Prepared for

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2021 SEMIANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLANT HAMMOND ASH POND 4 (AP-4)

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Project Number GW6581

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CERTIFICATION STATEMENT

This *2021 Semiannual Groundwater Monitoring and Corrective Action Report, Plant Hammond – Ash Pond 4 (AP-4)* has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants.

_____ February 28, 2022

Whitney Law — Date

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SUMMARY

This summary of the *2021 Semiannual Groundwater Monitoring and Corrective Action Report* provides the status of groundwater monitoring and corrective action program for the reporting period of July through December 2021(referred herein as) 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 is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Plant Hammond is a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. 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.

Plant Hammond and the Site

Groundwater at the Site is monitored using a comprehensive monitoring network that meets federal and state monitoring requirements. Groundwater monitoring-related

[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)

activities have been performed at AP-4 since August 2016 in support of establishing the detection monitoring program for the CCR unit in accordance with § 257.94. During the reporting period, the Site remained in assessment monitoring.

During the reporting period, Geosyntec conducted one groundwater sampling event in August 2021. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Per the federal CCR Rule, groundwater data for the August 2021 event were evaluated in accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III[3] and Appendix IV[4] constituents in excess of state groundwater protection standards in select monitoring wells, as summarized in the table below.

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 submitted an Alternate Source Demonstration (ASD) to GA EPD on October 28, 2021, to address the SSL of cobalt reported for HGWC-117. 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.

Appendix III Constituent	***August 2021***
Boron	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118
Calcium	HGWC-102, HGWC-103, HGWC-105, HGWC-118
Chloride	HGWC-103
pH	HGWC-101, HGWC-102
Sulfate	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC- 107, HGWC-109, HGWC-117, HGWC-118
Total Dissolved Solids	HGWC-102, HGWC-103, HGWC-105, HGWC-118
Appendix IV Constituent[5]	***August 2021***
Cobalt	HGWC-117

[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 state statistically significant level (SSL)-related constituent is determined by comparing the confidence intervals developed to either the constituent's maximum contaminant level (MCL), if available, or the calculated background interwell tolerance limit.

Geosyntec consultants

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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
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
SCS	Southern Company Services
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 *2021 Semiannual 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 through December 2021 (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.

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. Groundwater monitoring has been initiated to meet the GA EPD CCR requirements.

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 event conducted in August 2021.

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.

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* (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 compliance monitoring well network and piezometers associated with AP-4 are shown on **Figure 2**; well construction details are listed in **Table 1**.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes groundwater monitoring-related activities performed during the reporting period and discusses any change in status of the monitoring program. Groundwater sampling was performed in accordance with § 257.93.

2.1 Monitoring Well Installation and Maintenance

One piezometer (HGWC-117A) was installed in July 2021 approximately 30 feet side-gradient of HGWC-117 to evaluate groundwater quality and flow conditions in the vicinity of HGWC-117. A well installation report that includes detailed boring and well construction logs for the installation of HGWC-117A is provided in **Appendix A**. The installation report was submitted to GA EPD under separate cover in September 2021 (Geosyntec, 2021b).

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 2021, the networks were inspected, necessary corrective actions were identified and subsequently completed, as documented in **Appendix B**. This documentation will serve as the required five year well inspection and was performed 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. Statistical analyses of the groundwater data from the March 2021 semiannual assessment monitoring event identified a statistically significant level (SSL) of cobalt in compliance well HGWC-117. Details regarding the statistical analyses are provided in the *2021 Annual Groundwater & Corrective Action Monitoring Report* (Geosyntec, 2021a). Details of actions taken by Georgia Power subsequent to identifying the SSL are outlined in this current semiannual groundwater monitoring report.

For the current reporting period, the semiannual assessment monitoring event was conducted in August 2021. This event was a combined event to meet the requirements of § 257.95(b) and § 257.95(d)(1) and included sampling and analysis of all Appendix III and IV constituents. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-4 during this reporting period is summarized in

Table 2. The laboratory reports associated with the August 2021 groundwater sampling event are provided in **Appendix C.**

2.3 Additional Groundwater Sampling

Supplemental groundwater samples were collected from HGWC-117 and HGWC-117A on September 27, 2021, to further evaluate the cobalt SSL identified in HGWC-117. The samples were analyzed for the complete list of Appendix III and Appendix IV constituents. The laboratory report associated with the September 2021 sampling event is 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 Level Measurement

A synoptic round of depth-to-groundwater-level measurements was recorded from the AP-4 wells and piezometers during the August 2021 assessment monitoring event and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The August 2021 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

The groundwater elevation data were used to prepare a potentiometric surface contour map for the August 2021 event, which is presented on **Figure 3**. 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 groundwater hydraulic gradient within the uppermost aquifer beneath AP-4 was calculated using the groundwater elevation data from the August 2021 event. The 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, 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; 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.** 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 (SCS) 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, 2020a). 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 Kh 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 compliance 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, non-dedicated

bladder pumps, and peristaltic pumps. For wells sampled with non-dedicated bladder pumps and peristaltic pumps, the pump intake was lowered to the midpoint of the well screen (or as appropriate based on the groundwater level). Non-dedicated bladder pump and 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 Norcross, Georgia following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the August 2021 semiannual assessment monitoring event and the September 2021 supplemental sampling of HGWC- 117 and HGWC-117A 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 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 and September 2021 sampling events are summarized in **Table 5**.

3.5 Quality Assurance and Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events in accordance with the Site's *Groundwater Monitoring Plan* (Geosyntec, 2021c), 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 report is provided in **Appendix C**, along with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established groundwater protection standards (GWPS) for the Appendix IV monitoring constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the monitoring period. The data were analyzed by Groundwater Stats Consulting (GSC); the report 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, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009).

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to determine if concentrations statistically exceeded the established state 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 6**.

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

compliance monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient compliance 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. Those confidence intervals are compared to the state 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.

As described in the GA EPD CCR Rule, the GWPS is:

(1) The federally established MCL.

(2) Where an MCL has not been established, the background concentration.

(3) Background levels for constituents where the background level is higher than the MCL.

USEPA revised the federal CCR Rule on July 30, 2018, specifying GWPS for cobalt, lead, lithium, and molybdenum as described in § 257.95(h)(2). Presently, those rule-specified GWPS have not yet been incorporated into the current GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

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

4.2 Statistical Analyses Results

Based on review of the statistical analyses presented in **Appendix D**, Appendix III constituents continue to exceed background PLs for the August 2021 assessment

monitoring event. Pursuant to § 257.95(f), assessment monitoring should continue based on these statistical results.

Statistical analysis of the August 2021 data continued to identify an SSL of cobalt above the state GWPS (0.005 mg/L) in HGWC-117. As discussed below in Section 5, Georgia Power submitted an ASD to GA EPD in October 2021 that outlined multiple lines of evidence that the SSL is not associated with a release from AP-4. Pursuant to § 257.95(g), a groundwater exceedance notification acknowledging the SSL of cobalt and submission of the ASD was placed in the Operating Record on January 31, 2022.

5.0 ALTERNATE SOURCE DEMONSTRATION

An Alternate Source Demonstration (ASD) was prepared and submitted to GA EPD on October 28, 2021, to address the SSL of cobalt reported for HGWC-117 (Geosyntec, 2021d). 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 cobalt SSL, HGWC-117A was installed approximately 30 ft side-gradient to HGWC-117 and screened in the same lithology. The cobalt groundwater concentrations reported for samples collected in August and September 2021 from HGWC-117A were estimated (i.e., 0.0024 J mg/L [Aug 2021], 0.0011 J mg/L [Sep 2021]) below the reporting limit and the GWPS of 0.005 mg/L. Based on the data presented in the ASD, Georgia Power will monitor HGWC-117A in parallel with HGWC-117 during routine groundwater sampling events. Once sufficient data are available to statistically evaluate groundwater conditions at HGWC-117A, HGWC-117A may replace HGWC-117, if appropriate, as the new compliance well. The ASD is provided in **Appendix E**.

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; and therefore, Georgia Power will continue to monitor groundwater at AP-4 in accordance with the assessment monitoring program regulations of § 257.95.

Statistical analyses of the compiled AP-4 groundwater data identified an SSL of cobalt in HGWC-117 following the March 2021 semiannual monitoring event. As discussed in Section 5, an ASD was submitted to GA EPD in October 2021 addressing the SSL.

