2/2/2022	0.0027 (J)	0.0019 (J)	0.0022 (J)		0.002 (J)	0.022		
2/3/2022				<0.005			0.00041 (J)	0.00045 (J)
8/5/2022		0.001 (J)	0.0021 (J)	<0.005	0.0008 (J)	0.023	0.0011 (J)	<0.005
8/10/2022	0.0028 (J)							
Mean	0.002453	0.001569	0.002065	0.001318	0.001669	0.009939	0.001253	0.001462
Std. Dev.	0.0005444	0.0008277	0.0003757	0.0009411	0.0006755	0.006011	0.0008313	0.001027
Upper Lim.	0.002794	0.002006	0.0023	0.0025	0.002092	0.01281	0.00314	0.0025
Lower Lim.	0.002112	0.001008	0.001829	0.00047	0.001246	0.006091	-0.0006348	0.00045

Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.621 (U)		1.62	0.906 (U)	1.2	1.03	1.12		
10/20/2016	1.4						0.803 (U)		1.97
10/24/2016			1.01 (U)						
10/25/2016				1.03	1.11 (U)	1.07			
1/27/2017							1.08 (U)		
1/31/2017	0.906 (U)		0.976 (U)	0.868 (U)	1.45	0.588 (U)			1.03
5/23/2017	0.388 (U)		0.891 (U)				0.624 (U)		0.398 (U)
5/24/2017				0.728 (U)	0.393 (U)	0.593 (U)			
8/10/2017	1.03 (U)		0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.695 (U)		0.938 (U)
11/14/2017	0.769 (U)		0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.99 (U)		0.335 (U)
6/6/2018	1.28 (U)		0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)			
6/7/2018							1.04 (U)		0.696 (U)
10/2/2018				0.336 (U)	1.23	0.225 (U)			
10/3/2018	0.302 (U)		0.111 (U)				0.198 (U)		1.6 (U)
8/22/2019	0.474 (U)		0.946 (U)	0.694 (U)			0.333 (U)		0.904 (U)
8/23/2019					1.69	0.47 (U)			
10/22/2019					0.705 (U)	0.545 (U)	0.827 (U)		0.424 (U)
10/23/2019	0.776 (U)	0.858 (U)	0.571 (U)	0.584 (U)					
1/22/2020		1.04 (U)							
3/4/2020		1.32							
3/24/2020		1.23 (U)					0.815 (U)		
3/25/2020	0.603 (U)		0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)			0.915 (U)
7/21/2020		0.0938 (U)							
8/26/2020									1.19
8/27/2020	0.109 (U)	1.17 (U)	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	0.193 (U)		
9/24/2020	0.625 (U)	1.42	0.804 (U)	1.11 (U)	0.576 (U)				
9/25/2020						0.584 (U)	0.155 (U)		
9/28/2020									0.613 (U)
3/17/2021	0.248 (U)	0.401 (U)				0.556 (U)			
3/18/2021			0.274 (U)	0.252 (U)	0.145 (U)				0.323 (U)
3/19/2021							0.303 (U)		
8/12/2021								0.124 (U)	
8/13/2021		0.828 (U)		0.513 (U)	0.815 (U)	0.794 (U)			0.228 (U)
8/16/2021	0.667 (U)		0.493 (U)						
8/19/2021							0.155 (U)		
9/27/2021							0.905	1.05 (U)	
2/1/2022	0.162 (U)	0.806 (U)	0.569 (U)		0.0564 (U)	0.542 (U)	0.26 (U)		
2/3/2022				0.835				0.499 (U)	0.5 (U)
8/5/2022		0.618 (U)	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0.605 (U)	0 (U)	0.206 (U)
8/10/2022	0.601 (U)								
Mean	0.6448	0.8895	0.6616	0.6941	0.7906	0.6469	0.6167	0.4183	0.7669
Std. Dev.	0.3639	0.4051	0.3704	0.3163	0.4619	0.2503	0.3499	0.4716	0.5035
Upper Lim.	0.8728	1.227	0.8936	0.8923	1.08	0.8037	0.99	1.489	1.094
Lower Lim.	0.4168	0.5519	0.4295	0.4959	0.5012	0.49	0.198	-0.6524	0.4393

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.05 (J)		0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)		0.18 (J)
10/20/2016	0.03 (J)						0.11 (J)		0.12 (J)
10/24/2016			0.13 (J)						
10/25/2016				0.09 (J)	0.16 (J)	0.17 (J)			
1/27/2017							0.28 (J)		
1/31/2017	<0.1		<0.1	0.13 (J)	0.16 (J)	0.05 (J)			0.3
5/23/2017	<0.1		0.15 (J)				0.01 (J)		0.14 (J)
5/24/2017				0.07 (J)	0.009 (J)	0.13 (J)			
8/10/2017	<0.1		<0.1	0.03 (J)	<0.1	0.12 (J)	0.1 (J)		0.11 (J)
11/14/2017	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1		0.07 (J)
6/6/2018	<0.1		<0.1	0.074 (J)	0.057 (J)	0.15 (J)			
6/7/2018							<0.1		0.3
10/2/2018				<0.1	<0.1	<0.1			
10/3/2018	<0.1		<0.1				<0.1		0.12 (J)
4/3/2019					<0.1	0.05 (J)			
4/4/2019	<0.1		0.042 (J)	0.03 (J)					
4/5/2019							0.19 (J)		0.33
6/18/2019									0.89
8/22/2019	<0.1		<0.1	<0.1			<0.1		0.07 (J)
8/23/2019					<0.1	0.034 (J)			
10/22/2019					0.047 (J)	0.099 (J)	0.042 (J)		0.087 (J)
10/23/2019	<0.1	0.22 (J)	<0.1	<0.1					
1/3/2020		<0.1							
3/4/2020		<0.1							
3/24/2020		<0.1					<0.1		
3/25/2020	<0.1		<0.1	<0.1	<0.1	0.075 (J)			0.078 (J)
6/18/2020		<0.1							
7/21/2020		<0.1							
8/26/2020									0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	<0.1	<0.1	0.094 (J)	<0.1		
9/24/2020	<0.1	<0.1	<0.1	<0.1	0.064 (J)				
9/25/2020						0.091 (J)	<0.1		
9/28/2020									0.078 (J)
3/17/2021	<0.1	<0.1				0.089 (J)			
3/18/2021			<0.1	<0.1	<0.1				0.079 (J)
3/19/2021							<0.1		
8/12/2021								<0.1	
8/13/2021		<0.1		<0.1	<0.1	0.086 (J)			0.075 (J)
8/16/2021	<0.1		<0.1						
8/19/2021							<0.1		
9/27/2021							<0.1	<0.1	
2/2/2022	<0.1	<0.1	<0.1		<0.1	0.086 (J)	<0.1		
2/3/2022				<0.1				0.056 (J)	0.069 (J)
8/5/2022		0.076 (J)	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.075 (J)	0.12	0.12
8/10/2022	0.065 (J)								
Mean	0.09139	0.108	0.09739	0.09161	0.09278	0.09911	0.1051	0.094	0.1731
Std. Dev.	0.02071	0.03594	0.02311	0.02894	0.0351	0.0354	0.0539	0.02703	0.193
Upper Lim.	0.1	0.22	0.13	0.13	0.16	0.1205	0.11	0.1349	0.18
Lower Lim.	0.065	0.076	0.071	0.074	0.064	0.0777	0.09	0.009082	0.072

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016	<0.001						<0.001	<0.001
10/24/2016			<0.001					
10/25/2016				<0.001	<0.001	<0.001		
1/27/2017							<0.001	
1/31/2017	<0.001		<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	0.0009 (J)		<0.001				<0.001	<0.001
5/24/2017				<0.001	<0.001	<0.001		
8/10/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001		<0.001	<0.001	<0.001	<0.001		
6/7/2018							<0.001	<0.001
10/2/2018				<0.001	<0.001	<0.001		
10/3/2018	<0.001		<0.001				<0.001	<0.001
8/22/2019	<0.001		<0.001	<0.001			<0.001	<0.001
8/23/2019					<0.001	5.8E-05 (J)		
10/22/2019					7.9E-05 (J)	5.4E-05 (J)	0.00016 (J)	0.00025 (J)
10/23/2019	<0.001	<0.001	0.00043 (J)	6.8E-05 (J)				
1/3/2020		<0.001						
3/4/2020		0.00011 (J)						
3/24/2020		<0.001					0.00025 (J)	
3/25/2020	<0.001		7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001		0.0001 (J)
6/18/2020		<0.001						
7/21/2020		<0.001						
8/26/2020								0.00036 (J)
8/27/2020	<0.001	<0.001	0.00018 (J)	<0.001	<0.001	<0.001	0.00014 (J)	
9/24/2020	<0.001	<0.001	0.00028 (J)	4.9E-05 (J)	0.00034 (J)			
9/25/2020						<0.001	0.00019 (J)	
9/28/2020								0.00022 (J)
3/17/2021	<0.001	<0.001				<0.001		
3/18/2021			0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)			0.00088 (J)
3/19/2021							0.00038 (J)	
8/13/2021		<0.001		<0.001	<0.001	<0.001		<0.001
8/16/2021	<0.001		<0.001					
8/19/2021							<0.001	
9/27/2021							<0.001	
2/2/2022	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	
2/3/2022				<0.001				<0.001
8/5/2022		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/10/2022	<0.001							
Mean	0.0009941	0.0009258	0.0007768	0.00078	0.0008071	0.0008889	0.0007844	0.0008124
Std. Dev.	2.425E-05	0.0002569	0.0003623	0.0004089	0.0003624	0.0003135	0.0003607	0.000336
Upper Lim.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0009	0.00011	0.00028	8.5E-05	0.00034	5.8E-05	0.00025	0.00036

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016		<0.03	0.0034 (J)	<0.03	<0.03	0.0024 (J)		<0.03
10/20/2016						0.0027 (J)		<0.03
10/24/2016		<0.03						
10/25/2016			0.0043 (J)	<0.03	<0.03			
1/27/2017						<0.03		
1/31/2017		<0.03	0.0042 (J)	<0.03	<0.03			<0.03
5/23/2017		0.0012 (J)				<0.03		0.0012 (J)
5/24/2017			0.0039 (J)	<0.03	0.0012 (J)			
8/10/2017		0.0016 (J)	0.004 (J)	<0.03	<0.03	0.0021 (J)		<0.03
11/14/2017		0.0015 (J)	0.0044 (J)	<0.03	<0.03	<0.03		<0.03
6/6/2018		0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)			
6/7/2018						0.0011 (J)		0.0015 (J)
10/2/2018			0.0041 (J)	<0.03	0.0013 (J)			
10/3/2018		0.0016 (J)				0.0021 (J)		<0.03
8/22/2019		0.0015 (J)	0.004 (J)			0.0012 (J)		0.0018 (J)
8/23/2019				0.00092 (J)	0.0009 (J)			
10/22/2019				0.00094 (J)	0.00088 (J)	0.0028 (J)		0.0027 (J)
10/23/2019	0.0012 (J)	0.002 (J)	0.0039 (J)					
1/3/2020	0.0011 (J)							
3/4/2020	0.0013 (J)							
3/24/2020	0.00084 (J)					0.0029 (J)		
3/25/2020		0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03			0.0017 (J)
6/18/2020	0.0013 (J)							
7/21/2020	0.0013 (J)							
8/26/2020								0.0028 (J)
8/27/2020	0.0011 (J)	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)	0.0024 (J)		
9/24/2020	0.0011 (J)	0.0017 (J)	0.0038 (J)	0.00098 (J)				
9/25/2020					0.001 (J)	0.0031 (J)		
9/28/2020								0.0022 (J)
3/17/2021	0.0012 (J)				<0.03			
3/18/2021		0.0018 (J)	0.0042 (J)	0.0011 (J)				0.0029 (J)
3/19/2021						0.0035 (J)		
8/12/2021							0.0036 (J)	
8/13/2021	0.0011 (J)		0.0038 (J)	0.00084 (J)	<0.03			0.0017 (J)
8/16/2021		0.0016 (J)						
8/19/2021						0.0017 (J)		
9/27/2021						0.0016 (J)	0.0035 (J)	
2/2/2022	0.0013 (J)	0.0019 (J)		0.001 (J)	0.00084 (J)	0.0017 (J)		
2/3/2022			0.0046 (J)				0.0051 (J)	0.0015 (J)
8/5/2022	0.0013 (J)	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0017 (J)	0.0038 (J)	0.0018 (J)
Mean	0.001178	0.006629	0.004024	0.01462	0.01467	0.006833	0.004	0.01187
Std. Dev.	0.0001395	0.01115	0.0002818	0.01495	0.0149	0.01068	0.0007439	0.01381
Upper Lim.	0.0013	0.002	0.0042	0.03	0.03	0.0035	0.005858	0.03
Lower Lim.	0.00084	0.0015	0.003847	0.00092	0.0009	0.0017	0.002668	0.0017

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	7E-05 (J)		<0.0002
10/20/2016	<0.0002						<0.0002		<0.0002
10/24/2016			<0.0002						
10/25/2016				<0.0002	<0.0002	<0.0002			
1/27/2017							<0.0002		
1/31/2017	9.3E-05 (J)		8E-05 (J)	<0.0002	<0.0002	8E-05 (J)			9E-05 (J)
5/23/2017	<0.0002		<0.0002				<0.0002		<0.0002
5/24/2017				<0.0002	<0.0002	<0.0002			
8/10/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002			
6/7/2018							<0.0002		<0.0002
10/2/2018				<0.0002	<0.0002	<0.0002			
10/3/2018	<0.0002		<0.0002				<0.0002		<0.0002
8/22/2019	<0.0002		<0.0002	<0.0002			<0.0002		<0.0002
8/23/2019					<0.0002	<0.0002			
10/23/2019		<0.0002							
1/3/2020		<0.0002							
3/4/2020		<0.0002							
3/24/2020		<0.0002							
6/18/2020		<0.0002							
7/21/2020		<0.0002							
8/26/2020									<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
9/24/2020		<0.0002							
8/12/2021								9.4E-05 (J)	
8/13/2021		0.0001 (J)		0.00022	8.4E-05 (J)	8E-05 (J)			8.1E-05 (J)
8/16/2021	9.9E-05 (J)		0.00027						
8/19/2021							0.0003		
9/27/2021							<0.0002	<0.0002	
2/2/2022	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	0.00015 (J)		
2/3/2022				<0.0002				<0.0002	<0.0002
8/5/2022		<0.0002	0.00017 (J)	<0.0002	<0.0002	<0.0002	0.00014 (J)	<0.0002	<0.0002
8/10/2022	<0.0002								
Mean	0.000184	0.0001909	0.0001938	0.0002015	0.0001911	0.0001815	0.00019	0.0001735	0.0001824
Std. Dev.	3.907E-05	3.015E-05	4.053E-05	5.547E-06	3.217E-05	4.506E-05	4.93E-05	5.3E-05	4.304E-05
Upper Lim.	0.0002	0.0002	0.00027	0.00022	0.0002	0.0002	0.0003	0.0002	0.0002
Lower Lim.	9.9E-05	0.0002	0.00017	0.0002	8.4E-05	8E-05	0.00015	9.4E-05	9E-05

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.005
1/3/2020	0.0015 (J)
3/4/2020	<0.005
3/24/2020	<0.005
6/18/2020	<0.005
7/21/2020	<0.005
8/27/2020	<0.005
9/24/2020	<0.005
8/13/2021	<0.005
2/2/2022	<0.005
8/5/2022	<0.005
Mean	0.004682
Std. Dev.	0.001055
Upper Lim.	0.005
Lower Lim.	0.005

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.001
1/3/2020	8E-05 (J)
3/4/2020	<0.001
3/24/2020	<0.001
6/18/2020	<0.001
7/21/2020	<0.001
8/27/2020	<0.001
9/24/2020	<0.001
8/13/2021	<0.001
2/2/2022	<0.001
8/5/2022	<0.001
Mean	0.0009164
Std. Dev.	0.0002774
Upper Lim.	0.001
Lower Lim.	0.001

January 2023

GROUNDWATER STATS CONSULTING

July 31, 2023

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd. NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 4 (AP-4)
January 2023 Semi-Annual Statistical Analysis

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the January 2023 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-4. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for Hammond AP-4 in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells analyzed in this report. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113
- **Downgradient wells:** HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, and HGWC-118
- **Piezometer:** HGWC-117

Note that downgradient well HGWC-102 was first sampled in October 2019 and upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and

currently have at least 8 samples; therefore, data from this well were evaluated during this statistical analysis. Upgradient well data are included in construction of interwell prediction limits when a minimum of 2 samples are available and downgradient wells are evaluated with prediction limits once they have reached a minimum of 8 samples.

Note that HGWC-117 was reclassified as a piezometer; therefore, it is not included in this analysis. Well HGWC-117A was reclassified as a downgradient well was first sampled in February 2021 and currently has four samples. Therefore, this well is included on the time series graphs and box plots, and also has reached the minimum number of samples for Appendix IV parameters to be evaluated with confidence intervals. Once it has been sampled 8 times, it will be evaluated with interwell prediction limits.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting.

The Coal Combustion Residuals (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

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. This generally gives the most conservative limit in each case. 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 initially 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 all 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% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects, 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 non-detect 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 will be 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 April 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.

Using the Tukey box plot method, a few outliers were identified. Often, when the most recent value is identified as an outlier, values are not flagged in the database at this time as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged as all other values are similar to remaining measurements within a given well or neighboring wells, or were reported non-detects.

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

Seasonality

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 Tests

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 were included with the screening and showed a few statistically significant decreasing and increasing trends for the Appendix III parameters. Most trends noted were relatively low in magnitude when compared to average concentrations, and the background period is short; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. However, interwell methods are currently implemented in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Evaluation of Appendix III Parameters – January 2023

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 using all historical upgradient well data through January 2023 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The January 2023 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 a resample confirms the initial exceedance, a statistically significant increase 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 exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. A summary table of the interwell prediction limits follows this letter. Exceedances were identified for the following well/constituent pairs:

- Boron: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, and HGWC-118
- Calcium: HGWC-102, HGWC-103, HGWC-105, and HGWC-118
- Chloride: HGWC-102, HGWC-103, and HGWC-105
- Sulfate: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, and HGWC-118
- TDS: HGWC-102, HGWC-103, and HGWC-105

Trend Test Evaluation – Appendix III

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 at the 99% confidence level (Figure E). Upgradient wells 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 trends, it is an indication of variability in groundwater 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: HGWC-101
- Calcium: HGWA-113 (upgradient), HGWC-103, and HGWC-105
- Chloride: HGWC-103
- TDS: HGWC-105

Decreasing trends:

- Boron: HGWC-109
- Sulfate: HGWC-109 and HGWA-113 (upgradient)

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 (Maximum Containment Limits (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 – January 2023

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% non-detects do not require analysis. Data from upgradient 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 tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through January 2023 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 to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well (Figure H). As mentioned above, well/constituent pairs with 100% non-detects did not require statistics, which includes all downgradient wells for molybdenum.

The Sanitas software was used to calculate the tolerance limits and the confidence intervals, either parametric or nonparametric, as appropriate. The lower confidence limit, which is constructed with 99% confidence for parametric confidence intervals, is compared to the GWPS prepared as described above. The confidence level associated with nonparametric confidence intervals is dependent upon the number of samples available.

For some well/constituent pairs (cobalt and combined radium 226 + 228 at well HGWA-117A) the parametric lower confidence limit resulted in a negative number. Therefore, nonparametric confidence intervals were constructed for these well/constituent pairs and may be found at the end of Figure H. This is a more conservative approach in that the lower confidence limit reflects the lowest measurement in the data set for a given well rather than a negative number.

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. When the entire records were evaluated, no exceedances were identified.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-4. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Tristan Clark
Groundwater Analyst

Andrew T. Collins
Project Manager

100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 5/16/2023 10:45 AM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Antimony (mg/L)
HGWC-101, HGWC-105, HGWC-109, HGWC-117A, HGWC-118

Arsenic (mg/L)
HGWC-103, HGWC-105, HGWC-107, HGWC-117A

Beryllium (mg/L)
HGWC-102, HGWC-105, HGWC-107, HGWC-109, HGWC-117A

Cadmium (mg/L)
HGWC-105, HGWC-109, HGWC-118

Chromium (mg/L)
HGWC-117A

Cobalt (mg/L)
HGWC-107

Lead (mg/L)
HGWC-117A

Lithium (mg/L)
HGWC-101

Molybdenum (mg/L)
HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118

Selenium (mg/L)
HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118

Thallium (mg/L)
HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-101	0.04	n/a	1/25/2023	0.12	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-102	0.04	n/a	1/25/2023	2.5	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-103	0.04	n/a	1/25/2023	2.7	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-105	0.04	n/a	1/25/2023	1.3	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-107	0.04	n/a	1/25/2023	0.82	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-109	0.04	n/a	1/25/2023	0.22	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-118	0.04	n/a	1/25/2023	0.62	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	1/25/2023	128	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	1/25/2023	109	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	1/25/2023	113	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	1/25/2023	81.8	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	1/25/2023	7.8	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	1/25/2023	8	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-105	5.7	n/a	1/25/2023	6	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	1/25/2023	95	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	1/25/2023	348	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	1/25/2023	342	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	1/25/2023	230	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	1/25/2023	128	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	1/25/2023	25.4	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	1/25/2023	73	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	1/25/2023	664	Yes	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	1/25/2023	630	Yes	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	1/25/2023	537	Yes	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2

Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.04**	**n/a**	**1/25/2023**	**0.12**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-102**	**0.04**	**n/a**	**1/25/2023**	**2.5**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-103**	**0.04**	**n/a**	**1/25/2023**	**2.7**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-105**	**0.04**	**n/a**	**1/25/2023**	**1.3**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-107**	**0.04**	**n/a**	**1/25/2023**	**0.82**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-109**	**0.04**	**n/a**	**1/25/2023**	**0.22**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-118**	**0.04**	**n/a**	**1/25/2023**	**0.62**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-101	73.8	n/a	1/25/2023	20.4	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-102**	**73.8**	**n/a**	**1/25/2023**	**128**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-103**	**73.8**	**n/a**	**1/25/2023**	**109**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-105**	**73.8**	**n/a**	**1/25/2023**	**113**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-107	73.8	n/a	1/25/2023	57.8	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.8	n/a	1/25/2023	42.4	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-118**	**73.8**	**n/a**	**1/25/2023**	**81.8**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-101	5.7	n/a	1/25/2023	5.7	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	**HGWC-102**	**5.7**	**n/a**	**1/25/2023**	**7.8**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-103**	**5.7**	**n/a**	**1/25/2023**	**8**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-105**	**5.7**	**n/a**	**1/25/2023**	**6**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-107	5.7	n/a	1/25/2023	3.3	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109	5.7	n/a	1/25/2023	4.3	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	1/25/2023	4.3	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1692	n/a	1/25/2023	0.1ND	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.1692	n/a	1/25/2023	0.1ND	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1692	n/a	1/25/2023	0.1ND	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1692	n/a	1/25/2023	0.051J	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1692	n/a	1/25/2023	0.054J	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1692	n/a	1/25/2023	0.12	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1692	n/a	1/25/2023	0.095J	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	1/25/2023	5.47	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.43	1/25/2023	5.77	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.43	1/25/2023	5.65	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.43	1/25/2023	6.41	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.43	1/25/2023	6.13	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.43	1/25/2023	6.66	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.43	1/25/2023	6.67	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-101**	**14**	**n/a**	**1/25/2023**	**95**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-102**	**14**	**n/a**	**1/25/2023**	**348**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-103**	**14**	**n/a**	**1/25/2023**	**342**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-105**	**14**	**n/a**	**1/25/2023**	**230**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-107**	**14**	**n/a**	**1/25/2023**	**128**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-109**	**14**	**n/a**	**1/25/2023**	**25.4**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-118**	**14**	**n/a**	**1/25/2023**	**73**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-101	345	n/a	1/25/2023	186	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-102**	**345**	**n/a**	**1/25/2023**	**664**	**Yes**	**68**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004125**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-103**	**345**	**n/a**	**1/25/2023**	**630**	**Yes**	**68**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004125**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-105**	**345**	**n/a**	**1/25/2023**	**537**	**Yes**	**68**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004125**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-107	345	n/a	1/25/2023	304	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	345	n/a	1/25/2023	214	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	345	n/a	1/25/2023	337	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2

Appendix III Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:15 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.009089**	**72**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.03075**	**-102**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3008**	**80**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-103**	**5.635**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.476**	**119**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-103**	**0.4009**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-105**	**0.3224**	**87**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-0.9282**	**-79**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWC-109**	**-2.808**	**-83**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-105**	**22.68**	**83**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Tests - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:15 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0.0001228	21	63	No	17	29.41	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	0	-1	-63	No	17	29.41	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.00111	35	63	No	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.01438	16	25	No	9	55.56	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.0008669	-5	-25	No	9	11.11	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-101**	**0.009089**	**72**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-102	-0.2179	-35	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.09437	67	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.003835	21	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.0216	53	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-109**	**-0.03075**	**-102**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-118	-0.009092	-16	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.727	46	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.08575	44	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3008**	**80**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWA-47 (bg)	0.1534	2	25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	0.1311	3	25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-0.4704	-1	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-103**	**5.635**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.476**	**119**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-118	0.975	53	68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	0	-3	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	0	0	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.03432	-41	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	0.05437	6	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	-0.0365	-4	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	0.1665	13	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-103**	**0.4009**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-105**	**0.3224**	**87**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-111 (bg)	0	-8	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	0.0351	24	63	No	17	23.53	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-113 (bg)**	**-0.9282**	**-79**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-47 (bg)	-0.4079	-14	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-0.9231	-16	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.342	-55	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-9.606	-12	-43	No	13	7.692	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	4.631	28	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-0.8983	-4	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.437	-63	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWC-109**	**-2.808**	**-83**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWC-118	-1.644	-56	-68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	3.783	17	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-0.4451	-4	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	1.369	15	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	9.57	10	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0.8184	3	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-26	-21	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	11.98	35	68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWC-105**	**22.68**	**83**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 5/16/2023, 1:27 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	n/a 58	n/a	n/a	93.1	n/a	n/a	0.05105	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 72	n/a	n/a	93.06	n/a	n/a	0.02489	NP Inter(NDs)
Barium (mg/L)	n/a	0.11	n/a	n/a	n/a	n/a 72	n/a	n/a	0	n/a	n/a	0.02489	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0019	n/a	n/a	n/a	n/a 72	n/a	n/a	90.28	n/a	n/a	0.02489	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 72	n/a	n/a	100	n/a	n/a	0.02489	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0061	n/a	n/a	n/a	n/a 72	n/a	n/a	37.5	n/a	n/a	0.02489	NP Inter(normality)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 72	n/a	n/a	88.89	n/a	n/a	0.02489	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	n/a	1.277	n/a	n/a	n/a	n/a 72	0.5958	0.3442	0	None	No	0.05	Inter
Fluoride, total (mg/L)	n/a	0.1712	n/a	n/a	n/a	n/a 75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.0016	n/a	n/a	n/a	n/a 72	n/a	n/a	70.83	n/a	n/a	0.02489	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	n/a 72	n/a	n/a	37.5	n/a	n/a	0.02489	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 58	n/a	n/a	79.31	n/a	n/a	0.05105	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 58	n/a	n/a	84.48	n/a	n/a	0.05105	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 58	n/a	n/a	79.31	n/a	n/a	0.05105	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 58	n/a	n/a	100	n/a	n/a	0.05105	NP Inter(NDs)

PLANT HAMMOND AP-4 GWPS				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background 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		0.11	2
Beryllium, Total (mg/L)	0.004		0.0019	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0061	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.005	0.006
Combined Radium, Total (pCi/L)	5		1.28	5
Fluoride, Total (mg/L)	4		0.17	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 5/16/2023, 2:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.00076	0.006	No	12	0.002813	0.0006466	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	14	0.002943	0.0002138	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	14	0.002864	0.0005078	92.86	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	18	0.004744	0.001087	94.44	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	13	0.003674	0.002074	69.23	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002666	0.001611	0.01	No	18	0.002139	0.0008719	11.11	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	18	0.004778	0.0009428	94.44	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04528	0.03909	2	No	18	0.04218	0.005117	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03263	0.02707	2	No	13	0.02985	0.003738	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04011	0.03495	2	No	18	0.03753	0.004265	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-105	0.082	0.0668	2	No	18	0.07333	0.0096	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03899	0.03618	2	No	18	0.03758	0.00232	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08721	0.0804	2	No	18	0.08381	0.005625	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.07963	0.03837	2	No	5	0.059	0.01231	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.06112	0.0505	2	No	18	0.05581	0.00878	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	18	0.0002811	0.0002254	50	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	18	0.0004042	0.0001845	77.78	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	18	0.0004774	0.00009593	94.44	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.00011	0.005	No	18	0.0002197	0.0001381	16.67	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006632	0.0003168	0.005	No	13	0.00049	0.000233	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007885	0.0006793	0.005	No	18	0.0007339	0.0000903	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.0001	0.005	No	18	0.0003444	0.0002008	61.11	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	5	0.000432	0.0001521	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	18	0.004054	0.001823	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	13	0.004318	0.001664	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00081	0.1	No	18	0.003521	0.001978	61.11	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	18	0.004051	0.001834	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	18	0.004763	0.001004	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	18	0.004557	0.001297	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0017	0.1	No	18	0.003958	0.001754	72.22	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002757	0.00211	0.006	No	18	0.002433	0.0005347	5.556	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002022	0.001039	0.006	No	13	0.001572	0.0007925	0	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.002271	0.001818	0.006	No	18	0.002044	0.0003745	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.005	0.00046	0.006	No	18	0.002103	0.002125	33.33	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002062	0.001268	0.006	No	18	0.001665	0.0006555	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-117A	0.0024	0.00041	0.006	No	5	0.001098	0.0007985	0	None	No	0.031	NP (selected)
Cobalt (mg/L)	HGWC-118	0.005	0.00045	0.006	No	18	0.002769	0.002303	50	None	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8482	0.4162	5	No	18	0.6322	0.357	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.173	0.5433	5	No	12	0.8582	0.4013	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8742	0.4386	5	No	18	0.6564	0.36	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8689	0.4902	5	No	18	0.6796	0.313	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.057	0.5147	5	No	18	0.7861	0.4485	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.7822	0.4613	5	No	18	0.6218	0.2652	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	1.05	0	5	No	5	0.4536	0.416	0	None	No	0.031	NP (selected)
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.129	0.4844	5	No	17	0.8065	0.5141	0	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-101	0.1	0.065	4	No	19	0.09184	0.02022	84.21	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-102	0.22	0.076	4	No	13	0.1074	0.03448	84.62	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-103	0.13	0.071	4	No	19	0.09753	0.02247	73.68	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-105	0.13	0.07	4	No	19	0.08947	0.02962	52.63	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-107	0.16	0.057	4	No	19	0.09074	0.03525	52.63	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-109	0.1278	0.08316	4	No	19	0.1055	0.03811	10.53	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-117A	0.1201	0.04074	4	No	5	0.0922	0.02375	40	Kaplan-Meier	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-118	0.18	0.075	4	No	20	0.1692	0.1887	0	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	18	0.0009944	0.00002357	94.44	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	13	0.0009315	0.0002468	92.31	None	No	0.01	NP (NDs)

Confidence Intervals - All Results (No Significant)

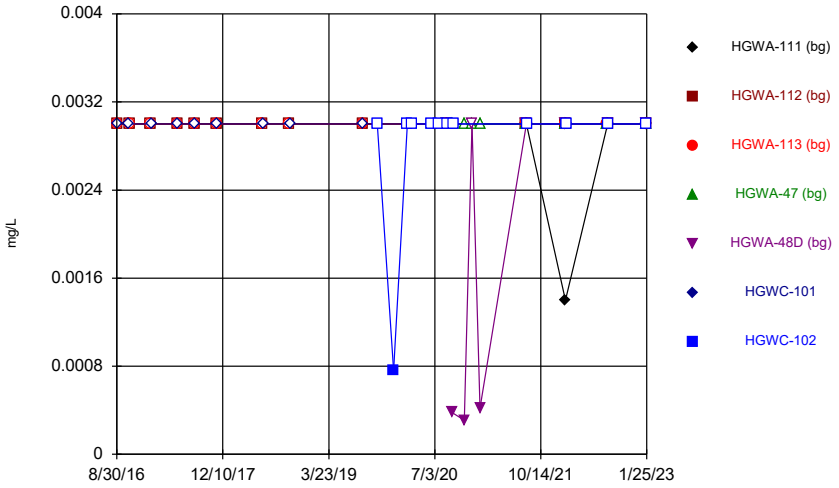
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 5/16/2023, 2:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	18	0.0007892	0.0003554	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	18	0.0007922	0.0004	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	18	0.0008178	0.0003545	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	18	0.0008951	0.0003053	88.89	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.001	0.00036	0.015	No	18	0.0008228	0.000329	72.22	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.001269	0.001075	0.04	No	13	0.001165	0.0001424	0	None	x^3	0.01	Param.
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	18	0.006328	0.0109	16.67	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.00418	0.003843	0.04	No	18	0.004011	0.0002784	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00091	0.04	No	18	0.01385	0.01486	44.44	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	18	0.01552	0.0149	50	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117A	0.0051	0.0035	0.04	No	5	0.00394	0.000658	0	None	No	0.031	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0015	0.04	No	18	0.01127	0.01364	33.33	None	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	14	0.0001851	0.00003778	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0001	0.002	No	12	0.0001917	0.00002887	91.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00027	0.00017	0.002	No	14	0.0001943	0.00003897	78.57	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	14	0.0002014	0.000005345	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	14	0.0001917	0.000031	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	14	0.0001829	0.00004358	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	5	0.0001788	0.0000474	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	14	0.0001836	0.00004162	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.0015	0.05	No	12	0.004708	0.00101	91.67	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.00008	0.002	No	12	0.0009233	0.0002656	91.67	None	No	0.01	NP (NDs)

FIGURE A.

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

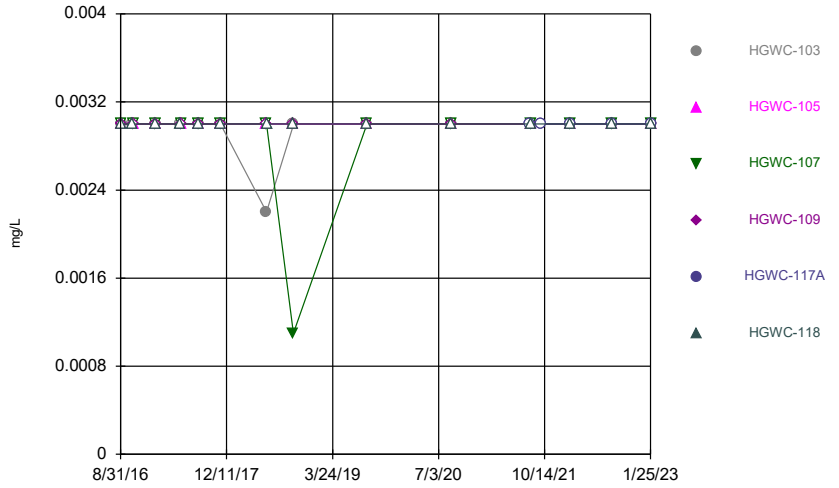
Time Series



Constituent: Antimony Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

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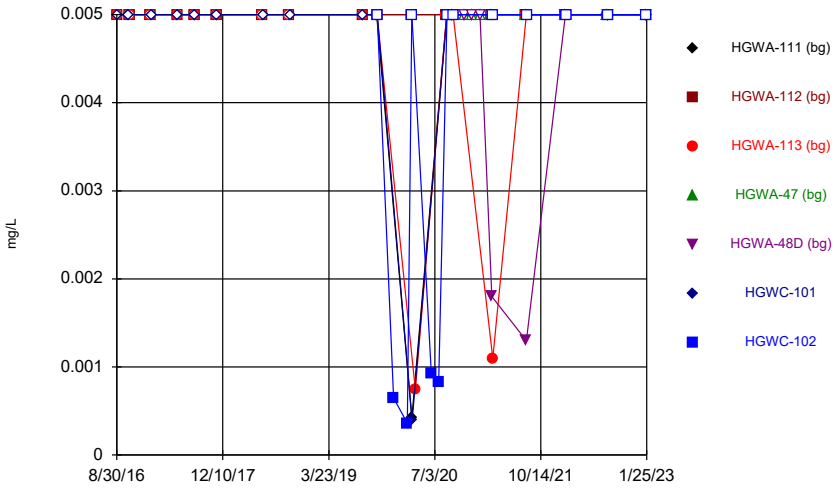
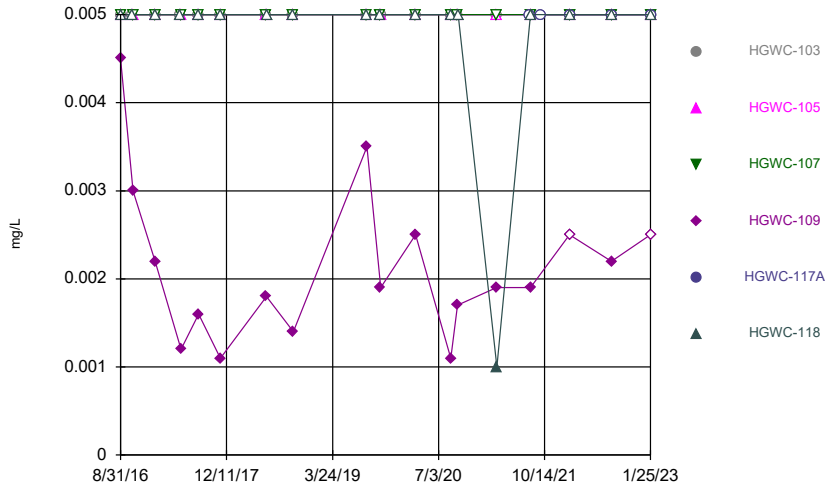


Constituent: Arsenic Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

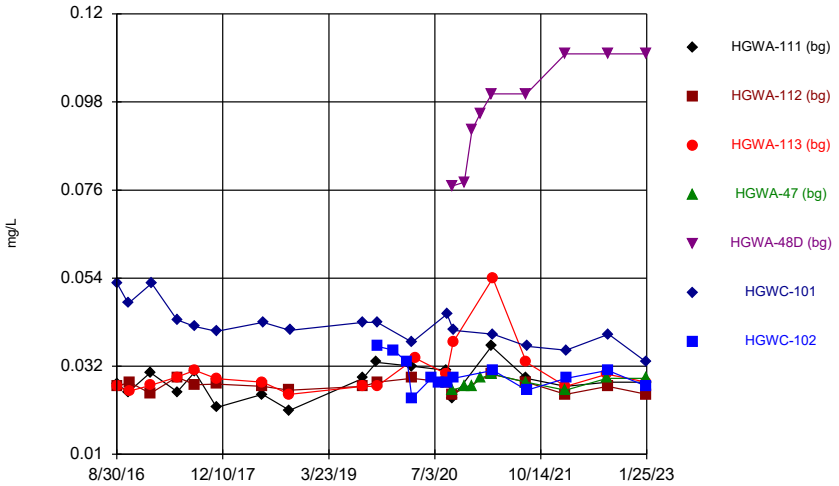
Time Series



Constituent: Arsenic Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

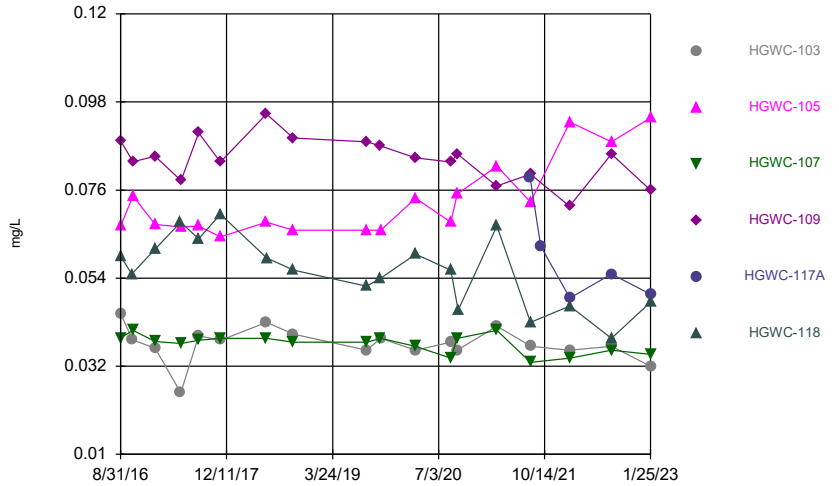


Constituent: Barium Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series



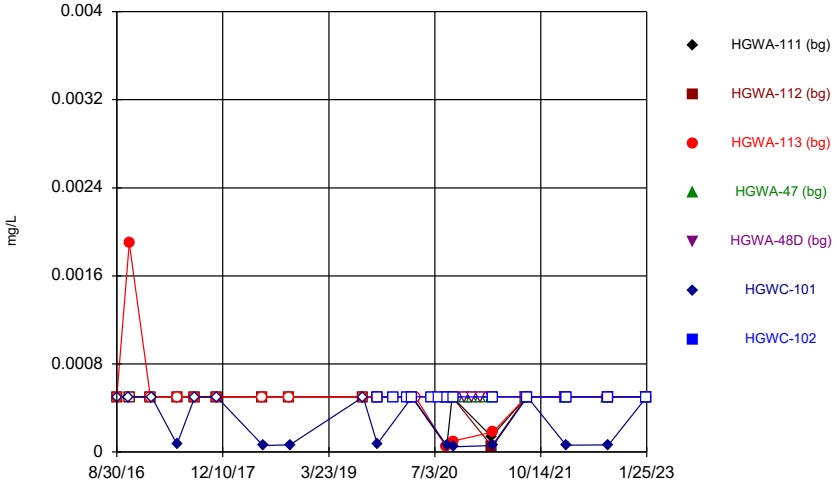
Constituent: Barium Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



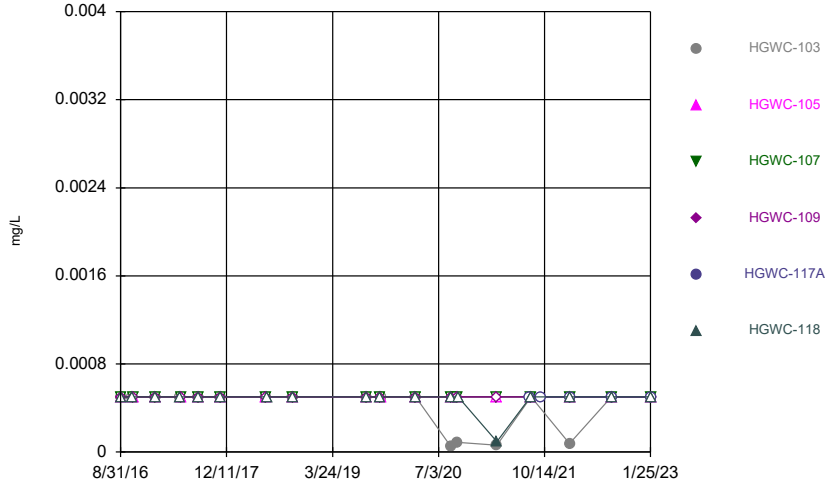
Constituent: Beryllium Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