7.0 CONCLUSIONS AND FUTURE ACTIONS

This *2021 Semiannual 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 the continued presence of an SSL of cobalt above the associated state GWPS (0.005 mg/L) in HGWC-117.

To address the SSL, Georgia Power prepared and submitted an ASD to GA EPD within 90 days of the initial posting of the Groundwater Exceedance Notification, dated July 30, 2021. The ASD presented multiple lines of evidence that the SSL is not associated with a release from AP-4, but instead is an isolated occurrence, relative to the other AP-4 monitoring wells, and may have been affected by pump/sampling issues unrelated to the unit. Based on the data presented in the ASD, Georgia Power proposes to monitor newly installed side-gradient piezometer HGWC-117A in parallel to HGWC-117 during routine groundwater sampling events. Once sufficient data are available for HGWC-117A to statistically evaluate groundwater conditions in this area, HGWC-117A may replace HGWC-117, if appropriate, as the new compliance well.

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 for February 2022. The February 2022 semiannual assessment monitoring event will include sampling and analysis of all Appendix III and IV constituents.

8.0 REFERENCES

Geosyntec, 2019. *2019 Annual Groundwater Monitoring & Corrective Action Report – Georgia Power Company, Plant Hammond Ash Pond 4 (AP-4)*. July 2019.

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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 (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)
Compliance 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-117	Downgradient	8/14/2012	1548100.77	1937180.43	579.31	581.98	552.12	542.12	40.26	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-117A	Downgradient	7/21/2021	1548082.04	1937157.25	578.85	581.76	551.85	541.85	37.40	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 wells HGWA-47 and HGWA-48D), and September 8, 2021 (for well 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 wells HGWA-47 and HGWA-48D), and September 8, 2021 (for well HGWC-117A).
(3) Total well depth accounts for sump if data provided on well construction logs.

Table 2

Groundwater Sampling Event Summary

Plant Hammond AP-4, Floyd County, Georgia

Well ID	Hydraulic Location	August 12 - 19, 2021	September 27, 2021
Purpose of Sampling Event:		**Assessment**	**Supplemental**
HGWA-47	Upgradient	X	--
HGWA-48D	Upgradient	X	--
HGWA-111	Upgradient	X	--
HGWA-112	Upgradient	X	--
HGWA-113	Upgradient	X	--
HGWC-101	Downgradient	X	--
HGWC-102	Downgradient	X	--
HGWC-103	Downgradient	X	--
HGWC-105	Downgradient	X	--
HGWC-107	Downgradient	X	--
HGWC-109	Downgradient	X	--
HGWC-117	Downgradient	X	X
HGWC-117A	Downgradient	X	X
HGWC-118	Downgradient	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 11, 2021	
		Depth to Water (ft BTOC)	Groundwater Elevations (ft)
Compliance Monitoring Well			
HGWA-47	580.33	8.24	572.09
HGWA-48D	580.26	8.13	572.13
HGWA-111	591.75	12.12	579.63
HGWA-112	596.27	12.34	583.93
HGWA-113	594.58	9.66	584.92
HGWC-101	578.85	12.66	566.19
HGWC-102	577.54	12.71	564.83
HGWC-103	580.79	12.85	567.94
HGWC-105	582.09	17.51	564.58
HGWC-107	579.31	14.82	564.49
HGWC-109	576.77	8.42	568.35
HGWC-117	581.98	16.44	565.54
HGWC-118	579.02	13.02	566.00
Piezometer			
MW-12	583.27	18.35	564.92
HGWC-117A	581.76	16.22	565.54
GWC-4	580.65	12.62	568.03
GWC-6	581.63	16.91	564.72
GWC-8	579.99	13.15	566.84
GWA-14	592.14	6.49	585.65
GWA-15	591.56	9.93	581.63
GWA-16	582.55	4.68	577.87
GWC-19	579.83	12.32	567.51
Surface Water Level Gauge Point			
Unnamed Creek	580.14	15.13	565.01

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 wells HGWA-47 and HGWA-48D), and September 8, 2021 (for well HGWC-117A).

Table 4

Horizontal Groundwater Gradient and Flow Velocity Calculations

Plant Hammond AP-4, Floyd County, Georgia

Flow Path Direction [1]	August 11, 2021				
	h_1 (ft)	h_2 (ft)	L (ft)	i (ft/ft)	Average i (ft/ft)
Eastern Flow Path (GWA-14 to HGWC-118)	585.65	566.00	1,075	0.018	0.016
Central Flow Path (HGWA-113 to HGWC-102)	584.92	564.83	1,235	0.016	
Western Flow Path (HGWA-111 to HGWC-107)	579.63	564.49	1,210	0.013	

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

$i = h_1\text{-}h_2/L$ = 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 Figures 3 of associated report.

(2) Groundwater flow velocity equation: $V = [K_h * i] / n_e$.

Table 5
Summary of Groundwater 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-117	HGWC-117	HGWC-117A	HGWC-117A	HGWC-118
	Sample Date:	8/12/2021	8/12/2021	8/12/2021	8/12/2021	8/12/2021	8/16/2021	8/13/2021	8/16/2021	8/13/2021	8/13/2021	8/13/2021	8/19/2021	9/27/2021	8/12/2021	9/27/2021	8/13/2021
	Parameter [1,2]																
APPENDIX III	Boron	<0.0086	0.012 J	<0.0086	<0.0086	<0.0086	0.13	2.4	3.2	1.2	0.73	0.24	0.78	0.67	0.34	0.30	0.59
	Calcium	71.2	59.5	45.4	6.9	8.4	22.8	119	124	102	57.8	43.5	40.9	37.5	50.7	47.2	84.3
	Chloride	2.3	2.2	2.5	4.4	1.5	5.4	6.0	10.4	3.7	3.1	4.0	4.0	3.4	6.3	4.5	4.0
	Fluoride	<0.050	0.064 J	<0.050	<0.050	0.16	<0.050	<0.050	<0.050	<0.050	<0.050	0.086 J	<0.050	<0.050	<0.050	<0.050	0.075 J
	pH [3]	7.38	7.44	6.67	5.50	6.08	5.40	5.45	5.59	6.44	6.11	6.71	6.04	5.66	6.27	6.14	6.78
	Sulfate	1.4	4.3	1.3	<0.50	10.0	72.1	248	354	142	112	24.4	108	104	64.6	69.7	75.1
	TDS	212	234	157	63.0	92.0	206	647	672	441	291	189	253	242	256	223	336
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	<0.0011	0.0013 J	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.0019 J	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	Barium	0.028	0.10	0.029	0.028	0.033	0.037	0.026	0.037	0.073	0.033	0.080	0.041	0.038	0.079	0.062	0.043
	Beryllium	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	0.000056 J	<0.000054	<0.000054	<0.000054	<0.000054
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00015 J	0.00069	0.00081	<0.00011	<0.00011	<0.00011	0.0012	0.00098	0.00016 J	<0.00011	<0.00011
	Chromium	<0.0011	<0.0011	<0.0011	0.0041 J	<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	<0.00039	<0.00039	<0.00039	<0.00039	0.0026 J	0.00085 J	0.0022 J	<0.00039	<0.00039	0.0011 J	0.017	0.015	0.0024 J	0.0011 J	<0.00039
	Fluoride	<0.050	0.064 J	<0.050	<0.050	0.16	<0.050	<0.050	<0.050	<0.050	<0.050	0.086 J	<0.050	<0.050	<0.050	<0.050	0.075 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	<0.00089	<0.00089	<0.00089	<0.00089
	Lithium	0.0029 J	0.0037 J	0.0020 J	<0.00073	0.00094 J	<0.00073	0.0011 J	0.0016 J	0.0038 J	0.00084 J	<0.00073	0.0017 J	0.0016 J	0.0036 J	0.0035 J	0.0017 J
	Mercury	0.000081 J	0.00018 J	<0.000078	0.00011 J	<0.000078	0.000099 J	0.00010 J	0.00027	0.00022	0.000084 J	0.000080 J	0.00030	<0.000078	0.000094 J	<0.000078	0.000081 J
	Molybdenum	<0.00074	0.0019 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	<0.00074	<0.00074
	Comb. Radium 226/228	0.462 U	0.274 U	0.532 U	0.223 U	0.312 U	0.667 U	0.828 U	0.493 U	0.513 U	0.815 U	0.794 U	0.155 U	0.905	0.124 U	1.05 U	0.228 U
	Selenium	<0.0014	<0.0014	<0.0014	<0.0014	0.0023 J	<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	<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, and combined radium by EPA Methods 9315/9320.
(3) The pH value presented was recorded at the time of sample collection in the field.