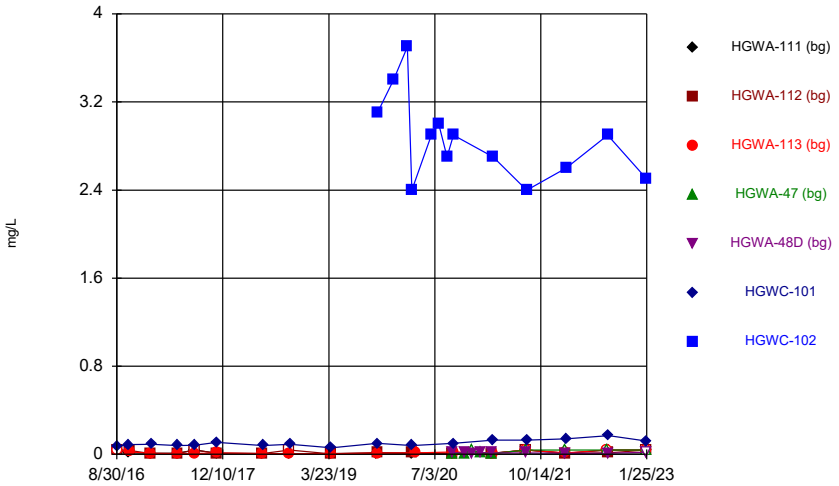


Constituent: Beryllium Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

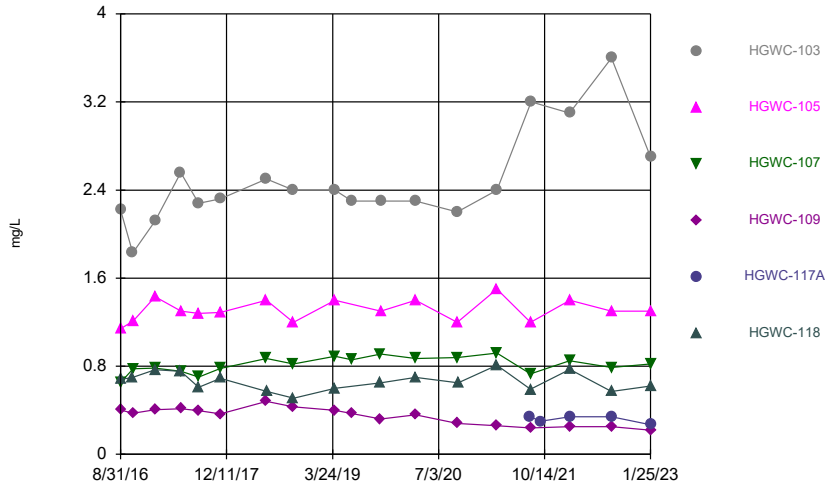
Time Series



Constituent: Boron, total Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

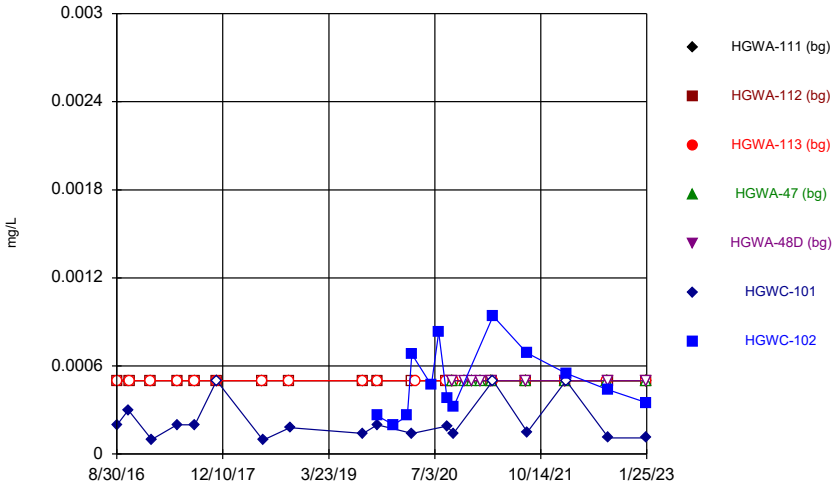
Time Series



Constituent: Boron, total Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

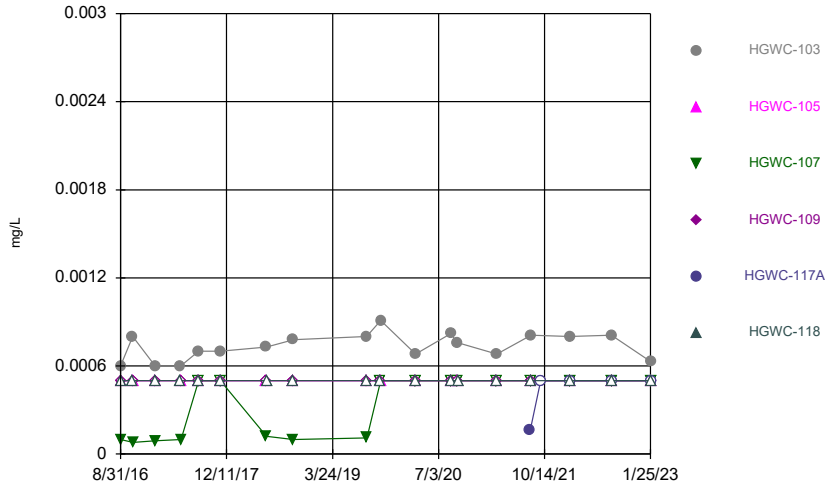
Time Series



Constituent: Cadmium Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

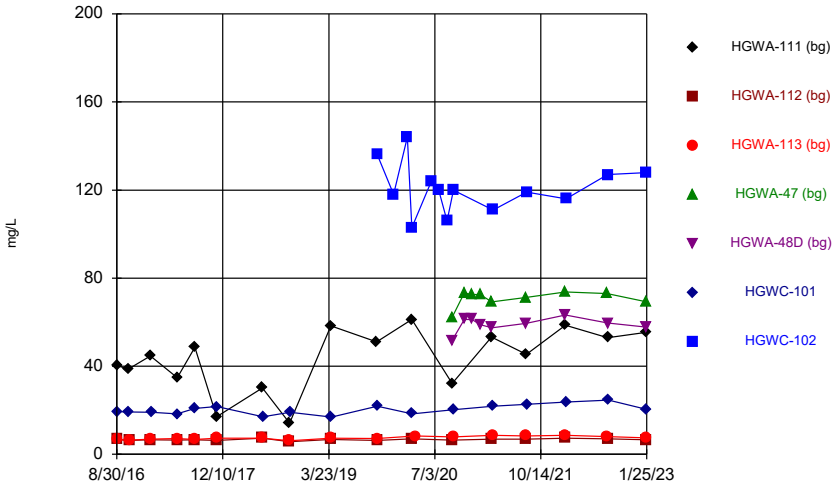
Time Series



Constituent: Cadmium Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

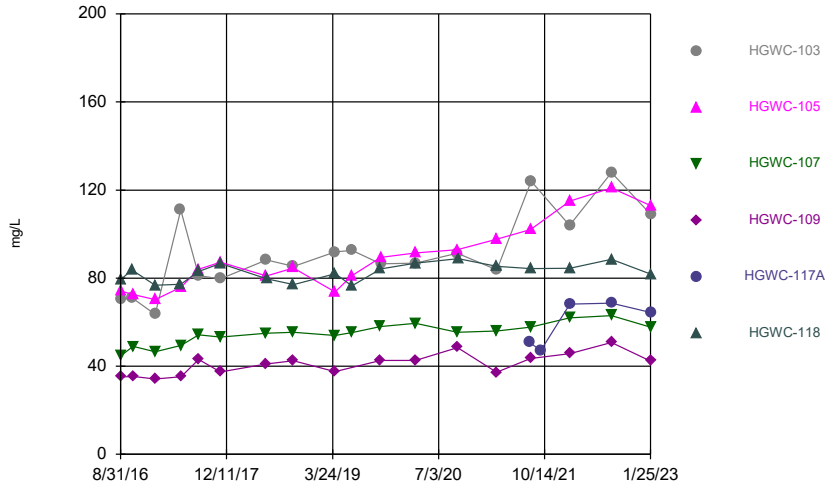


Constituent: Calcium, total Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

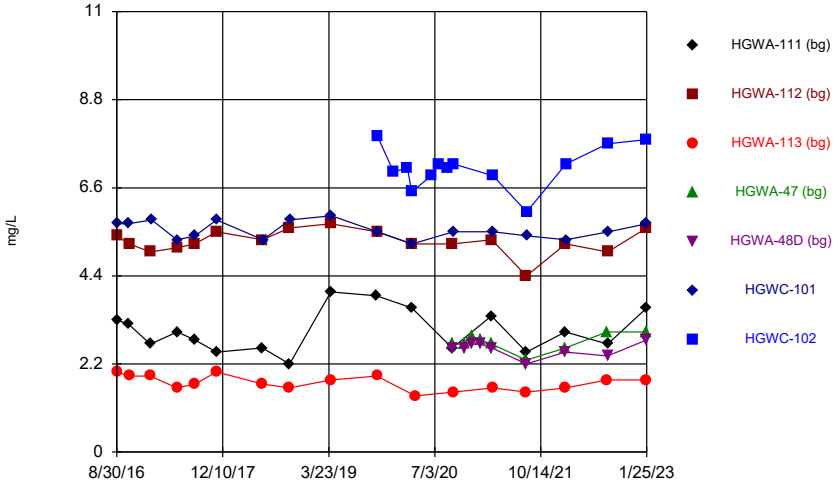


Constituent: Calcium, total Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

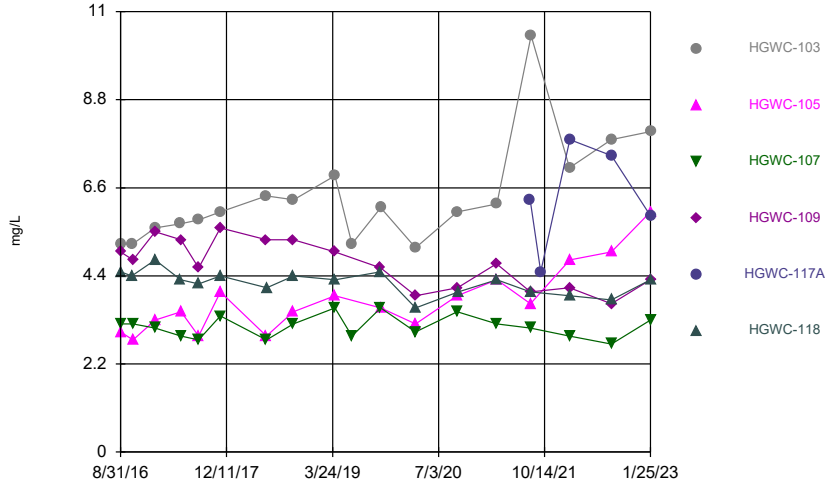


Constituent: Chloride, Total Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

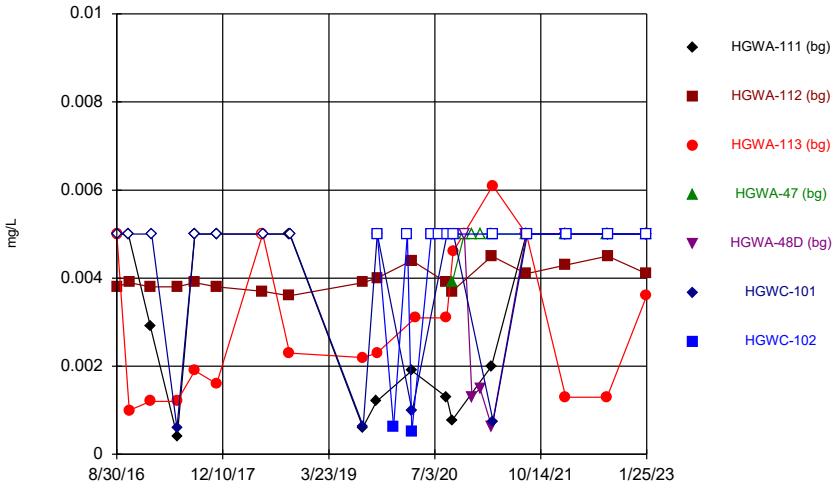


Constituent: Chloride, Total Analysis Run 5/16/2023 1:17 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

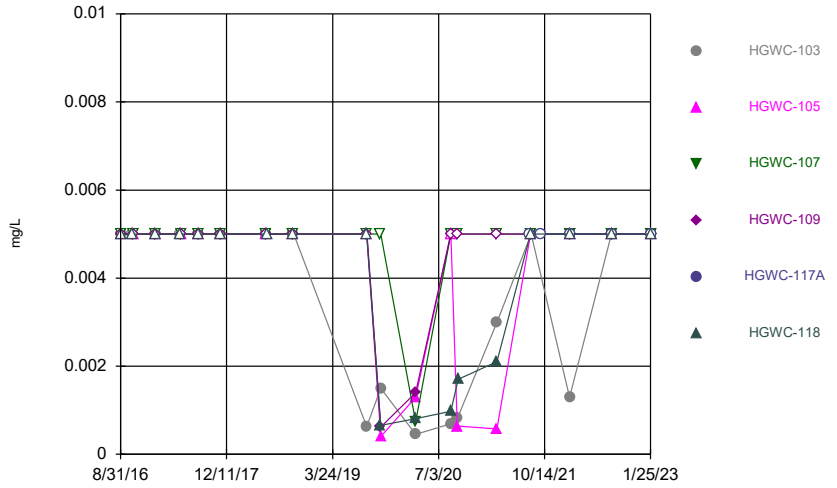
Time Series



Constituent: Chromium Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

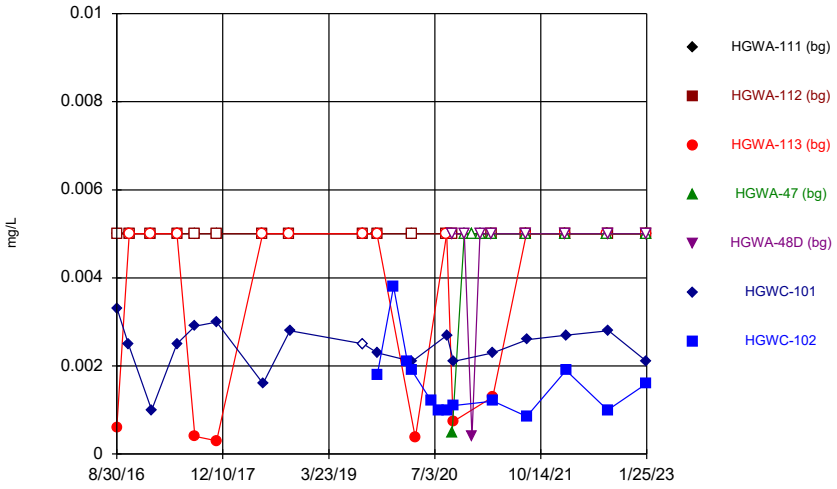
Time Series



Constituent: Chromium Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

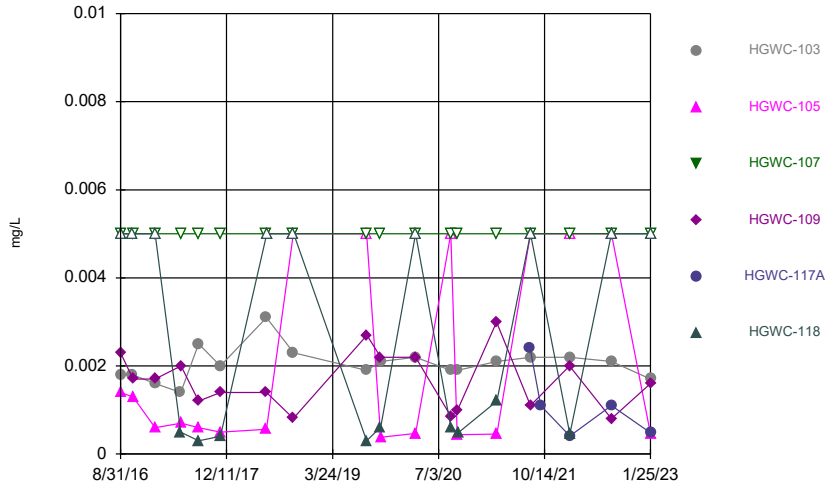
Time Series



Constituent: Cobalt Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

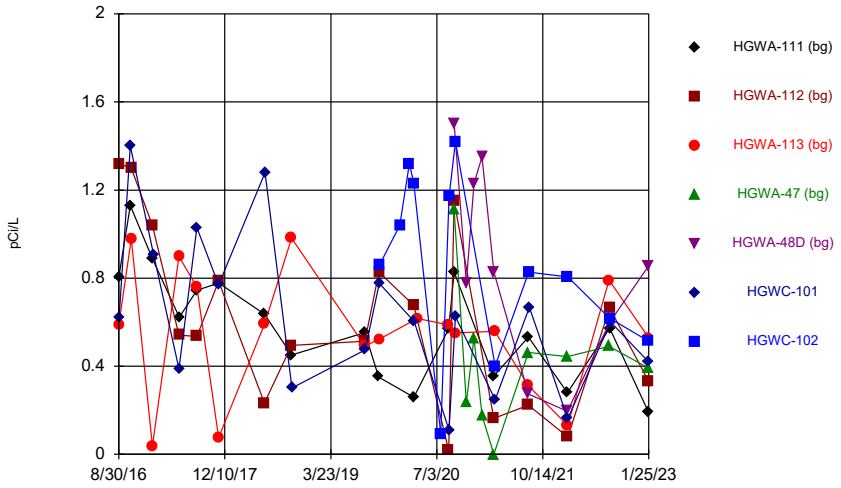
Time Series



Constituent: Cobalt Analysis Run 5/16/2023 1:17 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

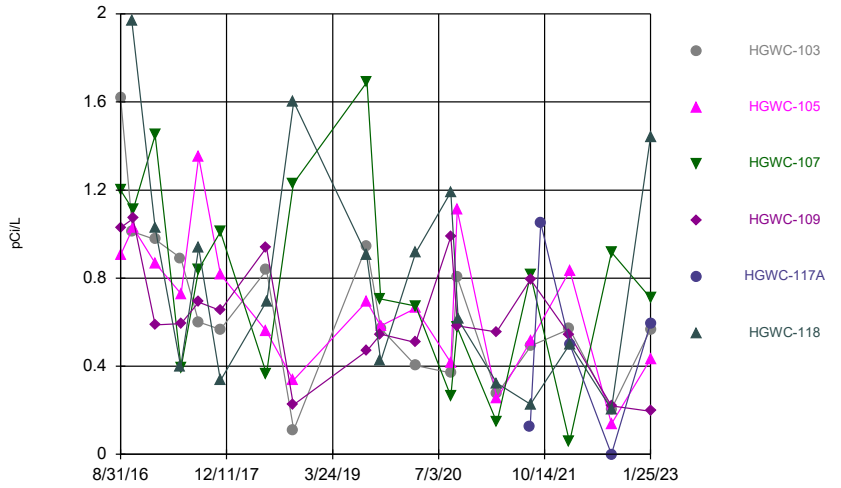


Constituent: Combined Radium 226 & 228 Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series



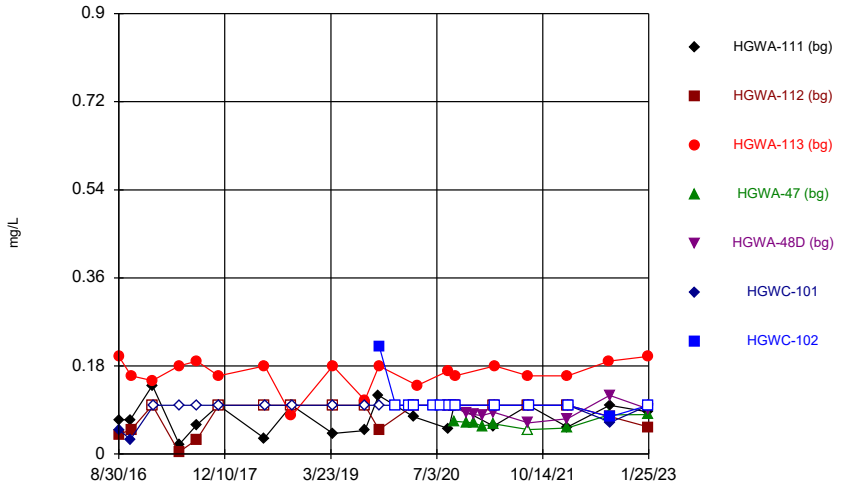
Constituent: Combined Radium 226 & 228 Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



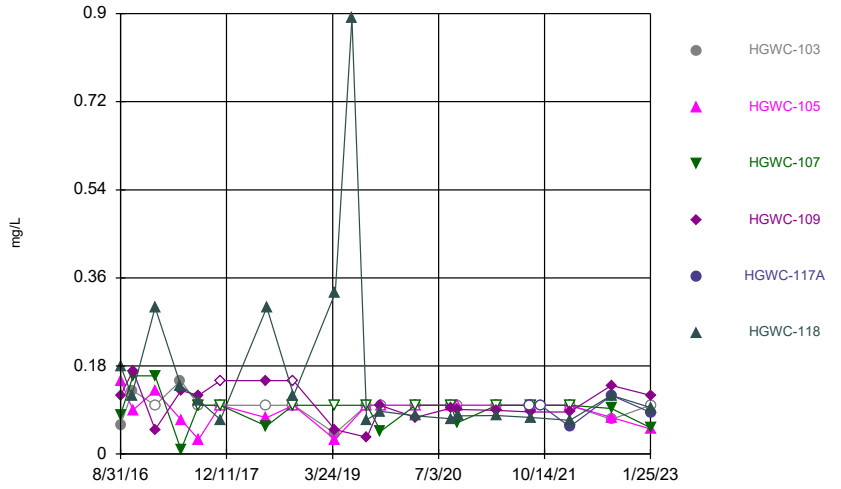
Constituent: Fluoride, total Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

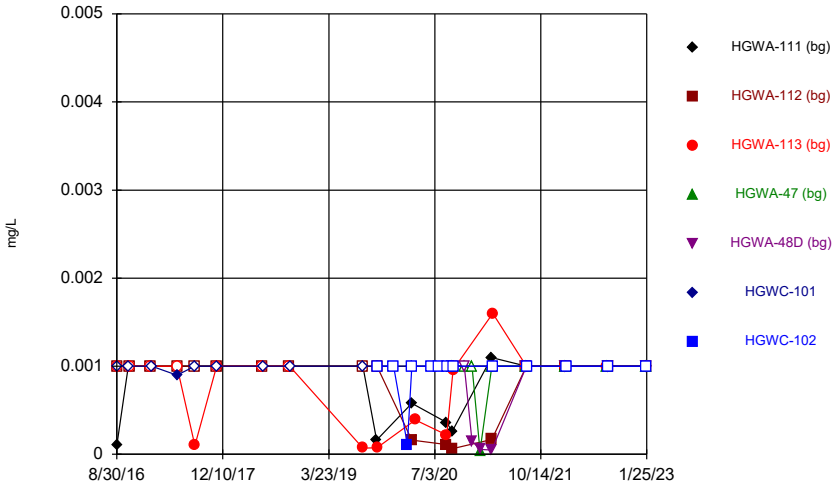


Constituent: Fluoride, total Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

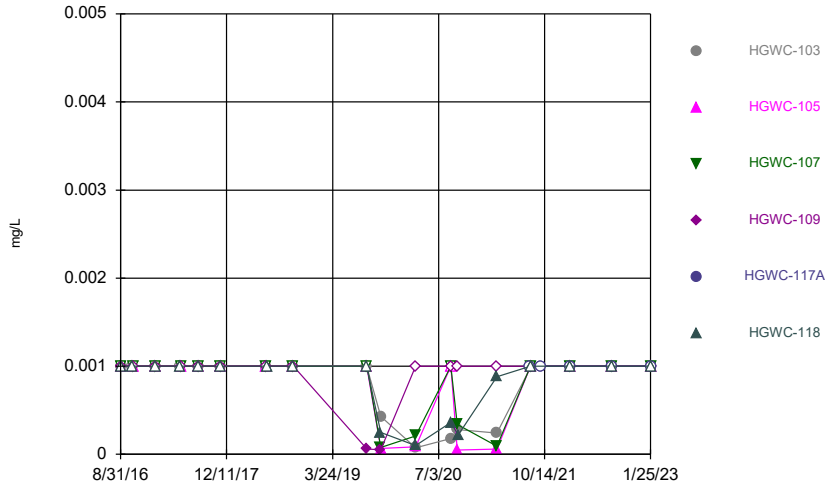
Time Series



Constituent: Lead Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

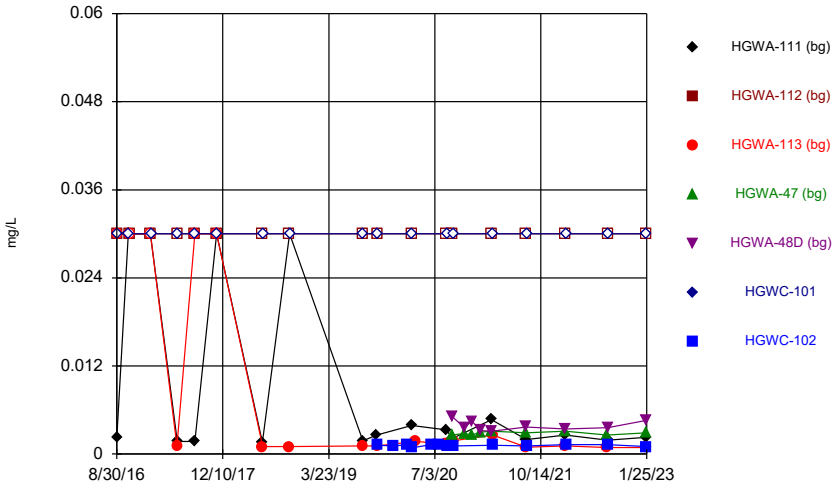
Time Series



Constituent: Lead Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

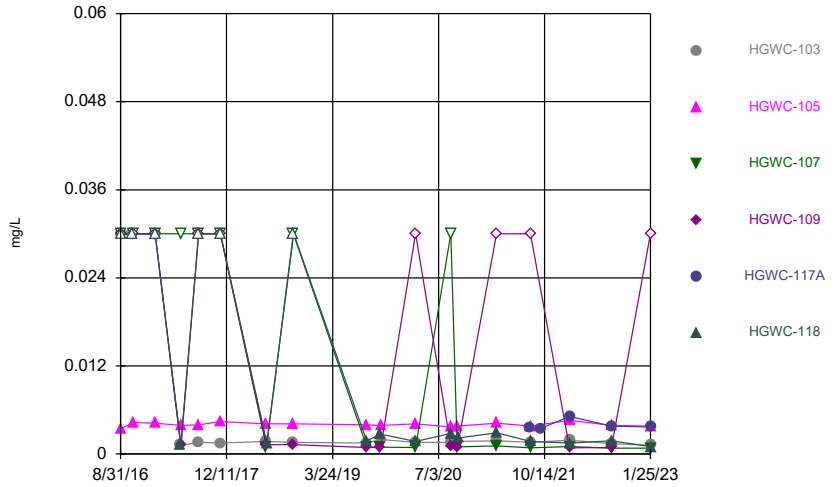
Time Series



Constituent: Lithium Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

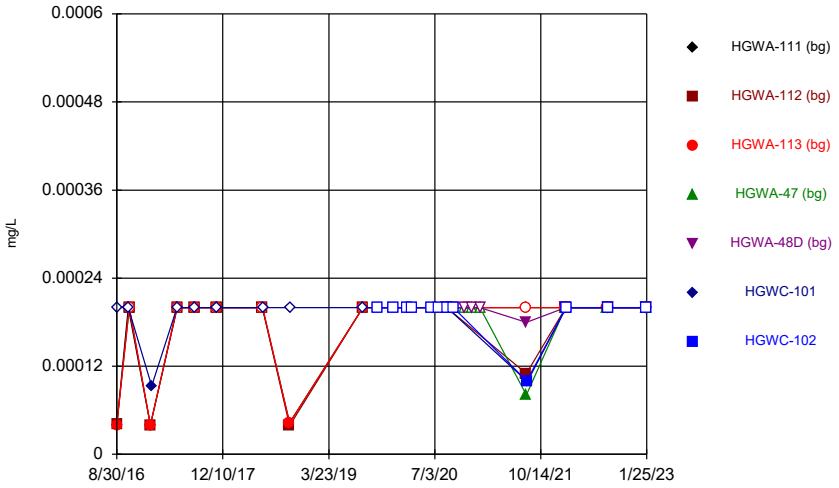
Time Series



Constituent: Lithium Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

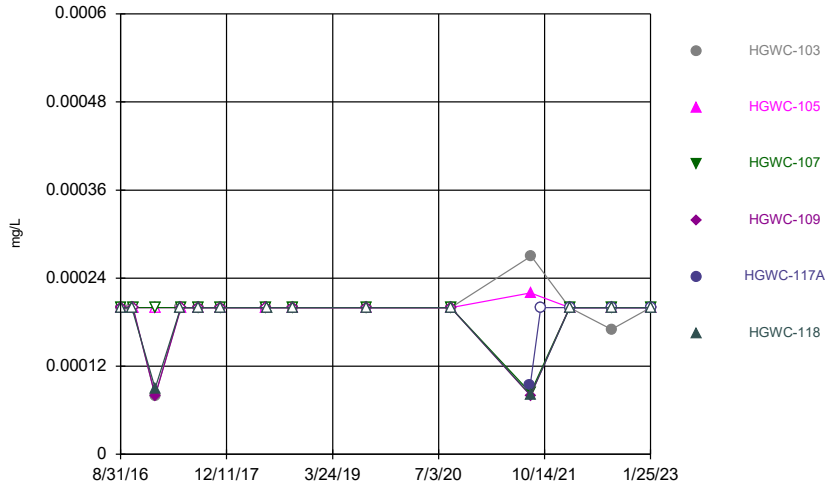
Time Series



Constituent: Mercury Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

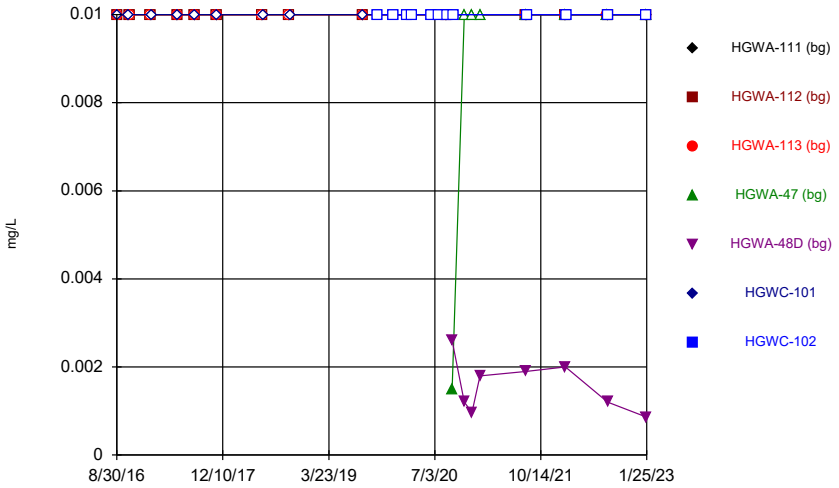
Time Series



Constituent: Mercury Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

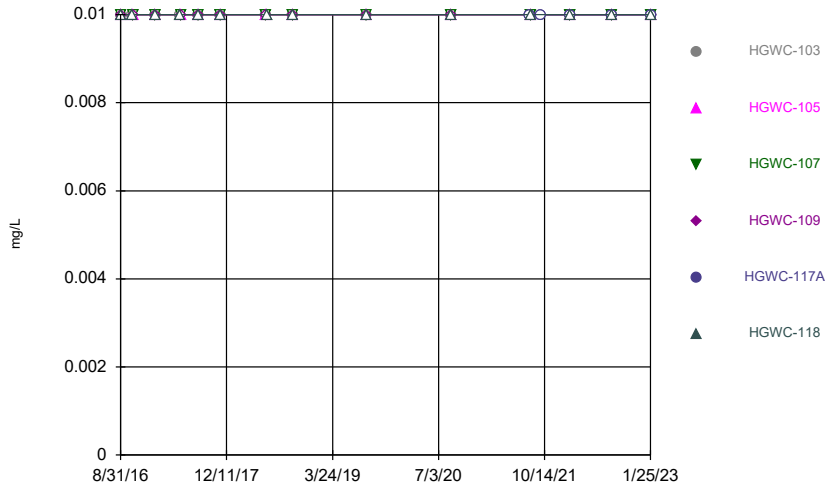
Time Series



Constituent: Molybdenum Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

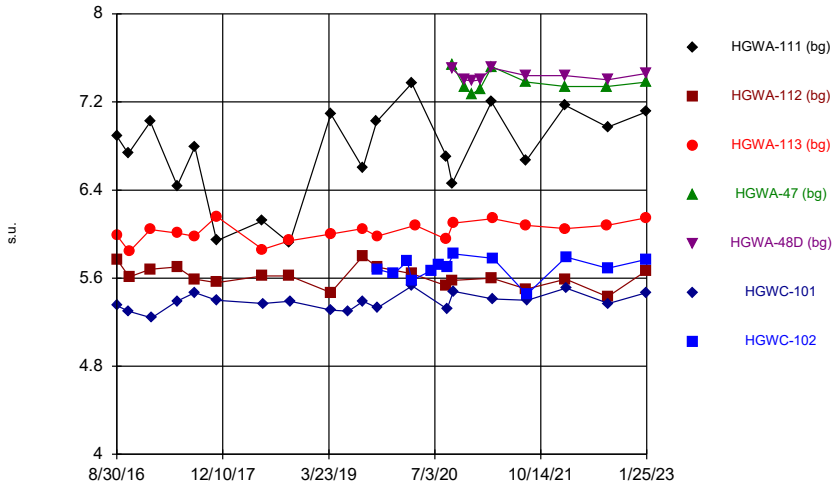
Time Series



Constituent: Molybdenum Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series

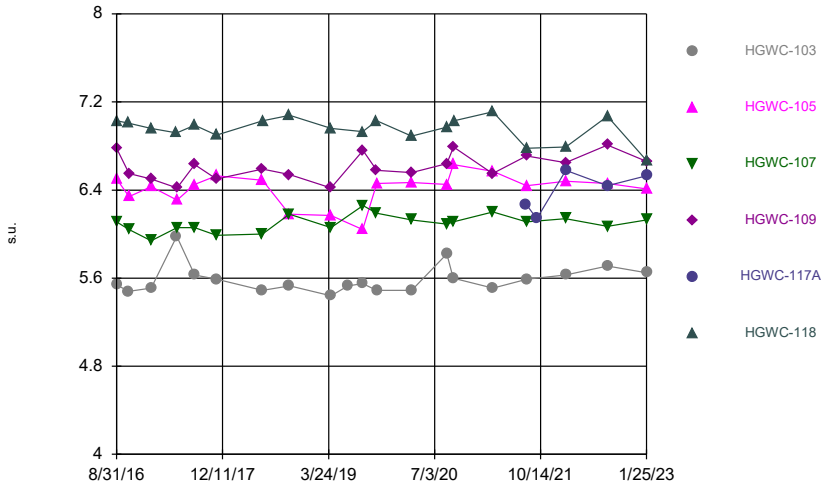


Constituent: pH, Field Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series



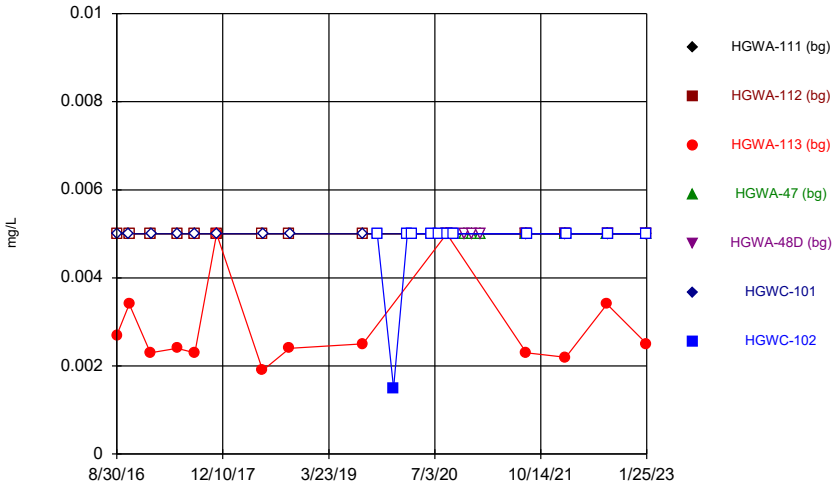
Constituent: pH, Field Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



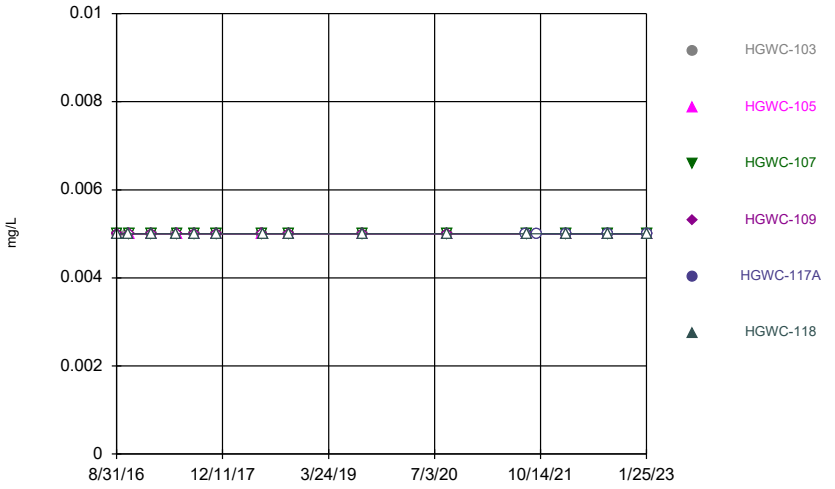
Constituent: Selenium Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

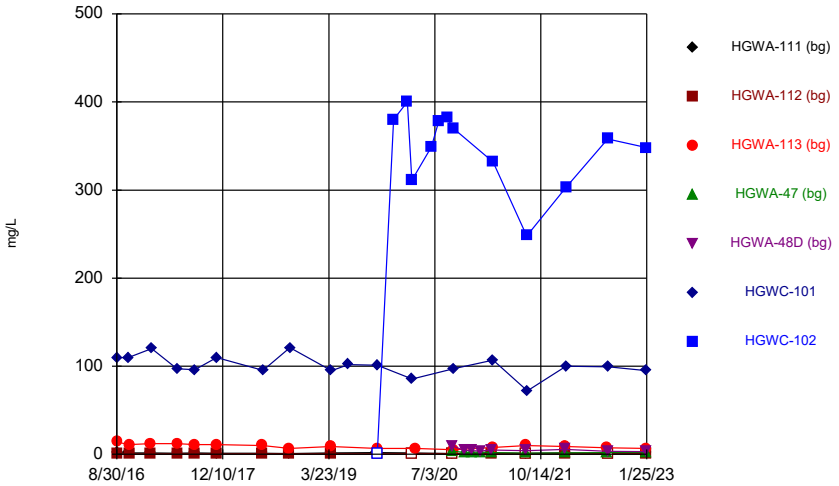


Constituent: Selenium Analysis Run 5/16/2023 1:18 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

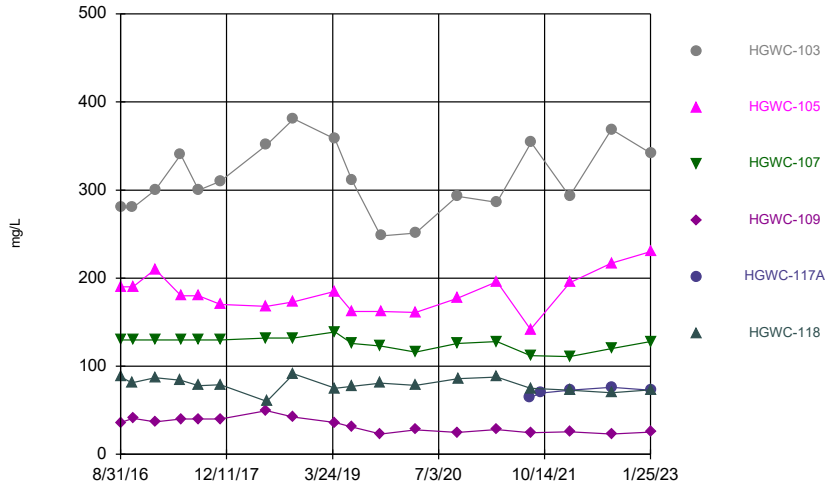
Time Series



Constituent: Sulfate as SO4 Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

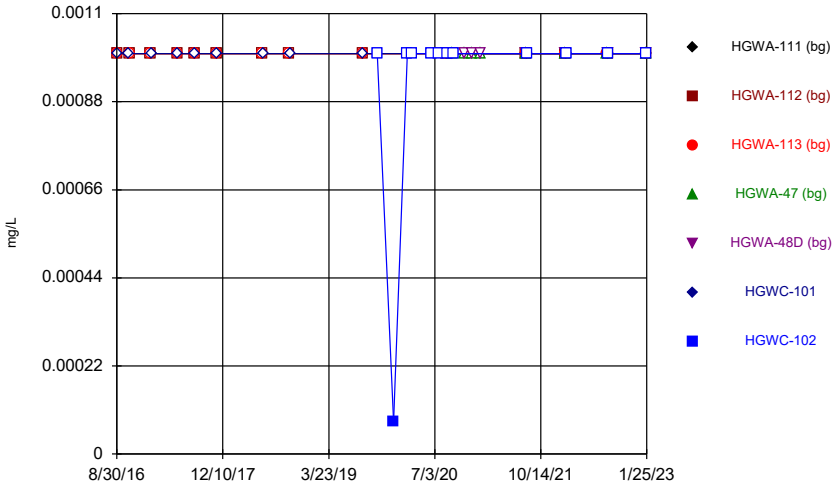
Time Series



Constituent: Sulfate as SO4 Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

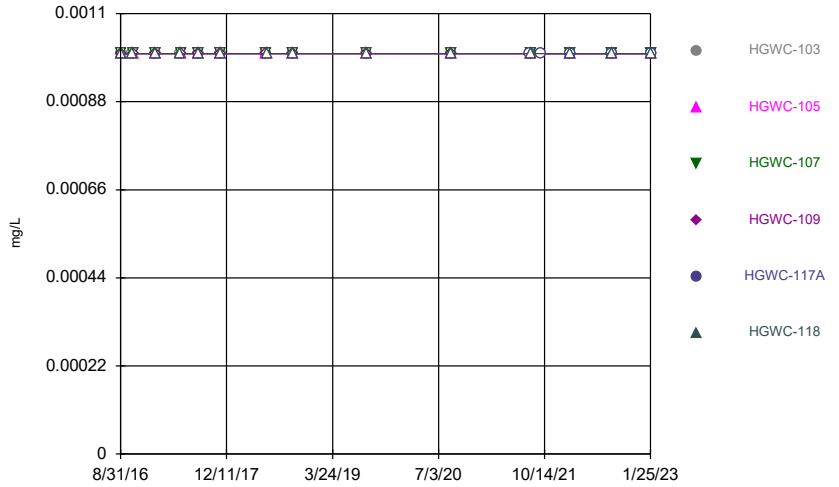
Time Series



Constituent: Thallium Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

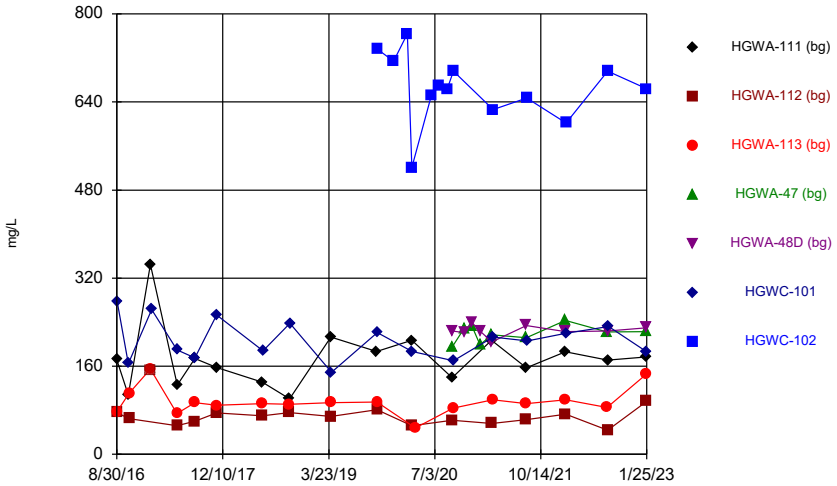
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

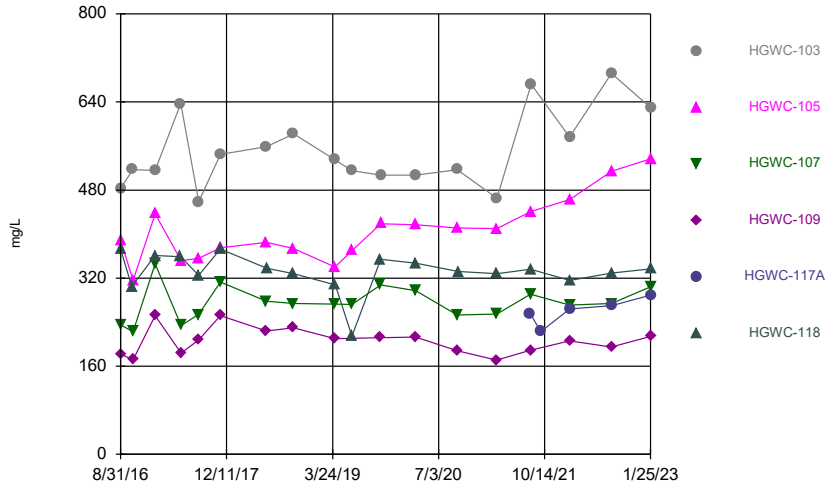
Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 5/16/2023 1:18 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.003	<0.003	<0.003				
8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	<0.003				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			<0.003	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						<0.003	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						<0.003	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/23/2019							<0.003
1/3/2020							0.00076 (J)
3/4/2020							<0.003
3/24/2020							<0.003
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	<0.003	<0.003	<0.003				
8/27/2020						<0.003	<0.003
9/18/2020				<0.003	0.00038 (J)		
9/24/2020							<0.003
11/10/2020				<0.003			
11/11/2020					0.00031 (J)		
12/15/2020				<0.003	<0.003		
1/19/2021				<0.003	0.00042 (J)		
8/12/2021	<0.003	<0.003	<0.003	<0.003	<0.003		
8/13/2021							<0.003
8/16/2021						<0.003	
1/31/2022	0.0014 (J)			<0.003	<0.003		
2/1/2022		<0.003	<0.003				
2/2/2022						<0.003	<0.003
8/2/2022			<0.003	<0.003			
8/5/2022	<0.003	<0.003			<0.003		<0.003
8/10/2022						<0.003	
1/24/2023	<0.003	<0.003	<0.003	<0.003	<0.003		
1/25/2023						<0.003	<0.003