Table 6

Summary of Background Concentrations and Groundwater Protection Standards

Plant Hammond AP-4, Floyd County, Georgia

Analyte	Units	Background[(1)]	State GWPS[(2)]
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.100	2
Beryllium	mg/L	0.002	0.004
Cadmium	mg/L	0.0005	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.005	0.005
Fluoride	mg/L	0.17	4
Lead	mg/L	0.002	0.0016
Lithium	mg/L	0.03	0.03
Mercury	mg/L	0.0002	0.002
Molybdenum	mg/L	0.01	0.01
Selenium	mg/L	0.005	0.05
Thallium	mg/L	0.001	0.002
Combined Radium-226/228	pCi/L	1.36	5

Notes:

mg/L = milligrams per liter

pCi/L = picocuries per liter

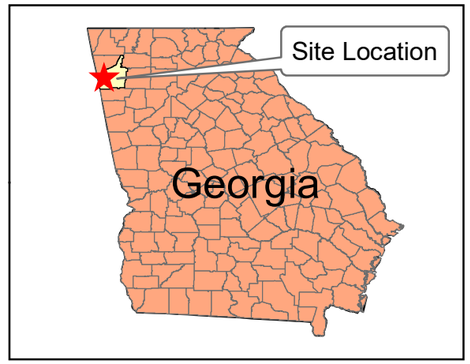
1. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (GA EPD) Rule 391-3-4-.10(6)(a).
2. Under the existing GA EPD rules, the GWPS is: (i) the maximum contaminant level (MCL); (ii) where the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

FIGURES

N

LEGEND

Plant Hammond Property Boundary



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

0 400 800 1,600

SCALE IN FEET

SITE LOCATION MAP

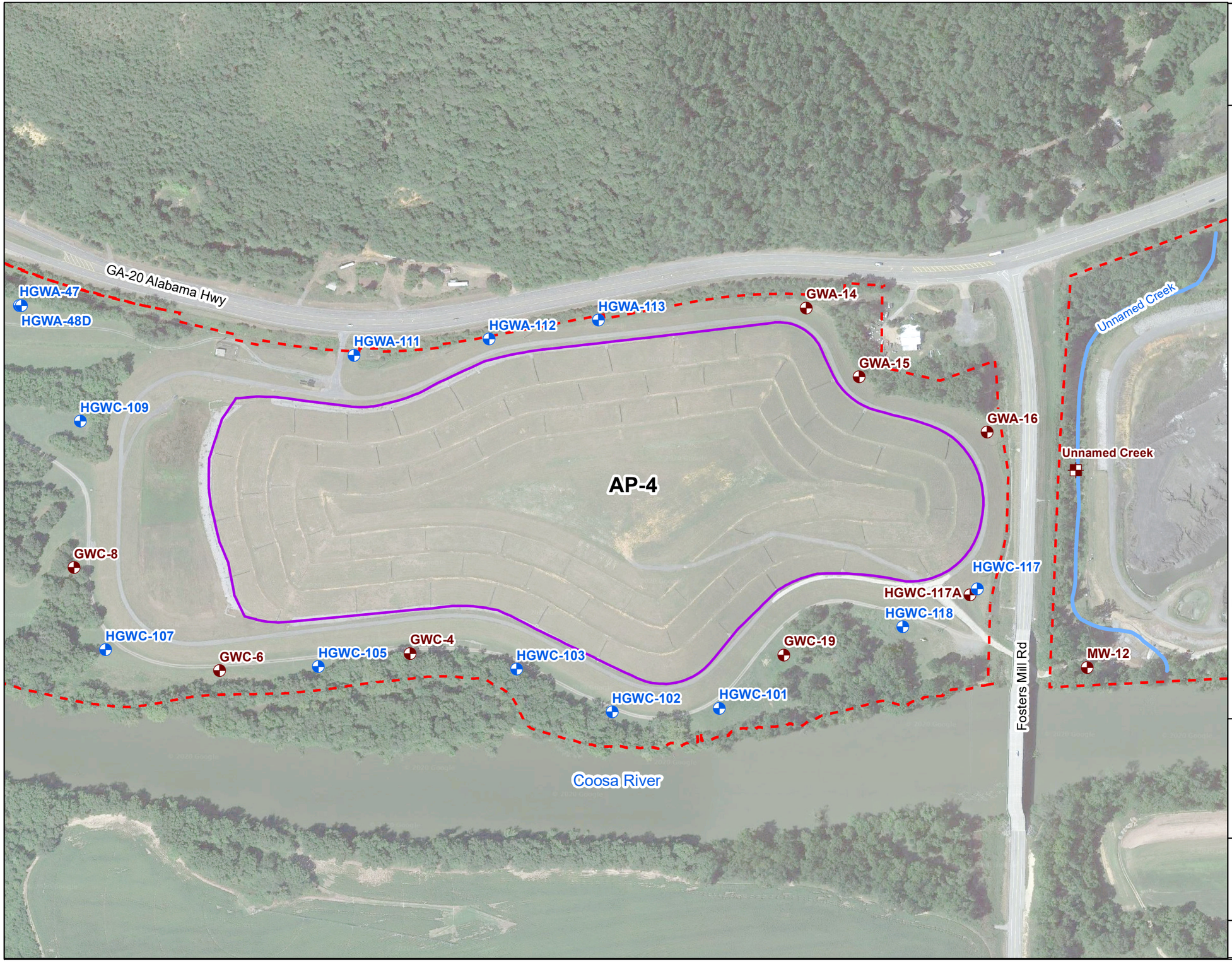
GEORGIA POWER COMPANY
PLANT HAMMOND AP-4
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | FEBRUARY 2022

FIGURE 1



N

LEGEND

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

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

0 150 300 600

SCALE IN FEET

MONITORING WELL AND SURFACE WATER GAUGE LOCATION NETWORK MAP

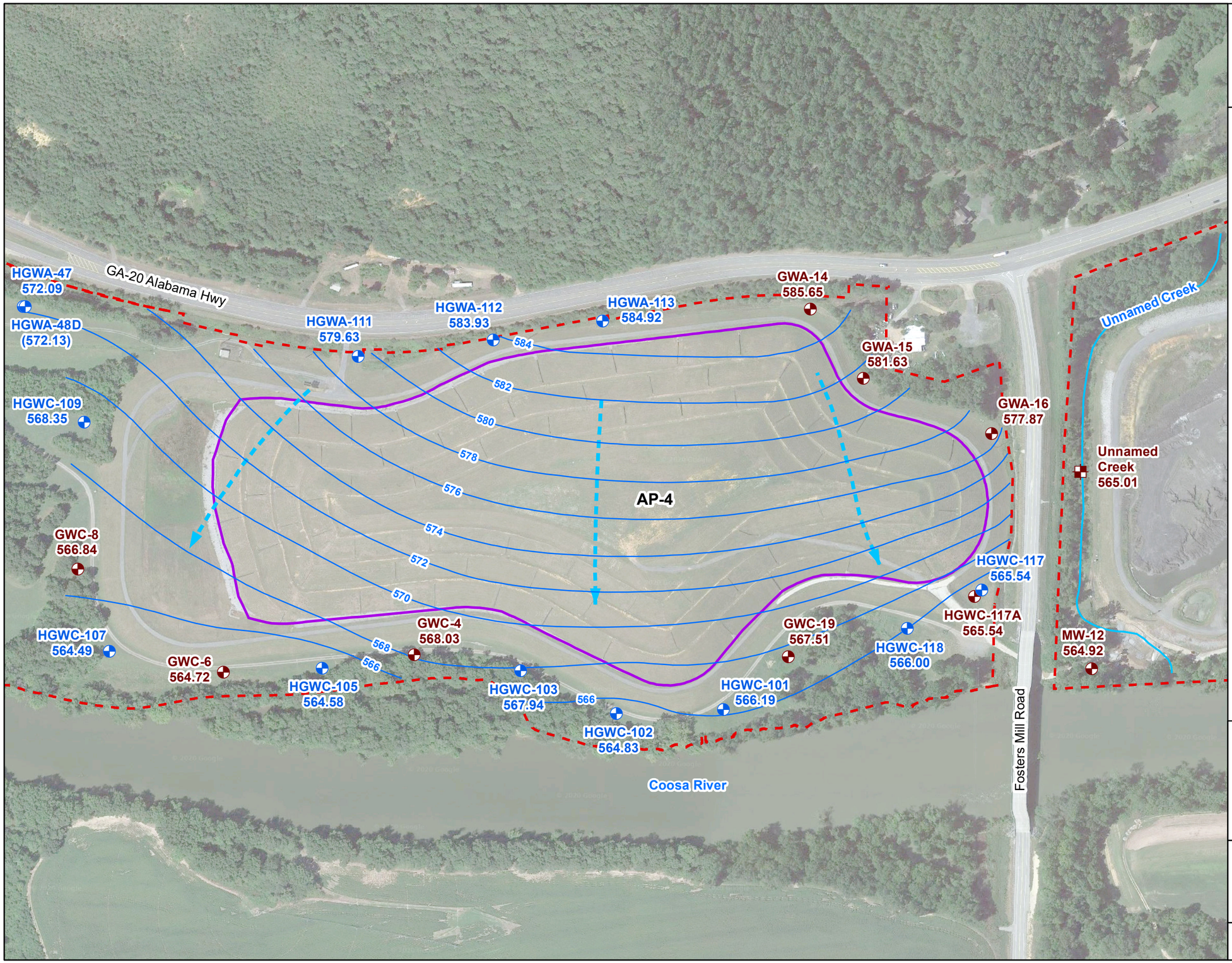
GEORGIA POWER COMPANY
PLANT HAMMOND AP-4
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | FEBRUARY 2022

FIGURE 2



N

LEGEND

- Compliance 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

Notes:
1. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).
2. Water 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.

0 150 300 600

SCALE IN FEET

GEORGIA REGISTERED No. PE019513 PROFESSIONAL ENGINEER WHITNEY B. LAW

POTENTIOMETRIC SURFACE CONTOUR MAP - AUGUST 2021

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | FEBRUARY 2022

FIGURE 3

APPENDIX A

Well Design, Installation and Development Report – Addendum No. 2, Plant Hammond Ash Pond 4 (AP-4), September 2021

Prepared for

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

WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT – ADDENDUM No.2

PLANT HAMMOND ASH POND 4 (AP-4)

Prepared by

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581

September 2021

WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT – ADDENDUM No. 2

Plant Hammond
Ash Pond 4
September 17, 2021

Whitney Law, P.E.
Georgia Professional Engineer No. 36641
Project Manager
Geosyntec Consultants

Geosyntec consultants

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Appendix B Boring and Well Construction Log
Appendix C Well Development Forms
Appendix D Certified Well Survey Data

LIST OF ACRONYMS

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

1. INTRODUCTION

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

Plant Hammond is located in Floyd County, approximately 10 miles west of Rome, Georgia. The current groundwater monitoring system at AP-4 includes 13 wells associated with the CCR compliance monitoring well network and a network of secondary groundwater monitoring wells and groundwater level monitoring piezometers. The locations of these wells and piezometers are shown on **Figure 1**.

2. DRILLING AND WELL INSTALLATION

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

This report presents the details for the installation and development of AP-4 well HGWC-117A. The location of this well is shown in **Figure 1**. Well construction details are provided in **Table 1**; boring and well construction logs are included in **Appendix B**.

2.1 Drilling Method

The borehole was advanced using hollow stem auger drilling techniques. A Geoprobe 7822DT drill rig with 6 ¼ - inch (outer diameter) augers was used to install the well. Split-spoon samples were collected using a combination of continuous and 5-foot centered intervals. Split spoons were used for the sole purpose of sample collection. Care was taken so that the drilling method did not introduce potential contamination from surface activities to the groundwater.

2.2 Screened Interval

Details regarding the well screen interval are provided in **Table 1**. The well is screened in the uppermost water bearing unit of the Site. HGWC-117A is screened from approximately 551.85 to 541.85 feet (referenced to the North American Vertical Datum of 1988). HGWC-117A is constructed with a 10 foot well screen segment.

2.3 Well Casing and Screen

The well was constructed of 2-inch inner diameter Schedule 40 polyvinyl chloride (PVC) casing with flush-threaded fittings. The well was installed with a 10-foot nominal length pre-packed dual-wall well screen with 0.010-inch slots. The casing and pre-packed

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

2.4 Well Intake Design

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

2.5 Filter Pack

Highly Pure Quartzite of Consolidated Aggregates Co. silica sand filter pack was used as the appropriate gradation for the well. The filter pack meets the ASTM D5092 uniformity coefficient specification of 2.5 or less, with a uniformity coefficient of 1.6.

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

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

2.6 Annular Seal

A minimum of two feet of bentonite chips (PelPlug time-release-coated 3/8-inch bentonite pellets) were placed immediately above the filter pack by gravity-pouring into the annular space and hydrated per manufacture's specifications. A tremie pipe was used to probe the annular space to ensure that no bridging occurred The bentonite was hydrated with potable water for a duration meeting the manufacture's specifications prior to grouting the remaining annulus.

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

2.7 Cap and Protective Casing

The well riser was fitted with a locking cap and a lockable cover. A ¼-inch vent hole was drilled into the PVC riser pipe to provide an avenue for the escape of gas. The protective cap guards the casing from damage and the locking cap serves as a security device to prevent well tampering. Bollards were installed around the four corners of the concrete pad to protect the well.

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

3. WELL DEVELOPMENT

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

4. SURVEY

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

5. REFERENCES

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

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

Geosyntec Consultants, 2020. Well Design, Installation and Development Report – Addendum, Plant Hammond Ash Ponds 4. November 2020.

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

TABLE

Table 1

Summary of Well Construction Details

Plant Hammond AP-4, Floyd County, Georgia

Well ID	Purpose	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation [2] (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Well Depth (ft bgs) [3]
HGWC-117A	Piezometer	7/21/2021	1548082.04	1937157.25	578.85	581.76	551.85	541.85	37.40

Notes:

ft bgs = feet below ground surface.

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey was completed by GEL Solutions and certified September 8, 2021.

(2) Vertical elevations are referenced to the North American Vertical Datum (NAVD) of 1988. Ground surface elevation defined at the survey nail installed within the well pad. Survey was completed by GEL Solutions and certified September 8,2021.

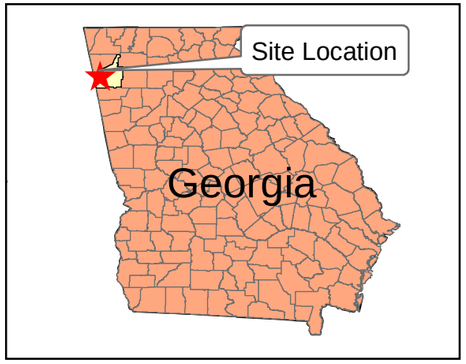
(3) Total well depth accounts for 4-inch sump.

FIGURE

N

LEGEND

- Compliance Monitoring Well
- Piezometer
- Unnamed Creek
- Approximate AP-4 Boundary
- Plant Hammond Property Boundary



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

0 175 350 700

SCALE IN FEET

GROUNDWATER MONITORING NETWORK MAP

GEORGIA POWER
PLANT HAMMOND
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | SEPTEMBER 2021

FIGURE 1

APPENDIX A

Well Driller Performance Bonds

CONTINUATION
CERTIFICATE

SAFECO Insurance Company of America , Surety upon

a certain Bond No. **4993104**

dated effective June 30, 1987
(MONTH-DAY-YEAR)

on behalf of Southern Company Services, Inc.
(PRINCIPAL)

and in favor of Georgia Department of Natural Resources, Environmental Protection Division
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2021
(MONTH-DAY-YEAR)

and ending on June 30, 2022
(MONTH-DAY-YEAR)

Amount of bond Fifteen Thousand Dollars and 00/100 ($15,000.00)

Description of bond Water Well Contractors & Drillers

Premium: $100.00

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

Signed and dated on 05/06/2021
(MONTH-DAY-YEAR)

SAFECO Insurance Company of America

175 Berkeley Street, Boston, MA 02116

By _____
Attorney-in-Fact Jeffrey M. Wilson, Attorney-in-Fact

McGriff Insurance Services, Inc.
Agent

2211 7th Avenue South, Birmingham, AL 35233
Address of Agent

(205) 252-9871
Telephone Number of Agent

S-0157/GE 8/08

XDP

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual. SURETY

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

Certificate No: **8205019-016032**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American States Insurance Company is a corporation duly organized under the laws of the State of Indiana, that First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America are corporations duly organized under the laws of the State of New Hampshire (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Alisa B. Ferris; Anna Childress; Jeffrey M. Wilson; Mark W. Edwards II; Richard H. Mitchell; Robert R. Freel; Sam Audia; William M. Smith

all of the city of Birmingham state of AL each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of March , 2021 .