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.003	<0.003	<0.003	<0.003		<0.003
10/20/2016						<0.003
10/24/2016	<0.003					
10/25/2016		<0.003	<0.003	<0.003		
1/31/2017	<0.003	<0.003	<0.003	<0.003		<0.003
5/23/2017	<0.003					<0.003
5/24/2017		<0.003	<0.003	<0.003		
8/10/2017	<0.003	<0.003	<0.003	<0.003		<0.003
11/14/2017	<0.003	<0.003	<0.003	<0.003		<0.003
6/6/2018	0.0022 (J)	<0.003	<0.003	<0.003		
6/7/2018						<0.003
10/2/2018		<0.003	0.0011 (J)	<0.003		
10/3/2018	<0.003					<0.003
8/22/2019	<0.003	<0.003				<0.003
8/23/2019			<0.003	<0.003		
8/26/2020						<0.003
8/27/2020	<0.003	<0.003	<0.003	<0.003		
8/12/2021					<0.003	
8/13/2021		<0.003	<0.003	<0.003		<0.003
8/16/2021	<0.003					
9/27/2021					<0.003	
2/2/2022	<0.003		<0.003	<0.003		
2/3/2022		<0.003			<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/25/2023	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						<0.005	
5/23/2017		<0.005	<0.005			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	<0.005			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						<0.005	<0.005
1/3/2020							0.00065 (J)
3/4/2020							0.00036 (J)
3/24/2020	0.00042 (J)	<0.005					<0.005
3/25/2020						0.00039 (J)	
4/9/2020			0.00074 (J)				
6/18/2020							0.00092 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020	<0.005	<0.005		<0.005	<0.005		
9/22/2020			<0.005				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	0.0018 (J)		
3/16/2021			0.0011 (J)				
3/17/2021						<0.005	<0.005
8/12/2021	<0.005	<0.005	<0.005	<0.005	0.0013 (J)		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						<0.005	<0.005
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	
1/24/2023	<0.005	<0.005	<0.005	<0.005	<0.005		
1/25/2023						<0.005	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	0.0045 (J)		<0.005
10/20/2016						<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	0.003 (J)		
1/31/2017	<0.005	<0.005	<0.005	0.0022 (J)		<0.005
5/23/2017	<0.005					<0.005
5/24/2017		<0.005	<0.005	0.0012 (J)		
8/10/2017	<0.005	<0.005	<0.005	0.0016 (J)		<0.005
11/14/2017	<0.005	<0.005	<0.005	0.0011 (J)		<0.005
6/6/2018	<0.005	<0.005	<0.005	0.0018 (J)		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	0.0014 (J)		
10/3/2018	<0.005					<0.005
8/22/2019	<0.005	<0.005				<0.005
8/23/2019			<0.005	0.0035 (J)		
10/22/2019			<0.005	0.0019 (J)		<0.005
10/23/2019	<0.005	<0.005				
3/25/2020	<0.005	<0.005	<0.005	0.0025 (J)		<0.005
8/26/2020						<0.005
8/27/2020	<0.005	<0.005	<0.005	0.0011 (J)		
9/24/2020	<0.005	<0.005	<0.005			
9/25/2020				0.0017 (J)		
9/28/2020						<0.005
3/17/2021				0.0019 (J)		
3/18/2021	<0.005	<0.005	<0.005			0.001 (J)
8/12/2021					<0.005	
8/13/2021		<0.005	<0.005	0.0019 (J)		<0.005
8/16/2021	<0.005					
9/27/2021					<0.005	
2/2/2022	<0.005		<0.005	<0.005		
2/3/2022		<0.005			<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	0.0022 (J)	<0.005	<0.005
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Barium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0275	0.0269	0.0269				
8/31/2016						0.0527	
10/20/2016	0.0255					0.0477	
10/24/2016		0.028	0.0258				
1/25/2017	0.0304	0.0252	0.0272				
1/31/2017						0.0527	
5/23/2017		0.0293	0.0293			0.0436	
5/24/2017	0.0256						
8/10/2017	0.0306	0.0274	0.031			0.0419	
11/13/2017	0.0217	0.0275					
11/14/2017			0.0289			0.0407	
6/4/2018	0.025	0.027					
6/5/2018			0.028				
6/6/2018						0.043	
10/1/2018	0.021	0.026	0.025				
10/3/2018						0.041	
8/21/2019	0.029	0.027	0.027				
8/22/2019						0.043	
10/21/2019	0.033						
10/22/2019		0.028	0.027				
10/23/2019						0.043	0.037
1/3/2020							0.036
3/4/2020							0.033
3/24/2020	0.032	0.029					0.024
3/25/2020						0.038	
4/9/2020			0.034				
6/18/2020							0.029
7/21/2020							0.028
8/25/2020	0.031	0.028	0.03				
8/27/2020						0.045	0.028
9/18/2020	0.024	0.025		0.026	0.077		
9/22/2020			0.038				
9/24/2020						0.041	0.029
11/10/2020				0.027			
11/11/2020					0.078		
12/15/2020				0.027	0.091		
1/19/2021				0.029	0.095		
3/11/2021	0.037						
3/12/2021		0.03		0.03	0.1		
3/16/2021			0.054				
3/17/2021						0.04	0.031
8/12/2021	0.029	0.028	0.033	0.028	0.1		
8/13/2021							0.026
8/16/2021						0.037	
1/31/2022	0.027			0.026	0.11		
2/1/2022		0.025	0.027				
2/2/2022						0.036	0.029
8/2/2022			0.03	0.029			
8/5/2022	0.028	0.027			0.11		0.031
8/10/2022						0.04	
1/24/2023	0.028	0.025	0.028	0.029	0.11		
1/25/2023						0.033	0.027

Time Series

Constituent: Barium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.045	0.067	0.0391	0.0883		0.0595
10/20/2016						0.055
10/24/2016	0.0386					
10/25/2016		0.0745	0.041	0.0831		
1/31/2017	0.0365	0.0674	0.0382	0.0844		0.0613
5/23/2017	0.0254					0.068
5/24/2017		0.0668	0.0377	0.0784		
8/10/2017	0.0396	0.067	0.0385	0.0903		0.0638
11/14/2017	0.0385	0.0643	0.039	0.083		0.07
6/6/2018	0.043	0.068	0.039	0.095		
6/7/2018						0.059
10/2/2018		0.066	0.038	0.089		
10/3/2018	0.04					0.056
8/22/2019	0.036	0.066				0.052
8/23/2019			0.038	0.088		
10/22/2019			0.039	0.087		0.054
10/23/2019	0.039	0.066				
3/25/2020	0.036	0.074	0.037	0.084		0.06
8/26/2020						0.056
8/27/2020	0.038	0.068	0.034	0.083		
9/24/2020	0.036	0.075	0.039			
9/25/2020				0.085		
9/28/2020						0.046
3/17/2021				0.077		
3/18/2021	0.042	0.082	0.041			0.067
8/12/2021					0.079	
8/13/2021		0.073	0.033	0.08		0.043
8/16/2021	0.037					
9/27/2021					0.062	
2/2/2022	0.036		0.034	0.072		
2/3/2022		0.093			0.049	0.047
8/5/2022	0.037	0.088	0.036	0.085	0.055	0.039
1/25/2023	0.032	0.094	0.035	0.076	0.05	0.048

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	0.0019 (J)				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						<0.0005	
5/23/2017		<0.0005	<0.0005			7E-05 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						5.9E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						6.5E-05 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						7.5E-05 (J)	<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020	<0.0005	<0.0005					<0.0005
3/25/2020						<0.0005	
4/9/2020			<0.0005				
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	4.7E-05 (J)	<0.0005	4.6E-05 (J)				
8/27/2020						5.7E-05 (J)	<0.0005
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			9.9E-05 (J)				
9/24/2020						4.8E-05 (J)	<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	0.00014 (J)						
3/12/2021		5.4E-05 (J)		<0.0005	<0.0005		
3/16/2021			0.00018 (J)				
3/17/2021						5.9E-05 (J)	<0.0005
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							<0.0005
8/16/2021						<0.0005	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						6.2E-05 (J)	<0.0005
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		<0.0005
8/10/2022						6.4E-05 (J)	
1/24/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
1/25/2023						<0.0005	<0.0005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
10/20/2016						<0.0005
10/24/2016	<0.0005					
10/25/2016		<0.0005	<0.0005	<0.0005		
1/31/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
5/23/2017	<0.0005					<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005		
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2018						<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005		
10/3/2018	<0.0005					<0.0005
8/22/2019	<0.0005	<0.0005				<0.0005
8/23/2019			<0.0005	<0.0005		
10/22/2019			<0.0005	<0.0005		<0.0005
10/23/2019	<0.0005	<0.0005				
3/25/2020	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
8/26/2020						<0.0005
8/27/2020	5E-05 (J)	<0.0005	<0.0005	<0.0005		
9/24/2020	8.8E-05 (J)	<0.0005	<0.0005			
9/25/2020				<0.0005		
9/28/2020						<0.0005
3/17/2021				<0.0005		
3/18/2021	6.1E-05 (J)	<0.0005	<0.0005			9.3E-05 (J)
8/12/2021					<0.0005	
8/13/2021		<0.0005	<0.0005	<0.0005		<0.0005
8/16/2021	<0.0005					
9/27/2021					<0.0005	
2/2/2022	7.7E-05 (J)		<0.0005	<0.0005		
2/3/2022		<0.0005			<0.0005	<0.0005
8/5/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/25/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Boron, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.04	<0.04	<0.04				
8/31/2016						0.0724 (J)	
10/20/2016	0.016 (J)					0.0877 (J)	
10/24/2016		0.0367 (J)	0.0226 (J)				
1/25/2017	0.0095 (J)	0.0075 (J)	0.009 (J)				
1/31/2017						0.0928	
5/23/2017		0.0073 (J)	0.0082 (J)			0.0795	
5/24/2017	0.0094 (J)						
8/10/2017	<0.04	<0.04	0.0061 (J)			0.0814	
11/13/2017	0.0103 (J)	0.0089 (J)					
11/14/2017			0.012 (J)			0.108	
6/4/2018	0.0065 (J)	0.007 (J)					
6/5/2018			0.0085 (J)				
6/6/2018						0.081	
10/1/2018	0.0054 (J)	<0.04	0.0042 (J)				
10/3/2018						0.092	
4/1/2019	0.0076 (J)						
4/2/2019		0.0043 (J)	0.0059 (J)				
4/4/2019						0.06 (X)	
10/21/2019	0.0097 (J)						
10/22/2019		0.016 (J)	0.01 (J)				
10/23/2019						0.1	3.1
1/3/2020							3.4
3/4/2020							3.7
3/24/2020	0.011 (J)	0.012 (J)					2.4
3/25/2020						0.08 (J)	
4/9/2020			0.012 (J)				
6/18/2020							2.9
7/21/2020							3
8/27/2020							2.7
9/18/2020	0.011 (J)	0.008 (J)		0.0082 (J)	0.015 (J)		
9/22/2020			0.021 (J)				
9/24/2020						0.1	2.9
11/10/2020				0.0064 (J)			
11/11/2020					0.014 (J)		
12/15/2020				<0.04	0.0083 (J)		
1/19/2021				0.015 (J)	0.015 (J)		
3/11/2021	0.01 (J)						
3/12/2021		0.0061 (J)		0.0067 (J)	0.012 (J)		
3/16/2021			0.011 (J)				
3/17/2021						0.13	2.7
8/12/2021	<0.04	<0.04	<0.04	<0.04	0.012 (J)		
8/13/2021							2.4
8/16/2021						0.13	
1/31/2022	0.0099 (J)			<0.04	0.011 (J)		
2/1/2022		0.011 (J)	0.012 (J)				
2/2/2022						0.14	2.6
8/2/2022			<0.04	<0.04			
8/5/2022	<0.04	0.012 (J)			0.011 (J)		2.9
8/10/2022						0.17	
1/24/2023	<0.04	<0.04	<0.04	<0.04	<0.04		
1/25/2023						0.12	2.5

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Boron, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	2.22	1.14	0.651	0.402		0.681
10/20/2016						0.697
10/24/2016	1.83					
10/25/2016		1.21	0.778	0.372		
1/31/2017	2.12	1.43	0.782	0.404		0.768
5/23/2017	2.56					0.754
5/24/2017		1.3	0.753	0.415		
8/10/2017	2.28	1.28	0.702	0.397		0.608
11/14/2017	2.32	1.29	0.78	0.366		0.691
6/6/2018	2.5	1.4	0.87	0.48		
6/7/2018						0.57
10/2/2018		1.2	0.82	0.43		
10/3/2018	2.4					0.51
4/3/2019			0.89	0.4		
4/4/2019	2.4	1.4 (X)				
4/5/2019						0.6 (X)
6/17/2019	2.3		0.86	0.37		
10/22/2019			0.91	0.32		0.65
10/23/2019	2.3	1.3				
3/25/2020	2.3	1.4	0.87	0.36		0.7
9/24/2020	2.2	1.2	0.88			
9/25/2020				0.28		
9/28/2020						0.65
3/17/2021				0.26		
3/18/2021	2.4	1.5	0.92			0.81
8/12/2021					0.34	
8/13/2021		1.2	0.73	0.24		0.59
8/16/2021	3.2					
9/27/2021					0.3	
2/2/2022	3.1		0.85	0.25		
2/3/2022		1.4			0.34	0.77
8/5/2022	3.6	1.3	0.79	0.25	0.34	0.57
1/25/2023	2.7	1.3	0.82	0.22	0.27	0.62

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						0.0002 (J)	
10/20/2016	<0.0005					0.0003 (J)	
10/24/2016		<0.0005	<0.0005				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						0.0001 (J)	
5/23/2017		<0.0005	<0.0005			0.0002 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			0.0002 (J)	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						9.5E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						0.00018 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						0.00014 (J)	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						0.0002 (J)	0.00026 (J)
1/3/2020							0.0002 (J)
3/4/2020							0.00026 (J)
3/24/2020	<0.0005	<0.0005					0.00068 (J)
3/25/2020						0.00014 (J)	
4/9/2020			<0.0005				
6/18/2020							0.00047 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						0.00019 (J)	0.00038 (J)
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			<0.0005				
9/24/2020						0.00014 (J)	0.00032 (J)
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	<0.0005						
3/12/2021		<0.0005		<0.0005	<0.0005		
3/16/2021			<0.0005				
3/17/2021						<0.0005	0.00094
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							0.00069
8/16/2021						0.00015 (J)	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						<0.0005	0.00055
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		0.00044 (J)
8/10/2022						0.00011 (J)	
1/24/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
1/25/2023						0.00011 (J)	0.00035 (J)

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0006 (J)	<0.0005	0.0001 (J)	<0.0005		<0.0005
10/20/2016						<0.0005
10/24/2016	0.0008 (J)					
10/25/2016		<0.0005	8E-05 (J)	<0.0005		
1/31/2017	0.0006 (J)	<0.0005	9E-05 (J)	<0.0005		<0.0005
5/23/2017	0.0006 (J)					<0.0005
5/24/2017		<0.0005	0.0001 (J)	<0.0005		
8/10/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005		<0.0005
11/14/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005		<0.0005
6/6/2018	0.00073 (J)	<0.0005	0.00012 (J)	<0.0005		
6/7/2018						<0.0005
10/2/2018		<0.0005	0.0001 (J)	<0.0005		
10/3/2018	0.00078 (J)					<0.0005
8/22/2019	0.0008 (J)	<0.0005				<0.0005
8/23/2019			0.00011 (J)	<0.0005		
10/22/2019			<0.0005	<0.0005		<0.0005
10/23/2019	0.00091 (J)	<0.0005				
3/25/2020	0.00068 (J)	<0.0005	<0.0005	<0.0005		<0.0005
8/26/2020						<0.0005
8/27/2020	0.00082 (J)	<0.0005	<0.0005	<0.0005		
9/24/2020	0.00076 (J)	<0.0005	<0.0005			
9/25/2020				<0.0005		
9/28/2020						<0.0005
3/17/2021				<0.0005		
3/18/2021	0.00068	<0.0005	<0.0005			<0.0005
8/12/2021					0.00016 (J)	
8/13/2021		<0.0005	<0.0005	<0.0005		<0.0005
8/16/2021	0.00081					
9/27/2021					<0.0005	
2/2/2022	0.0008		<0.0005	<0.0005		
2/3/2022		<0.0005			<0.0005	<0.0005
8/5/2022	0.00081	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/25/2023	0.00063	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Calcium, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	40.3	6.69	6.72				
8/31/2016						19.4	
10/20/2016	38.7					19.3	
10/24/2016		6.25	6.4				
1/25/2017	44.6	6.58	6.87				
1/31/2017						19.1	
5/23/2017		6.4	7.13			18.3	
5/24/2017	34.8						
8/10/2017	48.6	6.54	6.71			20.9	
11/13/2017	17.1	6.26					
11/14/2017			7.4			21.7	
6/4/2018	30.1	7.4					
6/5/2018			7.4				
6/6/2018						17	
10/1/2018	14.2 (J)	5.8	6.2				
10/3/2018						19.1 (J)	
4/1/2019	58.4						
4/2/2019		6.7	7.4				
4/4/2019						16.9	
10/21/2019	51						
10/22/2019		6.3	7.2				
10/23/2019						21.9	136
1/3/2020							118
3/4/2020							144
3/24/2020	61.2	7					103
3/25/2020						18.4	
4/9/2020			8.3				
6/18/2020							124
7/21/2020							120
8/27/2020							106
9/18/2020	32.2	6.5		62.2	51.8		
9/22/2020			7.9				
9/24/2020						20.3	120
11/10/2020				73.3			
11/11/2020					61.3		
12/15/2020				72.5	61.3		
1/19/2021				72.5	58.9		
3/11/2021	53.2						
3/12/2021		6.9		69.2	57.5		
3/16/2021			8.6				
3/17/2021						21.8	111
8/12/2021	45.4	6.9	8.4	71.2	59.5		
8/13/2021							119
8/16/2021						22.8	
1/31/2022	58.6			73.8	63.2		
2/1/2022		7.4	8.6				
2/2/2022						23.8	116
8/2/2022			8	73			
8/5/2022	53	7.1			59.6		127
8/10/2022						24.6	
1/24/2023	55.4	6.6	7.5	69.2	57.8		
1/25/2023						20.4	128

Time Series

Constituent: Calcium, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	70.4	74.2	44.7	35.1		79.3
10/20/2016						83.7
10/24/2016	70.9					
10/25/2016		72.5	49	35.4		
1/31/2017	63.6	70.3	46.6	34.2		76.8
5/23/2017	111					77.2
5/24/2017		75.9	49.5	35.3		
8/10/2017	81.2	84	54.2	43.1		83.1
11/14/2017	79.7	87.2	53.2	37.4		86.7
6/6/2018	88.3	81	55	41.1		
6/7/2018						79.7
10/2/2018		84.7	55.4	42.5		
10/3/2018	85.3					77.1
4/3/2019			54	37.5		
4/4/2019	91.9	73.8				
4/5/2019						82
6/17/2019	92.6	81.2	55.3			
6/18/2019						76.5
10/22/2019			58.1	42.6		84.2
10/23/2019	86.5	89.4				
3/25/2020	86.8	91.4	59.5	42.6		86.8
9/24/2020	91.3	92.9	55.4			
9/25/2020				48.5		
9/28/2020						88.9
3/17/2021				37.3		
3/18/2021	83.7	97.7	56			85.4
8/12/2021					50.7	
8/13/2021		102	57.8	43.5		84.3
8/16/2021	124					
9/27/2021					47.2	
2/2/2022	104		62	45.7		
2/3/2022		115			68.2	84.5
8/5/2022	128	121	63	50.8	68.6	88.5
1/25/2023	109	113	57.8	42.4	64.5	81.8

Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	3.3	5.4	2				
8/31/2016						5.7	
10/20/2016	3.2					5.7	
10/24/2016		5.2	1.9				
1/25/2017	2.7	5	1.9				
1/31/2017						5.8	
5/23/2017		5.1	1.6			5.3	
5/24/2017	3						
8/10/2017	2.8	5.2	1.7			5.4	
11/13/2017	2.5	5.5					
11/14/2017			2			5.8	
6/4/2018	2.6	5.3					
6/5/2018			1.7				
6/6/2018						5.3	
10/1/2018	2.2	5.6	1.6				
10/3/2018						5.8	
4/1/2019	4						
4/2/2019		5.7	1.8				
4/4/2019						5.9	
10/21/2019	3.9						
10/22/2019		5.5	1.9				
10/23/2019						5.5	7.9
1/3/2020							7
3/4/2020							7.1
3/24/2020	3.6	5.2					6.5
3/25/2020						5.2	
4/9/2020			1.4				
6/18/2020							6.9
7/21/2020							7.2
8/27/2020							7.1
9/18/2020	2.6	5.2		2.7	2.6		
9/22/2020			1.5				
9/24/2020						5.5	7.2
11/10/2020				2.7			
11/11/2020					2.6		
12/15/2020				2.9	2.7		
1/19/2021				2.8	2.7		
3/11/2021	3.4						
3/12/2021		5.3		2.7	2.6		
3/16/2021			1.6				
3/17/2021						5.5	6.9
8/12/2021	2.5	4.4	1.5	2.3	2.2		
8/13/2021							6
8/16/2021						5.4	
1/31/2022	3			2.6	2.5		
2/1/2022		5.2	1.6				
2/2/2022						5.3	7.2
8/2/2022			1.8	3			
8/5/2022	2.7	5			2.4		7.7
8/10/2022						5.5	
1/24/2023	3.6	5.6	1.8	3	2.8		
1/25/2023						5.7	7.8

Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	5.2	3	3.2	5		4.5
10/20/2016						4.4
10/24/2016	5.2					
10/25/2016		2.8	3.2	4.8		
1/31/2017	5.6	3.3	3.1	5.5		4.8
5/23/2017	5.7					4.3
5/24/2017		3.5	2.9	5.3		
8/10/2017	5.8	2.9	2.8	4.6		4.2
11/14/2017	6	4	3.4	5.6		4.4
6/6/2018	6.4	2.9	2.8	5.3		
6/7/2018						4.1
10/2/2018		3.5	3.2	5.3		
10/3/2018	6.3					4.4
4/3/2019			3.6	5		
4/4/2019	6.9	3.9				
4/5/2019						4.3
6/17/2019	5.2		2.9			
10/22/2019			3.6	4.6		4.5
10/23/2019	6.1	3.6				
3/25/2020	5.1	3.2	3	3.9		3.6
9/24/2020	6	3.9	3.5			
9/25/2020				4.1		
9/28/2020						4
3/17/2021				4.7		
3/18/2021	6.2	4.3	3.2			4.3
8/12/2021					6.3	
8/13/2021		3.7	3.1	4		4
8/16/2021	10.4					
9/27/2021					4.5	
2/2/2022	7.1		2.9	4.1		
2/3/2022		4.8			7.8	3.9
8/5/2022	7.8	5	2.7	3.7	7.4	3.8
1/25/2023	8	6	3.3	4.3	5.9	4.3

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	0.0038 (J)	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		0.0039 (J)	0.001 (J)				
1/25/2017	0.0029 (J)	0.0038 (J)	0.0012 (J)				
1/31/2017						<0.005	
5/23/2017		0.0038 (J)	0.0012 (J)			0.0006 (J)	
5/24/2017	0.0004 (J)						
8/10/2017	<0.005	0.0039 (J)	0.0019 (J)			<0.005	
11/13/2017	<0.005	0.0038 (J)					
11/14/2017			0.0016 (J)			<0.005	
6/4/2018	<0.005	0.0037 (J)					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	0.0036 (J)	0.0023 (J)				
10/3/2018						<0.005	
8/21/2019	0.00061 (J)	0.0039 (J)	0.0022 (J)				
8/22/2019						0.00064 (J)	
10/21/2019	0.0012 (J)						
10/22/2019		0.004 (J)	0.0023 (J)				
10/23/2019						<0.005	<0.005
1/3/2020							0.00063 (J)
3/4/2020							<0.005
3/24/2020	0.0019 (J)	0.0044 (J)					0.00051 (J)
3/25/2020						0.00098 (J)	
4/9/2020			0.0031 (J)				
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	0.0013 (J)	0.0039 (J)	0.0031 (J)				
8/27/2020						<0.005	<0.005
9/18/2020	0.00077 (J)	0.0037 (J)		0.0039 (J)	<0.005		
9/22/2020			0.0046 (J)				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.0013 (J)		
1/19/2021				<0.005	0.0015 (J)		
3/11/2021	0.002 (J)						
3/12/2021		0.0045 (J)		<0.005	0.00062 (J)		
3/16/2021			0.0061				
3/17/2021						0.00075 (J)	<0.005
8/12/2021	<0.005	0.0041 (J)	<0.005	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		0.0043 (J)	0.0013 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0013 (J)	<0.005			
8/5/2022	<0.005	0.0045 (J)			<0.005		<0.005
8/10/2022						<0.005	
1/24/2023	<0.005	0.0041 (J)	0.0036 (J)	<0.005	<0.005		
1/25/2023						<0.005	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005		<0.005
10/20/2016						<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	<0.005		
1/31/2017	<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	<0.005					<0.005
5/24/2017		<0.005	<0.005	<0.005		
8/10/2017	<0.005	<0.005	<0.005	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	<0.005		
10/3/2018	<0.005					<0.005
8/22/2019	0.00063 (J)	<0.005				<0.005
8/23/2019			<0.005	<0.005		
10/22/2019			<0.005	0.00062 (J)		0.00066 (J)
10/23/2019	0.0015 (J)	0.0004 (J)				
3/25/2020	0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)		0.00081 (J)
8/26/2020						0.00098 (J)
8/27/2020	0.00069 (J)	<0.005	<0.005	<0.005		
9/24/2020	0.00081 (J)	0.00064 (J)	<0.005			
9/25/2020				<0.005		
9/28/2020						0.0017 (J)
3/17/2021				<0.005		
3/18/2021	0.003 (J)	0.00058 (J)	<0.005			0.0021 (J)
8/12/2021					<0.005	
8/13/2021		<0.005	<0.005	<0.005		<0.005
8/16/2021	<0.005					
9/27/2021					<0.005	
2/2/2022	0.0013 (J)		<0.005	<0.005		
2/3/2022		<0.005			<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0006 (J)				
8/31/2016						0.0033 (J)	
10/20/2016	<0.005					0.0025 (J)	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						0.001 (J)	
5/23/2017		<0.005	<0.005			0.0025 (J)	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0004 (J)			0.0029 (J)	
11/13/2017	<0.005	<0.005					
11/14/2017			0.0003 (J)			0.003 (J)	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						0.0016 (J)	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						0.0028 (J)	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						0.0023 (J)	0.0018 (J)
1/3/2020							0.0038 (J)
3/4/2020							0.0021 (J)
3/24/2020	<0.005	<0.005					0.0019 (J)
3/25/2020						0.0021 (J)	
4/9/2020			0.00037 (J)				
6/18/2020							0.0012 (J)
7/21/2020							0.00098 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						0.0027 (J)	0.001 (J)
9/18/2020	<0.005	<0.005		0.00049 (J)	<0.005		
9/22/2020			0.00074 (J)				
9/24/2020						0.0021 (J)	0.0011 (J)
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.00039 (J)		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	<0.005		
3/16/2021			0.0013 (J)				
3/17/2021						0.0023 (J)	0.0012 (J)
8/12/2021	<0.005	<0.005	<0.005	<0.005	<0.005		
8/13/2021							0.00085 (J)
8/16/2021						0.0026 (J)	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						0.0027 (J)	0.0019 (J)
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		0.001 (J)
8/10/2022						0.0028 (J)	
1/24/2023	<0.005	<0.005	<0.005	<0.005	<0.005		
1/25/2023						0.0021 (J)	0.0016 (J)

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023 (J)		<0.005
10/20/2016						<0.005
10/24/2016	0.0018 (J)					
10/25/2016		0.0013 (J)	<0.005	0.0017 (J)		
1/31/2017	0.0016 (J)	0.0006 (J)	<0.005	0.0017 (J)		<0.005
5/23/2017	0.0014 (J)					0.0005 (J)
5/24/2017		0.0007 (J)	<0.005	0.002 (J)		
8/10/2017	0.0025 (J)	0.0006 (J)	<0.005	0.0012 (J)		0.0003 (J)
11/14/2017	0.002 (J)	0.0005 (J)	<0.005	0.0014 (J)		0.0004 (J)
6/6/2018	0.0031 (J)	0.00056 (J)	<0.005	0.0014 (J)		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	0.00081 (J)		
10/3/2018	0.0023 (J)					<0.005
8/22/2019	0.0019 (J)	<0.005				0.0003 (J)
8/23/2019			<0.005	0.0027 (J)		
10/22/2019			<0.005	0.0022 (J)		0.00061 (J)
10/23/2019	0.0021 (J)	0.00038 (J)				
3/25/2020	0.0022 (J)	0.00047 (J)	<0.005	0.0022 (J)		<0.005
8/26/2020						0.00061 (J)
8/27/2020	0.0019 (J)	<0.005	<0.005	0.00086 (J)		
9/24/2020	0.0019 (J)	0.00044 (J)	<0.005			
9/25/2020				0.001 (J)		
9/28/2020						0.00048 (J)
3/17/2021				0.003 (J)		
3/18/2021	0.0021 (J)	0.00045 (J)	<0.005			0.0012 (J)
8/12/2021					0.0024 (J)	
8/13/2021		<0.005	<0.005	0.0011 (J)		<0.005
8/16/2021	0.0022 (J)					
9/27/2021					0.0011 (J)	
2/2/2022	0.0022 (J)		<0.005	0.002 (J)		
2/3/2022		<0.005			0.00041 (J)	0.00045 (J)
8/5/2022	0.0021 (J)	<0.005	<0.005	0.0008 (J)	0.0011 (J)	<0.005
1/25/2023	0.0017 (J)	0.00046 (J)	<0.005	0.0016 (J)	0.00048 (J)	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.804 (U)	1.32 (U)	0.587 (U)				
8/31/2016						0.621 (U)	
10/20/2016	1.13 (U)					1.4	
10/24/2016		1.3 (U)	0.979 (U)				
1/25/2017	0.888 (U)	1.04 (U)	0.038 (U)				
1/31/2017						0.906 (U)	
5/23/2017		0.541 (U)	0.898 (U)			0.388 (U)	
5/24/2017	0.622 (U)						
8/10/2017	0.745 (U)	0.536 (U)	0.759 (U)			1.03 (U)	
11/13/2017	0.778 (U)	0.786 (U)					
11/14/2017			0.0762 (U)			0.769 (U)	
6/4/2018	0.637 (U)	0.233 (U)					
6/5/2018			0.594 (U)				
6/6/2018						1.28 (U)	
10/1/2018	0.451 (U)	0.494 (U)	0.982				
10/3/2018						0.302 (U)	
8/21/2019	0.553 (U)	0.514 (U)	0.492 (U)				
8/22/2019						0.474 (U)	
10/21/2019	0.351 (U)						
10/22/2019		0.828 (U)	0.523 (U)				
10/23/2019						0.776 (U)	0.858 (U)
1/22/2020							1.04 (U)
3/4/2020							1.32
3/24/2020	0.26 (U)	0.677 (U)					1.23 (U)
3/25/2020						0.603 (U)	
4/9/2020			0.617 (U)				
7/21/2020							0.0938 (U)
8/25/2020	0.57 (U)	0.0182 (U)	0.587 (U)				
8/27/2020						0.109 (U)	1.17 (U)
9/18/2020	0.828 (U)	1.15 (U)		1.11 (U)	1.5 (U)		
9/22/2020			0.551 (U)				
9/24/2020						0.625 (U)	1.42
11/10/2020				0.234 (U)			
11/11/2020					0.776 (U)		
12/15/2020				0.529 (U)	1.23 (U)		
1/19/2021				0.176 (U)	1.35 (U)		
3/11/2021	0.354 (U)						
3/12/2021		0.164 (U)		0 (U)	0.829 (U)		
3/16/2021			0.559 (U)				
3/17/2021						0.248 (U)	0.401 (U)
8/12/2021	0.532 (U)	0.223 (U)	0.312 (U)	0.462 (U)	0.274 (U)		
8/13/2021							0.828 (U)
8/16/2021						0.667 (U)	
1/31/2022	0.279 (U)			0.444 (U)	0.196 (U)		
2/1/2022		0.0793 (U)	0.132 (U)			0.162 (U)	0.806 (U)
8/2/2022			0.791 (U)	0.491 (U)			
8/5/2022	0.573 (U)	0.665 (U)			0.599 (U)		0.618 (U)
8/10/2022						0.601 (U)	
1/24/2023	0.19 (U)	0.331 (U)	0.529 (U)	0.391 (U)	0.856		
1/25/2023						0.419 (U)	0.513 (U)

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	1.62	0.906 (U)	1.2	1.03		
10/20/2016						1.97
10/24/2016	1.01 (U)					
10/25/2016		1.03	1.11 (U)	1.07		
1/31/2017	0.976 (U)	0.868 (U)	1.45	0.588 (U)		1.03
5/23/2017	0.891 (U)					0.398 (U)
5/24/2017		0.728 (U)	0.393 (U)	0.593 (U)		
8/10/2017	0.601 (U)	1.35	0.84 (U)	0.691 (U)		0.938 (U)
11/14/2017	0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)		0.335 (U)
6/6/2018	0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)		
6/7/2018						0.696 (U)
10/2/2018		0.336 (U)	1.23	0.225 (U)		
10/3/2018	0.111 (U)					1.6 (U)
8/22/2019	0.946 (U)	0.694 (U)				0.904 (U)
8/23/2019			1.69	0.47 (U)		
10/22/2019			0.705 (U)	0.545 (U)		0.424 (U)
10/23/2019	0.571 (U)	0.584 (U)				
3/25/2020	0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)		0.915 (U)
8/26/2020						1.19
8/27/2020	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)		
9/24/2020	0.804 (U)	1.11 (U)	0.576 (U)			
9/25/2020				0.584 (U)		
9/28/2020						0.613 (U)
3/17/2021				0.556 (U)		
3/18/2021	0.274 (U)	0.252 (U)	0.145 (U)			0.323 (U)
8/12/2021					0.124 (U)	
8/13/2021		0.513 (U)	0.815 (U)	0.794 (U)		0.228 (U)
8/16/2021	0.493 (U)					
9/27/2021					1.05 (U)	
2/1/2022	0.569 (U)		0.0564 (U)	0.542 (U)		
2/3/2022		0.835			0.499 (U)	0.5 (U)
8/5/2022	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0 (U)	0.206 (U)
1/25/2023	0.568 (U)	0.432 (U)	0.71 (U)	0.195 (U)	0.595 (U)	1.44

Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)				
8/31/2016						0.05 (J)	
10/20/2016	0.07 (J)					0.03 (J)	
10/24/2016		0.05 (J)	0.16 (J)				
1/25/2017	0.14 (J)	<0.1	0.15 (J)				
1/31/2017						<0.1	
5/23/2017		0.004 (J)	0.18 (J)			<0.1	
5/24/2017	0.02 (J)						
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)			<0.1	
11/13/2017	<0.1	<0.1					
11/14/2017			0.16 (J)			<0.1	
6/4/2018	0.032 (J)	<0.1					
6/5/2018			0.18 (J)				
6/6/2018						<0.1	
10/1/2018	<0.1	<0.1	0.078 (J)				
10/3/2018						<0.1	
4/1/2019	0.042 (J)						
4/2/2019		<0.1	0.18 (J)				
4/4/2019						<0.1	
8/21/2019	0.048 (J)	<0.1	0.11 (J)				
8/22/2019						<0.1	
10/21/2019	0.12 (J)						
10/22/2019		0.05 (J)	0.18 (J)				
10/23/2019						<0.1	0.22 (J)
1/3/2020							<0.1
3/4/2020							<0.1
3/24/2020	0.076 (J)	<0.1					<0.1
3/25/2020						<0.1	
4/9/2020			0.14 (J)				
6/18/2020							<0.1
7/21/2020							<0.1
8/25/2020	0.052 (J)	<0.1	0.17				
8/27/2020						<0.1	<0.1
9/18/2020	<0.1	<0.1		0.067 (J)	0.098 (J)		
9/22/2020			0.16				
9/24/2020						<0.1	<0.1
11/10/2020				0.065 (J)			
11/11/2020					0.083 (J)		
12/15/2020				0.064 (J)	0.081 (J)		
1/19/2021				0.057 (J)	0.079 (J)		
3/11/2021	0.057 (J)						
3/12/2021		<0.1		0.062 (J)	0.085 (J)		
3/16/2021			0.18				
3/17/2021						<0.1	<0.1
8/12/2021	<0.1	<0.1	0.16	<0.1	0.064 (J)		
8/13/2021							<0.1
8/16/2021						<0.1	
1/31/2022	0.055 (J)			0.053 (J)	0.072 (J)		
2/1/2022		<0.1	0.16				
2/2/2022						<0.1	<0.1
8/2/2022			0.19	0.08 (J)			
8/5/2022	0.1	0.077 (J)			0.12		0.076 (J)

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2022						0.065 (J)	
1/24/2023	0.086 (J)	0.055 (J)	0.2	0.081 (J)	0.092 (J)		
1/25/2023						<0.1	<0.1

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)		0.18 (J)
10/20/2016						0.12 (J)
10/24/2016	0.13 (J)					
10/25/2016		0.09 (J)	0.16 (J)	0.17 (J)		
1/31/2017	<0.1	0.13 (J)	0.16 (J)	0.05 (J)		0.3
5/23/2017	0.15 (J)					0.14 (J)
5/24/2017		0.07 (J)	0.009 (J)	0.13 (J)		
8/10/2017	<0.1	0.03 (J)	<0.1	0.12 (J)		0.11 (J)
11/14/2017	<0.1	<0.1	<0.1	<0.3		0.07 (J)
6/6/2018	<0.1	0.074 (J)	0.057 (J)	0.15 (J)		
6/7/2018						0.3
10/2/2018		<0.1	<0.1	<0.3		
10/3/2018	<0.1					0.12 (J)
4/3/2019			<0.1	0.05 (J)		
4/4/2019	0.042 (J)	0.03 (J)				
4/5/2019						0.33
6/18/2019						0.89
8/22/2019	<0.1	<0.1				0.07 (J)
8/23/2019			<0.1	0.034 (J)		
10/22/2019			0.047 (J)	0.099 (J)		0.087 (J)
10/23/2019	<0.1	<0.1				
3/25/2020	<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)
8/26/2020						0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	0.094 (J)		
9/24/2020	<0.1	<0.1	0.064 (J)			
9/25/2020				0.091 (J)		
9/28/2020						0.078 (J)
3/17/2021				0.089 (J)		
3/18/2021	<0.1	<0.1	<0.1			0.079 (J)
8/12/2021					<0.1	
8/13/2021		<0.1	<0.1	0.086 (J)		0.075 (J)
8/16/2021	<0.1					
9/27/2021					<0.1	
2/2/2022	<0.1		<0.1	0.086 (J)		
2/3/2022		<0.1			0.056 (J)	0.069 (J)
8/5/2022	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.12	0.12
1/25/2023	<0.1	0.051 (J)	0.054 (J)	0.12	0.085 (J)	0.095 (J)

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Lead (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0001 (J)	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			0.0009 (J)	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	0.0001 (J)			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	7.1E-05 (J)				
8/22/2019						<0.001	
10/21/2019	0.00016 (J)						
10/22/2019		<0.001	7.3E-05 (J)				
10/23/2019						<0.001	<0.001
1/3/2020							<0.001
3/4/2020							0.00011 (J)
3/24/2020	0.00058 (J)	0.00016 (J)					<0.001
3/25/2020						<0.001	
4/9/2020			0.00039 (J)				
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	0.00036 (J)	0.00011 (J)	0.00022 (J)				
8/27/2020						<0.001	<0.001
9/18/2020	0.00026 (J)	6.5E-05 (J)		<0.001	<0.001		
9/22/2020			0.00096 (J)				
9/24/2020						<0.001	<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	0.00015 (J)		
1/19/2021				3.8E-05 (J)	5.6E-05 (J)		
3/11/2021	0.0011						
3/12/2021		0.00017 (J)		<0.001	4.8E-05 (J)		
3/16/2021			0.0016				
3/17/2021						<0.001	<0.001
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	
1/24/2023	<0.001	<0.001	<0.001	<0.001	<0.001		
1/25/2023						<0.001	<0.001

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Lead (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001		<0.001
10/20/2016						<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001					<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001		<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001		<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018						<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001					<0.001
8/22/2019	<0.001	<0.001				<0.001
8/23/2019			<0.001	5.8E-05 (J)		
10/22/2019			7.9E-05 (J)	5.4E-05 (J)		0.00025 (J)
10/23/2019	0.00043 (J)	6.8E-05 (J)				
3/25/2020	7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001		0.0001 (J)
8/26/2020						0.00036 (J)
8/27/2020	0.00018 (J)	<0.001	<0.001	<0.001		
9/24/2020	0.00028 (J)	4.9E-05 (J)	0.00034 (J)			
9/25/2020				<0.001		
9/28/2020						0.00022 (J)
3/17/2021				<0.001		
3/18/2021	0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)			0.00088 (J)
8/12/2021					<0.001	
8/13/2021		<0.001	<0.001	<0.001		<0.001
8/16/2021	<0.001					
9/27/2021					<0.001	
2/2/2022	<0.001		<0.001	<0.001		
2/3/2022		<0.001			<0.001	<0.001
8/5/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/25/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0022 (J)	<0.03	<0.03				
8/31/2016						<0.03	
10/20/2016	<0.03					<0.03	
10/24/2016		<0.03	<0.03				
1/25/2017	<0.03	<0.03	<0.03				
1/31/2017						<0.03	
5/23/2017		<0.03	0.0011 (J)			<0.03	
5/24/2017	0.0017 (J)						
8/10/2017	0.0017 (J)	<0.03	<0.03			<0.03	
11/13/2017	<0.03	<0.03					
11/14/2017			<0.03			<0.03	
6/4/2018	0.0016 (J)	<0.03					
6/5/2018			0.001 (J)				
6/6/2018						<0.03	
10/1/2018	<0.03	<0.03	0.001 (J)				
10/3/2018						<0.03	
8/21/2019	0.0018 (J)	<0.03	0.0011 (J)				
8/22/2019						<0.03	
10/21/2019	0.0026 (J)						
10/22/2019		<0.03	0.0011 (J)				
10/23/2019						<0.03	0.0012 (J)
1/3/2020							0.0011 (J)
3/4/2020							0.0013 (J)
3/24/2020	0.0039 (J)	<0.03					0.00084 (J)
3/25/2020						<0.03	
4/9/2020			0.0017 (J)				
6/18/2020							0.0013 (J)
7/21/2020							0.0013 (J)
8/25/2020	0.0033 (J)	<0.03	0.0014 (J)				
8/27/2020						<0.03	0.0011 (J)
9/18/2020	0.0021 (J)	<0.03		0.0026 (J)	0.0051 (J)		
9/22/2020			0.0018 (J)				
9/24/2020						<0.03	0.0011 (J)
11/10/2020				0.0028 (J)			
11/11/2020					0.0036 (J)		
12/15/2020				0.0026 (J)	0.0045 (J)		
1/19/2021				0.003 (J)	0.0032 (J)		
3/11/2021	0.0047 (J)						
3/12/2021		<0.03		0.0031 (J)	0.0031 (J)		
3/16/2021			0.0026 (J)				
3/17/2021						<0.03	0.0012 (J)
8/12/2021	0.002 (J)	<0.03	0.00094 (J)	0.0029 (J)	0.0037 (J)		
8/13/2021							0.0011 (J)
8/16/2021						<0.03	
1/31/2022	0.0026 (J)			0.0031 (J)	0.0034 (J)		
2/1/2022		<0.03	0.0011 (J)				
2/2/2022						<0.03	0.0013 (J)
8/2/2022			0.00089 (J)	0.0026 (J)			
8/5/2022	0.0019 (J)	<0.03			0.0036 (J)		0.0013 (J)
8/10/2022						<0.03	
1/24/2023	0.0023 (J)	<0.03	0.00091 (J)	0.0029 (J)	0.0046 (J)		
1/25/2023						<0.03	0.001 (J)

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.03	0.0034 (J)	<0.03	<0.03		<0.03
10/20/2016						<0.03
10/24/2016	<0.03					
10/25/2016		0.0043 (J)	<0.03	<0.03		
1/31/2017	<0.03	0.0042 (J)	<0.03	<0.03		<0.03
5/23/2017	0.0012 (J)					0.0012 (J)
5/24/2017		0.0039 (J)	<0.03	0.0012 (J)		
8/10/2017	0.0016 (J)	0.004 (J)	<0.03	<0.03		<0.03
11/14/2017	0.0015 (J)	0.0044 (J)	<0.03	<0.03		<0.03
6/6/2018	0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)		
6/7/2018						0.0015 (J)
10/2/2018		0.0041 (J)	<0.03	0.0013 (J)		
10/3/2018	0.0016 (J)					<0.03
8/22/2019	0.0015 (J)	0.004 (J)				0.0018 (J)
8/23/2019			0.00092 (J)	0.0009 (J)		
10/22/2019			0.00094 (J)	0.00088 (J)		0.0027 (J)
10/23/2019	0.002 (J)	0.0039 (J)				
3/25/2020	0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03		0.0017 (J)
8/26/2020						0.0028 (J)
8/27/2020	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)		
9/24/2020	0.0017 (J)	0.0038 (J)	0.00098 (J)			
9/25/2020				0.001 (J)		
9/28/2020						0.0022 (J)
3/17/2021				<0.03		
3/18/2021	0.0018 (J)	0.0042 (J)	0.0011 (J)			0.0029 (J)
8/12/2021					0.0036 (J)	
8/13/2021		0.0038 (J)	0.00084 (J)	<0.03		0.0017 (J)
8/16/2021	0.0016 (J)					
9/27/2021					0.0035 (J)	
2/2/2022	0.0019 (J)		0.001 (J)	0.00084 (J)		
2/3/2022		0.0046 (J)			0.0051 (J)	0.0015 (J)
8/5/2022	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0038 (J)	0.0018 (J)
1/25/2023	0.0012 (J)	0.0038 (J)	0.00081 (J)	<0.03	0.0037 (J)	0.001 (J)

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	4E-05 (J)	4.1E-05 (J)	4E-05 (J)				
8/31/2016						<0.0002	
10/20/2016	<0.0002					<0.0002	
10/24/2016		<0.0002	<0.0002				
1/25/2017	4E-05 (J)	4E-05 (J)	4E-05 (J)				
1/31/2017						9.3E-05 (J)	
5/23/2017		<0.0002	<0.0002			<0.0002	
5/24/2017	<0.0002						
8/10/2017	<0.0002	<0.0002	<0.0002			<0.0002	
11/13/2017	<0.0002	<0.0002					
11/14/2017			<0.0002			<0.0002	
6/4/2018	<0.0002	<0.0002					
6/5/2018			<0.0002				
6/6/2018						<0.0002	
10/1/2018	4.3E-05 (J)	3.9E-05 (J)	4.3E-05 (J)				
10/3/2018						<0.0002	
8/21/2019	<0.0002	<0.0002	<0.0002				
8/22/2019						<0.0002	
10/23/2019							<0.0002
1/3/2020							<0.0002
3/4/2020							<0.0002
3/24/2020							<0.0002
6/18/2020							<0.0002
7/21/2020							<0.0002
8/25/2020	<0.0002	<0.0002	<0.0002				
8/27/2020						<0.0002	<0.0002
9/18/2020				<0.0002	<0.0002		
9/24/2020							<0.0002
11/10/2020				<0.0002			
11/11/2020					<0.0002		
12/15/2020				<0.0002	<0.0002		
1/19/2021				<0.0002	<0.0002		
8/12/2021	<0.0002	0.00011 (J)	<0.0002	8.1E-05 (J)	0.00018 (J)		
8/13/2021							0.0001 (J)
8/16/2021						9.9E-05 (J)	
1/31/2022	<0.0002			<0.0002	<0.0002		
2/1/2022		<0.0002	<0.0002				
2/2/2022						<0.0002	<0.0002
8/2/2022			<0.0002	<0.0002			
8/5/2022	<0.0002	<0.0002			<0.0002		<0.0002
8/10/2022						<0.0002	
1/24/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
1/25/2023						<0.0002	<0.0002