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 11th day of March , 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, which are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America and Safeco Insurance Company of America do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of May , 2021 .

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

APPENDIX B

Boring and Well Construction Log

Geosyntec consultants
engineers | scientists | innovators
Geosyntec Consultants
1255 Roberts Boulevard
Kennesaw, GA 30144

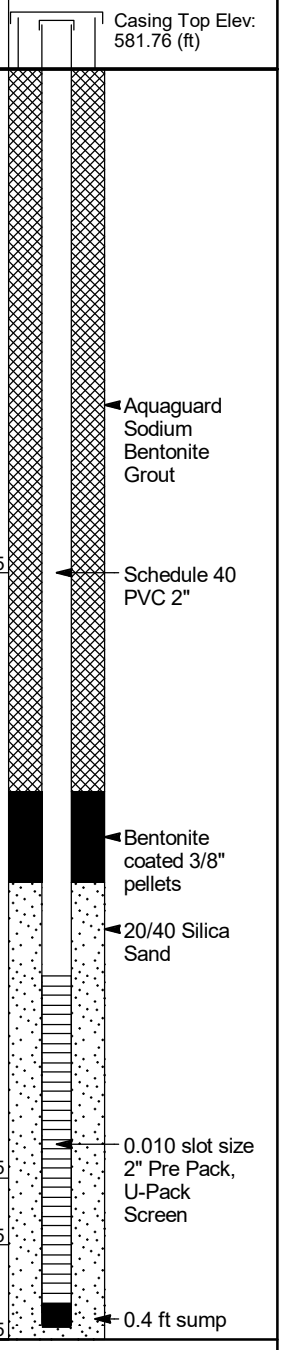
HGWC-117A

CLIENT Southern Company Services
PROJECT NAME Plant Hammond Well Installation
PROJECT NUMBER GW6581B
PROJECT LOCATION Plant Hammond
DATE STARTED 7/20/21 **COMPLETED** 7/21/21
NORTHING 1548082.04 ft **EASTING** 1937157.25 ft
DRILLER Sean Denty, Civil Field Services
GROUND ELEVATION 578.85 ft **BORING DIAMETER** 6 in
DRILLING METHOD Hollow Stem Auger
TOP OF CASING ELEVATION 581.76 ft
SAMPLING METHOD Split spoon
GEOPHYSICAL CONTRACTOR ---
RIG TYPE Geoprobe 7822DT
LOGGED BY T. Kessler **CHECKED BY** J. Ivanowski

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION
0		0 to 10 ft: Air Knife.		Air knife (0 to 10 ft) NO SAMPLE
	575			
5				
	570	10 to 15 ft: Hollow stem auger, no sample.		
10				
	565			
				563.85
15		From 15 ft bgs: Continuous split spoon samples were used solely for sample collection.		SILTY CLAY, Strong brown, medium plasticity, trace sands and mica, very soft, moist to wet.
	560			
20				20 ft: Abundant sands, trace mica, very soft, wet.
	555			
25				25 ft: Red and black mottling throughout, very soft, wet. 27 ft: Yellowish brown, abundant fine sands, trace mica, red and black mottling thorughout, very soft, wet.
	550			
30				29ft: Dark yellowish brown with black mottling throughout, low plasticity, fine sands throughout, trace mica, very soft, wet. 31 ft: Light yellowish brown, shale and chert fragments (subangular and subrounded) very soft, wet.
				545.85
	545			SAND, Yellowish brown, subangular and subrounded chert and shale fragments, trace quartz fragments, trace mica, very loose, wet.
35				543.85 SANDY GRAVEL, Yellowish brown, medium to coarse grained, subangular and subrounded chert, calcite and shale fragments, red, brown, and white mottling, very dense, moist.
				541.05

Bottom of borehole at 37.8 feet.

CONSTRUCTION DIAGRAM



SCS MONITORING WELLS MW-51 AND HGWC-117A.GPJ ACP GINT LIBRARY CH.GLB 9/9/21

APPENDIX C

Well Development Forms

Geosyntec consultants

WELL DEVELOPMENT LOG SHEET

Client: CCS
Site: Plant Hammond
Well ID: 117a
Total Depth (ft) (after purge): 40.41
Depth to Water (ft): 15.75
Well Diameter (in): 2
Well Volume (gal) = 0.041d$_2$h: 4.0476
Well Volume (L) = gal * 3.785: 15.30

Project No.: GLUCS81
Location: MP-41
Pump Type/Model: ~~Bladder~~ Monsoon
Tubing Material: poly
Pump Intake Depth (ft): 35.4 - 40
Start/Stop Purge Time: 1428 - 1676
Purge Rate (mL/min): 6000
Total Purge Volume (L): 32.5 gal

Development Date: 7/25/21
Field Personnel Name: Thomas Hessler

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

Well Type: Flush / (Stick Up)
Well Lock: (Yes) / No
Well Cap Condition: (Good) / Replace
Well Tag Present: (Yes) / No

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1428	6.32	398.38	129.2	0.11	21.63	1227	15.75	~~6000~~ 6000	0 xS	purge/surge
	6.24	371.55	113.1	0.17	19.10	orange	16.65	~~6000~~ 6000	8 xS	
	6.45	435.13	58.4	0.14	19.19	overcast	16.65	~~6000~~ 6000	16 xS	
	6.36	400.27	51.8	0.00	18.87	orange	16.35	~~6000~~ 6000	24 xS	
										pump failure @ 1456
										pump fixed @ ~~1500~~ 1520 - reduce speed
1530	7.83	1.13	88.9	5.79	212.45	overcast	16.00	~~6000~~ 6000	~~15~~ 30 xS	
1535	6.83	453.75	144.6	0.02	19.19	overcast	17.15	~~6000~~ 6000	~~24~~ 36 xS	
1540	6.90	456.01	131.4	0.01	18.97	1270	17.15	6000	42 xS	purge/surge
1545	6.87	487.79	93.7	0.09	19.13	overcast	17.15	6000	48 xS	
1550	6.87	438.15	88.8	0.03	18.93	2059	18.8	6000	54 xS	
1555	6.53	427.25	107.7	0.07	18.94	2483	18.56	6000	60 xS	
1600	6.55	431.53	107.3	0.01	18.96	1960	16.70	6000	66 xS	
1605	6.65	~~445.53~~ 443.74	~~109.3~~ 74	0.01	18.97	2451	18.45	6000	72 xS	
1610	6.64	446.54	76.0	0.01	18.97	1594	16.92	6000	78 xS	
1615	6.67	449.06	100.1	0.01	18.97	1148	18.89	6000	84 xS	
1620	6.60	437.78	78.6	0.01	18.98	overcast	18.00	6000	90 xS	
1625	6.62	444.04	97.6	0.01	~~42.60~~	1360	18.32	6000	106 xS	temp = 19.03
1630	6.66	449.44	100.5	0.01	19.06	112	18.72	6000	112 xS	
Stabilizing Criteria	**+/- 0.1 SU**	**+/- 5%**		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		**< 5 NTUs**				

Geosyntec consultants

WELL DEVELOPMENT LOG SHEET

Client: SCS
Site: Plant Hammond
Well ID: 117a
Total Depth (ft) (after purge): 40.41
Depth to Water (ft): 15.75
Well Diameter (in): 2
Well Volume (gal) = 0.041d^{2}h: 4.04
Well Volume (L) = gal * 3.785: 15.3
d = well diameter (inches); h = length of water column (feet)

Project No.: GW0658
Location: AP-21
Pump Type/Model: Monsoon
Tubing Material: poly
Pump Intake Depth (ft): 40
Start/Stop Purge Time: 1428-1820
Purge Rate (mL/min): 6000
Total Purge Volume (L): 3400

Development Date: 7/28/21
Field Personnel Name: Thomas Keech

Well Type: Flush / (Stick Up)
Well Lock: (Yes) / No
Well Cap Condition: (Good) / Replace
Well Tag Present: (Yes) / No

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1635	6.60	442.24	107.1	0.04	19.19	314	18.30	6000	118 NS	purge / surge
1640	6.58	446.29	111.5	0.02	19.06	157	18.52	6000	124 NS	
1645	6.61	441.52	113.8	0.07	19.15	124	18.45	6000	130 NS	
1650	6.75	478.89	109.8	0.02	18.97	52.5	17.45	6000	136 NS	
1655	6.62	444.09	95.7	0.02	18.93	31.9	18.10	6000	142 NS	
1700	6.50	431.11	78.7	0.01	~~13.54~~	~~overranging~~	18.60	6000	148 NS	
1705	6.58	425.77	75.3	0.00	19.08	~~135~~ 72.4	19.50	6000	154 NS	some erratic depth = 18.38, RR = 6000
1710	6.54	435.64	103.2	0.01	19.01	90	~~18.52~~	~~6000~~	160 NS	
1715	6.55	436.96	83.3	0.02	18.92	~~76~~ 74.0	18.70	6000	166 NS	
1720	6.57	438.88	108.4	0.01	18.94	150	19.50	6000	172 NS	
1725	6.57	442.38	115.7	0.01	18.91	42.2	19.50	6000	178 NS	
1730	6.57	432.65	120.3	0.01	19.01	44.7	19.30	6000	184 NS	
1735	6.60	445.35	120.8	0.02	18.97	15.0	19.50	6000	190 NS	
1740	6.60	442.61	88.8	0.02	18.97	10.9	19.50	6000	196 NS	
1745	6.61	450.55	112.8	0.02	18.99	15.2	19.50	6000	202 NS	
1750	6.59	444.51	113.7	0.02	18.98	20.2	19.20	6000	208 NS	reset
1755	6.59	441.53	95.7	0.02	18.88	~~10.97~~ 8.75	19.26	6000	214 NS	~~surge~~ continue purge
~~1800~~	6.58	442.88	~~112.7~~	0.02	18.88	7.68	19.26	6000	~~220~~ 222 NS	
1805	6.59	442.42	~~112.7~~	0.02	18.88	4.51	19.50	6000	228 NS	
Stabilizing Criteria	**+/- 0.1 SU**	**+/- 5%**		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		**< 5 NTUs**				

Geosyntec consultants

WELL DEVELOPMENT LOG SHEET

Client: SCS
Site: Plant Hammond
Well ID: MW4
Total Depth (ft) (after purge): 40.4
Depth to Water (ft): 15.75
Well Diameter (in): 2
Well Volume (gal) = 0.041d$_2$h: 4.04
Well Volume (L) = gal * 3.785: 15.3
d = well diameter (inches); h = length of water column (feet)

Project No.: GW6581
Location: AP-4
Pump Type/Model: ~~Re~~ Monsoon
Tubing Material: poly
Pump Intake Depth (ft): 40
Start/Stop Purge Time: 1428/1820
Purge Rate (mL/min): 6000
Total Purge Volume (L): 32000

Development Date: 7/28/21
Field Personnel Name: Thomas/Hessler

Well Type: Flush / (Stick Up)
Well Lock: (Yes) / No
Well Cap Condition: (Good) / Replace
Well Tag Present: (Yes) / No

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1810	6.54	451.87	118.1	0.03	18.87	4.64	19.25	6000	234 x5	
1815	6.59	442.61	89.1	0.03	18.86	4.35	19.30	6000	240 x5	
1820	6.59	441.85	81.8	0.03	18.84	2.89	19.30	6000	246 x5	total Purge volume = 1230L one purge
Stabilizing Criteria	**+/- 0.1 SU**	**+/- 5%**		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		**< 5 NTUs**				

APPENDIX D

Certified Well Survey Data

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail or Pad Northing	Nail or Pad Easting	Nail or Pad Elevation	Description
HGWC-117A	1548082.038	1937157.249	581.759	1548080.943	1937157.918	578.849	NAIL ON PAD
MW-51	1547872.352	1938421.463	574.541	1547873.517	1938421.451	571.573	NAIL ON PAD
Benchmark	Northing	Easting	Elevation				
BM-H2	1548149.4490	1938960.2220	590.68				
BM-H1	1547964.965	1937219.069	579.02				

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING. DATE OF FIELD SURVEY & INSPECTION: 09/07/2021. FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD '88. EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARKS BM-H1 AND BM-H2 SET BY GEL SOLUTIONS USING A TRIMBLE DINI LEVEL

9/8/2021

COA - LS003119
Exp. 06/30/2022

APPENDIX B

Well Maintenance and Repair Documentation Memorandum

Geosyntec consultants

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144
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MEMORANDUM

DATE: December 20, 2021

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 2021 semiannual reporting period. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells. Documentation of the well inspections are provided as an attachment to this memorandum.

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Hammond/AP-4	8/4/2021	All Wells	Checked and cleared weep holes of debris.

ATTACHMENT

Well Inspection Forms

August 2021

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-A-47
Date, field conditions: 8/11/21 Hot, sunny

		yes	no	n/a
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 and does the well require protection from traffic?	✓		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	✓		
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWA-48D
Date, field conditions: 8/11/21 8/12/21

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

7 Corrective actions as needed, by date:
None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: AGWA-111
Date, field conditions: 8/11/21 8/12/21

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

7 Corrective actions as needed, by date:

None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: HGWA-112
Well ID:
Date, field conditions: 8/12/21 Sunny 85° F

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	✓		
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWA-113
Date, field conditions: ~~BA~~ ~~BA~~ 8/11/21 Hot

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	✓		
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: plant hammond
Permit Number:
Well ID: HGWC-101
Date, field conditions: 8/11/21 8/16/21

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

7 Corrective actions as needed, by date:
none.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-102
Date, field conditions: 8/13/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plaut Hammond
Permit Number:
Well ID: HGWC-105
Date, field conditions: 8/11/21 8/16/21

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

7 Corrective actions as needed, by date:

none

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-105
Date, field conditions: 8/11/21 8/13/21

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

7 Corrective actions as needed, by date:
Wasp nest. Plant notified.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-107
Date, field conditions: 8/11/21 8/13/21

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

7 Corrective actions as needed, by date:
None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: plant hammond
Permit Number:
Well ID: HGWC-109
Date, field conditions: 8/11/21 8/13/21

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

7 Corrective actions as needed, by date:
None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MONWC-114
Date, field conditions: 8/11/21 Hot

		yes	no	n/a
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 and does the well require protection from traffic?	✓		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-118
Date, field conditions: 8/13/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-12
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: Hgwell-117A
Date, field conditions: BKG 8/11/21 Sunny hot

		yes	no	n/a
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 and does the well require protection from traffic?	✓		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-4
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-6
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-8
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-14
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-15
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-16
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: GWC-19
Date, field conditions: 8/11/21

		yes	no	n/a
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 and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			✓
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?			✓
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

September 2021

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-117
Date, field conditions: 9/27/21, clear

		yes	no	n/a
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 and does the well require protection from traffic?	✓		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-117A
Date, field conditions: ~~9/27~~ 9/27/21, Clear

		yes	no	n/a
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 and does the well require protection from traffic?	✓		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
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 and is the lock 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: Groundwater Wells Only:			
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			✓
c	Does the well require redevelopment (low flow, turbid)?		✓	
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	✓		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

APPENDIX C

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL RESULTS

August 2021

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

September 13, 2021

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

RE: Project: HAMMOND AP-4
Pace Project No.: 92555501

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 20, 2021. 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
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.: 92555501

Pace Analytical Services Charlotte
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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