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
10/20/2016						<0.0002
10/24/2016	<0.0002					
10/25/2016		<0.0002	<0.0002	<0.0002		
1/31/2017	8E-05 (J)	<0.0002	<0.0002	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0002					<0.0002
5/24/2017		<0.0002	<0.0002	<0.0002		
8/10/2017	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2018						<0.0002
10/2/2018		<0.0002	<0.0002	<0.0002		
10/3/2018	<0.0002					<0.0002
8/22/2019	<0.0002	<0.0002				<0.0002
8/23/2019			<0.0002	<0.0002		
8/26/2020						<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002		
8/12/2021					9.4E-05 (J)	
8/13/2021		0.00022	8.4E-05 (J)	8E-05 (J)		8.1E-05 (J)
8/16/2021	0.00027					
9/27/2021					<0.0002	
2/2/2022	<0.0002		<0.0002	<0.0002		
2/3/2022		<0.0002			<0.0002	<0.0002
8/5/2022	0.00017 (J)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/25/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	<0.01				
1/25/2017	<0.01	<0.01	<0.01				
1/31/2017						<0.01	
5/23/2017		<0.01	<0.01			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	<0.01			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	<0.01				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	<0.01				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							<0.01
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				0.0015 (J)	0.0026 (J)		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					0.0012 (J)		
12/15/2020				<0.01	0.00097 (J)		
1/19/2021				<0.01	0.0018 (J)		
8/12/2021	<0.01	<0.01	<0.01	<0.01	0.0019 (J)		
8/13/2021							<0.01
8/16/2021						<0.01	
1/31/2022	<0.01			<0.01	0.002 (J)		
2/1/2022		<0.01	<0.01				
2/2/2022						<0.01	<0.01
8/2/2022			<0.01	<0.01			
8/5/2022	<0.01	<0.01			0.0012 (J)		<0.01
8/10/2022						<0.01	
1/24/2023	<0.01	<0.01	<0.01	<0.01	0.00086 (J)		
1/25/2023						<0.01	<0.01

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01		<0.01
10/20/2016						<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01					<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01		<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01		<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018						<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01					<0.01
8/22/2019	<0.01	<0.01				<0.01
8/23/2019			<0.01	<0.01		
8/26/2020						<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01		
8/12/2021					<0.01	
8/13/2021		<0.01	<0.01	<0.01		<0.01
8/16/2021	<0.01					
9/27/2021					<0.01	
2/2/2022	<0.01		<0.01	<0.01		
2/3/2022		<0.01			<0.01	<0.01
8/5/2022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/25/2023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: pH, Field (s.u.) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	6.89	5.77	5.99				
8/31/2016						5.35	
10/20/2016	6.73					5.3	
10/24/2016		5.61	5.84				
1/25/2017	7.02	5.68	6.04				
1/31/2017						5.24	
5/23/2017		5.7	6.01			5.39	
5/24/2017	6.44						
8/10/2017	6.79	5.59	5.98			5.47	
11/13/2017	5.94	5.56					
11/14/2017			6.16			5.4	
6/4/2018	6.12	5.62					
6/5/2018			5.86				
6/6/2018						5.37	
10/1/2018	5.92	5.62	5.94				
10/3/2018						5.39	
4/1/2019	7.09						
4/2/2019		5.47	6				
4/4/2019						5.31	
6/18/2019						5.3	
8/21/2019	6.6	5.8	6.05				
8/22/2019						5.39	
10/21/2019	7.02						
10/22/2019		5.7	5.98				
10/23/2019						5.33	5.68
1/3/2020							5.64
3/4/2020							5.75
3/24/2020	7.37	5.64					5.58
3/25/2020						5.53	
4/9/2020			6.08				
6/18/2020							5.67
7/21/2020							5.72
8/25/2020	6.7	5.53	5.95				
8/27/2020						5.32	5.7
9/18/2020	6.46	5.58		7.54	7.5		
9/22/2020			6.1				
9/24/2020						5.48	5.82
11/10/2020				7.34			
11/11/2020					7.4		
12/15/2020				7.27	7.39		
1/19/2021				7.32	7.4		
3/11/2021	7.2						
3/12/2021		5.6		7.52	7.51		
3/16/2021			6.14				
3/17/2021						5.41	5.78
8/12/2021	6.67	5.5	6.08	7.38	7.44		
8/13/2021							5.45
8/16/2021						5.4	
1/31/2022	7.17			7.34	7.44		
2/1/2022		5.59	6.05				
2/2/2022						5.51	5.79
8/2/2022			6.08	7.34			

Time Series

Constituent: pH, Field (s.u.) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/5/2022	6.97	5.43			7.4		5.69
8/10/2022						5.37	
1/24/2023	7.11	5.67	6.15	7.38	7.46		
1/25/2023						5.47	5.77

Time Series

Constituent: pH, Field (s.u.) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	5.54	6.5	6.11	6.78		7.03
10/20/2016						7.01
10/24/2016	5.48					
10/25/2016		6.34	6.04	6.55		
1/31/2017	5.51	6.43	5.94	6.5		6.96
5/23/2017	5.98					6.92
5/24/2017		6.31	6.06	6.42		
8/10/2017	5.63	6.45	6.06	6.63		6.99
11/14/2017	5.59	6.53	5.99	6.5		6.9
6/6/2018	5.49	6.49	6	6.59		
6/7/2018						7.03
10/2/2018		6.18	6.18	6.54		
10/3/2018	5.53					7.08
4/3/2019			6.06	6.42		
4/4/2019	5.44	6.17				
4/5/2019						6.96
6/17/2019	5.53					
8/22/2019	5.55	6.04				6.93
8/23/2019			6.26	6.76		
10/22/2019			6.19	6.58		7.03
10/23/2019	5.49	6.46				
3/25/2020	5.49	6.47	6.13	6.56		6.89
8/26/2020						6.97
8/27/2020	5.82	6.45	6.09	6.64		
9/24/2020	5.6	6.63	6.11			
9/25/2020				6.79		
9/28/2020						7.03
3/17/2021				6.55		
3/18/2021	5.51	6.57	6.2			7.11
8/12/2021					6.27	
8/13/2021		6.44	6.11	6.71		6.78
8/16/2021	5.59					
9/27/2021					6.14	
2/2/2022	5.63		6.14	6.65		
2/3/2022		6.48			6.58	6.79
8/5/2022	5.71	6.46	6.07	6.81	6.44	7.07
1/25/2023	5.65	6.41	6.13	6.66	6.53	6.67

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0027 (J)				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	0.0034 (J)				
1/25/2017	<0.005	<0.005	0.0023 (J)				
1/31/2017						<0.005	
5/23/2017		<0.005	0.0024 (J)			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0023 (J)			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.01			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			0.0019 (J)				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	0.0024 (J)				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	0.0025 (J)				
8/22/2019						<0.005	
10/23/2019							<0.005
1/3/2020							0.0015 (J)
3/4/2020							<0.005
3/24/2020							<0.005
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	<0.005	<0.005	<0.01				
8/27/2020						<0.005	<0.005
9/18/2020				<0.005	<0.005		
9/24/2020							<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
8/12/2021	<0.005	<0.005	0.0023 (J)	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	0.0022 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0034 (J)	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	
1/24/2023	<0.005	<0.005	0.0025 (J)	<0.005	<0.005		
1/25/2023						<0.005	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005		<0.005
10/20/2016						<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	<0.005		
1/31/2017	<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	<0.005					<0.005
5/24/2017		<0.005	<0.005	<0.005		
8/10/2017	<0.005	<0.005	<0.005	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	<0.005		
10/3/2018	<0.005					<0.005
8/22/2019	<0.005	<0.005				<0.005
8/23/2019			<0.005	<0.005		
8/26/2020						<0.005
8/27/2020	<0.005	<0.005	<0.005	<0.005		
8/12/2021					<0.005	
8/13/2021		<0.005	<0.005	<0.005		<0.005
8/16/2021	<0.005					
9/27/2021					<0.005	
2/2/2022	<0.005		<0.005	<0.005		
2/3/2022		<0.005			<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	1.6	0.63 (J)	14				
8/31/2016						110	
10/20/2016	1.6					110	
10/24/2016		0.62 (J)	11				
1/25/2017	1.6	0.62 (J)	12				
1/31/2017						120	
5/23/2017		0.55 (J)	12			97	
5/24/2017	1.4						
8/10/2017	1.6	0.66 (J)	11			96	
11/13/2017	1.3	0.61 (J)					
11/14/2017			11			110	
6/4/2018	1.4	0.73 (J)					
6/5/2018			9.9				
6/6/2018						95.5	
10/1/2018	1	0.52 (J)	6.7				
10/3/2018						121	
4/1/2019	1.7						
4/2/2019		0.78 (J)	8.7				
4/4/2019						95.1	
6/18/2019						102	
10/21/2019	1.8						
10/22/2019		0.6 (J)	6.8				
10/23/2019						101	<1
1/3/2020							380
3/4/2020							400
3/24/2020	1.6	<1					311
3/25/2020						85.5	
4/9/2020			6.6				
6/18/2020							349
7/21/2020							378
8/27/2020							382
9/18/2020	1	<1		3.5	9.5		
9/22/2020			5.3				
9/24/2020						97	370
11/10/2020				2.3			
11/11/2020					4.5		
12/15/2020				2.4	4.2		
1/19/2021				2.6	3.9		
3/11/2021	1.5						
3/12/2021		0.52 (J)		1.9	4.7		
3/16/2021			7.7				
3/17/2021						107	332
8/12/2021	1.3	<1	10	1.4	4.3		
8/13/2021							248
8/16/2021						72.1	
1/31/2022	1.5			1.7	5.6		
2/1/2022		0.5 (J)	8.9				
2/2/2022						100	303
8/2/2022			7.5	2.1			
8/5/2022	1.4	<1			3.4		358
8/10/2022						99.5	
1/24/2023	1.9	0.81 (J)	6.6	2.2	2.9		

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
1/25/2023						95	348

Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	280	190	130	36		88
10/20/2016						81
10/24/2016	280					
10/25/2016		190	130	41		
1/31/2017	300	210	130	37		87
5/23/2017	340					84
5/24/2017		180	130	40		
8/10/2017	300	180	130	40		78
11/14/2017	310	170	130	40		79
6/6/2018	351	168	132	49.7		
6/7/2018						60.1
10/2/2018		173	132	42.3		
10/3/2018	381					91.5
4/3/2019			139	36		
4/4/2019	358	185				
4/5/2019						75.1
6/17/2019	311	162	126	30.9		
6/18/2019						77
10/22/2019			123	23.2		80.9
10/23/2019	248	162				
3/25/2020	251	161	116	27.9		78.4
9/24/2020	293	177	126			
9/25/2020				24.7		
9/28/2020						86
3/17/2021				28.3		
3/18/2021	286	196	128			87.8
8/12/2021					64.6	
8/13/2021		142	112	24.4		75.1
8/16/2021	354					
9/27/2021					69.7	
2/2/2022	293		111	25.5		
2/3/2022		195			72.9	72.7
8/5/2022	369	217	120	23	76.1	69.8
1/25/2023	342	230	128	25.4	72.9	73

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.001	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			<0.001	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	<0.001			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	<0.001				
8/22/2019						<0.001	
10/23/2019							<0.001
1/3/2020							8E-05 (J)
3/4/2020							<0.001
3/24/2020							<0.001
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	<0.001	<0.001	<0.001				
8/27/2020						<0.001	<0.001
9/18/2020				<0.001	<0.001		
9/24/2020							<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	<0.001		
1/19/2021				<0.001	<0.001		
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	
1/24/2023	<0.001	<0.001	<0.001	<0.001	<0.001		
1/25/2023						<0.001	<0.001

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001		<0.001
10/20/2016						<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001					<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001		<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001		<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018						<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001					<0.001
8/22/2019	<0.001	<0.001				<0.001
8/23/2019			<0.001	<0.001		
8/26/2020						<0.001
8/27/2020	<0.001	<0.001	<0.001	<0.001		
8/12/2021					<0.001	
8/13/2021		<0.001	<0.001	<0.001		<0.001
8/16/2021	<0.001					
9/27/2021					<0.001	
2/2/2022	<0.001		<0.001	<0.001		
2/3/2022		<0.001			<0.001	<0.001
8/5/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/25/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

ND substitution: RL or RL/2 if <15% NDs.

Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	172	76	77				
8/31/2016						278	
10/20/2016	108					165	
10/24/2016		65	111				
1/25/2017	345	152 (O)	155				
1/31/2017						263	
5/23/2017		52	74			190	
5/24/2017	126						
8/10/2017	174	60	94			175	
11/13/2017	158	75					
11/14/2017			89			253	
6/4/2018	131	70					
6/5/2018			92				
6/6/2018						188	
10/1/2018	101	76	91				
10/3/2018						238	
4/1/2019	213						
4/2/2019		69	94				
4/4/2019						149	
10/21/2019	187						
10/22/2019		81	95				
10/23/2019						221	736
1/3/2020							714
3/4/2020							764
3/24/2020	207	52					521
3/25/2020						187	
4/9/2020			48				
6/18/2020							652
7/21/2020							669
8/27/2020							663
9/18/2020	139	62		195	224		
9/22/2020			84				
9/24/2020						170	696
11/10/2020				229			
11/11/2020					221		
12/15/2020				233	239		
1/19/2021				199	224		
3/11/2021	207						
3/12/2021		56		217	204		
3/16/2021			99				
3/17/2021						213	626
8/12/2021	157	63	92	212	234		
8/13/2021							647
8/16/2021						206	
1/31/2022	186			243	223		
2/1/2022		73	99				
2/2/2022						220	602
8/2/2022			85	222			
8/5/2022	171	44			224		696
8/10/2022						232	
1/24/2023	177	96	146	223	230		
1/25/2023						186	664

Time Series

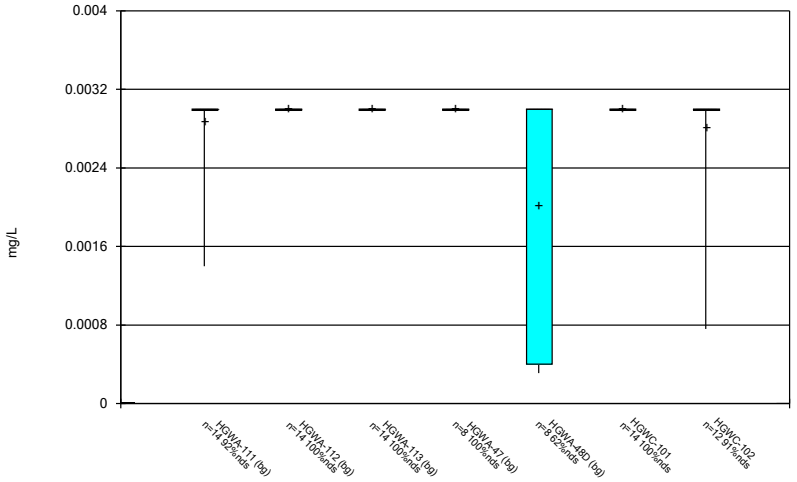
Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/16/2023 1:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	483	389	235	182		373
10/20/2016						305
10/24/2016	517					
10/25/2016		316	223	172		
1/31/2017	516	437	346	252		361
5/23/2017	637					359
5/24/2017		352	234	184		
8/10/2017	459	356	254	208		325
11/14/2017	545	375	313	252		373
6/6/2018	559	385	278	224		
6/7/2018						338
10/2/2018		374	274	230		
10/3/2018	582					328
4/3/2019			273	210		
4/4/2019	535	340				
4/5/2019						308
6/17/2019	515	370	272			
6/18/2019						215
10/22/2019			308	212		354
10/23/2019	507	419				
3/25/2020	507	417	297	213		347
9/24/2020	517	411	253			
9/25/2020				188		
9/28/2020						332
3/17/2021				171		
3/18/2021	465	410	255			328
8/12/2021					256	
8/13/2021		441	291	189		336
8/16/2021	672					
9/27/2021					223	
2/2/2022	576		271	206		
2/3/2022		463			264	316
8/5/2022	692	514	274	195	270	329
1/25/2023	630	537	304	214	289	337

FIGURE B.

Box & Whiskers Plot

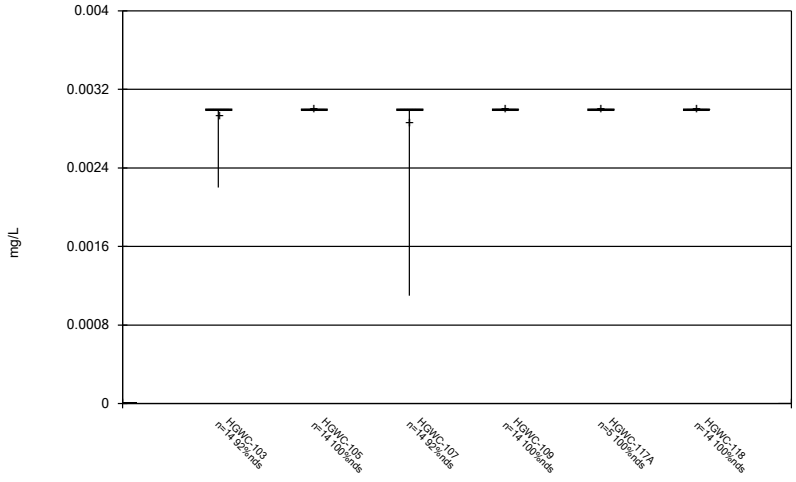


Constituent: Antimony Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

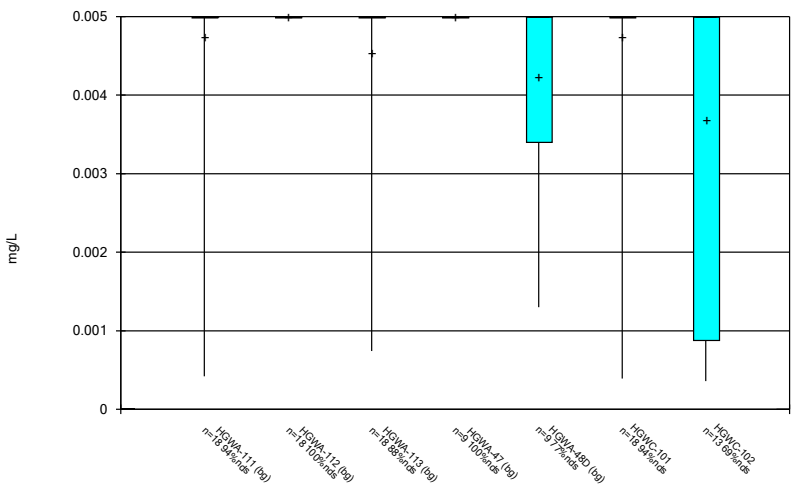


Constituent: Antimony Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

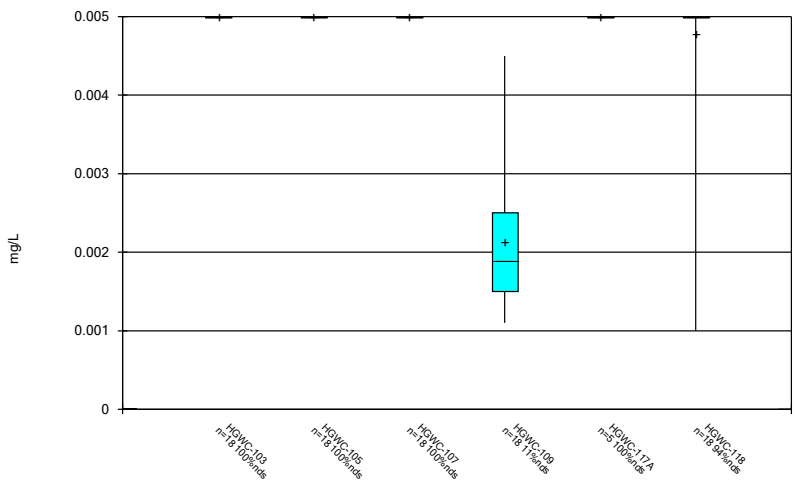


Constituent: Arsenic Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

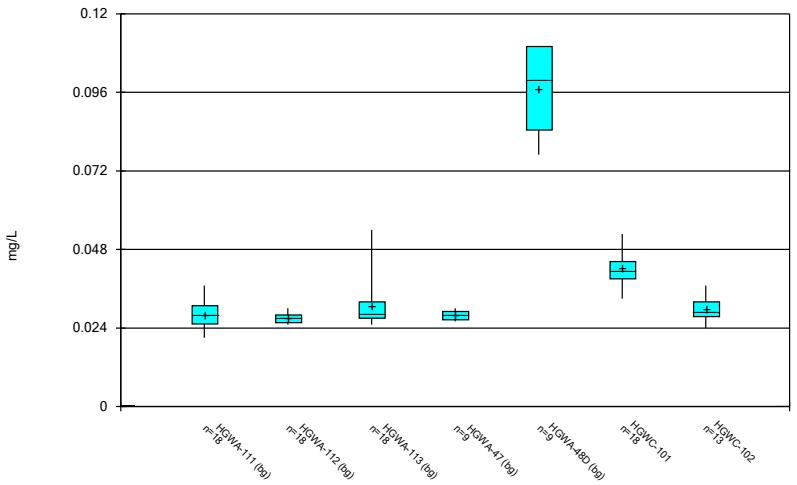
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

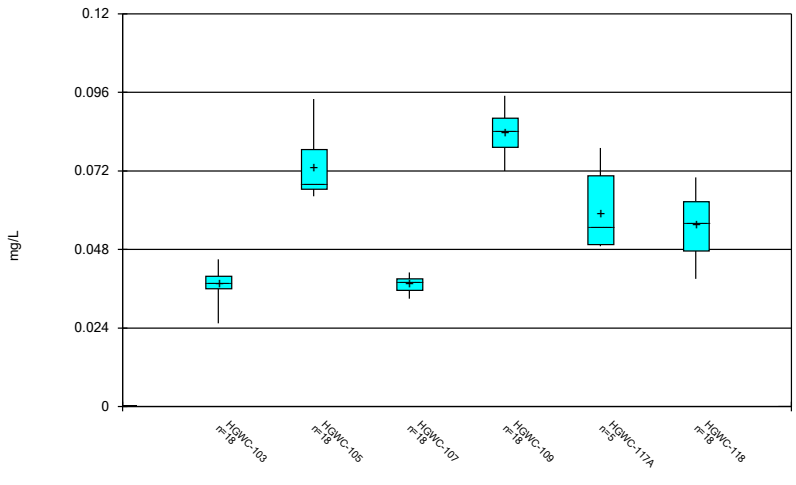


Constituent: Barium Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

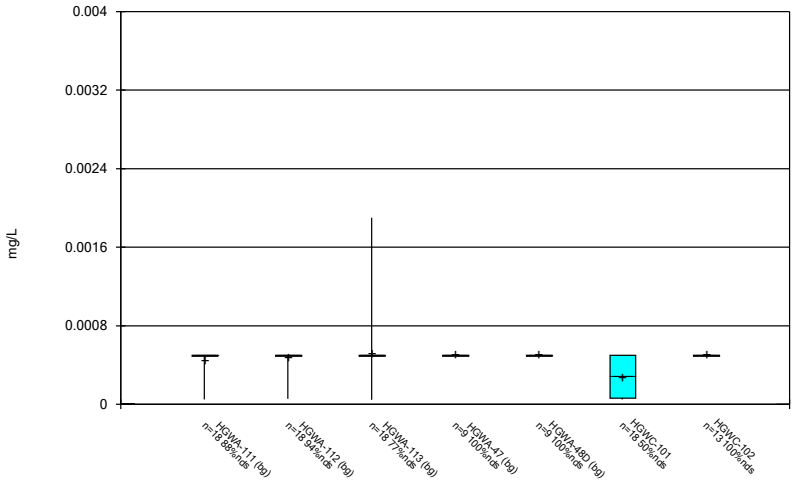


Constituent: Barium Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

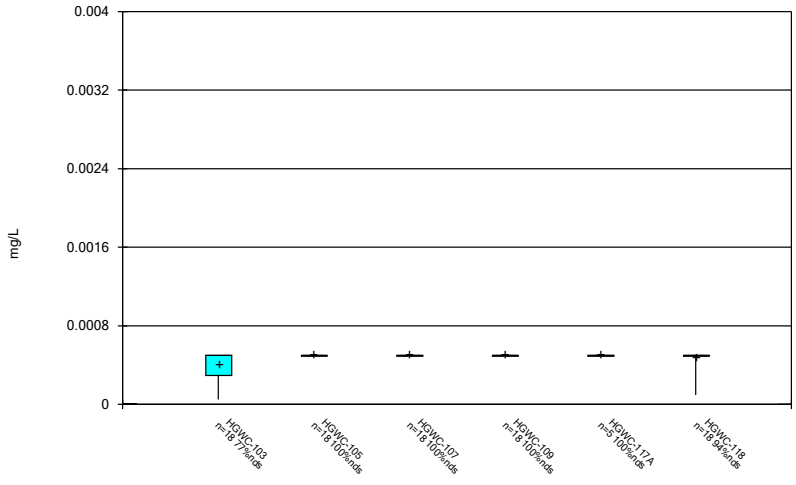


Constituent: Beryllium Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

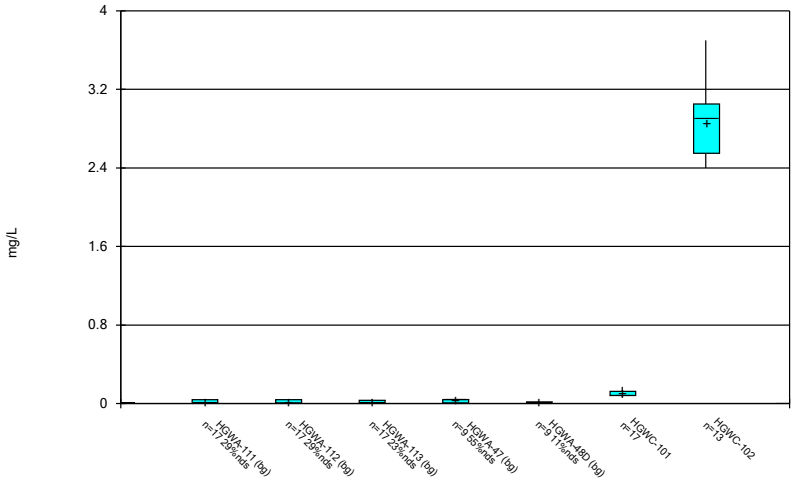
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 5/16/2023 1:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

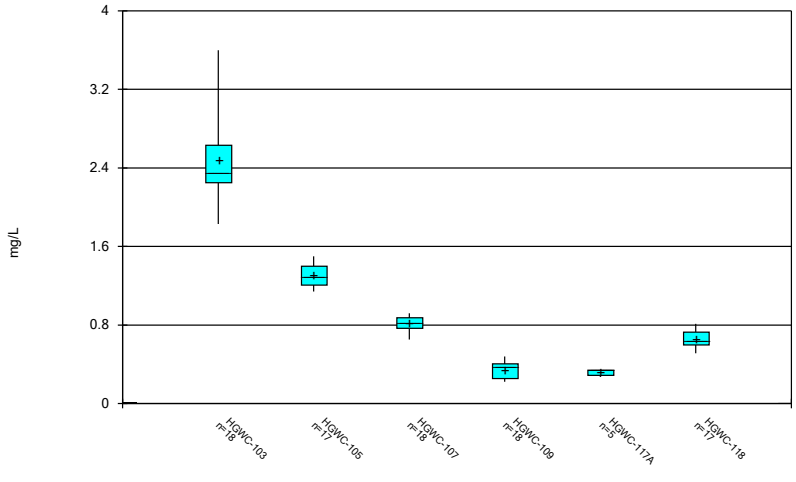


Constituent: Boron, total Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

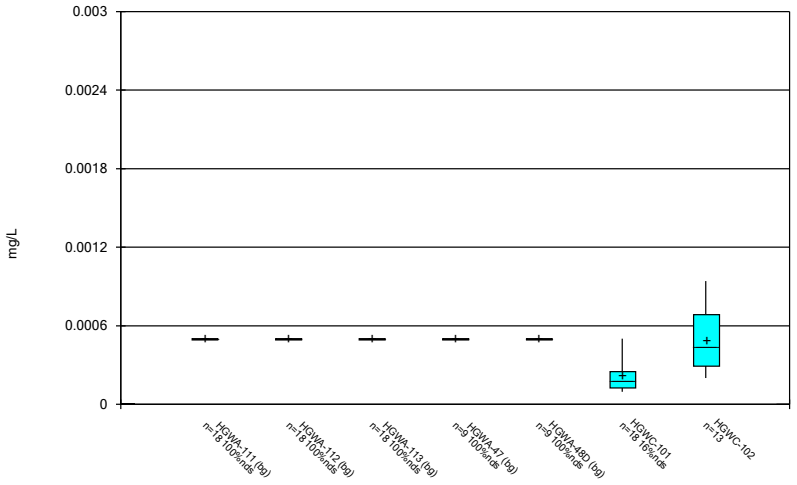


Constituent: Boron, total Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

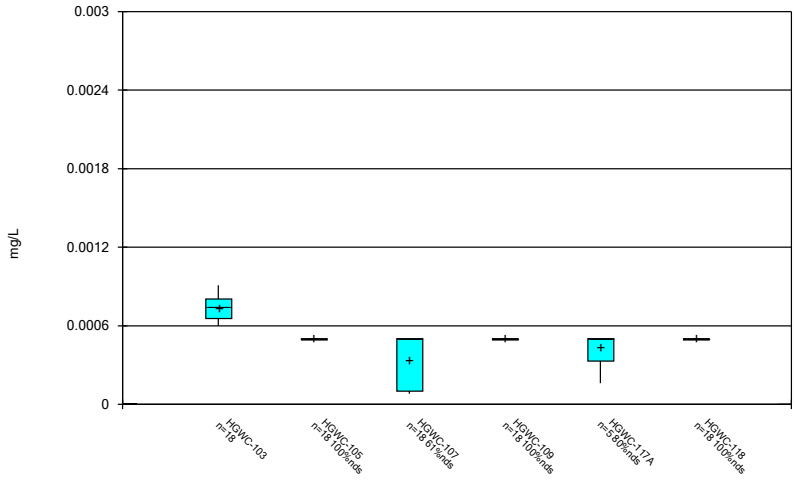


Constituent: Cadmium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

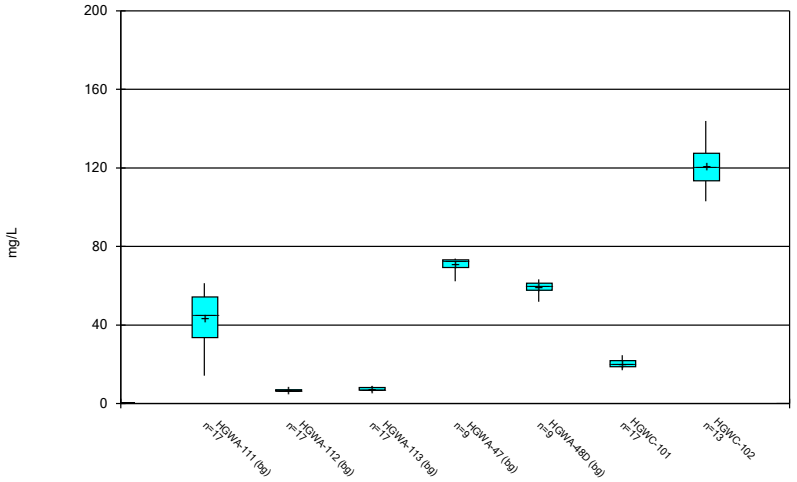
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

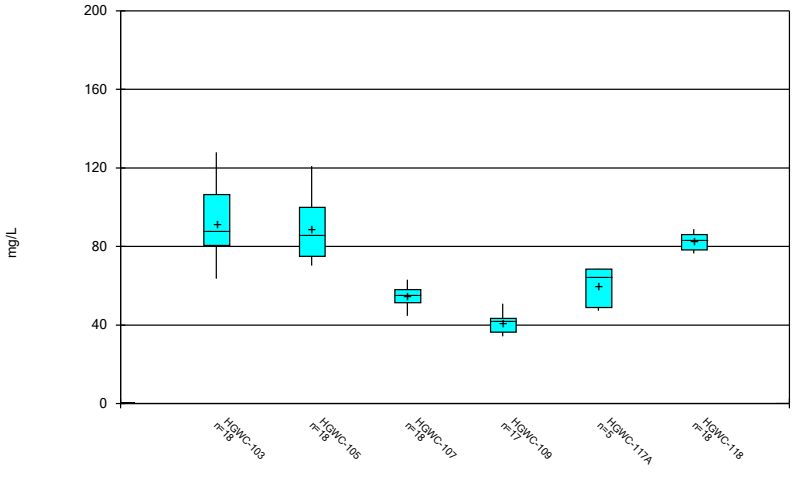


Constituent: Calcium, total Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

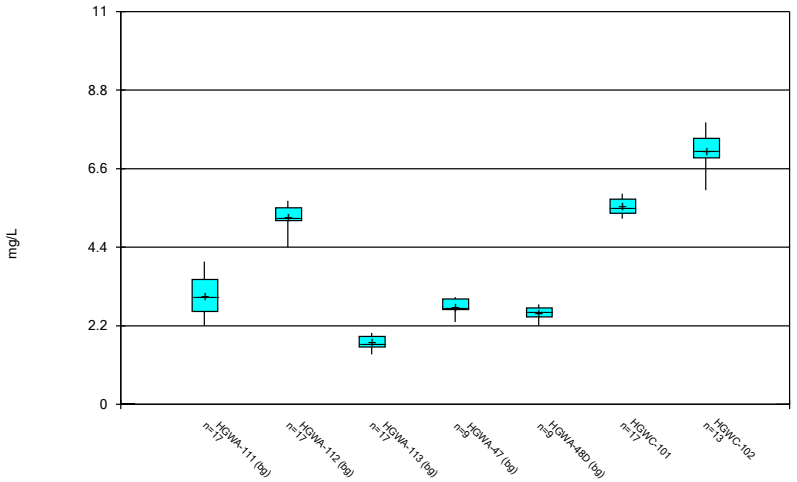


Constituent: Calcium, total Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

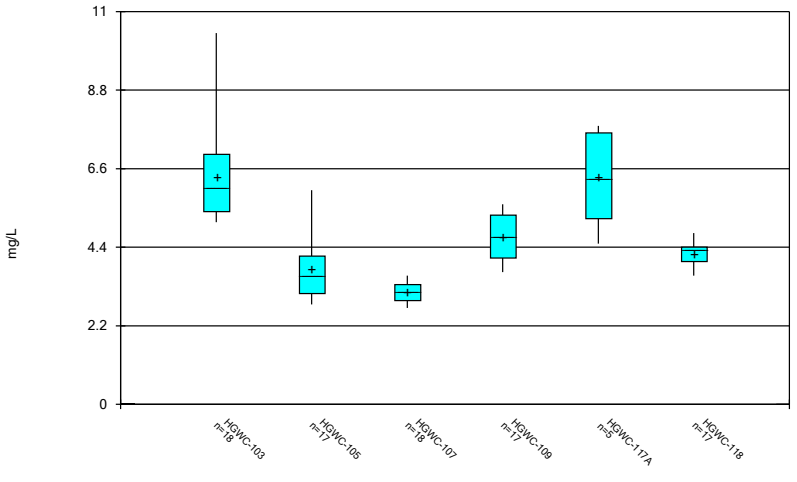


Constituent: Chloride, Total Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

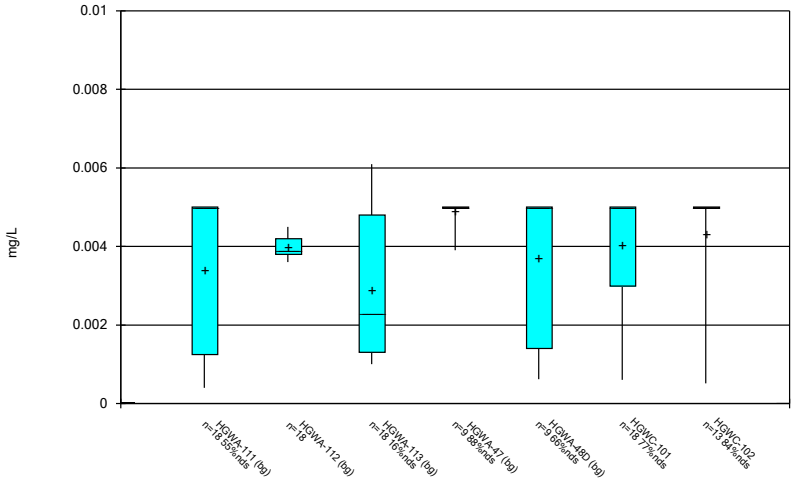
Box & Whiskers Plot



Constituent: Chloride, Total Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

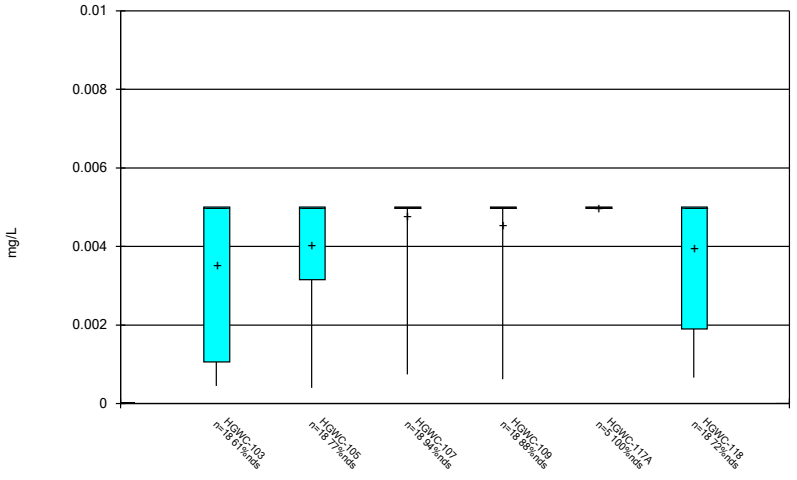


Constituent: Chromium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

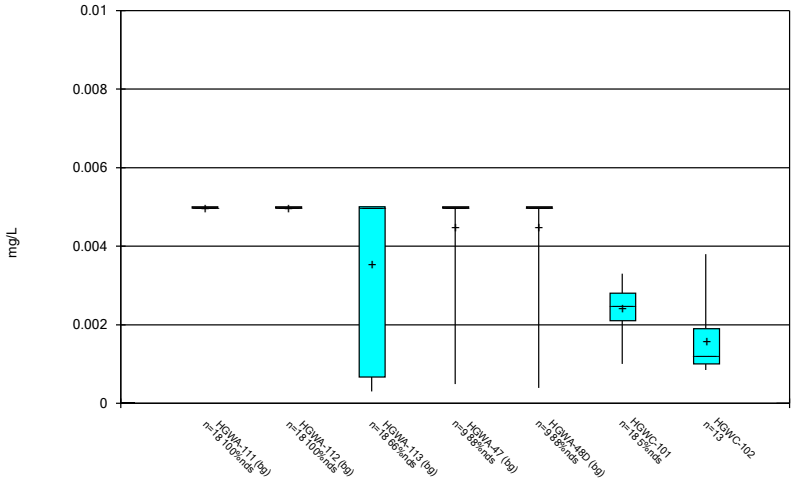


Constituent: Chromium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

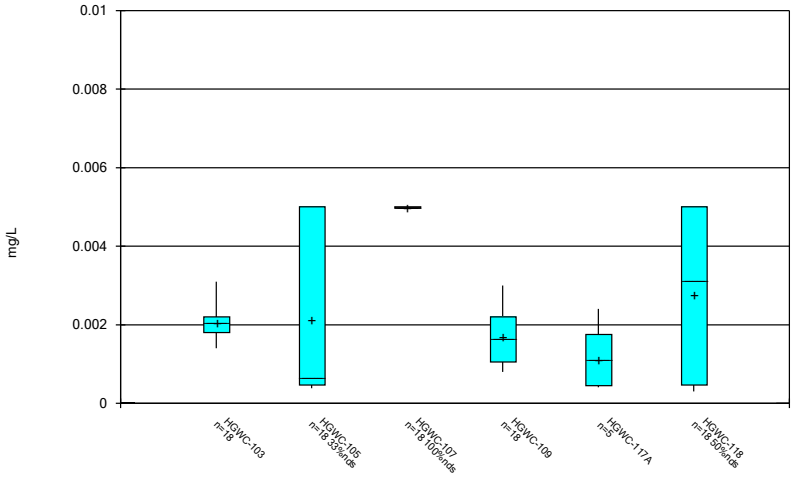


Constituent: Cobalt Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

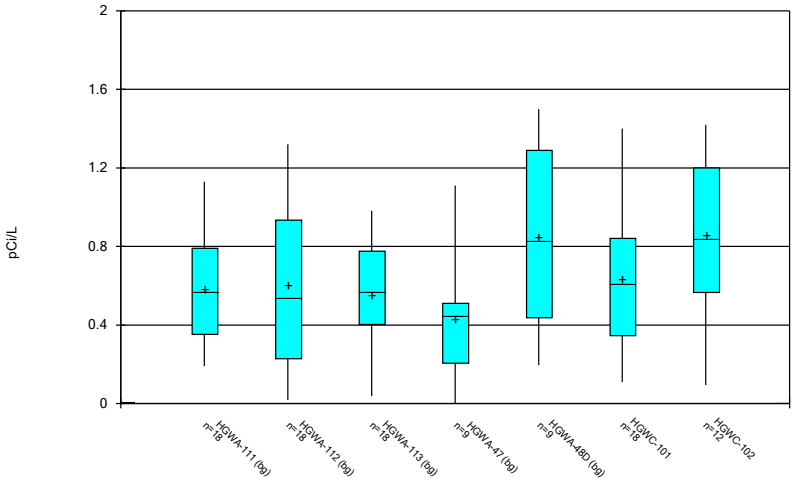
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

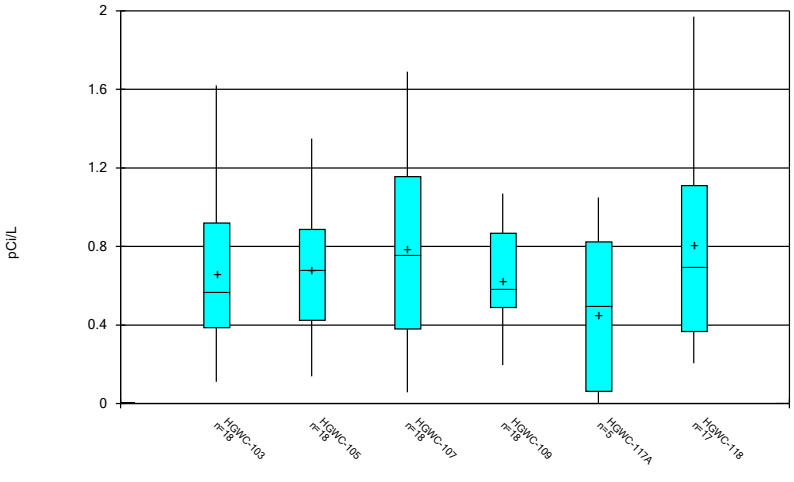
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 5/16/2023 1:23 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

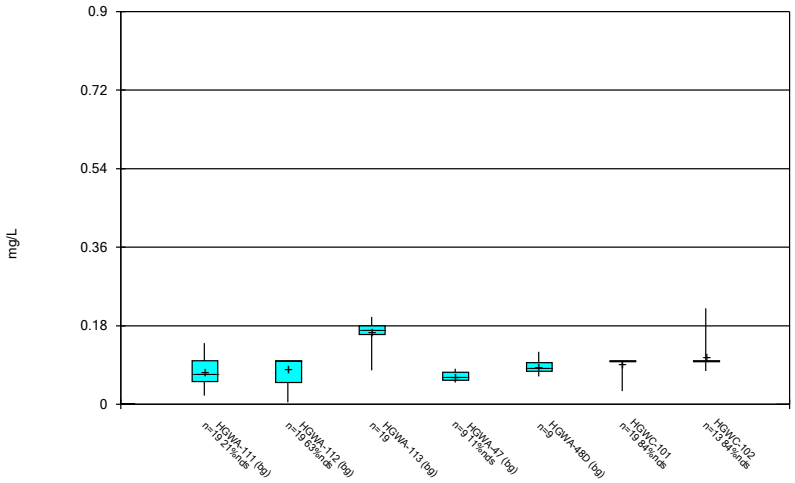
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 5/16/2023 1:23 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