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.: 92555501

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555501001	**HGWA-47**	Water	08/12/21 11:08	08/13/21 14:55
92555501002	**HGWA-48D**	Water	08/12/21 11:30	08/13/21 14:55
92555501003	**HGWA-111**	Water	08/12/21 13:15	08/13/21 14:55
92555501004	**HGWA-112**	Water	08/12/21 12:55	08/13/21 14:55
92555501005	**HGWA-113**	Water	08/12/21 15:08	08/13/21 14:55
92555501006	**HGWC-117A**	Water	08/12/21 17:57	08/13/21 14:55
92555501007	**HGWC-102**	Water	08/13/21 17:16	08/16/21 13:25
92555501008	**HGWC-105**	Water	08/13/21 15:35	08/16/21 13:25
92555501009	**HGWC-107**	Water	08/13/21 14:10	08/16/21 13:25
92555501010	**HGWC-109**	Water	08/13/21 12:00	08/16/21 13:25
92555501011	**HGWC-118**	Water	08/13/21 14:18	08/16/21 13:25
92555501012	**DUP-4**	Water	08/13/21 00:00	08/16/21 13:25
92555501013	**HGWC-101**	Water	08/16/21 12:50	08/17/21 11:25
92555501014	**HGWC-103**	Water	08/16/21 10:50	08/17/21 11:25
92555501015	**FB-4**	Water	08/16/21 11:30	08/17/21 11:25
92555501016	**EB-4**	Water	08/16/21 11:30	08/17/21 11:25
92555501017	**HGWC-117**	Water	08/19/21 18:28	08/20/21 12:15

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555501001	**HGWA-47**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501002	**HGWA-48D**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501003	**HGWA-111**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501004	**HGWA-112**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501005	**HGWA-113**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501006	**HGWC-117A**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501007	**HGWC-102**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501008	**HGWC-105**	EPA 6010D	KH	1
		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.: 92555501

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501009	**HGWC-107**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501010	**HGWC-109**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501011	**HGWC-118**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501012	**DUP-4**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501013	**HGWC-101**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501014	**HGWC-103**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501015	**FB-4**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	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.: 92555501

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501016	**EB-4**	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555501017	**HGWC-117**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

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

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

SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555501001	**HGWA-47**					
	Performed by	CUSTOMER			08/16/21 10:09	
	pH	7.38	Std. Units		08/16/21 10:09	
EPA 6010D	Calcium	71.2	mg/L	1.0	08/18/21 18:58	M1
EPA 6020B	Barium	0.028	mg/L	0.0050	08/19/21 18:36	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	08/19/21 18:36	
EPA 7470A	Mercury	0.000081J	mg/L	0.00020	08/27/21 13:25	B
SM 2540C-2011	Total Dissolved Solids	212	mg/L	10.0	08/18/21 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	08/20/21 02:58	
EPA 300.0 Rev 2.1 1993	Sulfate	1.4	mg/L	1.0	08/20/21 02:58	
92555501002	**HGWA-48D**					
	Performed by	CUSTOMER			08/16/21 10:09	
	pH	7.44	Std. Units		08/16/21 10:09	
EPA 6010D	Calcium	59.5	mg/L	1.0	08/18/21 19:17	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	08/19/21 14:54	
EPA 6020B	Barium	0.10	mg/L	0.0050	08/19/21 14:54	
EPA 6020B	Boron	0.012J	mg/L	0.040	08/19/21 14:54	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	08/19/21 14:54	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	08/19/21 14:54	
EPA 7470A	Mercury	0.00018J	mg/L	0.00020	08/27/21 13:36	B
SM 2540C-2011	Total Dissolved Solids	234	mg/L	10.0	08/18/21 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/20/21 03:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.064J	mg/L	0.10	08/20/21 03:13	
EPA 300.0 Rev 2.1 1993	Sulfate	4.3	mg/L	1.0	08/20/21 03:13	
92555501003	**HGWA-111**					
	Performed by	CUSTOMER			08/16/21 10:09	
	pH	6.67	Std. Units		08/16/21 10:09	
EPA 6010D	Calcium	45.4	mg/L	1.0	08/18/21 19:22	
EPA 6020B	Barium	0.029	mg/L	0.0050	08/19/21 18:42	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	08/19/21 18:42	
SM 2540C-2011	Total Dissolved Solids	157	mg/L	10.0	08/18/21 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	08/20/21 03:58	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	08/20/21 03:58	
92555501004	**HGWA-112**					
	Performed by	CUSTOMER			08/16/21 10:09	
	pH	5.50	Std. Units		08/16/21 10:09	
EPA 6010D	Calcium	6.9	mg/L	1.0	08/18/21 19:36	
EPA 6020B	Barium	0.028	mg/L	0.0050	08/19/21 18:48	
EPA 6020B	Chromium	0.0041J	mg/L	0.0050	08/19/21 18:48	
EPA 7470A	Mercury	0.00011J	mg/L	0.00020	08/27/21 13:42	B
SM 2540C-2011	Total Dissolved Solids	63.0	mg/L	10.0	08/18/21 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	4.4	mg/L	1.0	08/20/21 04:13	

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.: 92555501

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555501005	**HGWA-113**					
	Performed by	CUSTOMER			08/16/21 10:10	
	pH	6.08	Std. Units		08/16/21 10:10	
EPA 6010D	Calcium	8.4	mg/L	1.0	08/18/21 19:41	
EPA 6020B	Barium	0.033	mg/L	0.0050	08/19/21 18:54	
EPA 6020B	Lithium	0.00094J	mg/L	0.030	08/19/21 18:54	
EPA 6020B	Selenium	0.0023J	mg/L	0.0050	08/19/21 18:54	
SM 2540C-2011	Total Dissolved Solids	92.0	mg/L	10.0	08/18/21 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	08/20/21 04:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	08/20/21 04:28	
EPA 300.0 Rev 2.1 1993	Sulfate	10.0	mg/L	1.0	08/20/21 04:28	
92555501006	**HGWC-117A**					
	Performed by	CUSTOMER			08/16/21 10:10	
	pH	6.27	Std. Units		08/16/21 10:10	
EPA 6010D	Calcium	50.7	mg/L	1.0	08/18/21 19:46	
EPA 6020B	Barium	0.079	mg/L	0.0050	08/20/21 15:22	
EPA 6020B	Boron	0.34	mg/L	0.040	08/20/21 15:22	
EPA 6020B	Cadmium	0.00016J	mg/L	0.00050	08/20/21 15:22	
EPA 6020B	Cobalt	0.0024J	mg/L	0.0050	08/20/21 15:22	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	08/20/21 15:22	
EPA 7470A	Mercury	0.000094J	mg/L	0.00020	08/27/21 13:53	B
SM 2540C-2011	Total Dissolved Solids	256	mg/L	10.0	08/18/21 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	6.3	mg/L	1.0	08/20/21 05:13	
EPA 300.0 Rev 2.1 1993	Sulfate	64.6	mg/L	1.0	08/20/21 05:13	
92555501007	**HGWC-102**					
	Performed by	CUSTOMER			08/16/21 17:34	
	pH	5.45	Std. Units		08/16/21 17:34	
EPA 6010D	Calcium	119	mg/L	1.0	08/18/21 19:50	
EPA 6020B	Barium	0.026	mg/L	0.0050	08/20/21 15:28	
EPA 6020B	Boron	2.4	mg/L	0.040	08/20/21 15:28	
EPA 6020B	Cadmium	0.00069	mg/L	0.00050	08/20/21 15:28	
EPA 6020B	Cobalt	0.00085J	mg/L	0.0050	08/20/21 15:28	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	08/20/21 15:28	
EPA 7470A	Mercury	0.00010J	mg/L	0.00020	08/27/21 13:55	B
SM 2540C-2011	Total Dissolved Solids	647	mg/L	10.0	08/19/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	08/20/21 13:28	
EPA 300.0 Rev 2.1 1993	Sulfate	248	mg/L	6.0	08/20/21 14:30	
92555501008	**HGWC-105**					
	Performed by	CUSTOMER			08/16/21 17:34	
	pH	6.44	Std. Units		08/16/21 17:34	
EPA 6010D	Calcium	102	mg/L	1.0	08/18/21 19:55	
EPA 6020B	Barium	0.073	mg/L	0.0050	08/20/21 15:33	
EPA 6020B	Boron	1.2	mg/L	0.040	08/20/21 15:33	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	08/20/21 15:33	