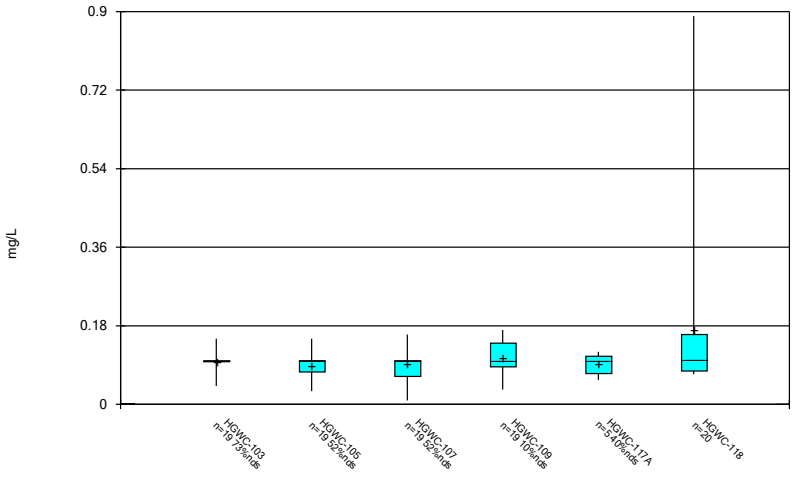
Box & Whiskers Plot



Constituent: Fluoride, total Analysis Run 5/16/2023 1:23 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

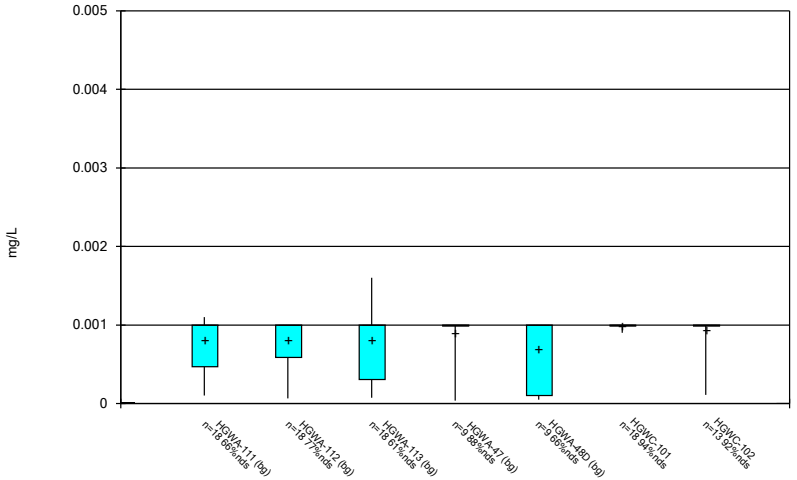
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride, total Analysis Run 5/16/2023 1:23 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

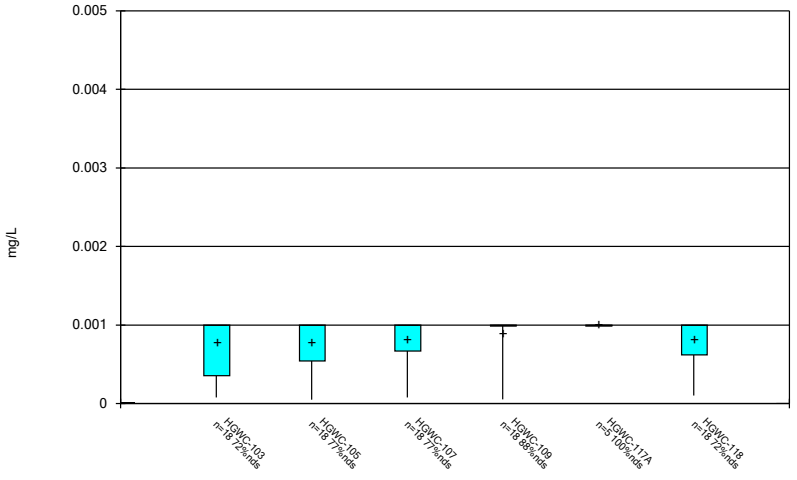


Constituent: Lead Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

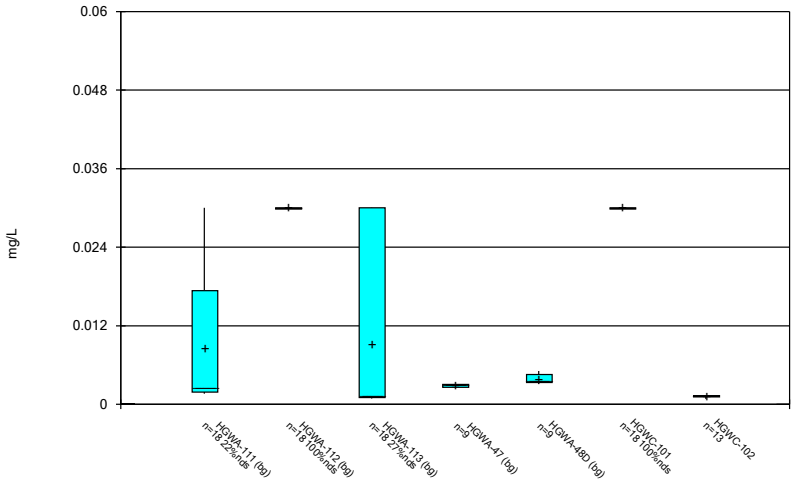


Constituent: Lead Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

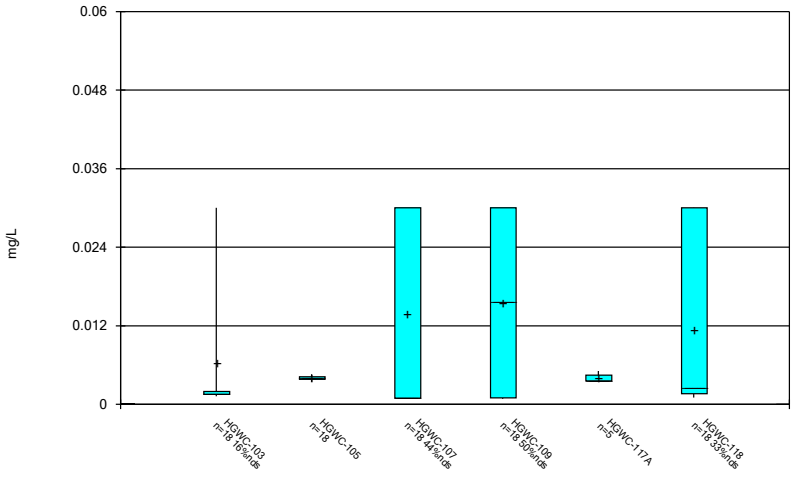


Constituent: Lithium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

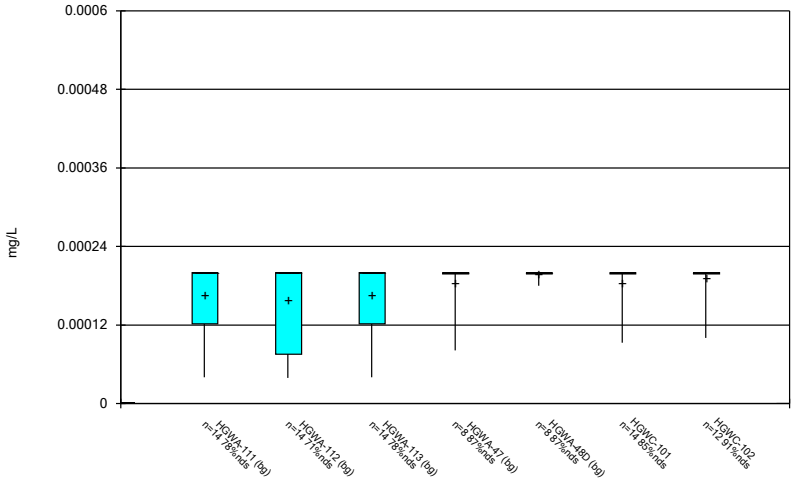
Box & Whiskers Plot



Constituent: Lithium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

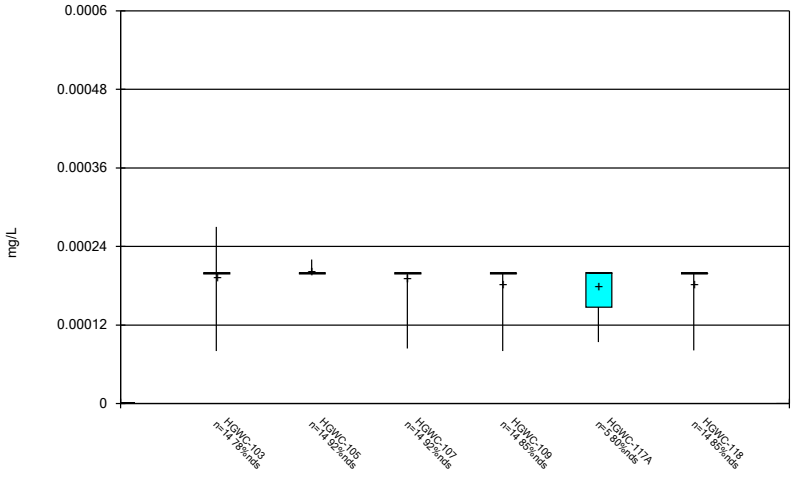


Constituent: Mercury Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

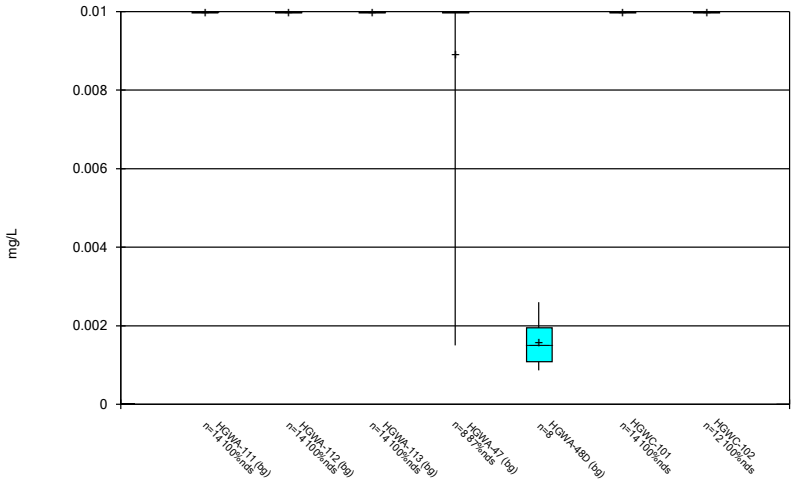


Constituent: Mercury Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

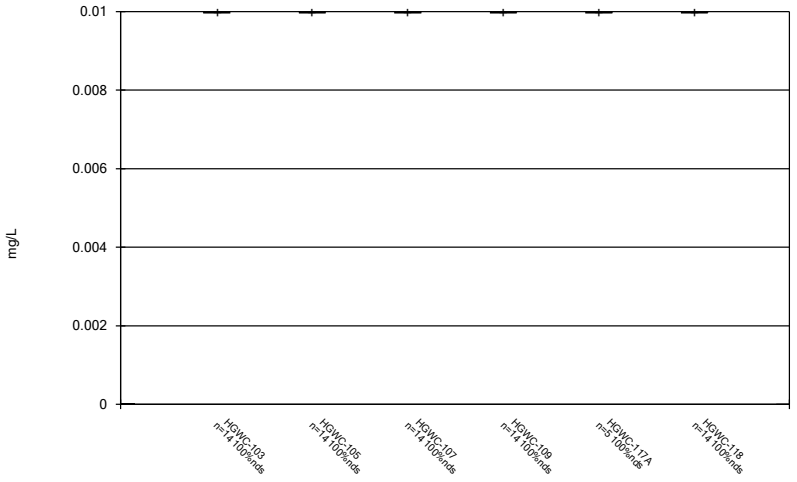


Constituent: Molybdenum Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

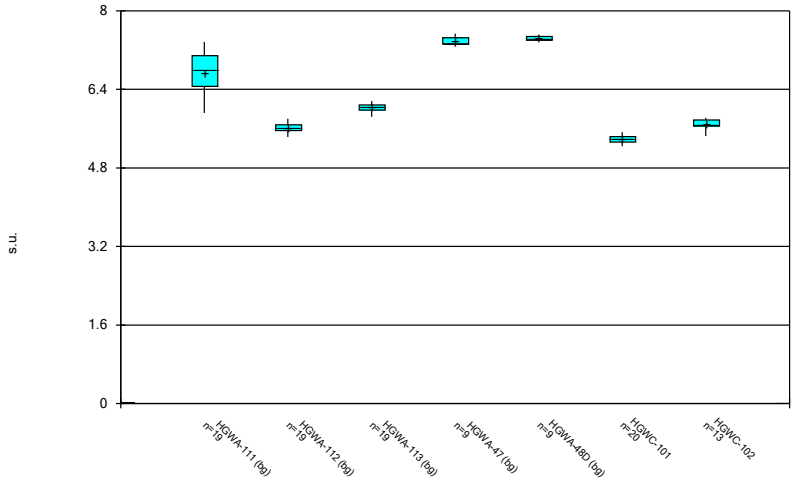
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

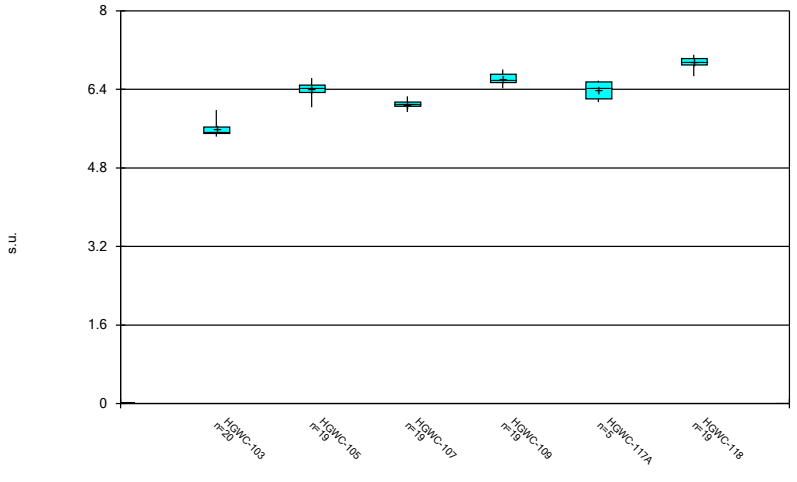


Constituent: pH, Field Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

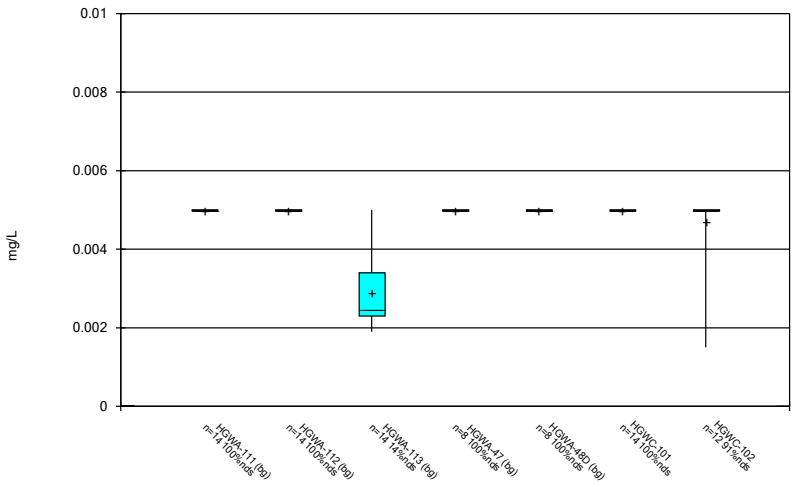


Constituent: pH, Field Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

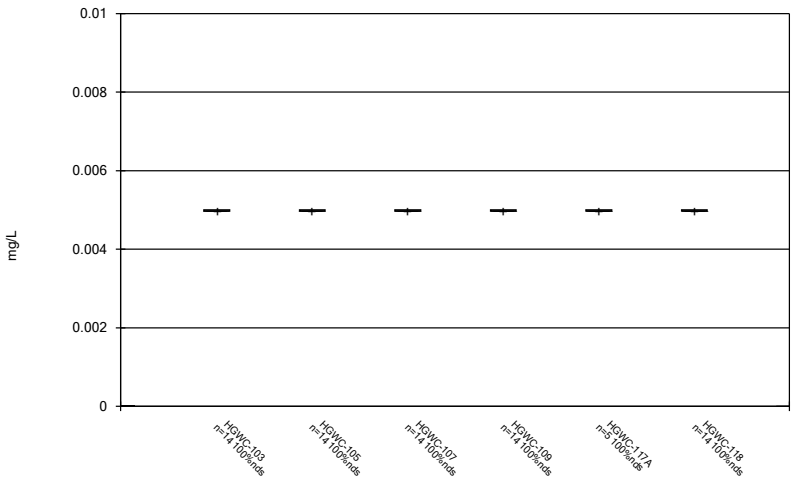


Constituent: Selenium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

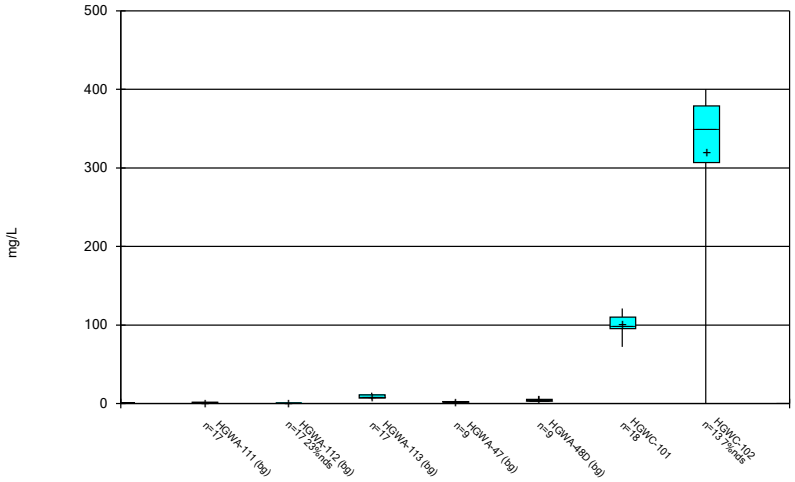
Box & Whiskers Plot



Constituent: Selenium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

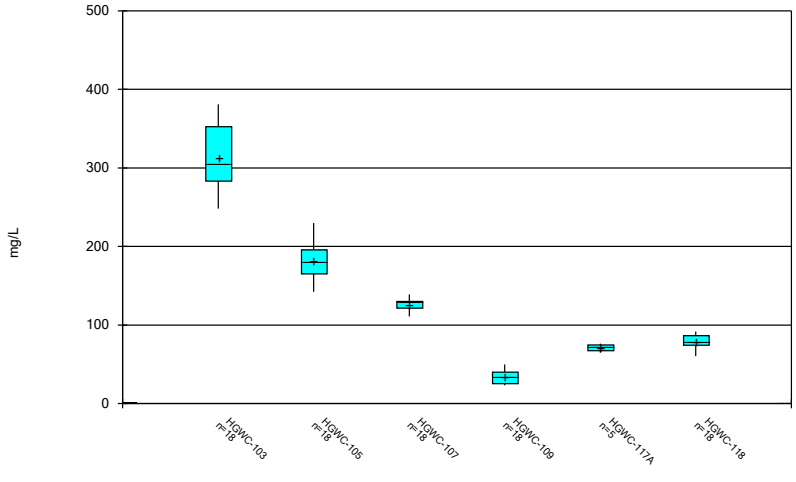


Constituent: Sulfate as SO4 Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

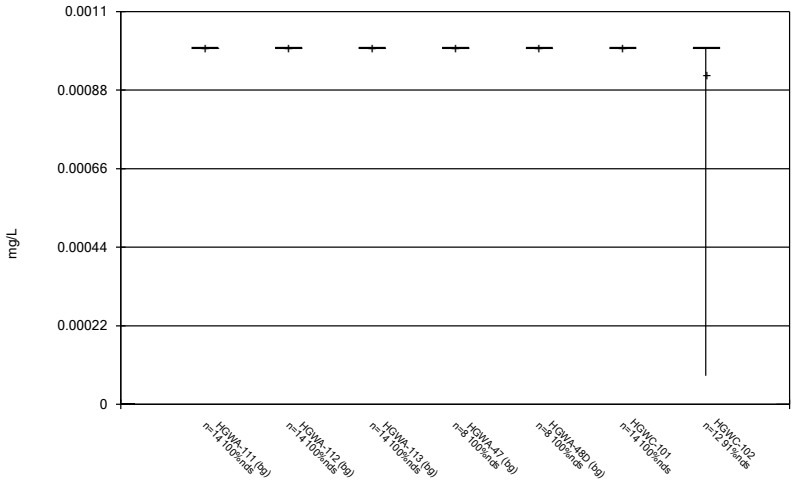


Constituent: Sulfate as SO4 Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot

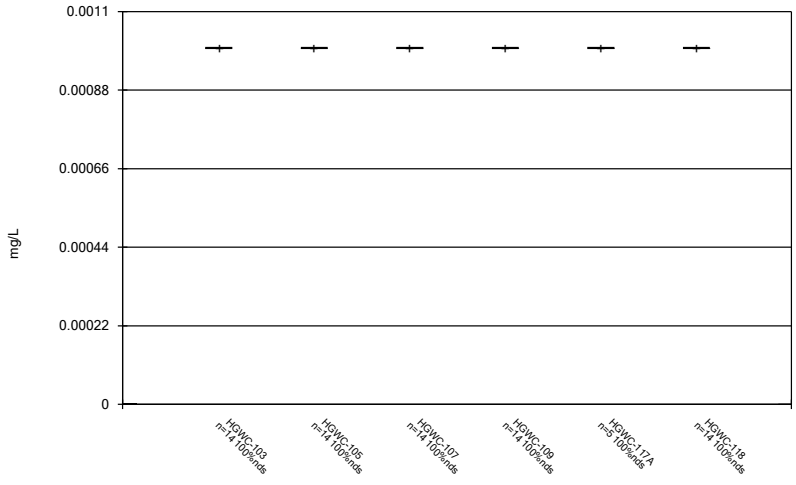


Constituent: Thallium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

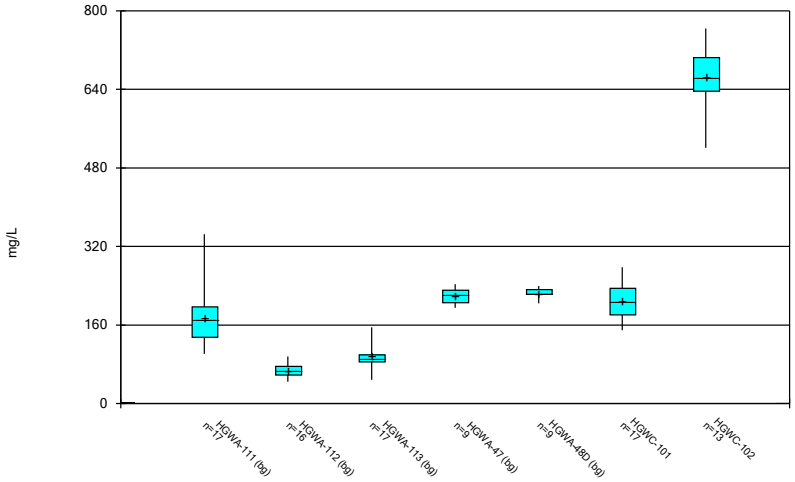
Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

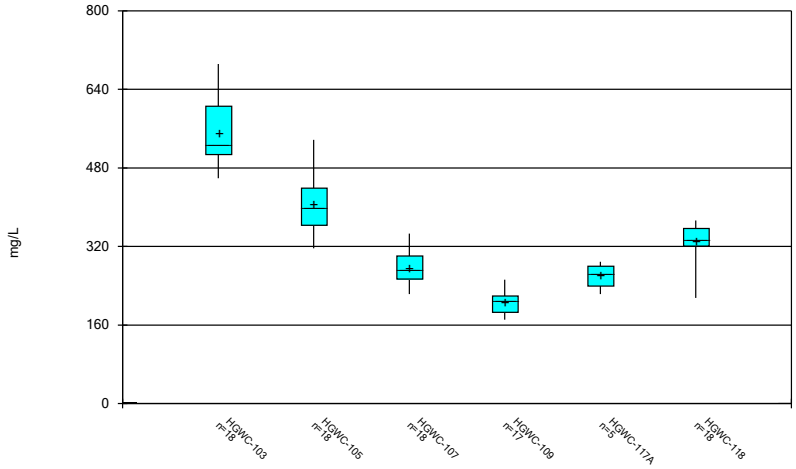


Constituent: Total Dissolved Solids [TDS] Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 5/16/2023 1:23 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 3/29/2023, 4:50 PM

	HGWA-112 Total Dissolved Solids (mg/L)
1/25/2017	152 (o)

FIGURE D.

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-101	0.04	n/a	1/25/2023	0.12	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-102	0.04	n/a	1/25/2023	2.5	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-103	0.04	n/a	1/25/2023	2.7	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-105	0.04	n/a	1/25/2023	1.3	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-107	0.04	n/a	1/25/2023	0.82	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-109	0.04	n/a	1/25/2023	0.22	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-118	0.04	n/a	1/25/2023	0.62	Yes	69	n/a	n/a	28.99	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	1/25/2023	128	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	1/25/2023	109	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	1/25/2023	113	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	1/25/2023	81.8	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	1/25/2023	7.8	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	1/25/2023	8	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-105	5.7	n/a	1/25/2023	6	Yes	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	1/25/2023	95	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	1/25/2023	348	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	1/25/2023	342	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	1/25/2023	230	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	1/25/2023	128	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	1/25/2023	25.4	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	1/25/2023	73	Yes	69	n/a	n/a	5.797	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	1/25/2023	664	Yes	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	1/25/2023	630	Yes	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	1/25/2023	537	Yes	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2

Interwell Prediction Limits - All Results

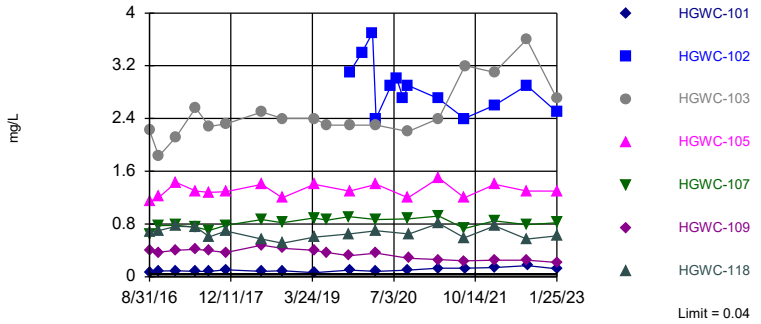
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.04**	**n/a**	**1/25/2023**	**0.12**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-102**	**0.04**	**n/a**	**1/25/2023**	**2.5**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-103**	**0.04**	**n/a**	**1/25/2023**	**2.7**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-105**	**0.04**	**n/a**	**1/25/2023**	**1.3**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-107**	**0.04**	**n/a**	**1/25/2023**	**0.82**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-109**	**0.04**	**n/a**	**1/25/2023**	**0.22**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-118**	**0.04**	**n/a**	**1/25/2023**	**0.62**	**Yes**	**69**	**n/a**	**n/a**	**28.99**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-101	73.8	n/a	1/25/2023	20.4	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-102**	**73.8**	**n/a**	**1/25/2023**	**128**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-103**	**73.8**	**n/a**	**1/25/2023**	**109**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-105**	**73.8**	**n/a**	**1/25/2023**	**113**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-107	73.8	n/a	1/25/2023	57.8	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.8	n/a	1/25/2023	42.4	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-118**	**73.8**	**n/a**	**1/25/2023**	**81.8**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-101	5.7	n/a	1/25/2023	5.7	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	**HGWC-102**	**5.7**	**n/a**	**1/25/2023**	**7.8**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-103**	**5.7**	**n/a**	**1/25/2023**	**8**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-105**	**5.7**	**n/a**	**1/25/2023**	**6**	**Yes**	**69**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-107	5.7	n/a	1/25/2023	3.3	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109	5.7	n/a	1/25/2023	4.3	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	1/25/2023	4.3	No	69	n/a	n/a	0	n/a	n/a	0.0003992	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1692	n/a	1/25/2023	0.1ND	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.1692	n/a	1/25/2023	0.1ND	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1692	n/a	1/25/2023	0.1ND	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1692	n/a	1/25/2023	0.051J	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1692	n/a	1/25/2023	0.054J	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1692	n/a	1/25/2023	0.12	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1692	n/a	1/25/2023	0.095J	No	75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	1/25/2023	5.47	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.43	1/25/2023	5.77	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.43	1/25/2023	5.65	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.43	1/25/2023	6.41	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.43	1/25/2023	6.13	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.43	1/25/2023	6.66	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.43	1/25/2023	6.67	No	75	n/a	n/a	0	n/a	n/a	0.0006837	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-101**	**14**	**n/a**	**1/25/2023**	**95**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-102**	**14**	**n/a**	**1/25/2023**	**348**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-103**	**14**	**n/a**	**1/25/2023**	**342**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-105**	**14**	**n/a**	**1/25/2023**	**230**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-107**	**14**	**n/a**	**1/25/2023**	**128**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-109**	**14**	**n/a**	**1/25/2023**	**25.4**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-118**	**14**	**n/a**	**1/25/2023**	**73**	**Yes**	**69**	**n/a**	**n/a**	**5.797**	**n/a**	**n/a**	**0.0003992**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-101	345	n/a	1/25/2023	186	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-102**	**345**	**n/a**	**1/25/2023**	**664**	**Yes**	**68**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004125**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-103**	**345**	**n/a**	**1/25/2023**	**630**	**Yes**	**68**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004125**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-105**	**345**	**n/a**	**1/25/2023**	**537**	**Yes**	**68**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004125**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-107	345	n/a	1/25/2023	304	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	345	n/a	1/25/2023	214	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	345	n/a	1/25/2023	337	No	68	n/a	n/a	0	n/a	n/a	0.0004125	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-118

Prediction Limit

Interwell Non-parametric



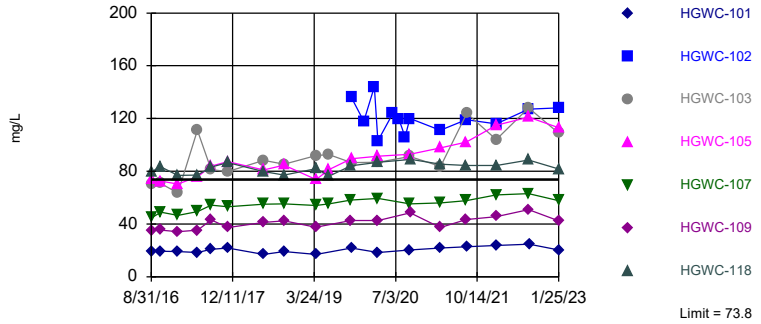
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 28.99% NDs. Annual per-constituent alpha = 0.006368. Individual comparison alpha = 0.0003992 (1 of 2). Comparing 7 points to limit. Assumes 1 future value.

Constituent: Boron Analysis Run 4/3/2023 12:11 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105, HGWC-118

Prediction Limit

Interwell Non-parametric



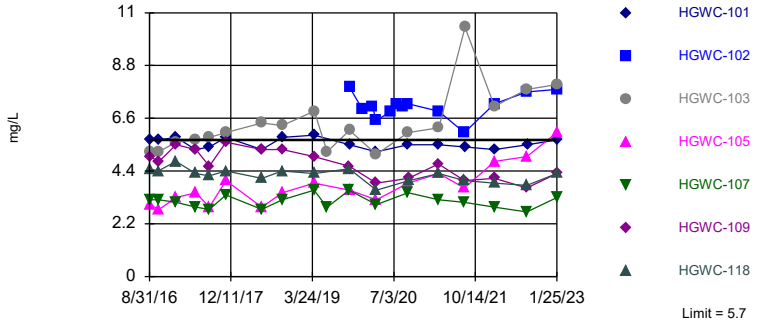
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.006368. Individual comparison alpha = 0.0003992 (1 of 2). Comparing 7 points to limit. Assumes 1 future value.

Constituent: Calcium Analysis Run 4/3/2023 12:11 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.006368. Individual comparison alpha = 0.0003992 (1 of 2). Comparing 7 points to limit. Assumes 1 future value.

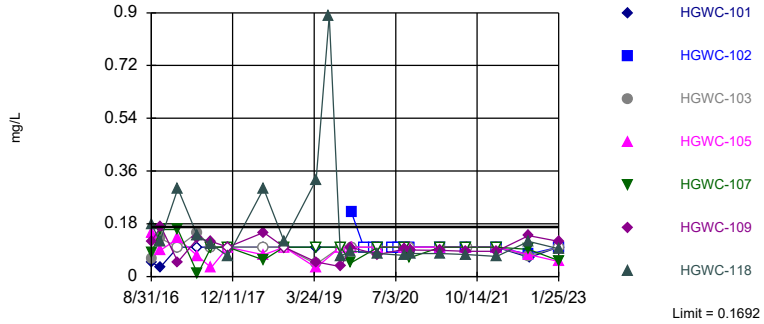
Constituent: Chloride Analysis Run 4/3/2023 12:11 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2609, Std. Dev.=0.07751, n=75, 22.67% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9603, critical = 0.956. Kappa = 1.941 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 7 points to limit. Assumes 1 future value.

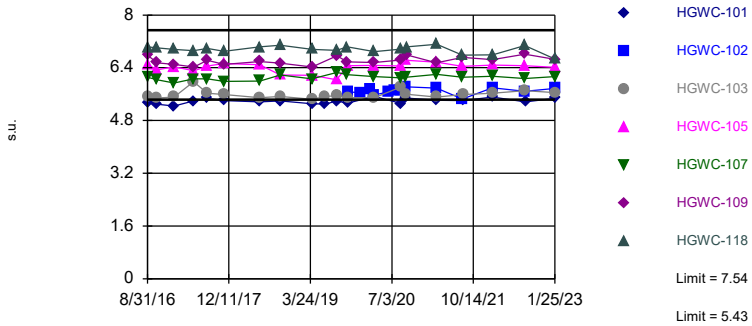
Constituent: Fluoride Analysis Run 4/3/2023 12:11 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Within Limits

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 75 background values. Annual per-constituent alpha = 0.01091. Individual comparison alpha = 0.0006837 (1 of 2). Comparing 7 points to limit. Assumes 1 future value.

Constituent: pH Analysis Run 4/3/2023 12:11 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

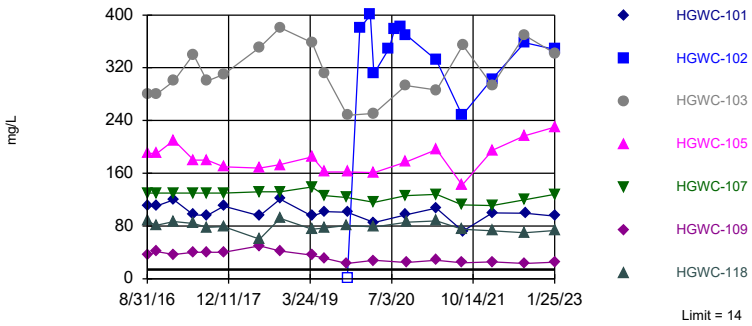
Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-118

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 5.797% NDs. Annual per-constituent alpha = 0.006368. Individual comparison alpha = 0.0003992 (1 of 2). Comparing 7 points to limit. Assumes 1 future value.

Constituent: Sulfate Analysis Run 4/3/2023 12:11 PM View: Interwell PL

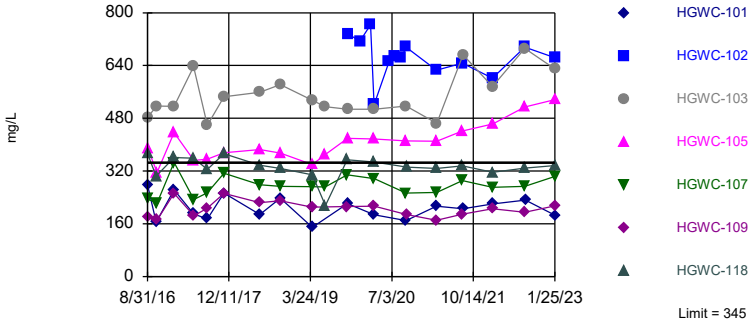
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 68 background values. Annual per-constituent alpha = 0.00658. Individual comparison alpha = 0.0004125 (1 of 2). Comparing 7 points to limit. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:11 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/30/2016	<0.04	<0.04	<0.04						
8/31/2016				2.22	0.651	0.0724 (J)	0.402	0.681	1.14
10/20/2016	0.016 (J)					0.0877 (J)		0.697	
10/24/2016		0.0226 (J)	0.0367 (J)	1.83					
10/25/2016					0.778		0.372		1.21
1/25/2017	0.0095 (J)	0.009 (J)	0.0075 (J)						
1/31/2017				2.12	0.782	0.0928	0.404	0.768	1.43
5/23/2017		0.0082 (J)	0.0073 (J)	2.56		0.0795		0.754	
5/24/2017	0.0094 (J)				0.753		0.415		1.3
8/10/2017	<0.04	0.0061 (J)	<0.04	2.28	0.702	0.0814	0.397	0.608	1.28
11/13/2017	0.0103 (J)		0.0089 (J)						
11/14/2017		0.012 (J)		2.32	0.78	0.108	0.366	0.691	1.29
6/4/2018	0.0065 (J)		0.007 (J)						
6/5/2018		0.0085 (J)							
6/6/2018				2.5	0.87	0.081	0.48		1.4
6/7/2018								0.57	
10/1/2018	0.0054 (J)	0.0042 (J)	<0.04						
10/2/2018					0.82		0.43		1.2
10/3/2018				2.4		0.092		0.51	
4/1/2019	0.0076 (J)								
4/2/2019		0.0059 (J)	0.0043 (J)						
4/3/2019					0.89		0.4		
4/4/2019				2.4		0.06 (X)			1.4 (X)
4/5/2019								0.6 (X)	
6/17/2019				2.3	0.86		0.37		
10/21/2019	0.0097 (J)								
10/22/2019		0.01 (J)	0.016 (J)		0.91		0.32	0.65	
10/23/2019				2.3		0.1			1.3
1/3/2020									
3/4/2020									
3/24/2020	0.011 (J)		0.012 (J)						
3/25/2020				2.3	0.87	0.08 (J)	0.36	0.7	1.4
4/9/2020		0.012 (J)							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	0.011 (J)		0.008 (J)						
9/22/2020		0.021 (J)							
9/24/2020				2.2	0.88	0.1			1.2
9/25/2020							0.28		
9/28/2020								0.65	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.01 (J)								
3/12/2021			0.0061 (J)						
3/16/2021		0.011 (J)							
3/17/2021						0.13	0.26		
3/18/2021				2.4	0.92			0.81	1.5
8/12/2021	<0.04	<0.04	<0.04						
8/13/2021					0.73		0.24	0.59	1.2

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/16/2021				3.2		0.13			
1/31/2022	0.0099 (J)								
2/1/2022		0.012 (J)	0.011 (J)						
2/2/2022				3.1	0.85	0.14	0.25		
2/3/2022								0.77	1.4
8/2/2022		<0.04							
8/5/2022	<0.04		0.012 (J)	3.6	0.79		0.25	0.57	1.3
8/10/2022						0.17			
1/24/2023	<0.04	<0.04	<0.04						
1/25/2023				2.7	0.82	0.12	0.22	0.62	1.3

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/17/2019			
10/21/2019			
10/22/2019			
10/23/2019	3.1		
1/3/2020	3.4		
3/4/2020	3.7		
3/24/2020	2.4		
3/25/2020			
4/9/2020			
6/18/2020	2.9		
7/21/2020	3		
8/27/2020	2.7		
9/18/2020		0.0082 (J)	0.015 (J)
9/22/2020			
9/24/2020	2.9		
9/25/2020			
9/28/2020			
11/10/2020		0.0064 (J)	
11/11/2020			0.014 (J)
12/15/2020		<0.04	0.0083 (J)
1/19/2021		0.015 (J)	0.015 (J)
3/11/2021			
3/12/2021		0.0067 (J)	0.012 (J)
3/16/2021			
3/17/2021	2.7		
3/18/2021			
8/12/2021		<0.04	0.012 (J)
8/13/2021	2.4		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/16/2021			
1/31/2022		<0.04	0.011 (J)
2/1/2022			
2/2/2022	2.6		
2/3/2022			
8/2/2022		<0.04	
8/5/2022	2.9		0.011 (J)
8/10/2022			
1/24/2023		<0.04	<0.04
1/25/2023	2.5		

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/30/2016	40.3	6.72	6.69						
8/31/2016				70.4	44.7	19.4	35.1	79.3	74.2
10/20/2016	38.7					19.3		83.7	
10/24/2016		6.4	6.25	70.9					
10/25/2016					49		35.4		72.5
1/25/2017	44.6	6.87	6.58						
1/31/2017				63.6	46.6	19.1	34.2	76.8	70.3
5/23/2017		7.13	6.4	111		18.3		77.2	
5/24/2017	34.8				49.5		35.3		75.9
8/10/2017	48.6	6.71	6.54	81.2	54.2	20.9	43.1	83.1	84
11/13/2017	17.1		6.26						
11/14/2017		7.4		79.7	53.2	21.7	37.4	86.7	87.2
6/4/2018	30.1		7.4						
6/5/2018		7.4							
6/6/2018				88.3	55	17	41.1		81
6/7/2018								79.7	
10/1/2018	14.2 (J)	6.2	5.8						
10/2/2018					55.4		42.5		84.7
10/3/2018				85.3		19.1 (J)		77.1	
4/1/2019	58.4								
4/2/2019		7.4	6.7						
4/3/2019					54		37.5		
4/4/2019				91.9		16.9			73.8
4/5/2019								82	
6/17/2019				92.6	55.3				81.2
6/18/2019								76.5	
10/21/2019	51								
10/22/2019		7.2	6.3		58.1		42.6	84.2	
10/23/2019				86.5		21.9			89.4
1/3/2020									
3/4/2020									
3/24/2020	61.2		7						
3/25/2020				86.8	59.5	18.4	42.6	86.8	91.4
4/9/2020		8.3							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	32.2		6.5						
9/22/2020		7.9							
9/24/2020				91.3	55.4	20.3			92.9
9/25/2020							48.5		
9/28/2020								88.9	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	53.2								
3/12/2021			6.9						
3/16/2021		8.6							
3/17/2021						21.8	37.3		
3/18/2021				83.7	56			85.4	97.7
8/12/2021	45.4	8.4	6.9						

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/13/2021					57.8		43.5	84.3	102
8/16/2021				124		22.8			
1/31/2022	58.6								
2/1/2022		8.6	7.4						
2/2/2022				104	62	23.8	45.7		
2/3/2022								84.5	115
8/2/2022		8							
8/5/2022	53		7.1	128	63		50.8	88.5	121
8/10/2022						24.6			
1/24/2023	55.4	7.5	6.6						
1/25/2023				109	57.8	20.4	42.4	81.8	113

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/17/2019			
6/18/2019			
10/21/2019			
10/22/2019			
10/23/2019	136		
1/3/2020	118		
3/4/2020	144		
3/24/2020	103		
3/25/2020			
4/9/2020			
6/18/2020	124		
7/21/2020	120		
8/27/2020	106		
9/18/2020		62.2	51.8
9/22/2020			
9/24/2020	120		
9/25/2020			
9/28/2020			
11/10/2020		73.3	
11/11/2020			61.3
12/15/2020		72.5	61.3
1/19/2021		72.5	58.9
3/11/2021			
3/12/2021		69.2	57.5
3/16/2021			
3/17/2021	111		
3/18/2021			
8/12/2021		71.2	59.5

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/13/2021	119		
8/16/2021			
1/31/2022		73.8	63.2
2/1/2022			
2/2/2022	116		
2/3/2022			
8/2/2022		73	
8/5/2022	127		59.6
8/10/2022			
1/24/2023		69.2	57.8
1/25/2023	128		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-101	HGWC-109	HGWC-118	HGWC-107
8/30/2016	3.3	2	5.4						
8/31/2016				5.2	3	5.7	5	4.5	3.2
10/20/2016	3.2					5.7		4.4	
10/24/2016		1.9	5.2	5.2					
10/25/2016					2.8		4.8		3.2
1/25/2017	2.7	1.9	5						
1/31/2017				5.6	3.3	5.8	5.5	4.8	3.1
5/23/2017		1.6	5.1	5.7		5.3		4.3	
5/24/2017	3				3.5		5.3		2.9
8/10/2017	2.8	1.7	5.2	5.8	2.9	5.4	4.6	4.2	2.8
11/13/2017	2.5		5.5						
11/14/2017		2		6	4	5.8	5.6	4.4	3.4
6/4/2018	2.6		5.3						
6/5/2018		1.7							
6/6/2018				6.4	2.9	5.3	5.3		2.8
6/7/2018								4.1	
10/1/2018	2.2	1.6	5.6						
10/2/2018					3.5		5.3		3.2
10/3/2018				6.3		5.8		4.4	
4/1/2019	4								
4/2/2019		1.8	5.7						
4/3/2019							5		3.6
4/4/2019				6.9	3.9	5.9			
4/5/2019								4.3	
6/17/2019				5.2					2.9
10/21/2019	3.9								
10/22/2019		1.9	5.5				4.6	4.5	3.6
10/23/2019				6.1	3.6	5.5			
1/3/2020									
3/4/2020									
3/24/2020	3.6		5.2						
3/25/2020				5.1	3.2	5.2	3.9	3.6	3
4/9/2020		1.4							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	2.6		5.2						
9/22/2020		1.5							
9/24/2020				6	3.9	5.5			3.5
9/25/2020							4.1		
9/28/2020								4	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	3.4								
3/12/2021			5.3						
3/16/2021		1.6							
3/17/2021						5.5	4.7		
3/18/2021				6.2	4.3			4.3	3.2
8/12/2021	2.5	1.5	4.4						
8/13/2021					3.7		4	4	3.1

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-101	HGWC-109	HGWC-118	HGWC-107
8/16/2021				10.4		5.4			
1/31/2022	3								
2/1/2022		1.6	5.2						
2/2/2022				7.1		5.3	4.1		2.9
2/3/2022					4.8			3.9	
8/2/2022		1.8							
8/5/2022	2.7		5	7.8	5		3.7	3.8	2.7
8/10/2022						5.5			
1/24/2023	3.6	1.8	5.6						
1/25/2023				8	6	5.7	4.3	4.3	3.3

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/17/2019			
10/21/2019			
10/22/2019			
10/23/2019	7.9		
1/3/2020	7		
3/4/2020	7.1		
3/24/2020	6.5		
3/25/2020			
4/9/2020			
6/18/2020	6.9		
7/21/2020	7.2		
8/27/2020	7.1		
9/18/2020		2.7	2.6
9/22/2020			
9/24/2020	7.2		
9/25/2020			
9/28/2020			
11/10/2020		2.7	
11/11/2020			2.6
12/15/2020		2.9	2.7
1/19/2021		2.8	2.7
3/11/2021			
3/12/2021		2.7	2.6
3/16/2021			
3/17/2021	6.9		
3/18/2021			
8/12/2021		2.3	2.2
8/13/2021	6		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/16/2021			
1/31/2022		2.6	2.5
2/1/2022			
2/2/2022	7.2		
2/3/2022			
8/2/2022		3	
8/5/2022	7.7		2.4
8/10/2022			
1/24/2023		3	2.8
1/25/2023	7.8		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-118	HGWC-109	HGWC-101	HGWC-105	HGWC-107	HGWC-103
8/30/2016	0.07 (J)	0.2 (J)	0.04 (J)						
8/31/2016				0.18 (J)	0.12 (J)	0.05 (J)	0.15 (J)	0.08 (J)	0.06 (J)
10/20/2016	0.07 (J)			0.12 (J)		0.03 (J)			
10/24/2016		0.16 (J)	0.05 (J)						0.13 (J)
10/25/2016					0.17 (J)		0.09 (J)	0.16 (J)	
1/25/2017	0.14 (J)	0.15 (J)	<0.1						
1/31/2017				0.3	0.05 (J)	<0.1	0.13 (J)	0.16 (J)	<0.1
5/23/2017		0.18 (J)	0.004 (J)	0.14 (J)		<0.1			0.15 (J)
5/24/2017	0.02 (J)				0.13 (J)		0.07 (J)	0.009 (J)	
8/10/2017	0.06 (J)	0.19 (J)	0.03 (J)	0.11 (J)	0.12 (J)	<0.1	0.03 (J)	<0.1	<0.1
11/13/2017	<0.1		<0.1						
11/14/2017		0.16 (J)		0.07 (J)	<0.1	<0.1	<0.1	<0.1	<0.1
6/4/2018	0.032 (J)		<0.1						
6/5/2018		0.18 (J)							
6/6/2018					0.15 (J)	<0.1	0.074 (J)	0.057 (J)	<0.1
6/7/2018				0.3					
10/1/2018	<0.1	0.078 (J)	<0.1						
10/2/2018					<0.1		<0.1	<0.1	
10/3/2018				0.12 (J)		<0.1			<0.1
4/1/2019	0.042 (J)								
4/2/2019		0.18 (J)	<0.1						
4/3/2019					0.05 (J)			<0.1	
4/4/2019						<0.1	0.03 (J)		0.042 (J)
4/5/2019				0.33					
6/18/2019				0.89					
8/21/2019	0.048 (J)	0.11 (J)	<0.1						
8/22/2019				0.07 (J)		<0.1	<0.1		<0.1
8/23/2019					0.034 (J)			<0.1	
10/21/2019	0.12 (J)								
10/22/2019		0.18 (J)	0.05 (J)	0.087 (J)	0.099 (J)			0.047 (J)	
10/23/2019						<0.1	<0.1		<0.1
1/3/2020									
3/4/2020									
3/24/2020	0.076 (J)		<0.1						
3/25/2020				0.078 (J)	0.075 (J)	<0.1	<0.1	<0.1	<0.1
4/9/2020		0.14 (J)							
6/18/2020									
7/21/2020									
8/25/2020	0.052 (J)	0.17	<0.1						
8/26/2020				0.072 (J)					
8/27/2020					0.094 (J)	<0.1	<0.1	<0.1	<0.1
9/18/2020	<0.1		<0.1						
9/22/2020		0.16							
9/24/2020						<0.1	<0.1	0.064 (J)	<0.1
9/25/2020					0.091 (J)				
9/28/2020				0.078 (J)					
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.057 (J)								
3/12/2021			<0.1						

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-118	HGWC-109	HGWC-101	HGWC-105	HGWC-107	HGWC-103
3/16/2021		0.18							
3/17/2021					0.089 (J)	<0.1			
3/18/2021				0.079 (J)			<0.1	<0.1	<0.1
8/12/2021	<0.1	0.16	<0.1						
8/13/2021				0.075 (J)	0.086 (J)		<0.1	<0.1	
8/16/2021						<0.1			<0.1
1/31/2022	0.055 (J)								
2/1/2022		0.16	<0.1						
2/2/2022					0.086 (J)	<0.1		<0.1	<0.1
2/3/2022				0.069 (J)			<0.1		
8/2/2022		0.19							
8/5/2022	0.1		0.077 (J)	0.12	0.14		0.075 (J)	0.093 (J)	0.071 (J)
8/10/2022						0.065 (J)			
1/24/2023	0.086 (J)	0.2	0.055 (J)						
1/25/2023				0.095 (J)	0.12	<0.1	0.051 (J)	0.054 (J)	<0.1

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/18/2019			
8/21/2019			
8/22/2019			
8/23/2019			
10/21/2019			
10/22/2019			
10/23/2019	0.22 (J)		
1/3/2020	<0.1		
3/4/2020	<0.1		
3/24/2020	<0.1		
3/25/2020			
4/9/2020			
6/18/2020	<0.1		
7/21/2020	<0.1		
8/25/2020			
8/26/2020			
8/27/2020	<0.1		
9/18/2020		0.098 (J)	0.067 (J)
9/22/2020			
9/24/2020	<0.1		
9/25/2020			
9/28/2020			
11/10/2020			0.065 (J)
11/11/2020		0.083 (J)	
12/15/2020		0.081 (J)	0.064 (J)
1/19/2021		0.079 (J)	0.057 (J)
3/11/2021			
3/12/2021		0.085 (J)	0.062 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
3/16/2021			
3/17/2021	<0.1		
3/18/2021			
8/12/2021		0.064 (J)	<0.1
8/13/2021	<0.1		
8/16/2021			
1/31/2022		0.072 (J)	0.053 (J)
2/1/2022			
2/2/2022	<0.1		
2/3/2022			
8/2/2022			0.08 (J)
8/5/2022	0.076 (J)	0.12	
8/10/2022			
1/24/2023		0.092 (J)	0.081 (J)
1/25/2023	<0.1		

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: pH (s.u.) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/30/2016	6.89	5.99	5.77						
8/31/2016				5.54	6.11	5.35	6.78	7.03	6.5
10/20/2016	6.73					5.3		7.01	
10/24/2016		5.84	5.61	5.48					
10/25/2016					6.04		6.55		6.34
1/25/2017	7.02	6.04	5.68						
1/31/2017				5.51	5.94	5.24	6.5	6.96	6.43
5/23/2017		6.01	5.7	5.98		5.39		6.92	
5/24/2017	6.44				6.06		6.42		6.31
8/10/2017	6.79	5.98	5.59	5.63	6.06	5.47	6.63	6.99	6.45
11/13/2017	5.94		5.56						
11/14/2017		6.16		5.59	5.99	5.4	6.5	6.9	6.53
6/4/2018	6.12		5.62						
6/5/2018		5.86							
6/6/2018				5.49	6	5.37	6.59		6.49
6/7/2018								7.03	
10/1/2018	5.92	5.94	5.62						
10/2/2018					6.18		6.54		6.18
10/3/2018				5.53		5.39		7.08	
4/1/2019	7.09								
4/2/2019		6	5.47						
4/3/2019					6.06		6.42		
4/4/2019				5.44		5.31			6.17
4/5/2019								6.96	
6/17/2019				5.53					
6/18/2019						5.3			
8/21/2019	6.6	6.05	5.8						
8/22/2019				5.55		5.39		6.93	6.04
8/23/2019					6.26		6.76		
10/21/2019	7.02								
10/22/2019		5.98	5.7		6.19		6.58	7.03	
10/23/2019				5.49		5.33			6.46
1/3/2020									
3/4/2020									
3/24/2020	7.37		5.64						
3/25/2020				5.49	6.13	5.53	6.56	6.89	6.47
4/9/2020		6.08							
6/18/2020									
7/21/2020									
8/25/2020	6.7	5.95	5.53						
8/26/2020								6.97	
8/27/2020				5.82	6.09	5.32	6.64		6.45
9/18/2020	6.46		5.58						
9/22/2020		6.1							
9/24/2020				5.6	6.11	5.48			6.63
9/25/2020							6.79		
9/28/2020								7.03	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	7.2								

Prediction Limit

Constituent: pH (s.u.) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
3/12/2021			5.6						
3/16/2021		6.14							
3/17/2021						5.41	6.55		
3/18/2021				5.51	6.2			7.11	6.57
8/12/2021	6.67	6.08	5.5						
8/13/2021					6.11		6.71	6.78	6.44
8/16/2021				5.59		5.4			
1/31/2022	7.17								
2/1/2022		6.05	5.59						
2/2/2022				5.63	6.14	5.51	6.65		
2/3/2022								6.79	6.48
8/2/2022		6.08							
8/5/2022	6.97		5.43	5.71	6.07		6.81	7.07	6.46
8/10/2022						5.37			
1/24/2023	7.11	6.15	5.67						
1/25/2023				5.65	6.13	5.47	6.66	6.67	6.41

Prediction Limit

Constituent: pH (s.u.) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/17/2019			
6/18/2019			
8/21/2019			
8/22/2019			
8/23/2019			
10/21/2019			
10/22/2019			
10/23/2019	5.68		
1/3/2020	5.64		
3/4/2020	5.75		
3/24/2020	5.58		
3/25/2020			
4/9/2020			
6/18/2020	5.67		
7/21/2020	5.72		
8/25/2020			
8/26/2020			
8/27/2020	5.7		
9/18/2020		7.54	7.5
9/22/2020			
9/24/2020	5.82		
9/25/2020			
9/28/2020			
11/10/2020		7.34	
11/11/2020			7.4
12/15/2020		7.27	7.39
1/19/2021		7.32	7.4
3/11/2021			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/12/2021		7.52	7.51
3/16/2021			
3/17/2021	5.78		
3/18/2021			
8/12/2021		7.38	7.44
8/13/2021	5.45		
8/16/2021			
1/31/2022		7.34	7.44
2/1/2022			
2/2/2022	5.79		
2/3/2022			
8/2/2022		7.34	
8/5/2022	5.69		7.4
8/10/2022			
1/24/2023		7.38	7.46
1/25/2023	5.77		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/30/2016	1.6	14	0.63 (J)						
8/31/2016				280	130	110	36	88	190
10/20/2016	1.6					110		81	
10/24/2016		11	0.62 (J)	280					
10/25/2016					130		41		190
1/25/2017	1.6	12	0.62 (J)						
1/31/2017				300	130	120	37	87	210
5/23/2017		12	0.55 (J)	340		97		84	
5/24/2017	1.4				130		40		180
8/10/2017	1.6	11	0.66 (J)	300	130	96	40	78	180
11/13/2017	1.3		0.61 (J)						
11/14/2017		11		310	130	110	40	79	170
6/4/2018	1.4		0.73 (J)						
6/5/2018		9.9							
6/6/2018				351	132	95.5	49.7		168
6/7/2018								60.1	
10/1/2018	1	6.7	0.52 (J)						
10/2/2018					132		42.3		173
10/3/2018				381		121		91.5	
4/1/2019	1.7								
4/2/2019		8.7	0.78 (J)						
4/3/2019					139		36		
4/4/2019				358		95.1			185
4/5/2019								75.1	
6/17/2019				311	126		30.9		162
6/18/2019						102		77	
10/21/2019	1.8								
10/22/2019		6.8	0.6 (J)		123		23.2	80.9	
10/23/2019				248		101			162
1/3/2020									
3/4/2020									
3/24/2020	1.6		<1						
3/25/2020				251	116	85.5	27.9	78.4	161
4/9/2020		6.6							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	1		<1						
9/22/2020		5.3							
9/24/2020				293	126	97			177
9/25/2020							24.7		
9/28/2020								86	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	1.5								
3/12/2021			0.52 (J)						
3/16/2021		7.7							
3/17/2021						107	28.3		
3/18/2021				286	128			87.8	196
8/12/2021	1.3	10	<1						

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-118	HGWC-105
8/13/2021					112		24.4	75.1	142
8/16/2021				354		72.1			
1/31/2022	1.5								
2/1/2022		8.9	0.5 (J)						
2/2/2022				293	111	100	25.5		
2/3/2022								72.7	195
8/2/2022		7.5							
8/5/2022	1.4		<1	369	120		23	69.8	217
8/10/2022						99.5			
1/24/2023	1.9	6.6	0.81 (J)						
1/25/2023				342	128	95	25.4	73	230

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/17/2019			
6/18/2019			
10/21/2019			
10/22/2019			
10/23/2019	<1		
1/3/2020	380		
3/4/2020	400		
3/24/2020	311		
3/25/2020			
4/9/2020			
6/18/2020	349		
7/21/2020	378		
8/27/2020	382		
9/18/2020		3.5	9.5
9/22/2020			
9/24/2020	370		
9/25/2020			
9/28/2020			
11/10/2020		2.3	
11/11/2020			4.5
12/15/2020		2.4	4.2
1/19/2021		2.6	3.9
3/11/2021			
3/12/2021		1.9	4.7
3/16/2021			
3/17/2021	332		
3/18/2021			
8/12/2021		1.4	4.3

ND substitution: RL or RL/2 if <15% NDs.

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/13/2021	248		
8/16/2021			
1/31/2022		1.7	5.6
2/1/2022			
2/2/2022	303		
2/3/2022			
8/2/2022		2.1	
8/5/2022	358		3.4
8/10/2022			
1/24/2023		2.2	2.9
1/25/2023	348		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-103	HGWC-109	HGWC-101	HGWC-118	HGWC-107
8/30/2016	172	77	76						
8/31/2016				389	483	182	278	373	235
10/20/2016	108						165	305	
10/24/2016		111	65		517				
10/25/2016				316		172			223
1/25/2017	345	155	152 (o)						
1/31/2017				437	516	252	263	361	346
5/23/2017		74	52		637		190	359	
5/24/2017	126			352		184			234
8/10/2017	174	94	60	356	459	208	175	325	254
11/13/2017	158		75						
11/14/2017		89		375	545	252	253	373	313
6/4/2018	131		70						
6/5/2018		92							
6/6/2018				385	559	224	188		278
6/7/2018								338	
10/1/2018	101	91	76						
10/2/2018				374		230			274
10/3/2018					582		238	328	
4/1/2019	213								
4/2/2019		94	69						
4/3/2019						210			273
4/4/2019				340	535		149		
4/5/2019								308	
6/17/2019				370	515				272
6/18/2019								215	
10/21/2019	187								
10/22/2019		95	81			212		354	308
10/23/2019				419	507		221		
1/3/2020									
3/4/2020									
3/24/2020	207		52						
3/25/2020				417	507	213	187	347	297
4/9/2020		48							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	139		62						
9/22/2020		84							
9/24/2020				411	517		170		253
9/25/2020						188			
9/28/2020								332	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	207								
3/12/2021			56						
3/16/2021		99							
3/17/2021						171	213		
3/18/2021				410	465			328	255
8/12/2021	157	92	63						

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-103	HGWC-109	HGWC-101	HGWC-118	HGWC-107
8/13/2021				441		189		336	291
8/16/2021					672		206		
1/31/2022	186								
2/1/2022		99	73						
2/2/2022					576	206	220		271
2/3/2022				463				316	
8/2/2022		85							
8/5/2022	171		44	514	692	195		329	274
8/10/2022							232		
1/24/2023	177	146	96						
1/25/2023				537	630	214	186	337	304

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			
8/31/2016			
10/20/2016			
10/24/2016			
10/25/2016			
1/25/2017			
1/31/2017			
5/23/2017			
5/24/2017			
8/10/2017			
11/13/2017			
11/14/2017			
6/4/2018			
6/5/2018			
6/6/2018			
6/7/2018			
10/1/2018			
10/2/2018			
10/3/2018			
4/1/2019			
4/2/2019			
4/3/2019			
4/4/2019			
4/5/2019			
6/17/2019			
6/18/2019			
10/21/2019			
10/22/2019			
10/23/2019	736		
1/3/2020	714		
3/4/2020	764		
3/24/2020	521		
3/25/2020			
4/9/2020			
6/18/2020	652		
7/21/2020	669		
8/27/2020	663		
9/18/2020		195	224
9/22/2020			
9/24/2020	696		
9/25/2020			
9/28/2020			
11/10/2020		229	
11/11/2020			221
12/15/2020		233	239
1/19/2021		199	224
3/11/2021			
3/12/2021		217	204
3/16/2021			
3/17/2021	626		
3/18/2021			
8/12/2021		212	234

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/3/2023 12:12 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/13/2021	647		
8/16/2021			
1/31/2022		243	223
2/1/2022			
2/2/2022	602		
2/3/2022			
8/2/2022		222	
8/5/2022	696		224
8/10/2022			
1/24/2023		223	230
1/25/2023	664		

FIGURE E.

Appendix III Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:15 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWC-101**	**0.009089**	**72**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.03075**	**-102**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3008**	**80**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-103**	**5.635**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.476**	**119**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-103**	**0.4009**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-105**	**0.3224**	**87**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-0.9282**	**-79**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWC-109**	**-2.808**	**-83**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-105**	**22.68**	**83**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Tests - All Results

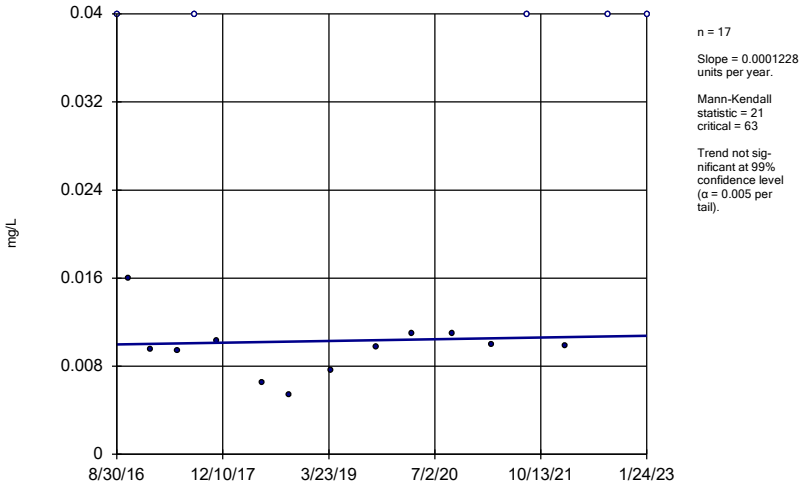
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/3/2023, 12:15 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0.0001228	21	63	No	17	29.41	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	0	-1	-63	No	17	29.41	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.00111	35	63	No	17	23.53	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.01438	16	25	No	9	55.56	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.0008669	-5	-25	No	9	11.11	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-101**	**0.009089**	**72**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-102	-0.2179	-35	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.09437	67	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.003835	21	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.0216	53	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-109**	**-0.03075**	**-102**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-118	-0.009092	-16	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.727	46	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.08575	44	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3008**	**80**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWA-47 (bg)	0.1534	2	25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	0.1311	3	25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-0.4704	-1	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-103**	**5.635**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**6.476**	**119**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-118	0.975	53	68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	0	-3	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	0	0	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.03432	-41	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	0.05437	6	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	-0.0365	-4	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	0.1665	13	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-103**	**0.4009**	**85**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-105**	**0.3224**	**87**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-111 (bg)	0	-8	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	0.0351	24	63	No	17	23.53	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-113 (bg)**	**-0.9282**	**-79**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-47 (bg)	-0.4079	-14	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-0.9231	-16	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.342	-55	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-9.606	-12	-43	No	13	7.692	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	4.631	28	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-0.8983	-4	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.437	-63	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWC-109**	**-2.808**	**-83**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWC-118	-1.644	-56	-68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	3.783	17	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-0.4451	-4	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	1.369	15	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	9.57	10	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0.8184	3	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-26	-21	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	11.98	35	68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWC-105**	**22.68**	**83**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-111 (bg)



n = 17

Slope = 0.0001228 units per year.

Mann-Kendall statistic = 21
critical = 63

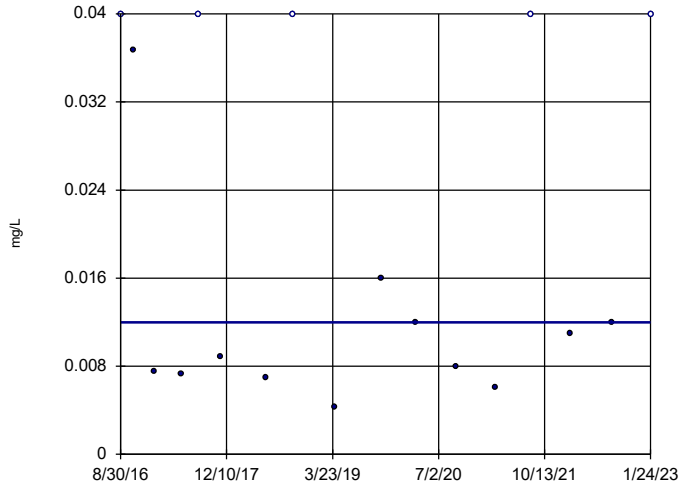
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-112 (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -63

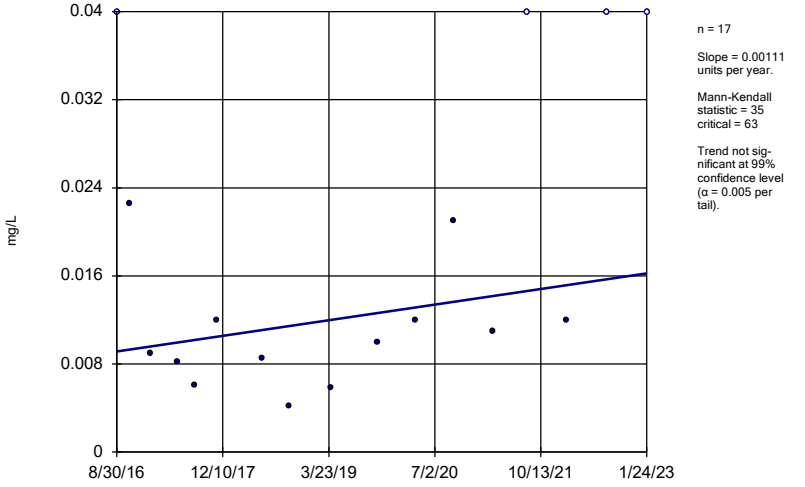
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-113 (bg)



n = 17

Slope = 0.00111 units per year.

Mann-Kendall statistic = 35
critical = 63

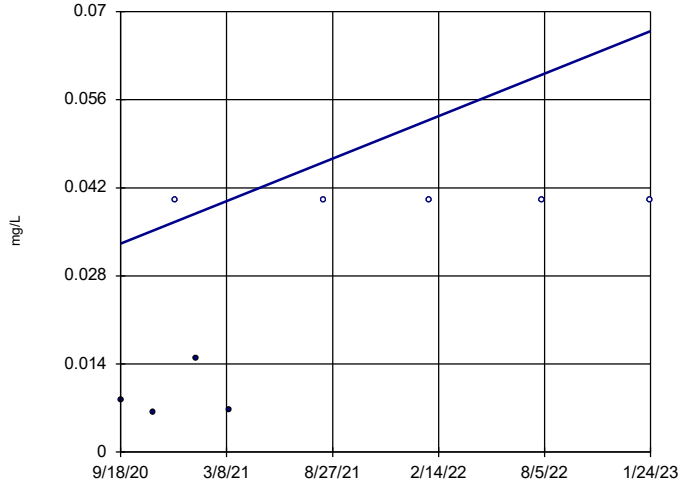
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-47 (bg)



n = 9

Slope = 0.01438 units per year.

Mann-Kendall statistic = 16
critical = 25

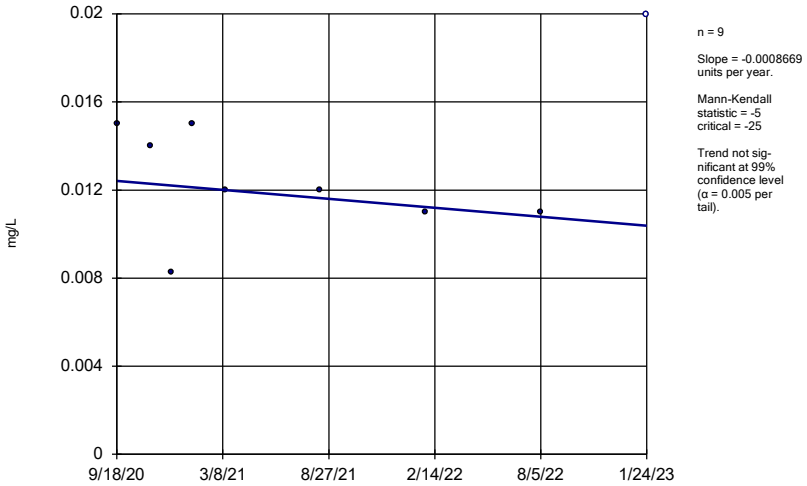
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-48D (bg)



n = 9

Slope = -0.0008669 units per year.

Mann-Kendall statistic = -5
critical = -25

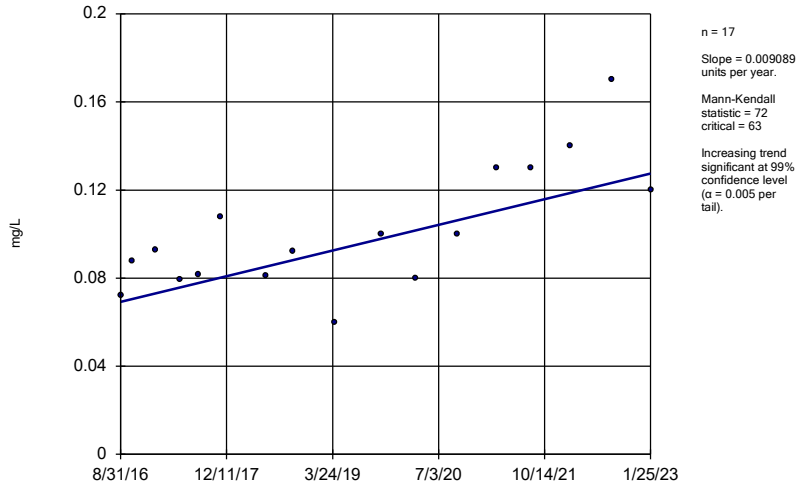
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-101



n = 17

Slope = 0.009089 units per year.

Mann-Kendall statistic = 72
critical = 63

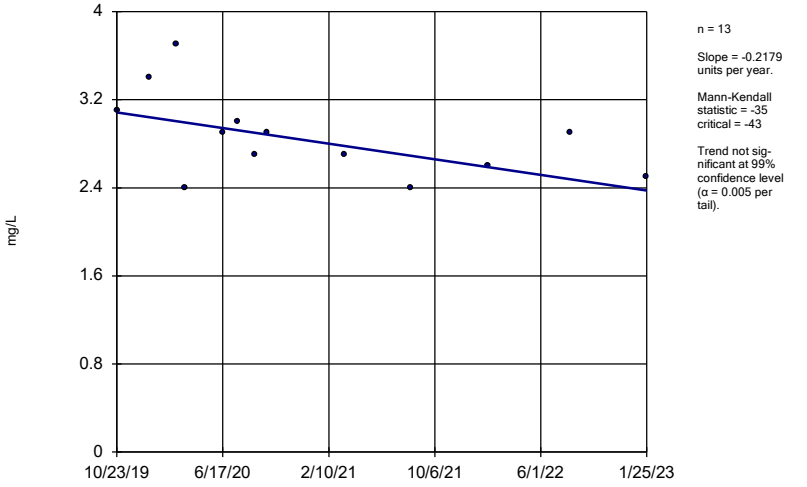
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-102



n = 13

Slope = -0.2179 units per year.

Mann-Kendall statistic = -35
critical = -43

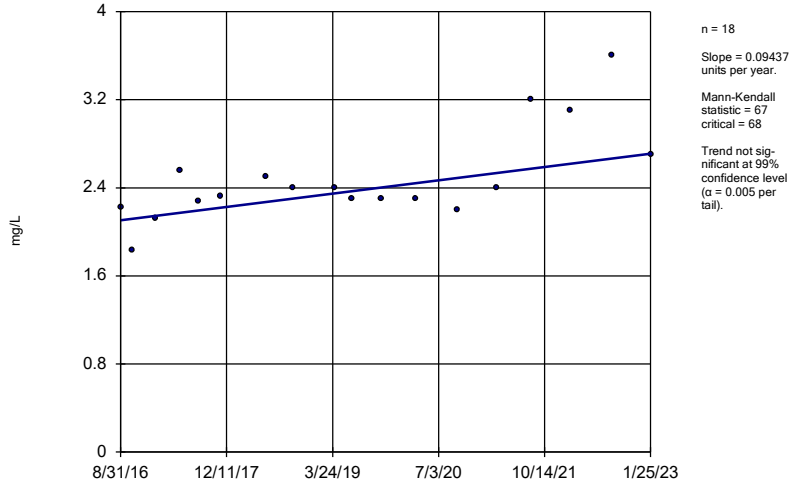
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-103



n = 18

Slope = 0.09437 units per year.

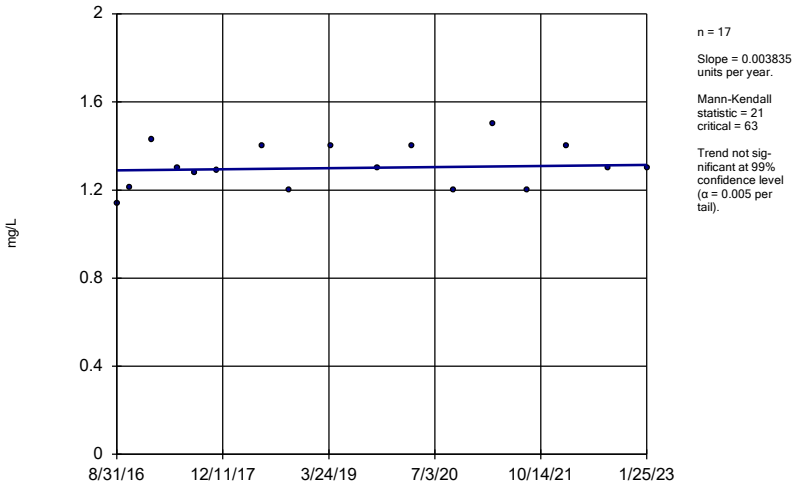
Mann-Kendall statistic = 67
critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 17

Slope = 0.003835 units per year.

Mann-Kendall statistic = 21
critical = 63

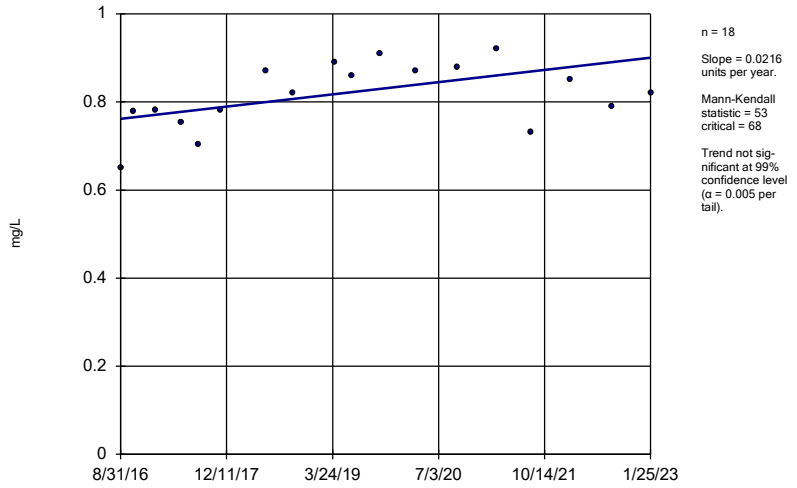
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-107



n = 18

Slope = 0.0216 units per year.

Mann-Kendall statistic = 53
critical = 68

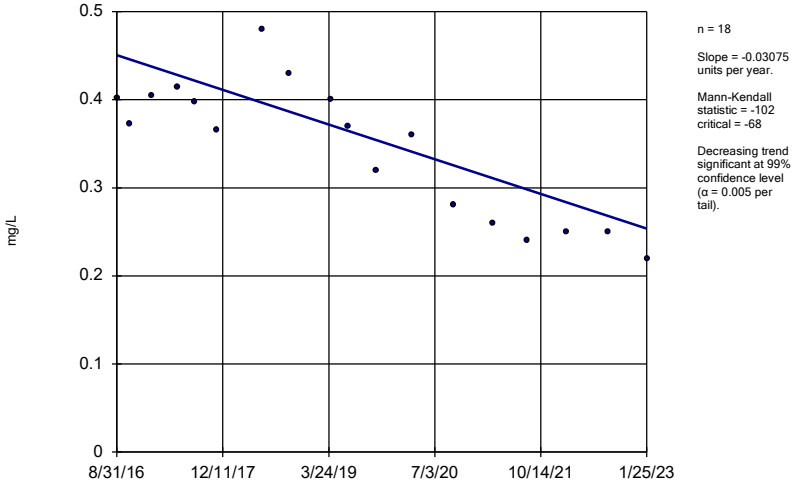
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-109



n = 18

Slope = -0.03075 units per year.

Mann-Kendall statistic = -102
critical = -68

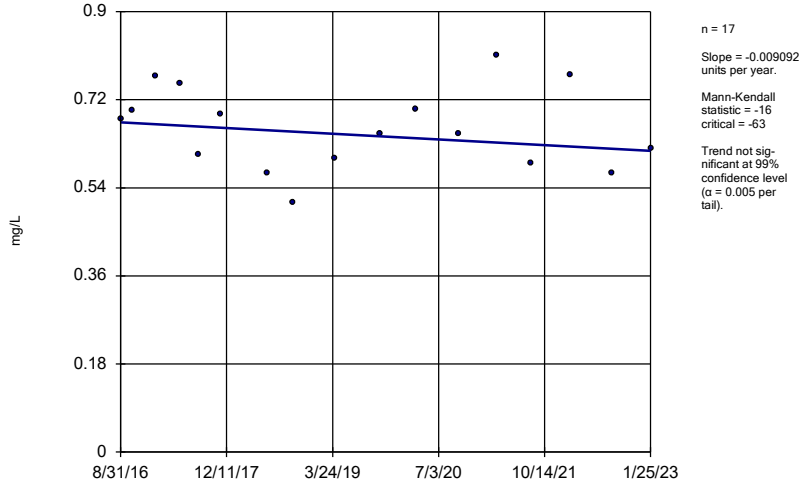
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-118



n = 17

Slope = -0.009092 units per year.

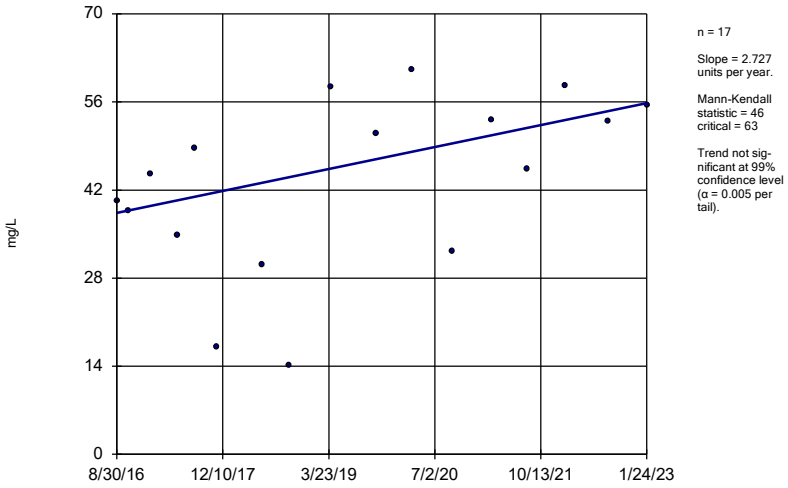
Mann-Kendall statistic = -16
critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 4/3/2023 12:13 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-111 (bg)



n = 17

Slope = 2.727 units per year.

Mann-Kendall statistic = 46 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

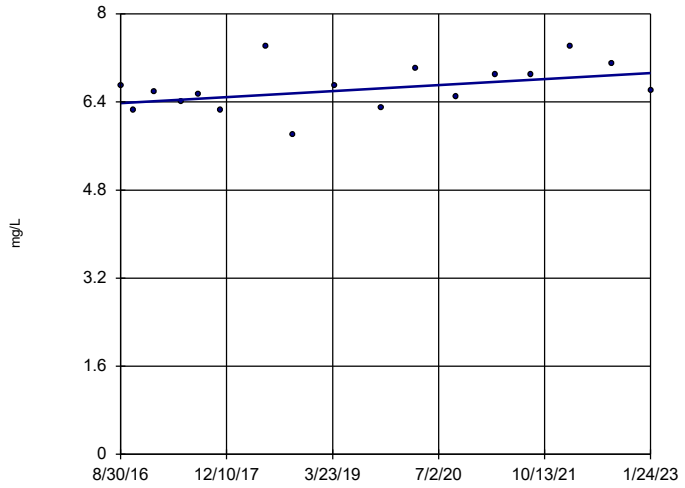
Constituent: Calcium Analysis Run 4/3/2023 12:13 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 17

Slope = 0.08575 units per year.

Mann-Kendall statistic = 44 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

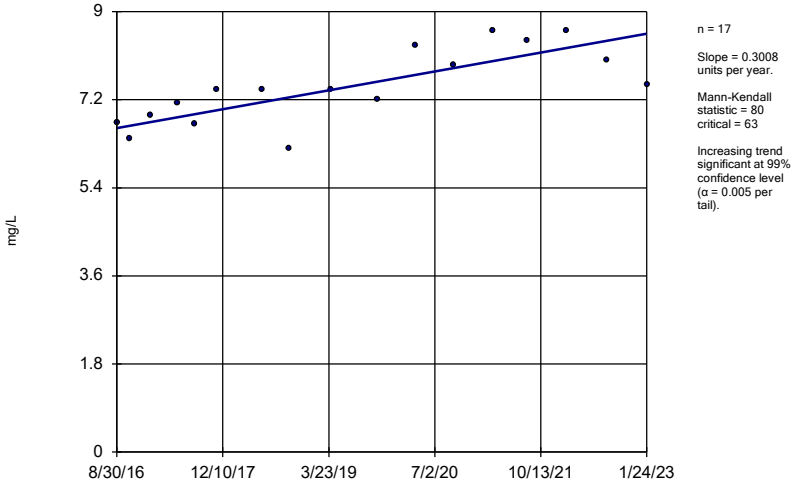
Constituent: Calcium Analysis Run 4/3/2023 12:13 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 17

Slope = 0.3008 units per year.

Mann-Kendall statistic = 80 critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

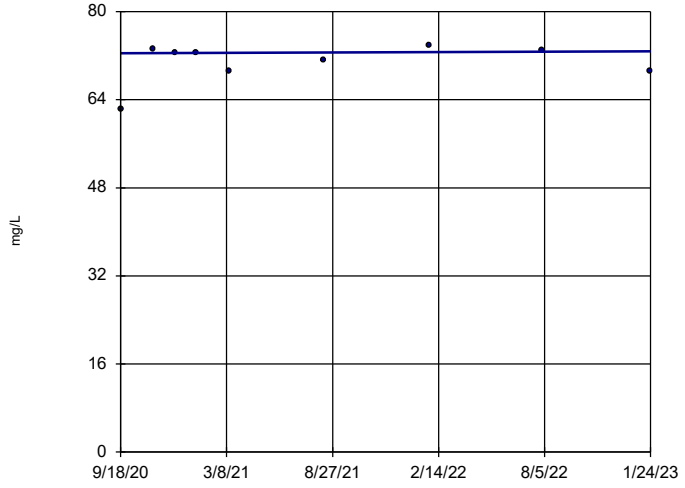
Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-47 (bg)



n = 9

Slope = 0.1534 units per year.

Mann-Kendall statistic = 2 critical = 25

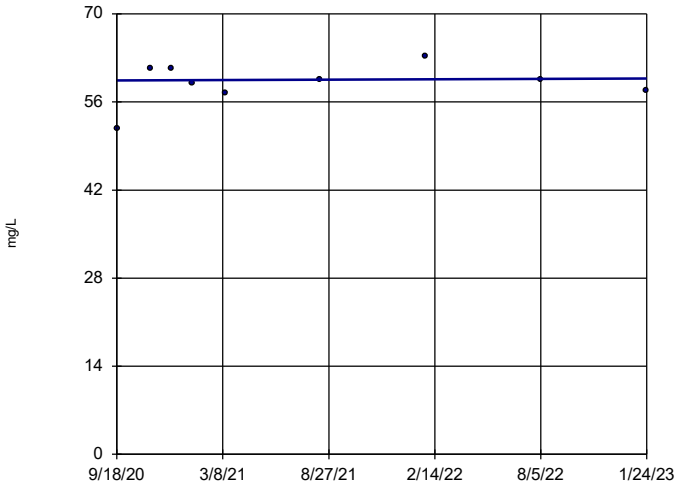
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)



n = 9

Slope = 0.1311 units per year.

Mann-Kendall statistic = 3 critical = 25

Trend not significant at 99% confidence level (α = 0.005 per tail).

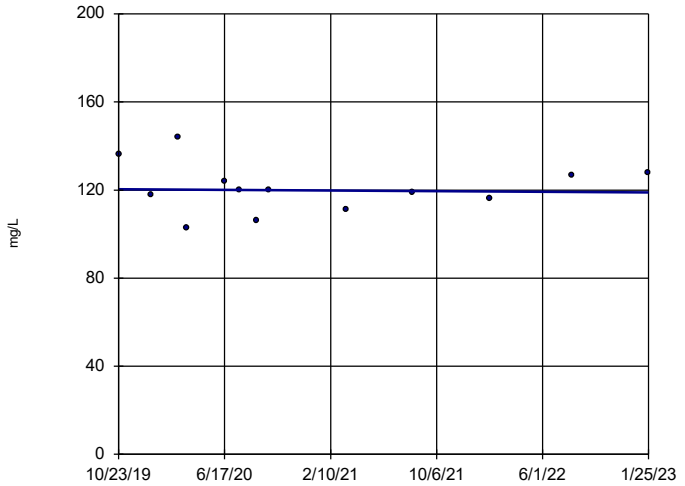
Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-102



n = 13

Slope = -0.4704 units per year.

Mann-Kendall statistic = -1 critical = -43

Trend not significant at 99% confidence level (α = 0.005 per tail).

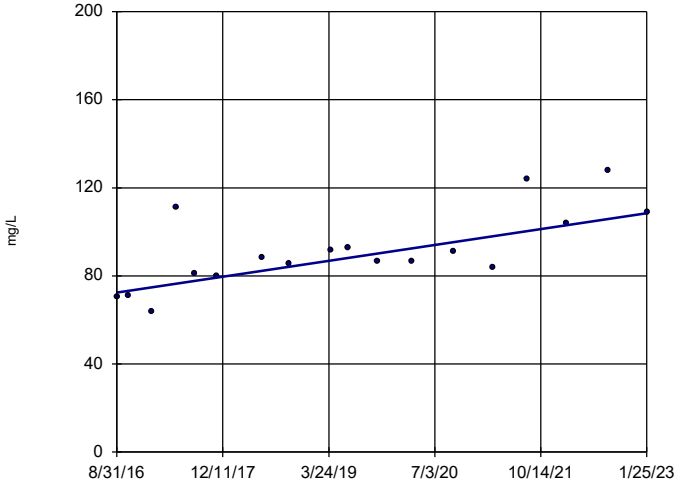
Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-103



n = 18

Slope = 5.635 units per year.

Mann-Kendall statistic = 85 critical = 68

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

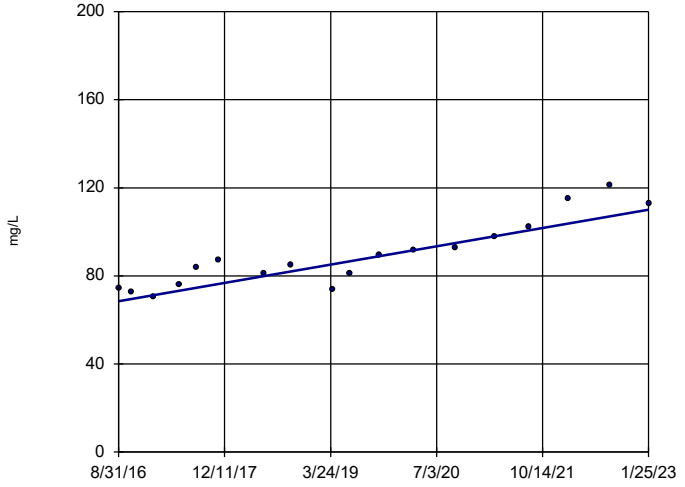
Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-105



n = 18

Slope = 6.476 units per year.

Mann-Kendall statistic = 119 critical = 68

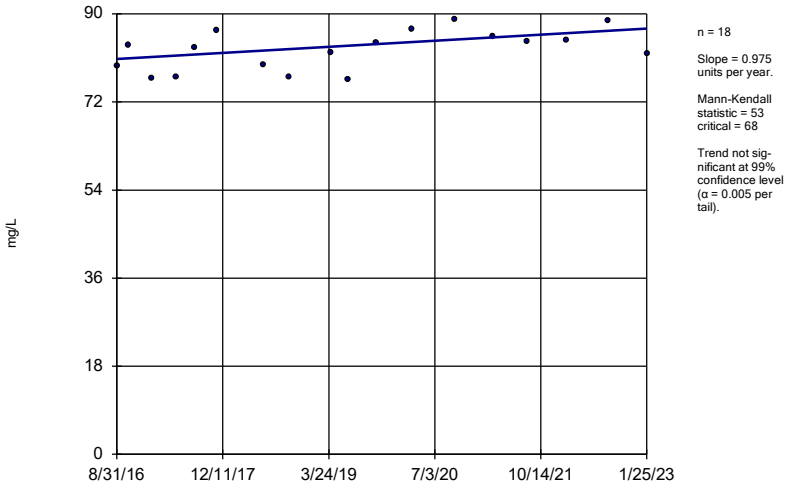
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-118



n = 18

Slope = 0.975 units per year.

Mann-Kendall statistic = 53 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

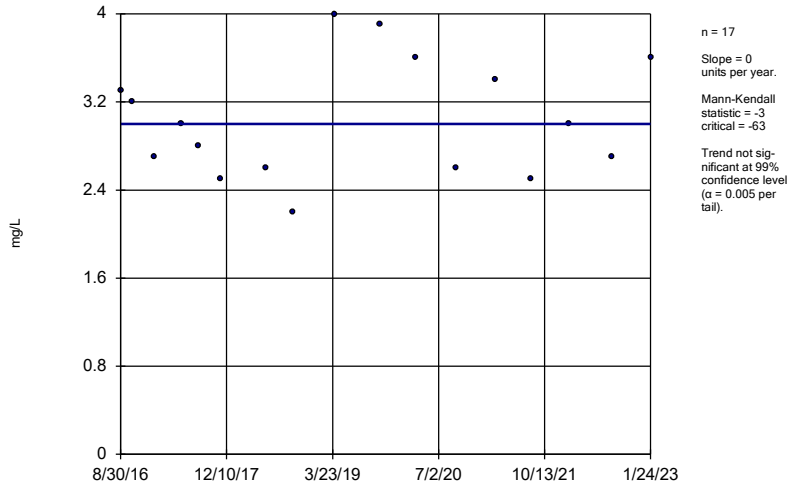
Constituent: Calcium Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = -3 critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

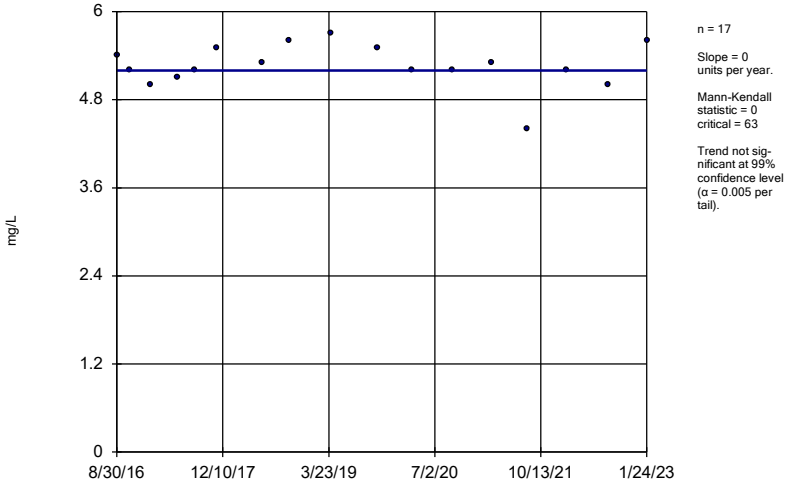
Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

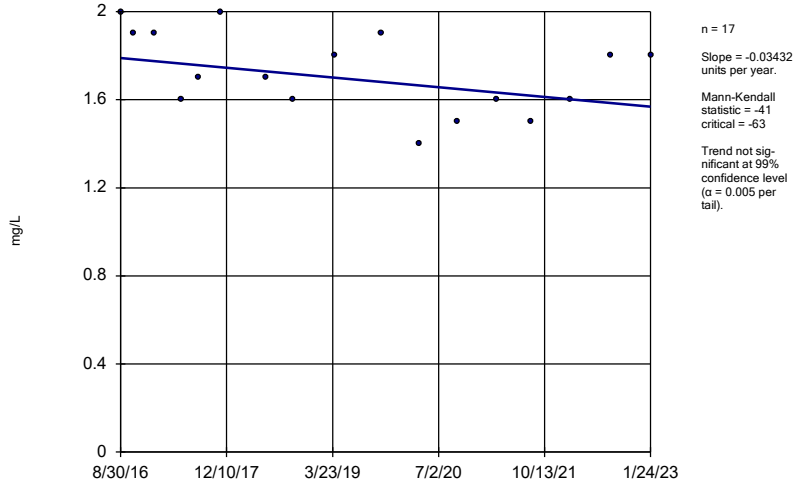
Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 17

Slope = -0.03432 units per year.

Mann-Kendall statistic = -41 critical = -63

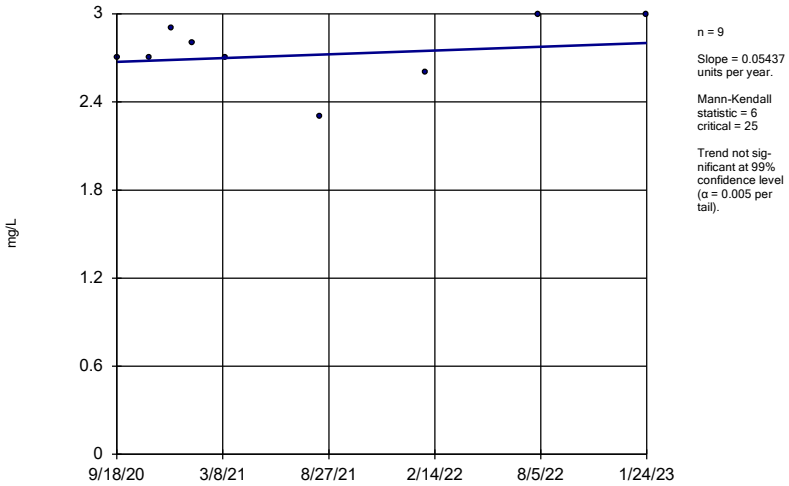
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)



n = 9

Slope = 0.05437 units per year.

Mann-Kendall statistic = 6
critical = 25

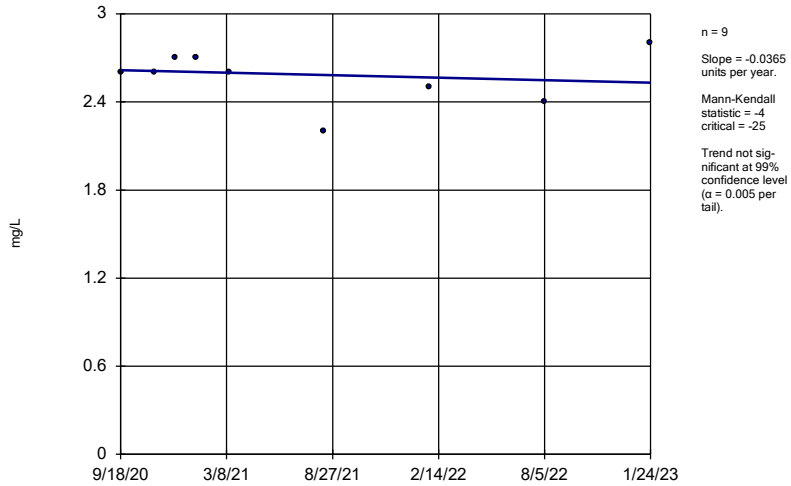
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 9

Slope = -0.0365 units per year.

Mann-Kendall statistic = -4
critical = -25

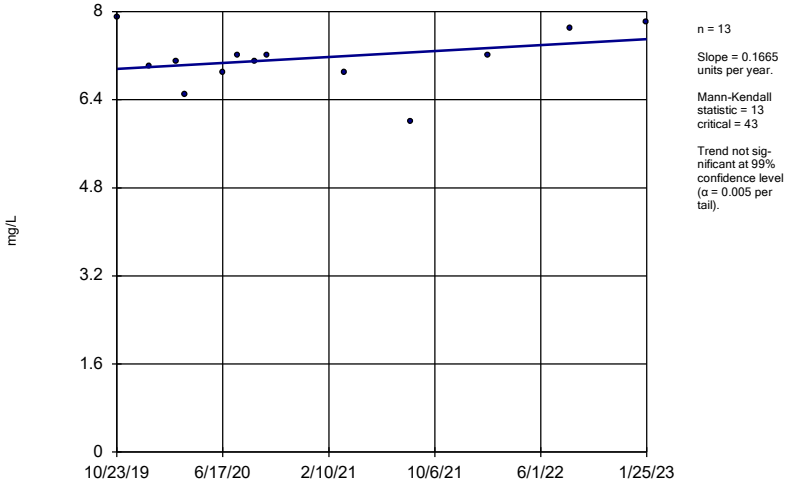
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-102



n = 13

Slope = 0.1665 units per year.

Mann-Kendall statistic = 13
critical = 43

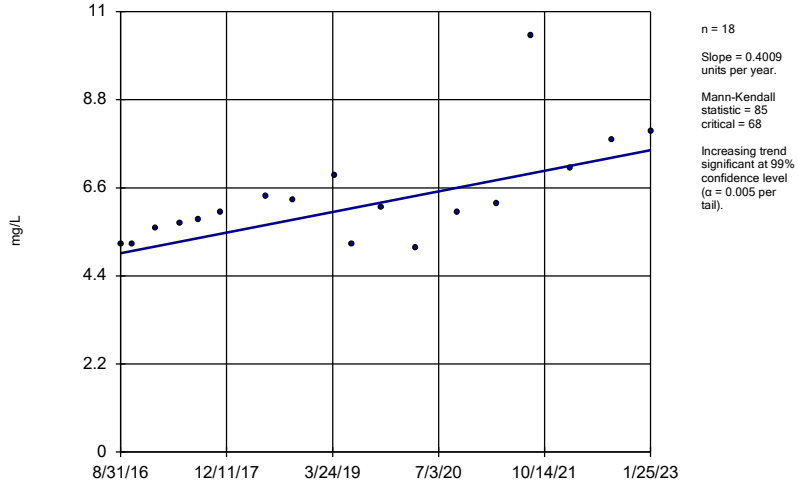
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-103



n = 18

Slope = 0.4009 units per year.

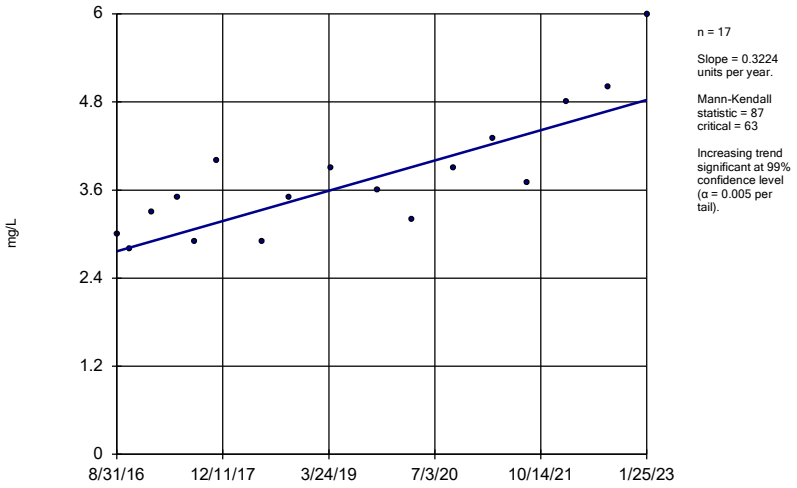
Mann-Kendall statistic = 85
critical = 68

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 17

Slope = 0.3224 units per year.

Mann-Kendall statistic = 87 critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

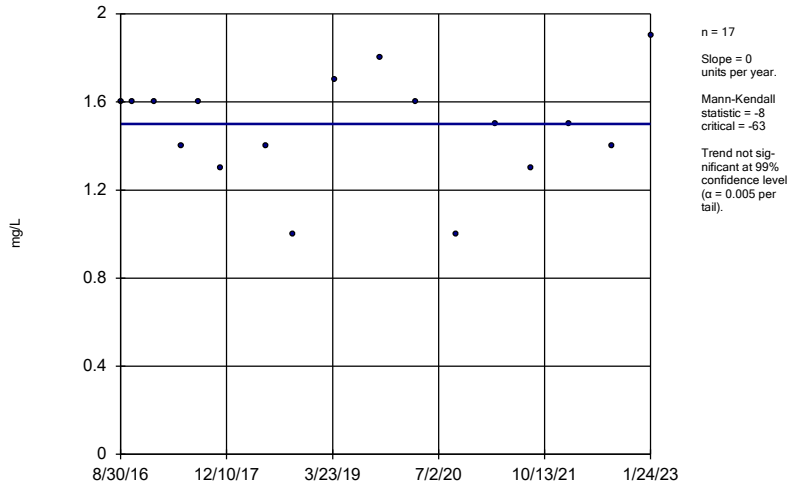
Constituent: Chloride Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = -8 critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

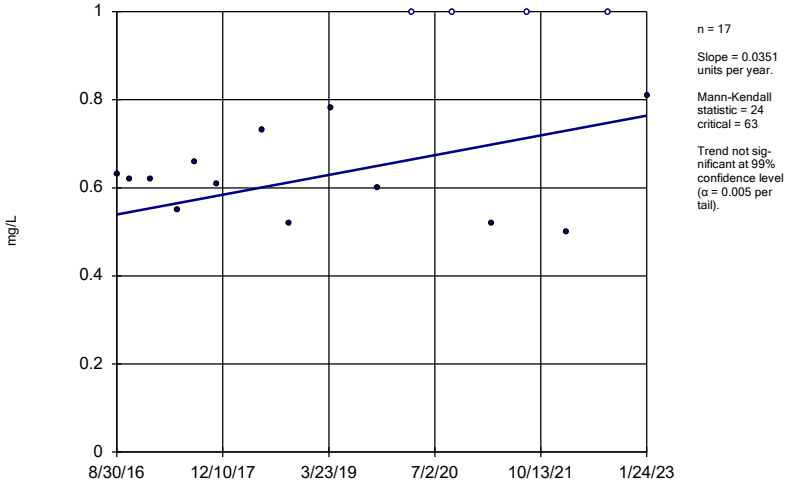
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-112 (bg)



n = 17

Slope = 0.0351 units per year.

Mann-Kendall statistic = 24 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

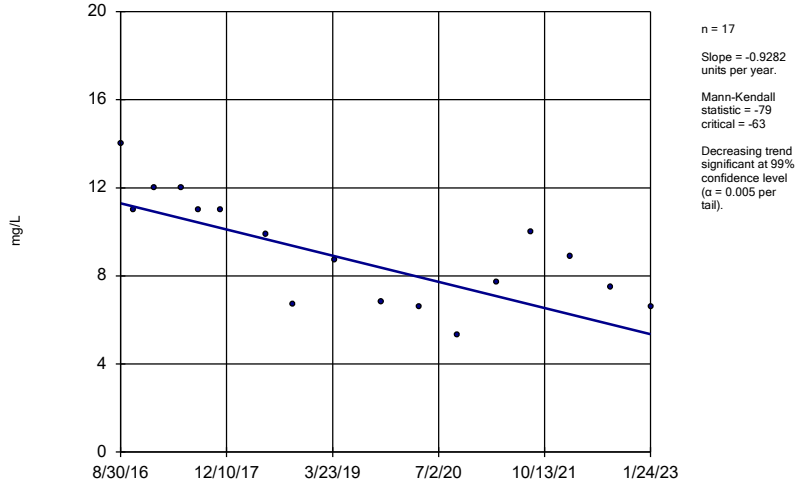
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 17

Slope = -0.9282 units per year.

Mann-Kendall statistic = -79 critical = -63

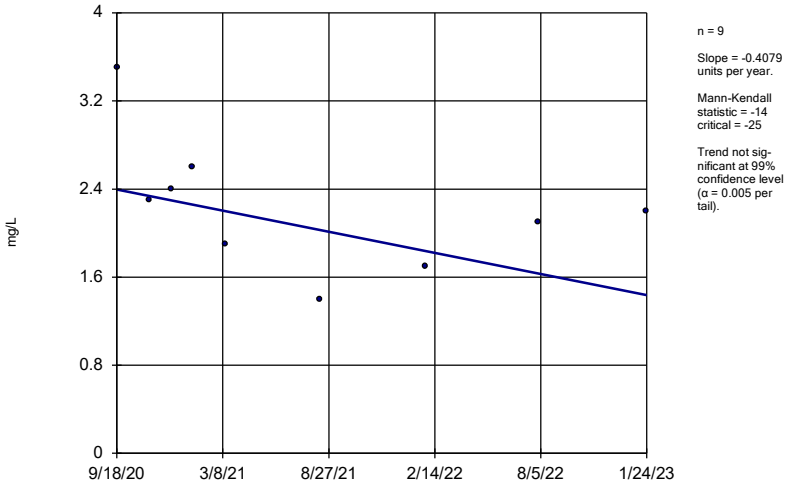
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)



n = 9

Slope = -0.4079 units per year.

Mann-Kendall statistic = -14 critical = -25

Trend not significant at 99% confidence level (α = 0.005 per tail).

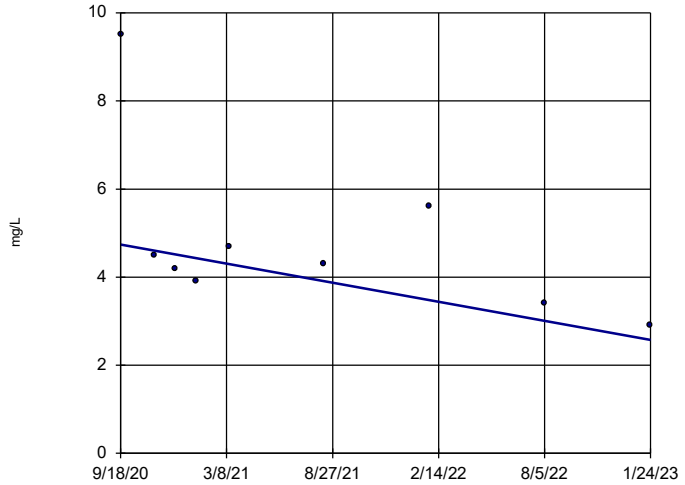
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 9

Slope = -0.9231 units per year.

Mann-Kendall statistic = -16 critical = -25

Trend not significant at 99% confidence level (α = 0.005 per tail).

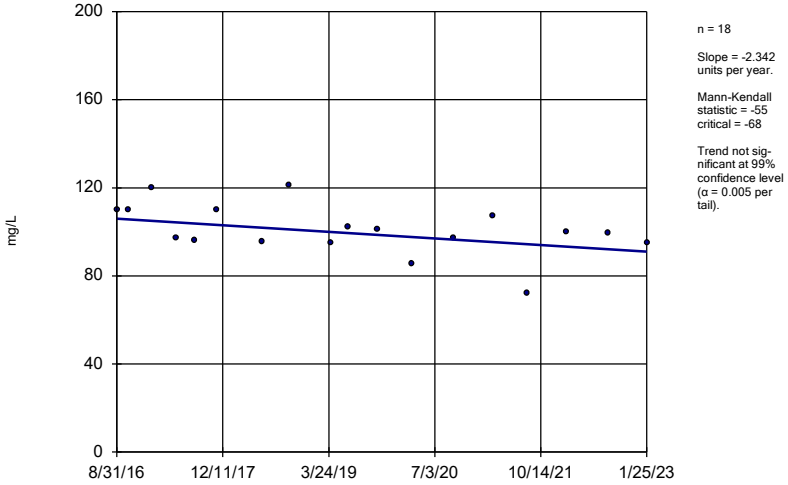
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-101



n = 18

Slope = -2.342 units per year.

Mann-Kendall statistic = -55 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

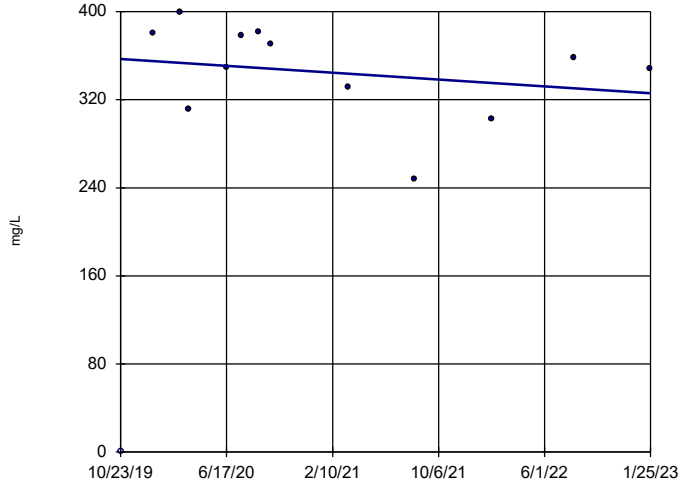
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWC-102



n = 13

Slope = -9.606 units per year.

Mann-Kendall statistic = -12 critical = -43

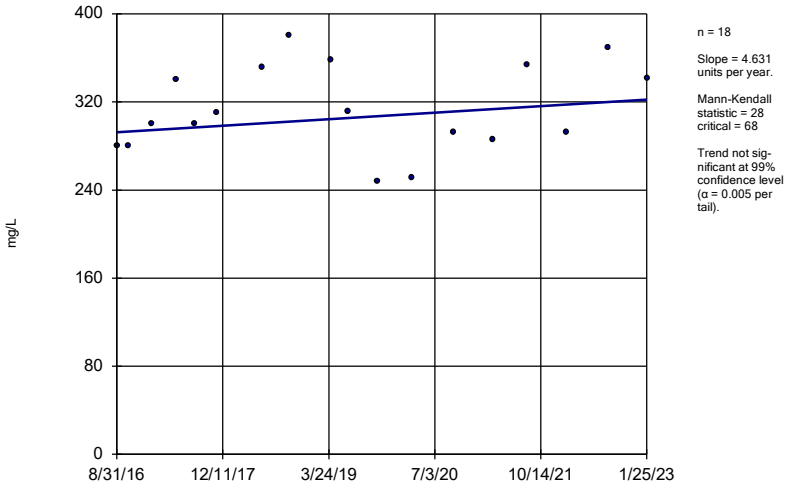
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-103



n = 18

Slope = 4.631 units per year.

Mann-Kendall statistic = 28 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

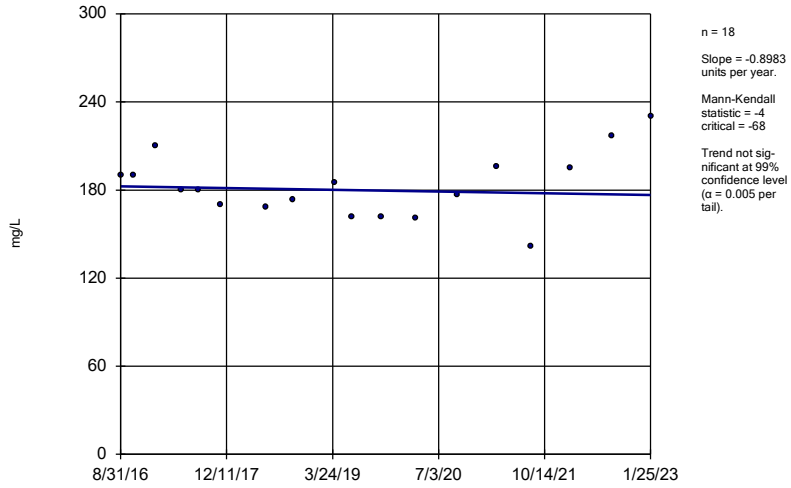
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-105



n = 18

Slope = -0.8983 units per year.

Mann-Kendall statistic = -4 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

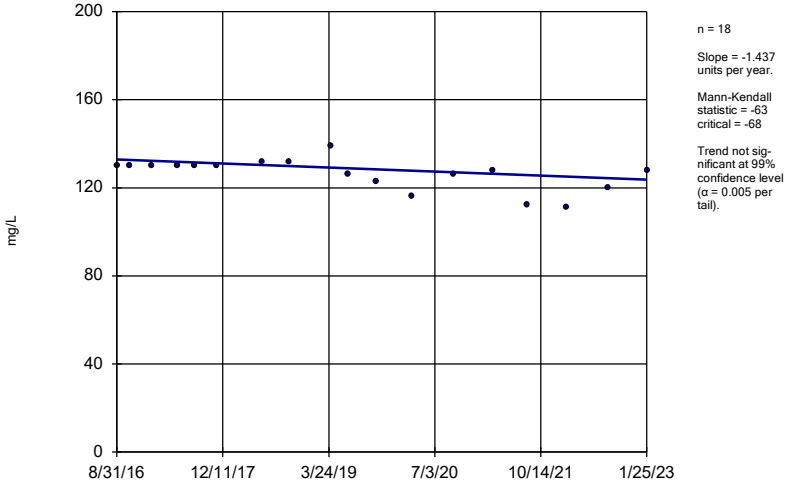
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-107



n = 18

Slope = -1.437 units per year.

Mann-Kendall statistic = -63 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

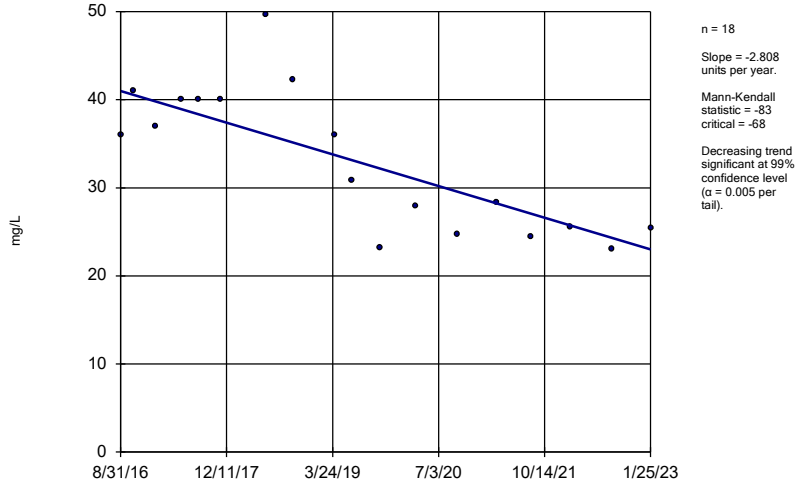
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-109



n = 18

Slope = -2.808 units per year.

Mann-Kendall statistic = -83 critical = -68

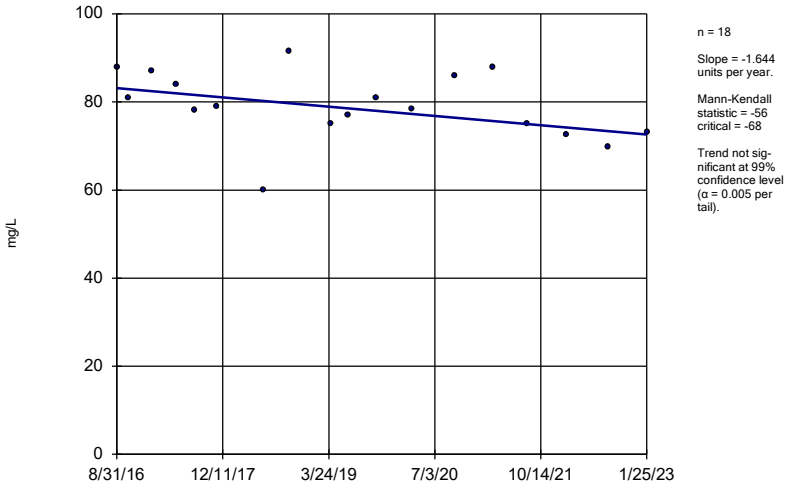
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-118



n = 18

Slope = -1.644 units per year.

Mann-Kendall statistic = -56 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

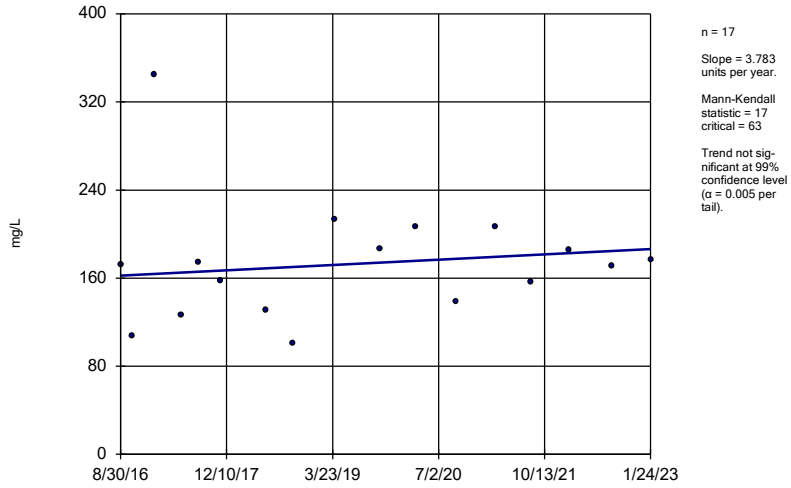
Constituent: Sulfate Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 17

Slope = 3.783 units per year.

Mann-Kendall statistic = 17 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

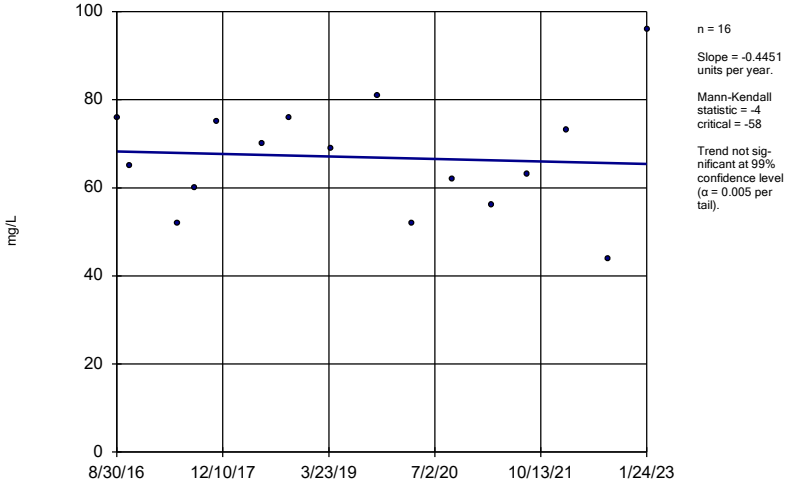
Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 16

Slope = -0.4451 units per year.

Mann-Kendall statistic = -4 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

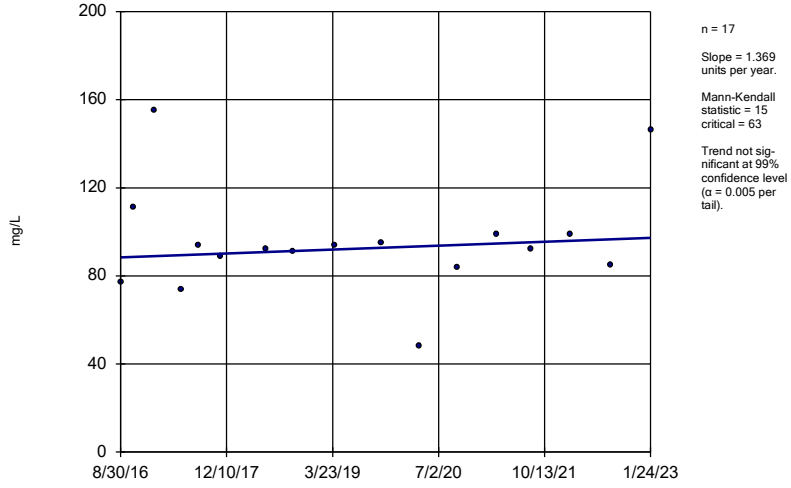
Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 17

Slope = 1.369 units per year.

Mann-Kendall statistic = 15 critical = 63

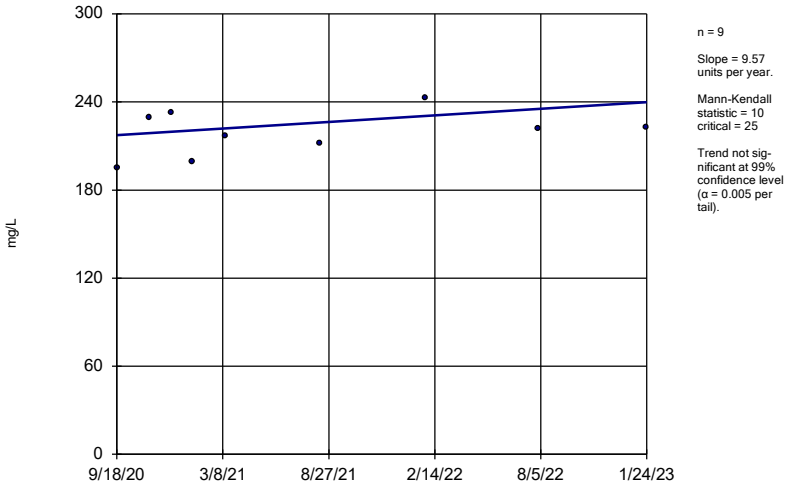
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)



n = 9

Slope = 9.57 units per year.

Mann-Kendall statistic = 10 critical = 25

Trend not significant at 99% confidence level (α = 0.005 per tail).

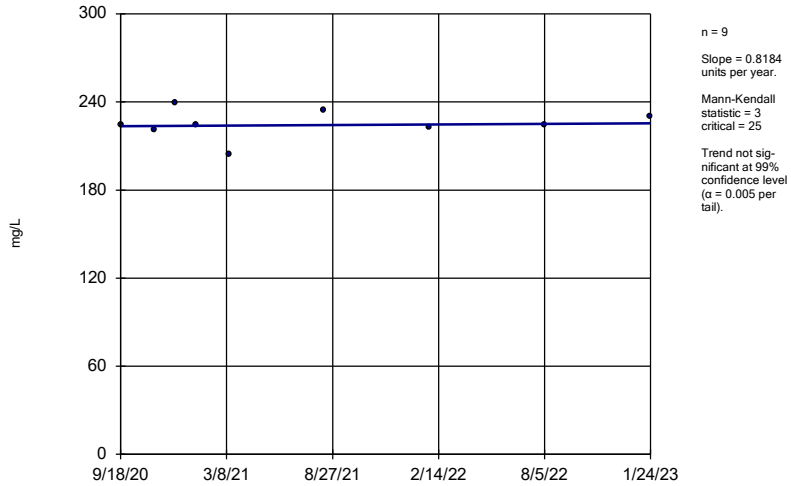
Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 9

Slope = 0.8184 units per year.

Mann-Kendall statistic = 3 critical = 25

Trend not significant at 99% confidence level (α = 0.005 per tail).

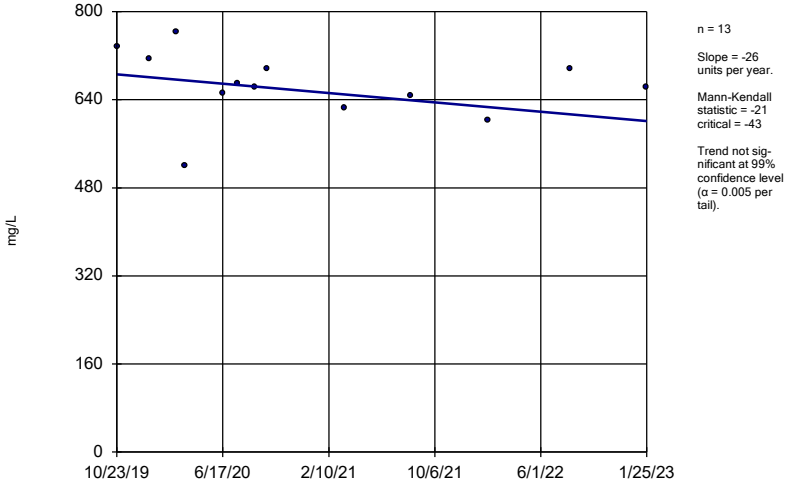
Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-102



n = 13

Slope = -26 units per year.

Mann-Kendall statistic = -21 critical = -43

Trend not significant at 99% confidence level (α = 0.005 per tail).

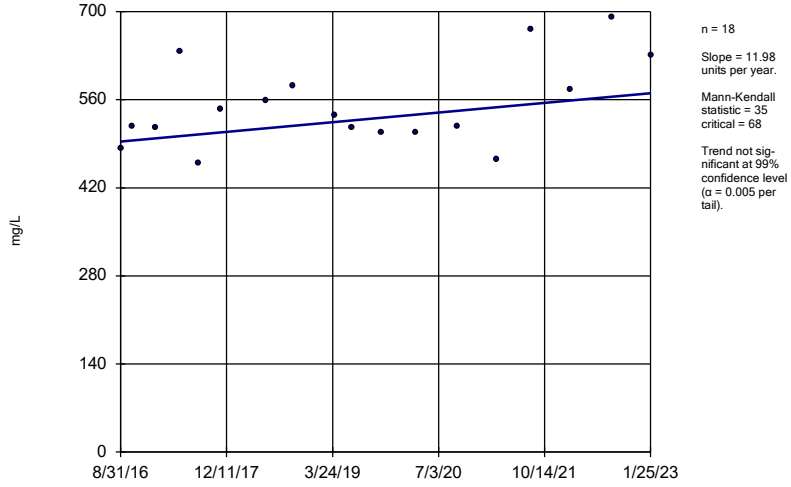
Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-103



n = 18

Slope = 11.98 units per year.

Mann-Kendall statistic = 35 critical = 68

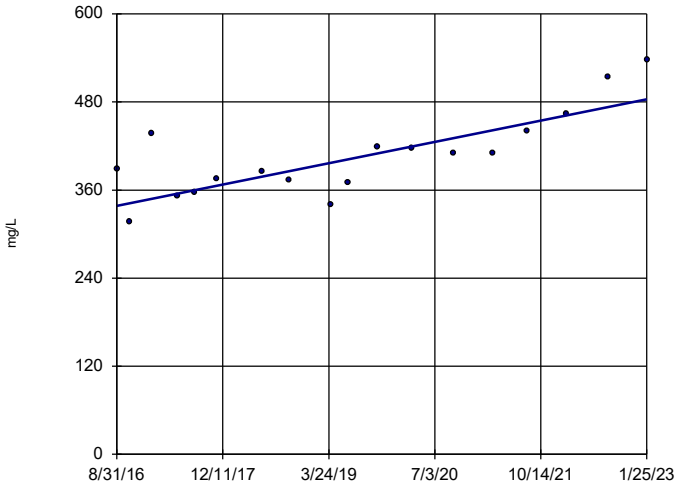
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 18

Slope = 22.68 units per year.

Mann-Kendall statistic = 83
critical = 68

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 4/3/2023 12:14 PM View: Trend Test

Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 5/16/2023, 1:27 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	n/a 58	n/a	n/a	93.1	n/a	n/a	0.05105	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 72	n/a	n/a	93.06	n/a	n/a	0.02489	NP Inter(NDs)
Barium (mg/L)	n/a	0.11	n/a	n/a	n/a	n/a 72	n/a	n/a	0	n/a	n/a	0.02489	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0019	n/a	n/a	n/a	n/a 72	n/a	n/a	90.28	n/a	n/a	0.02489	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 72	n/a	n/a	100	n/a	n/a	0.02489	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0061	n/a	n/a	n/a	n/a 72	n/a	n/a	37.5	n/a	n/a	0.02489	NP Inter(normality)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 72	n/a	n/a	88.89	n/a	n/a	0.02489	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	n/a	1.277	n/a	n/a	n/a	n/a 72	0.5958	0.3442	0	None	No	0.05	Inter
Fluoride, total (mg/L)	n/a	0.1712	n/a	n/a	n/a	n/a 75	0.2609	0.07751	22.67	Kaplan-Meier	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.0016	n/a	n/a	n/a	n/a 72	n/a	n/a	70.83	n/a	n/a	0.02489	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	n/a 72	n/a	n/a	37.5	n/a	n/a	0.02489	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	n/a 58	n/a	n/a	79.31	n/a	n/a	0.05105	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	n/a 58	n/a	n/a	84.48	n/a	n/a	0.05105	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 58	n/a	n/a	79.31	n/a	n/a	0.05105	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 58	n/a	n/a	100	n/a	n/a	0.05105	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-4 GWPS				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background 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		0.11	2
Beryllium, Total (mg/L)	0.004		0.0019	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0061	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.005	0.006
Combined Radium, Total (pCi/L)	5		1.28	5
Fluoride, Total (mg/L)	4		0.17	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 5/16/2023, 2:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.00076	0.006	No	12	0.002813	0.0006466	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	14	0.002943	0.0002138	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	14	0.002864	0.0005078	92.86	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	18	0.004744	0.001087	94.44	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	13	0.003674	0.002074	69.23	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002666	0.001611	0.01	No	18	0.002139	0.0008719	11.11	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	18	0.004778	0.0009428	94.44	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04528	0.03909	2	No	18	0.04218	0.005117	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03263	0.02707	2	No	13	0.02985	0.003738	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04011	0.03495	2	No	18	0.03753	0.004265	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-105	0.082	0.0668	2	No	18	0.07333	0.0096	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03899	0.03618	2	No	18	0.03758	0.00232	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08721	0.0804	2	No	18	0.08381	0.005625	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.07963	0.03837	2	No	5	0.059	0.01231	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.06112	0.0505	2	No	18	0.05581	0.00878	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	18	0.0002811	0.0002254	50	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	18	0.0004042	0.0001845	77.78	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	18	0.0004774	0.00009593	94.44	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.00011	0.005	No	18	0.0002197	0.0001381	16.67	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006632	0.0003168	0.005	No	13	0.00049	0.000233	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007885	0.0006793	0.005	No	18	0.0007339	0.0000903	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.0001	0.005	No	18	0.0003444	0.0002008	61.11	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	5	0.000432	0.0001521	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	18	0.004054	0.001823	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	13	0.004318	0.001664	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00081	0.1	No	18	0.003521	0.001978	61.11	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	18	0.004051	0.001834	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	18	0.004763	0.001004	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	18	0.004557	0.001297	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0017	0.1	No	18	0.003958	0.001754	72.22	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002757	0.00211	0.006	No	18	0.002433	0.0005347	5.556	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002022	0.001039	0.006	No	13	0.001572	0.0007925	0	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.002271	0.001818	0.006	No	18	0.002044	0.0003745	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.005	0.00046	0.006	No	18	0.002103	0.002125	33.33	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002062	0.001268	0.006	No	18	0.001665	0.0006555	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-117A	0.0024	0.00041	0.006	No	5	0.001098	0.0007985	0	None	No	0.031	NP (selected)
Cobalt (mg/L)	HGWC-118	0.005	0.00045	0.006	No	18	0.002769	0.002303	50	None	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8482	0.4162	5	No	18	0.6322	0.357	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.173	0.5433	5	No	12	0.8582	0.4013	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8742	0.4386	5	No	18	0.6564	0.36	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8689	0.4902	5	No	18	0.6796	0.313	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.057	0.5147	5	No	18	0.7861	0.4485	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.7822	0.4613	5	No	18	0.6218	0.2652	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	1.05	0	5	No	5	0.4536	0.416	0	None	No	0.031	NP (selected)
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.129	0.4844	5	No	17	0.8065	0.5141	0	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-101	0.1	0.065	4	No	19	0.09184	0.02022	84.21	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-102	0.22	0.076	4	No	13	0.1074	0.03448	84.62	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-103	0.13	0.071	4	No	19	0.09753	0.02247	73.68	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-105	0.13	0.07	4	No	19	0.08947	0.02962	52.63	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-107	0.16	0.057	4	No	19	0.09074	0.03525	52.63	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-109	0.1278	0.08316	4	No	19	0.1055	0.03811	10.53	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-117A	0.1201	0.04074	4	No	5	0.0922	0.02375	40	Kaplan-Meier	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-118	0.18	0.075	4	No	20	0.1692	0.1887	0	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	18	0.0009944	0.00002357	94.44	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	13	0.0009315	0.0002468	92.31	None	No	0.01	NP (NDs)

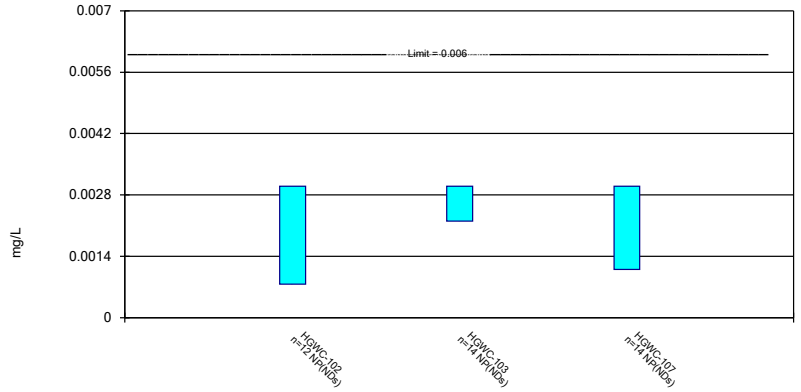
Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 5/16/2023, 2:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	18	0.0007892	0.0003554	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	18	0.0007922	0.0004	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	18	0.0008178	0.0003545	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	18	0.0008951	0.0003053	88.89	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.001	0.00036	0.015	No	18	0.0008228	0.000329	72.22	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.001269	0.001075	0.04	No	13	0.001165	0.0001424	0	None	x^3	0.01	Param.
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	18	0.006328	0.0109	16.67	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.00418	0.003843	0.04	No	18	0.004011	0.0002784	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00091	0.04	No	18	0.01385	0.01486	44.44	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	18	0.01552	0.0149	50	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117A	0.0051	0.0035	0.04	No	5	0.00394	0.000658	0	None	No	0.031	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0015	0.04	No	18	0.01127	0.01364	33.33	None	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	14	0.0001851	0.00003778	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0001	0.002	No	12	0.0001917	0.00002887	91.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00027	0.00017	0.002	No	14	0.0001943	0.00003897	78.57	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	14	0.0002014	0.000005345	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	14	0.0001917	0.000031	92.86	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	14	0.0001829	0.00004358	85.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	5	0.0001788	0.0000474	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	14	0.0001836	0.00004162	85.71	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.0015	0.05	No	12	0.004708	0.00101	91.67	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.00008	0.002	No	12	0.0009233	0.0002656	91.67	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

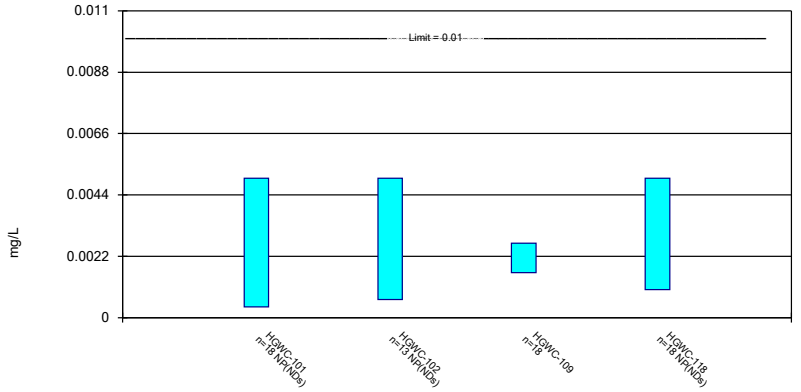
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

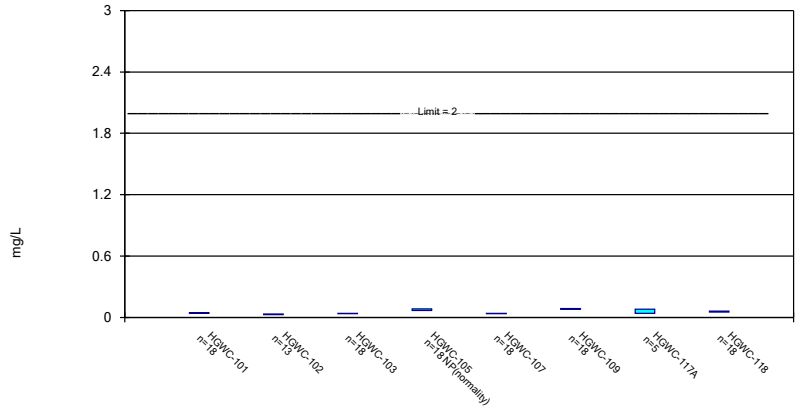
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

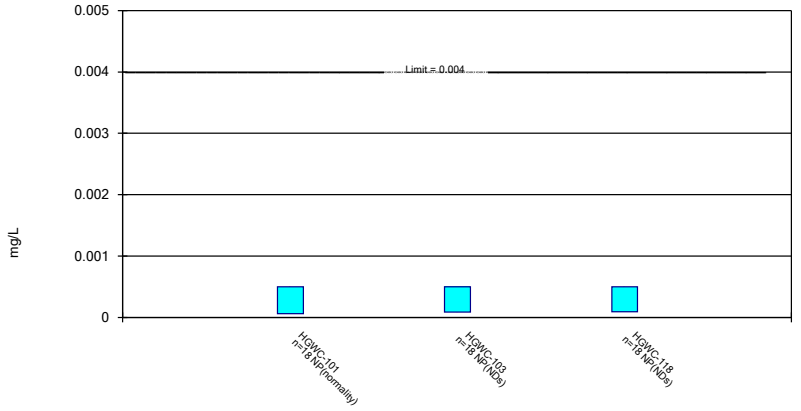
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

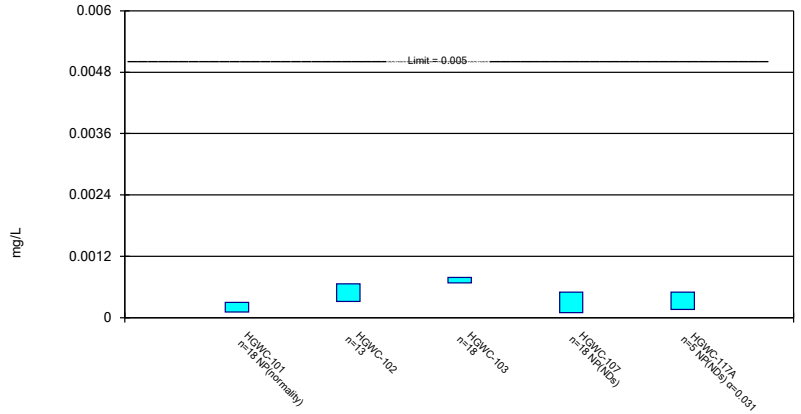
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

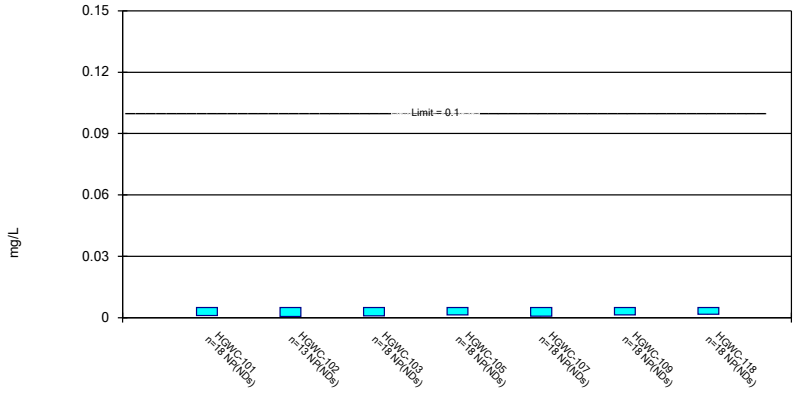
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

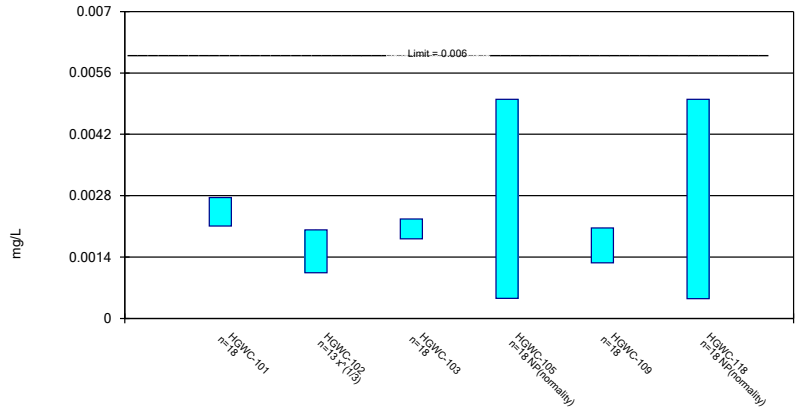
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

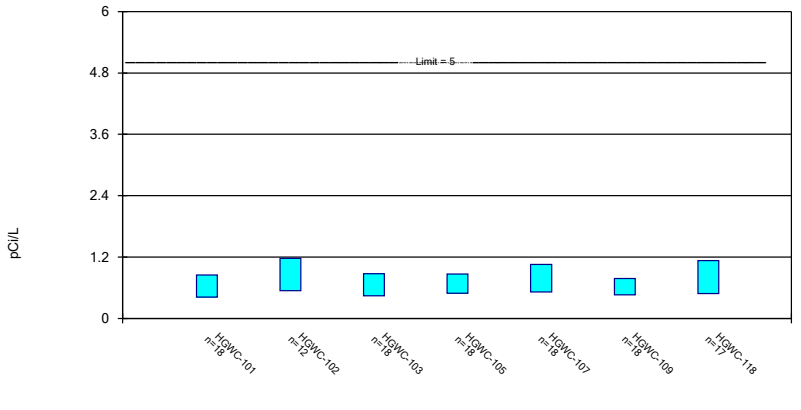
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric Confidence Interval

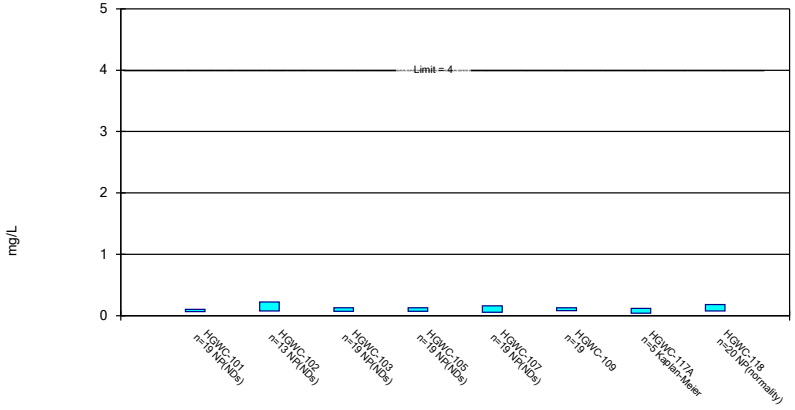
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 & 228 Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

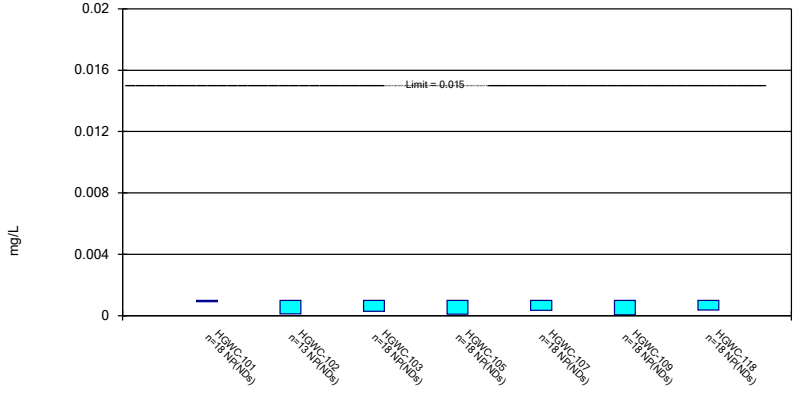
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride, total Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

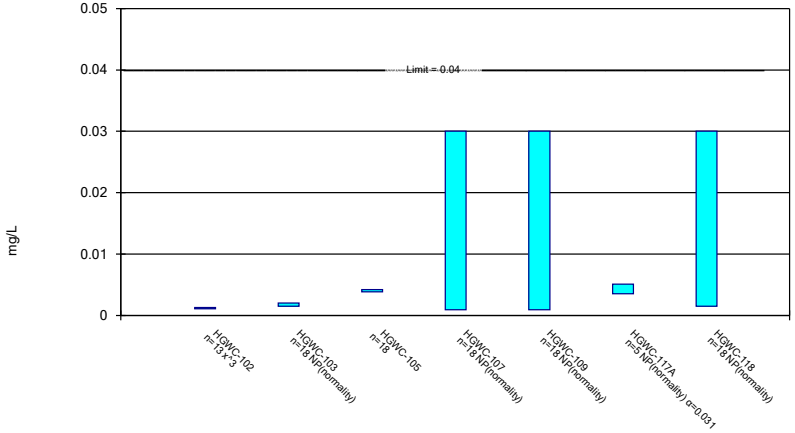
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

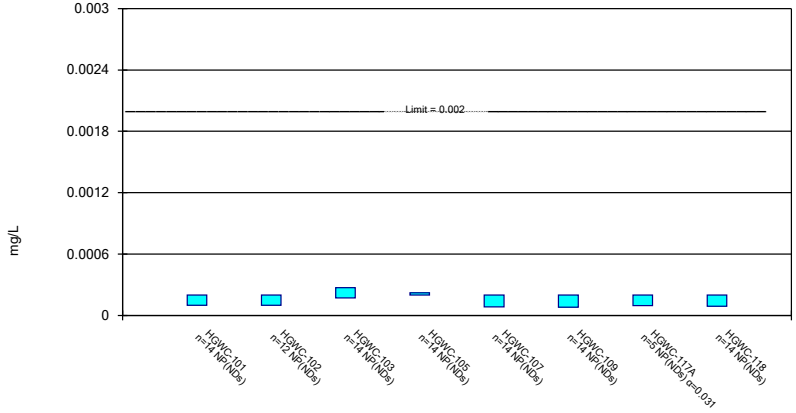
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/16/2023 2:20 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

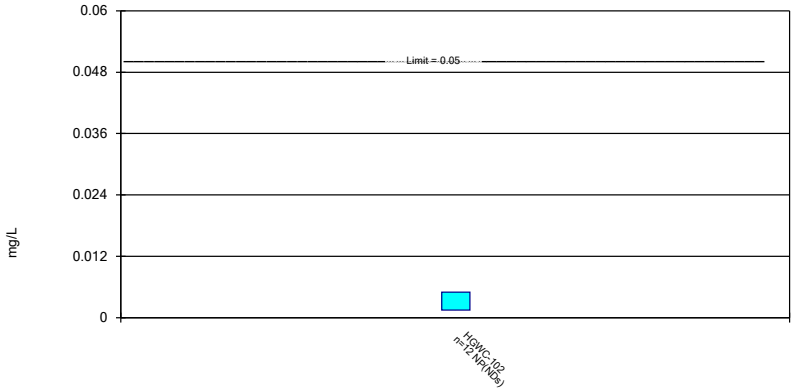
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 5/16/2023 2:21 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 5/16/2023 2:21 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

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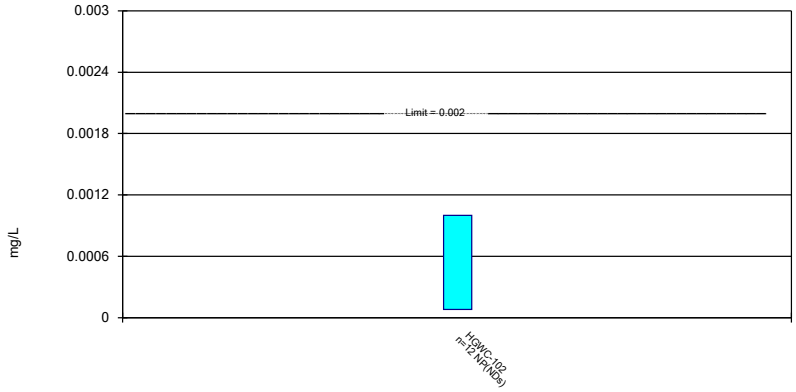
Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 5/16/2023 2:21 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-107
8/31/2016		<0.003	<0.003
10/24/2016		<0.003	
10/25/2016			<0.003
1/31/2017		<0.003	<0.003
5/23/2017		<0.003	
5/24/2017			<0.003
8/10/2017		<0.003	<0.003
11/14/2017		<0.003	<0.003
6/6/2018		0.0022 (J)	<0.003
10/2/2018			0.0011 (J)
10/3/2018		<0.003	
8/22/2019		<0.003	
8/23/2019			<0.003
10/23/2019	<0.003		
1/3/2020	0.00076 (J)		
3/4/2020	<0.003		
3/24/2020	<0.003		
6/18/2020	<0.003		
7/21/2020	<0.003		
8/27/2020	<0.003	<0.003	<0.003
9/24/2020	<0.003		
8/13/2021	<0.003		<0.003
8/16/2021		<0.003	
2/2/2022	<0.003	<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003
1/25/2023	<0.003	<0.003	<0.003
Mean	0.002813	0.002943	0.002864
Std. Dev.	0.0006466	0.0002138	0.0005078
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00076	0.0022	0.0011

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-109	HGWC-118
8/31/2016	<0.005		0.0045 (J)	<0.005
10/20/2016	<0.005			<0.005
10/25/2016			0.003 (J)	
1/31/2017	<0.005		0.0022 (J)	<0.005
5/23/2017	<0.005			<0.005
5/24/2017			0.0012 (J)	
8/10/2017	<0.005		0.0016 (J)	<0.005
11/14/2017	<0.005		0.0011 (J)	<0.005
6/6/2018	<0.005		0.0018 (J)	
6/7/2018				<0.005
10/2/2018			0.0014 (J)	
10/3/2018	<0.005			<0.005
8/22/2019	<0.005			<0.005
8/23/2019			0.0035 (J)	
10/22/2019			0.0019 (J)	<0.005
10/23/2019	<0.005	<0.005		
1/3/2020		0.00065 (J)		
3/4/2020		0.00036 (J)		
3/24/2020		<0.005		
3/25/2020	0.00039 (J)		0.0025 (J)	<0.005
6/18/2020		0.00092 (J)		
7/21/2020		0.00083 (J)		
8/26/2020				<0.005
8/27/2020	<0.005	<0.005	0.0011 (J)	
9/24/2020	<0.005	<0.005		
9/25/2020			0.0017 (J)	
9/28/2020				<0.005
3/17/2021	<0.005	<0.005	0.0019 (J)	
3/18/2021				0.001 (J)
8/13/2021		<0.005	0.0019 (J)	<0.005
8/16/2021	<0.005			
2/2/2022	<0.005	<0.005	<0.005	
2/3/2022				<0.005
8/5/2022		<0.005	0.0022 (J)	<0.005
8/10/2022	<0.005			
1/25/2023	<0.005	<0.005	<0.005	<0.005
Mean	0.004744	0.003674	0.002139	0.004778
Std. Dev.	0.001087	0.002074	0.0008719	0.0009428
Upper Lim.	0.005	0.005	0.002666	0.005
Lower Lim.	0.00039	0.00065	0.001611	0.001

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0527		0.045	0.067	0.0391	0.0883		0.0595
10/20/2016	0.0477							0.055
10/24/2016			0.0386					
10/25/2016				0.0745	0.041	0.0831		
1/31/2017	0.0527		0.0365	0.0674	0.0382	0.0844		0.0613
5/23/2017	0.0436		0.0254					0.068
5/24/2017				0.0668	0.0377	0.0784		
8/10/2017	0.0419		0.0396	0.067	0.0385	0.0903		0.0638
11/14/2017	0.0407		0.0385	0.0643	0.039	0.083		0.07
6/6/2018	0.043		0.043	0.068	0.039	0.095		
6/7/2018								0.059
10/2/2018				0.066	0.038	0.089		
10/3/2018	0.041		0.04					0.056
8/22/2019	0.043		0.036	0.066				0.052
8/23/2019					0.038	0.088		
10/22/2019					0.039	0.087		0.054
10/23/2019	0.043	0.037	0.039	0.066				
1/3/2020		0.036						
3/4/2020		0.033						
3/24/2020		0.024						
3/25/2020	0.038		0.036	0.074	0.037	0.084		0.06
6/18/2020		0.029						
7/21/2020		0.028						
8/26/2020								0.056
8/27/2020	0.045	0.028	0.038	0.068	0.034	0.083		
9/24/2020	0.041	0.029	0.036	0.075	0.039			
9/25/2020						0.085		
9/28/2020								0.046
3/17/2021	0.04	0.031				0.077		
3/18/2021			0.042	0.082	0.041			0.067
8/12/2021							0.079	
8/13/2021		0.026		0.073	0.033	0.08		0.043
8/16/2021	0.037		0.037					
9/27/2021							0.062	
2/2/2022	0.036	0.029	0.036		0.034	0.072		
2/3/2022				0.093			0.049	0.047
8/5/2022		0.031	0.037	0.088	0.036	0.085	0.055	0.039
8/10/2022	0.04							
1/25/2023	0.033	0.027	0.032	0.094	0.035	0.076	0.05	0.048
Mean	0.04218	0.02985	0.03753	0.07333	0.03758	0.08381	0.059	0.05581
Std. Dev.	0.005117	0.003738	0.004265	0.0096	0.00232	0.005625	0.01231	0.00878
Upper Lim.	0.04528	0.03263	0.04011	0.082	0.03899	0.08721	0.07963	0.06112
Lower Lim.	0.03909	0.02707	0.03495	0.0668	0.03618	0.0804	0.03837	0.0505

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-103	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005
10/20/2016	<0.0005		<0.0005
10/24/2016		<0.0005	
1/31/2017	<0.0005	<0.0005	<0.0005
5/23/2017	7E-05 (J)	<0.0005	<0.0005
8/10/2017	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005
6/6/2018	5.9E-05 (J)	<0.0005	
6/7/2018			<0.0005
10/3/2018	6.5E-05 (J)	<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005	<0.0005
10/22/2019			<0.0005
10/23/2019	7.5E-05 (J)	<0.0005	
3/25/2020	<0.0005	<0.0005	<0.0005
8/26/2020			<0.0005
8/27/2020	5.7E-05 (J)	5E-05 (J)	
9/24/2020	4.8E-05 (J)	8.8E-05 (J)	
9/28/2020			<0.0005
3/17/2021	5.9E-05 (J)		
3/18/2021		6.1E-05 (J)	9.3E-05 (J)
8/13/2021			<0.0005
8/16/2021	<0.0005	<0.0005	
2/2/2022	6.2E-05 (J)	7.7E-05 (J)	
2/3/2022			<0.0005
8/5/2022		<0.0005	<0.0005
8/10/2022	6.4E-05 (J)		
1/25/2023	<0.0005	<0.0005	<0.0005
Mean	0.0002811	0.0004042	0.0004774
Std. Dev.	0.0002254	0.0001845	9.593E-05
Upper Lim.	0.0005	0.0005	0.0005
Lower Lim.	5.9E-05	8.8E-05	9.3E-05

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-107	HGWC-117A
8/31/2016	0.0002 (J)		0.0006 (J)	0.0001 (J)	
10/20/2016	0.0003 (J)				
10/24/2016			0.0008 (J)		
10/25/2016				8E-05 (J)	
1/31/2017	0.0001 (J)		0.0006 (J)	9E-05 (J)	
5/23/2017	0.0002 (J)		0.0006 (J)		
5/24/2017				0.0001 (J)	
8/10/2017	0.0002 (J)		0.0007 (J)	<0.0005	
11/14/2017	<0.0005		0.0007 (J)	<0.0005	
6/6/2018	9.5E-05 (J)		0.00073 (J)	0.00012 (J)	
10/2/2018				0.0001 (J)	
10/3/2018	0.00018 (J)		0.00078 (J)		
8/22/2019	0.00014 (J)		0.0008 (J)		
8/23/2019				0.00011 (J)	
10/22/2019				<0.0005	
10/23/2019	0.0002 (J)	0.00026 (J)	0.00091 (J)		
1/3/2020		0.0002 (J)			
3/4/2020		0.00026 (J)			
3/24/2020		0.00068 (J)			
3/25/2020	0.00014 (J)		0.00068 (J)	<0.0005	
6/18/2020		0.00047 (J)			
7/21/2020		0.00083 (J)			
8/27/2020	0.00019 (J)	0.00038 (J)	0.00082 (J)	<0.0005	
9/24/2020	0.00014 (J)	0.00032 (J)	0.00076 (J)	<0.0005	
3/17/2021	<0.0005	0.00094			
3/18/2021			0.00068	<0.0005	
8/12/2021					0.00016 (J)
8/13/2021		0.00069		<0.0005	
8/16/2021	0.00015 (J)		0.00081		
9/27/2021					<0.0005
2/2/2022	<0.0005	0.00055	0.0008	<0.0005	
2/3/2022					<0.0005
8/5/2022		0.00044 (J)	0.00081	<0.0005	<0.0005
8/10/2022	0.00011 (J)				
1/25/2023	0.00011 (J)	0.00035 (J)	0.00063	<0.0005	<0.0005
Mean	0.0002197	0.00049	0.0007339	0.0003444	0.000432
Std. Dev.	0.0001381	0.000233	9.03E-05	0.0002008	0.0001521
Upper Lim.	0.0003	0.0006632	0.0007885	0.0005	0.0005
Lower Lim.	0.00011	0.0003168	0.0006793	0.0001	0.00016

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
8/31/2016	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016	<0.005						<0.005
10/24/2016			<0.005				
10/25/2016				<0.005	<0.005	<0.005	
1/31/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
5/23/2017	0.0006 (J)		<0.005				<0.005
5/24/2017				<0.005	<0.005	<0.005	
8/10/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
11/14/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2018	<0.005		<0.005	<0.005	<0.005	<0.005	
6/7/2018							<0.005
10/2/2018				<0.005	<0.005	<0.005	
10/3/2018	<0.005		<0.005				<0.005
8/22/2019	0.00064 (J)		0.00063 (J)	<0.005			<0.005
8/23/2019					<0.005	<0.005	
10/22/2019					<0.005	0.00062 (J)	0.00066 (J)
10/23/2019	<0.005	<0.005	0.0015 (J)	0.0004 (J)			
1/3/2020		0.00063 (J)					
3/4/2020		<0.005					
3/24/2020		0.00051 (J)					
3/25/2020	0.00098 (J)		0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)	0.00081 (J)
6/18/2020		<0.005					
7/21/2020		<0.005					
8/26/2020							0.00098 (J)
8/27/2020	<0.005	<0.005	0.00069 (J)	<0.005	<0.005	<0.005	
9/24/2020	<0.005	<0.005	0.00081 (J)	0.00064 (J)	<0.005		
9/25/2020						<0.005	
9/28/2020							0.0017 (J)
3/17/2021	0.00075 (J)	<0.005				<0.005	
3/18/2021			0.003 (J)	0.00058 (J)	<0.005		0.0021 (J)
8/13/2021		<0.005		<0.005	<0.005	<0.005	<0.005
8/16/2021	<0.005		<0.005				
2/2/2022	<0.005	<0.005	0.0013 (J)		<0.005	<0.005	
2/3/2022				<0.005			<0.005
8/5/2022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/10/2022	<0.005						
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mean	0.004054	0.004318	0.003521	0.004051	0.004763	0.004557	0.003958
Std. Dev.	0.001823	0.001664	0.001978	0.001834	0.001004	0.001297	0.001754
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00098	0.00063	0.00081	0.0013	0.00074	0.0014	0.0017

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-109	HGWC-118
8/31/2016	0.0033 (J)		0.0018 (J)	0.0014 (J)	0.0023 (J)	<0.005
10/20/2016	0.0025 (J)					<0.005
10/24/2016			0.0018 (J)			
10/25/2016				0.0013 (J)	0.0017 (J)	
1/31/2017	0.001 (J)		0.0016 (J)	0.0006 (J)	0.0017 (J)	<0.005
5/23/2017	0.0025 (J)		0.0014 (J)			0.0005 (J)
5/24/2017				0.0007 (J)	0.002 (J)	
8/10/2017	0.0029 (J)		0.0025 (J)	0.0006 (J)	0.0012 (J)	0.0003 (J)
11/14/2017	0.003 (J)		0.002 (J)	0.0005 (J)	0.0014 (J)	0.0004 (J)
6/6/2018	0.0016 (J)		0.0031 (J)	0.00056 (J)	0.0014 (J)	
6/7/2018						<0.005
10/2/2018				<0.005	0.00081 (J)	
10/3/2018	0.0028 (J)		0.0023 (J)			<0.005
8/22/2019	<0.005		0.0019 (J)	<0.005		0.0003 (J)
8/23/2019					0.0027 (J)	
10/22/2019					0.0022 (J)	0.00061 (J)
10/23/2019	0.0023 (J)	0.0018 (J)	0.0021 (J)	0.00038 (J)		
1/3/2020		0.0038 (J)				
3/4/2020		0.0021 (J)				
3/24/2020		0.0019 (J)				
3/25/2020	0.0021 (J)		0.0022 (J)	0.00047 (J)	0.0022 (J)	<0.005
6/18/2020		0.0012 (J)				
7/21/2020		0.00098 (J)				
8/26/2020						0.00061 (J)
8/27/2020	0.0027 (J)	0.001 (J)	0.0019 (J)	<0.005	0.00086 (J)	
9/24/2020	0.0021 (J)	0.0011 (J)	0.0019 (J)	0.00044 (J)		
9/25/2020					0.001 (J)	
9/28/2020						0.00048 (J)
3/17/2021	0.0023 (J)	0.0012 (J)			0.003 (J)	
3/18/2021			0.0021 (J)	0.00045 (J)		0.0012 (J)
8/13/2021		0.00085 (J)		<0.005	0.0011 (J)	<0.005
8/16/2021	0.0026 (J)		0.0022 (J)			
2/2/2022	0.0027 (J)	0.0019 (J)	0.0022 (J)		0.002 (J)	
2/3/2022				<0.005		0.00045 (J)
8/5/2022		0.001 (J)	0.0021 (J)	<0.005	0.0008 (J)	<0.005
8/10/2022	0.0028 (J)					
1/25/2023	0.0021 (J)	0.0016 (J)	0.0017 (J)	0.00046 (J)	0.0016 (J)	<0.005
Mean	0.002433	0.001572	0.002044	0.002103	0.001665	0.002769
Std. Dev.	0.0005347	0.0007925	0.0003745	0.002125	0.0006555	0.002303
Upper Lim.	0.002757	0.002022	0.002271	0.005	0.002062	0.005
Lower Lim.	0.00211	0.001039	0.001818	0.00046	0.001268	0.00045

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
8/31/2016	0.621 (U)		1.62	0.906 (U)	1.2	1.03	
10/20/2016	1.4						1.97
10/24/2016			1.01 (U)				
10/25/2016				1.03	1.11 (U)	1.07	
1/31/2017	0.906 (U)		0.976 (U)	0.868 (U)	1.45	0.588 (U)	1.03
5/23/2017	0.388 (U)		0.891 (U)				0.398 (U)
5/24/2017				0.728 (U)	0.393 (U)	0.593 (U)	
8/10/2017	1.03 (U)		0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.938 (U)
11/14/2017	0.769 (U)		0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.335 (U)
6/6/2018	1.28 (U)		0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)	
6/7/2018							0.696 (U)
10/2/2018				0.336 (U)	1.23	0.225 (U)	
10/3/2018	0.302 (U)		0.111 (U)				1.6 (U)
8/22/2019	0.474 (U)		0.946 (U)	0.694 (U)			0.904 (U)
8/23/2019					1.69	0.47 (U)	
10/22/2019					0.705 (U)	0.545 (U)	0.424 (U)
10/23/2019	0.776 (U)	0.858 (U)	0.571 (U)	0.584 (U)			
1/22/2020		1.04 (U)					
3/4/2020		1.32					
3/24/2020		1.23 (U)					
3/25/2020	0.603 (U)		0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)	0.915 (U)
7/21/2020		0.0938 (U)					
8/26/2020							1.19
8/27/2020	0.109 (U)	1.17 (U)	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	
9/24/2020	0.625 (U)	1.42	0.804 (U)	1.11 (U)	0.576 (U)		
9/25/2020						0.584 (U)	
9/28/2020							0.613 (U)
3/17/2021	0.248 (U)	0.401 (U)				0.556 (U)	
3/18/2021			0.274 (U)	0.252 (U)	0.145 (U)		0.323 (U)
8/13/2021		0.828 (U)		0.513 (U)	0.815 (U)	0.794 (U)	0.228 (U)
8/16/2021	0.667 (U)		0.493 (U)				
2/1/2022	0.162 (U)	0.806 (U)	0.569 (U)		0.0564 (U)	0.542 (U)	
2/3/2022				0.835			0.5 (U)
8/5/2022		0.618 (U)	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0.206 (U)
8/10/2022	0.601 (U)						
1/25/2023	0.419 (U)	0.513 (U)	0.568 (U)	0.432 (U)	0.71 (U)	0.195 (U)	1.44
Mean	0.6322	0.8582	0.6564	0.6796	0.7861	0.6218	0.8065
Std. Dev.	0.357	0.4013	0.36	0.313	0.4485	0.2652	0.5141
Upper Lim.	0.8482	1.173	0.8742	0.8689	1.057	0.7822	1.129
Lower Lim.	0.4162	0.5433	0.4386	0.4902	0.5147	0.4613	0.4844

Confidence Interval

Constituent: Fluoride, total (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.05 (J)		0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)		0.18 (J)
10/20/2016	0.03 (J)							0.12 (J)
10/24/2016			0.13 (J)					
10/25/2016				0.09 (J)	0.16 (J)	0.17 (J)		
1/31/2017	<0.1		<0.1	0.13 (J)	0.16 (J)	0.05 (J)		0.3
5/23/2017	<0.1		0.15 (J)					0.14 (J)
5/24/2017				0.07 (J)	0.009 (J)	0.13 (J)		
8/10/2017	<0.1		<0.1	0.03 (J)	<0.1	0.12 (J)		0.11 (J)
11/14/2017	<0.1		<0.1	<0.1	<0.1	<0.3		0.07 (J)
6/6/2018	<0.1		<0.1	0.074 (J)	0.057 (J)	0.15 (J)		
6/7/2018								0.3
10/2/2018				<0.1	<0.1	<0.3		
10/3/2018	<0.1		<0.1					0.12 (J)
4/3/2019					<0.1	0.05 (J)		
4/4/2019	<0.1		0.042 (J)	0.03 (J)				
4/5/2019								0.33
6/18/2019								0.89
8/22/2019	<0.1		<0.1	<0.1				0.07 (J)
8/23/2019					<0.1	0.034 (J)		
10/22/2019					0.047 (J)	0.099 (J)		0.087 (J)
10/23/2019	<0.1	0.22 (J)	<0.1	<0.1				
1/3/2020		<0.1						
3/4/2020		<0.1						
3/24/2020		<0.1						
3/25/2020	<0.1		<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)
6/18/2020		<0.1						
7/21/2020		<0.1						
8/26/2020								0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	<0.1	<0.1	0.094 (J)		
9/24/2020	<0.1	<0.1	<0.1	<0.1	0.064 (J)			
9/25/2020						0.091 (J)		
9/28/2020								0.078 (J)
3/17/2021	<0.1	<0.1				0.089 (J)		
3/18/2021			<0.1	<0.1	<0.1			0.079 (J)
8/12/2021							<0.1	
8/13/2021		<0.1		<0.1	<0.1	0.086 (J)		0.075 (J)
8/16/2021	<0.1		<0.1					
9/27/2021							<0.1	
2/2/2022	<0.1	<0.1	<0.1		<0.1	0.086 (J)		
2/3/2022				<0.1			0.056 (J)	0.069 (J)
8/5/2022		0.076 (J)	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.12	0.12
8/10/2022	0.065 (J)							
1/25/2023	<0.1	<0.1	<0.1	0.051 (J)	0.054 (J)	0.12	0.085 (J)	0.095 (J)
Mean	0.09184	0.1074	0.09753	0.08947	0.09074	0.1055	0.0922	0.1692
Std. Dev.	0.02022	0.03448	0.02247	0.02962	0.03525	0.03811	0.02375	0.1887
Upper Lim.	0.1	0.22	0.13	0.13	0.16	0.1278	0.1201	0.18
Lower Lim.	0.065	0.076	0.071	0.07	0.057	0.08316	0.04074	0.075

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
8/31/2016	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016	<0.001						<0.001
10/24/2016			<0.001				
10/25/2016				<0.001	<0.001	<0.001	
1/31/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
5/23/2017	0.0009 (J)		<0.001				<0.001
5/24/2017				<0.001	<0.001	<0.001	
8/10/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001		<0.001	<0.001	<0.001	<0.001	
6/7/2018							<0.001
10/2/2018				<0.001	<0.001	<0.001	
10/3/2018	<0.001		<0.001				<0.001
8/22/2019	<0.001		<0.001	<0.001			<0.001
8/23/2019					<0.001	5.8E-05 (J)	
10/22/2019					7.9E-05 (J)	5.4E-05 (J)	0.00025 (J)
10/23/2019	<0.001	<0.001	0.00043 (J)	6.8E-05 (J)			
1/3/2020		<0.001					
3/4/2020		0.00011 (J)					
3/24/2020		<0.001					
3/25/2020	<0.001		7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001	0.0001 (J)
6/18/2020		<0.001					
7/21/2020		<0.001					
8/26/2020							0.00036 (J)
8/27/2020	<0.001	<0.001	0.00018 (J)	<0.001	<0.001	<0.001	
9/24/2020	<0.001	<0.001	0.00028 (J)	4.9E-05 (J)	0.00034 (J)		
9/25/2020						<0.001	
9/28/2020							0.00022 (J)
3/17/2021	<0.001	<0.001				<0.001	
3/18/2021			0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)		0.00088 (J)
8/13/2021		<0.001		<0.001	<0.001	<0.001	<0.001
8/16/2021	<0.001		<0.001				
2/2/2022	<0.001	<0.001	<0.001		<0.001	<0.001	
2/3/2022				<0.001			<0.001
8/5/2022		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/10/2022	<0.001						
1/25/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mean	0.0009944	0.0009315	0.0007892	0.0007922	0.0008178	0.0008951	0.0008228
Std. Dev.	2.357E-05	0.0002468	0.0003554	0.0004	0.0003545	0.0003053	0.000329
Upper Lim.	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0009	0.00011	0.00028	8.5E-05	0.00034	5.8E-05	0.00036

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016		<0.03	0.0034 (J)	<0.03	<0.03		<0.03
10/20/2016							<0.03
10/24/2016		<0.03					
10/25/2016			0.0043 (J)	<0.03	<0.03		
1/31/2017		<0.03	0.0042 (J)	<0.03	<0.03		<0.03
5/23/2017		0.0012 (J)					0.0012 (J)
5/24/2017			0.0039 (J)	<0.03	0.0012 (J)		
8/10/2017		0.0016 (J)	0.004 (J)	<0.03	<0.03		<0.03
11/14/2017		0.0015 (J)	0.0044 (J)	<0.03	<0.03		<0.03
6/6/2018		0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)		
6/7/2018							0.0015 (J)
10/2/2018			0.0041 (J)	<0.03	0.0013 (J)		
10/3/2018		0.0016 (J)					<0.03
8/22/2019		0.0015 (J)	0.004 (J)				0.0018 (J)
8/23/2019				0.00092 (J)	0.0009 (J)		
10/22/2019				0.00094 (J)	0.00088 (J)		0.0027 (J)
10/23/2019	0.0012 (J)	0.002 (J)	0.0039 (J)				
1/3/2020	0.0011 (J)						
3/4/2020	0.0013 (J)						
3/24/2020	0.00084 (J)						
3/25/2020		0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03		0.0017 (J)
6/18/2020	0.0013 (J)						
7/21/2020	0.0013 (J)						
8/26/2020							0.0028 (J)
8/27/2020	0.0011 (J)	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)		
9/24/2020	0.0011 (J)	0.0017 (J)	0.0038 (J)	0.00098 (J)			
9/25/2020					0.001 (J)		
9/28/2020							0.0022 (J)
3/17/2021	0.0012 (J)				<0.03		
3/18/2021		0.0018 (J)	0.0042 (J)	0.0011 (J)			0.0029 (J)
8/12/2021						0.0036 (J)	
8/13/2021	0.0011 (J)		0.0038 (J)	0.00084 (J)	<0.03		0.0017 (J)
8/16/2021		0.0016 (J)					
9/27/2021						0.0035 (J)	
2/2/2022	0.0013 (J)	0.0019 (J)		0.001 (J)	0.00084 (J)		
2/3/2022			0.0046 (J)			0.0051 (J)	0.0015 (J)
8/5/2022	0.0013 (J)	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0038 (J)	0.0018 (J)
1/25/2023	0.001 (J)	0.0012 (J)	0.0038 (J)	0.00081 (J)	<0.03	0.0037 (J)	0.001 (J)
Mean	0.001165	0.006328	0.004011	0.01385	0.01552	0.00394	0.01127
Std. Dev.	0.0001424	0.0109	0.0002784	0.01486	0.0149	0.000658	0.01364
Upper Lim.	0.001269	0.002	0.00418	0.03	0.03	0.0051	0.03
Lower Lim.	0.001075	0.0015	0.003843	0.00091	0.0009	0.0035	0.0015

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
10/20/2016	<0.0002							<0.0002
10/24/2016			<0.0002					
10/25/2016				<0.0002	<0.0002	<0.0002		
1/31/2017	9.3E-05 (J)		8E-05 (J)	<0.0002	<0.0002	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0002		<0.0002					<0.0002
5/24/2017				<0.0002	<0.0002	<0.0002		
8/10/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2018								<0.0002
10/2/2018				<0.0002	<0.0002	<0.0002		
10/3/2018	<0.0002		<0.0002					<0.0002
8/22/2019	<0.0002		<0.0002	<0.0002				<0.0002
8/23/2019					<0.0002	<0.0002		
10/23/2019		<0.0002						
1/3/2020		<0.0002						
3/4/2020		<0.0002						
3/24/2020		<0.0002						
6/18/2020		<0.0002						
7/21/2020		<0.0002						
8/26/2020								<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
9/24/2020		<0.0002						
8/12/2021							9.4E-05 (J)	
8/13/2021		0.0001 (J)		0.00022	8.4E-05 (J)	8E-05 (J)		8.1E-05 (J)
8/16/2021	9.9E-05 (J)		0.00027					
9/27/2021							<0.0002	
2/2/2022	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002		
2/3/2022				<0.0002			<0.0002	<0.0002
8/5/2022		<0.0002	0.00017 (J)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/10/2022	<0.0002							
1/25/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mean	0.0001851	0.0001917	0.0001943	0.0002014	0.0001917	0.0001829	0.0001788	0.0001836
Std. Dev.	3.778E-05	2.887E-05	3.897E-05	5.345E-06	3.1E-05	4.358E-05	4.74E-05	4.162E-05
Upper Lim.	0.0002	0.0002	0.00027	0.00022	0.0002	0.0002	0.0002	0.0002
Lower Lim.	9.9E-05	0.0001	0.00017	0.0002	8.4E-05	8E-05	9.4E-05	9E-05

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.005
1/3/2020	0.0015 (J)
3/4/2020	<0.005
3/24/2020	<0.005
6/18/2020	<0.005
7/21/2020	<0.005
8/27/2020	<0.005
9/24/2020	<0.005
8/13/2021	<0.005
2/2/2022	<0.005
8/5/2022	<0.005
1/25/2023	<0.005
Mean	0.004708
Std. Dev.	0.00101
Upper Lim.	0.005
Lower Lim.	0.0015

ND substitution: RL or RL/2 if <15% NDs.

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals

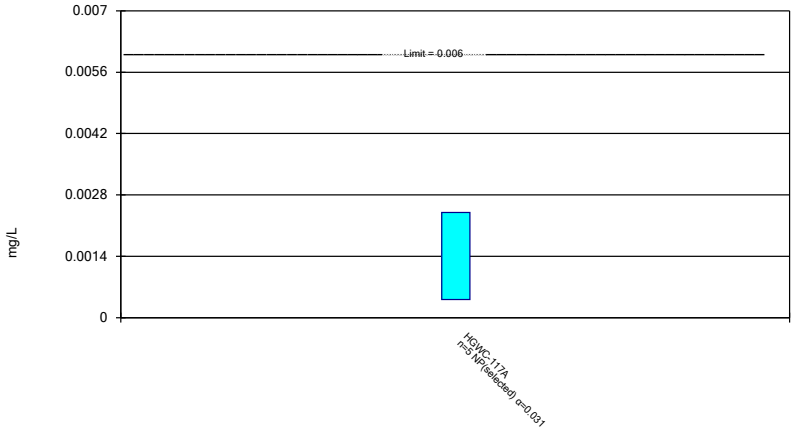
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.001
1/3/2020	8E-05 (J)
3/4/2020	<0.001
3/24/2020	<0.001
6/18/2020	<0.001
7/21/2020	<0.001
8/27/2020	<0.001
9/24/2020	<0.001
8/13/2021	<0.001
2/2/2022	<0.001
8/5/2022	<0.001
1/25/2023	<0.001
Mean	0.0009233
Std. Dev.	0.0002656
Upper Lim.	0.001
Lower Lim.	8E-05

ND substitution: RL or RL/2 if <15% NDs.

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Normality testing disabled.

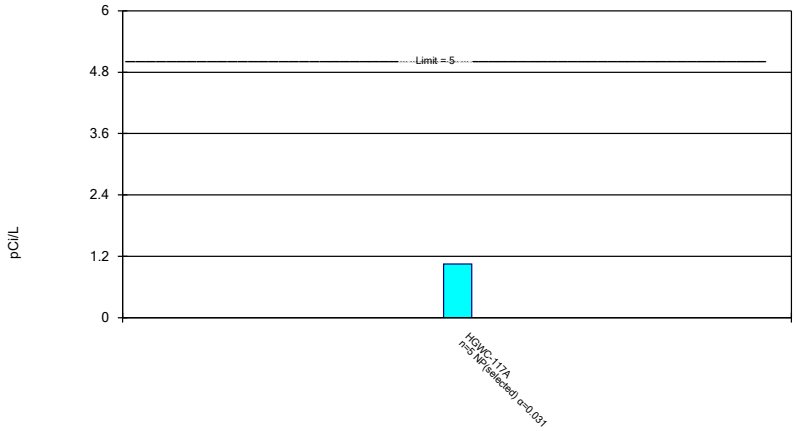
Constituent: Cobalt Analysis Run 5/16/2023 2:21 PM View: Confidence Intervals - Nonparametric

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Normality testing disabled.

Constituent: Combined Radium 226 & 228 Analysis Run 5/16/2023 2:21 PM View: Confidence Intervals -

Plant Hammond Client: Southern Company Data: Hammond AP-4

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals - Nonparametric

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117A
8/12/2021	0.0024 (J)
9/27/2021	0.0011 (J)
2/3/2022	0.00041 (J)
8/5/2022	0.0011 (J)
1/25/2023	0.00048 (J)
Mean	0.001098
Std. Dev.	0.0007985
Upper Lim.	0.0024
Lower Lim.	0.00041

Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 5/16/2023 2:23 PM View: Confidence Intervals - Nonparametric

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117A
8/12/2021	0.124 (U)
9/27/2021	1.05 (U)
2/3/2022	0.499 (U)
8/5/2022	0 (U)
1/25/2023	0.595 (U)
Mean	0.4536
Std. Dev.	0.416
Upper Lim.	1.05
Lower Lim.	0