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.: 92555501

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555501008	**HGWC-105**					
EPA 7470A	Mercury	0.00022	mg/L	0.00020	08/27/21 13:58	B
SM 2540C-2011	Total Dissolved Solids	441	mg/L	10.0	08/19/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	08/20/21 14:15	
EPA 300.0 Rev 2.1 1993	Sulfate	142	mg/L	3.0	08/20/21 14:45	
92555501009	**HGWC-107**					
	Performed by	CUSTOMER			08/16/21 17:34	
	pH	6.11	Std. Units		08/16/21 17:34	
EPA 6010D	Calcium	57.8	mg/L	1.0	08/18/21 20:00	
EPA 6020B	Barium	0.033	mg/L	0.0050	08/20/21 15:39	
EPA 6020B	Boron	0.73	mg/L	0.040	08/20/21 15:39	
EPA 6020B	Lithium	0.00084J	mg/L	0.030	08/20/21 15:39	
EPA 7470A	Mercury	0.000084J	mg/L	0.00020	08/27/21 14:01	B
SM 2540C-2011	Total Dissolved Solids	291	mg/L	10.0	08/19/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	08/20/21 19:31	
EPA 300.0 Rev 2.1 1993	Sulfate	112	mg/L	2.0	08/21/21 01:35	
92555501010	**HGWC-109**					
	Performed by	CUSTOMER			08/16/21 17:34	
	pH	6.71	Std. Units		08/16/21 17:34	
EPA 6010D	Calcium	43.5	mg/L	1.0	08/18/21 20:04	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	08/20/21 15:45	
EPA 6020B	Barium	0.080	mg/L	0.0050	08/20/21 15:45	
EPA 6020B	Boron	0.24	mg/L	0.040	08/20/21 15:45	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	08/20/21 15:45	
EPA 7470A	Mercury	0.000080J	mg/L	0.00020	08/27/21 14:04	B
SM 2540C-2011	Total Dissolved Solids	189	mg/L	10.0	08/19/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/20/21 19:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.086J	mg/L	0.10	08/20/21 19:46	
EPA 300.0 Rev 2.1 1993	Sulfate	24.4	mg/L	1.0	08/20/21 19:46	
92555501011	**HGWC-118**					
	Performed by	CUSTOMER			08/16/21 17:35	
	pH	6.78	Std. Units		08/16/21 17:35	
EPA 6010D	Calcium	84.3	mg/L	1.0	08/18/21 20:09	
EPA 6020B	Barium	0.043	mg/L	0.0050	08/20/21 15:51	
EPA 6020B	Boron	0.59	mg/L	0.040	08/20/21 15:51	
EPA 6020B	Lithium	0.0017J	mg/L	0.030	08/20/21 15:51	
EPA 7470A	Mercury	0.000081J	mg/L	0.00020	08/27/21 14:07	B
SM 2540C-2011	Total Dissolved Solids	336	mg/L	10.0	08/19/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/20/21 20:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/20/21 20:01	
EPA 300.0 Rev 2.1 1993	Sulfate	75.1	mg/L	1.0	08/20/21 20:01	
92555501012	**DUP-4**					
EPA 6010D	Calcium	44.7	mg/L	1.0	08/18/21 20:14	
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	08/20/21 15:56	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555501012	**DUP-4**					
EPA 6020B	Barium	0.084	mg/L	0.0050	08/20/21 15:56	
EPA 6020B	Boron	0.24	mg/L	0.040	08/20/21 15:56	
EPA 6020B	Cobalt	0.0012J	mg/L	0.0050	08/20/21 15:56	
EPA 6020B	Lithium	0.00077J	mg/L	0.030	08/20/21 15:56	
SM 2540C-2011	Total Dissolved Solids	196	mg/L	10.0	08/19/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/20/21 20:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.087J	mg/L	0.10	08/20/21 20:46	
EPA 300.0 Rev 2.1 1993	Sulfate	24.3	mg/L	1.0	08/20/21 20:46	
92555501013	**HGWC-101**					
	Performed by	CUSTOMER			08/17/21 16:27	
	pH	5.40	Std. Units		08/17/21 16:27	
EPA 6010D	Calcium	22.8	mg/L	1.0	08/18/21 20:19	
EPA 6020B	Barium	0.037	mg/L	0.0050	08/20/21 16:02	
EPA 6020B	Boron	0.13	mg/L	0.040	08/20/21 16:02	
EPA 6020B	Cadmium	0.00015J	mg/L	0.00050	08/20/21 16:02	
EPA 6020B	Cobalt	0.0026J	mg/L	0.0050	08/20/21 16:02	
EPA 7470A	Mercury	0.000099J	mg/L	0.00020	08/27/21 14:12	B
SM 2540C-2011	Total Dissolved Solids	206	mg/L	10.0	08/19/21 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	08/24/21 20:58	
EPA 300.0 Rev 2.1 1993	Sulfate	72.1	mg/L	2.0	08/25/21 09:20	
92555501014	**HGWC-103**					
	Performed by	CUSTOMER			08/17/21 16:28	
	pH	5.59	Std. Units		08/17/21 16:28	
EPA 6010D	Calcium	124	mg/L	1.0	08/18/21 20:33	
EPA 6020B	Barium	0.037	mg/L	0.0050	08/20/21 16:08	
EPA 6020B	Boron	3.2	mg/L	0.040	08/20/21 16:08	
EPA 6020B	Cadmium	0.00081	mg/L	0.00050	08/20/21 16:08	
EPA 6020B	Cobalt	0.0022J	mg/L	0.0050	08/20/21 16:08	
EPA 6020B	Lithium	0.0016J	mg/L	0.030	08/20/21 16:08	
EPA 7470A	Mercury	0.00027	mg/L	0.00020	08/27/21 14:15	B
SM 2540C-2011	Total Dissolved Solids	672	mg/L	20.0	08/19/21 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	10.4	mg/L	1.0	08/22/21 23:02	
EPA 300.0 Rev 2.1 1993	Sulfate	354	mg/L	8.0	08/23/21 12:30	
92555501015	**FB-4**					
EPA 7470A	Mercury	0.00012J	mg/L	0.00020	08/27/21 14:18	B
92555501016	**EB-4**					
EPA 7470A	Mercury	0.00012J	mg/L	0.00020	08/27/21 14:26	B
92555501017	**HGWC-117**					
	Performed by	CUSTOMER			08/20/21 15:24	
	pH	6.04	Std. Units		08/20/21 15:24	
EPA 6010D	Calcium	40.9	mg/L	1.0	08/24/21 19:27	
EPA 6020B	Barium	0.041	mg/L	0.0050	08/27/21 13:08	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555501017	**HGWC-117**					
EPA 6020B	Beryllium	0.000056J	mg/L	0.00050	08/27/21 13:08	
EPA 6020B	Boron	0.78	mg/L	0.040	08/27/21 13:08	
EPA 6020B	Cadmium	0.0012	mg/L	0.00050	08/27/21 13:08	
EPA 6020B	Cobalt	0.017	mg/L	0.0050	08/27/21 13:08	
EPA 6020B	Lithium	0.0017J	mg/L	0.030	08/27/21 13:08	
EPA 7470A	Mercury	0.00030	mg/L	0.00020	08/27/21 14:29	B
SM 2540C-2011	Total Dissolved Solids	253	mg/L	10.0	08/25/21 19:44	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/27/21 07:20	
EPA 300.0 Rev 2.1 1993	Sulfate	108	mg/L	2.0	08/27/21 18:04	

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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: HGWA-47 **Lab ID: 92555501001** Collected: 08/12/21 11:08 Received: 08/13/21 14:55 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		08/16/21 10:09		
pH	**7.38**	Std. Units			1		08/16/21 10:09		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**71.2**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 18:58	7440-70-2	M1
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	08/18/21 12:41	08/19/21 18:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:36	7440-38-2	
Barium	**0.028**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 18:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 18:36	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 18:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 18:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 18:36	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 18:36	7439-92-1	
Lithium	**0.0029J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 18:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 18:36	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 18:36	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.000081J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 13:25	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**212**	mg/L	10.0	10.0	1		08/18/21 08:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.3**	mg/L	1.0	0.60	1		08/20/21 02:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 02:58	16984-48-8	
Sulfate	**1.4**	mg/L	1.0	0.50	1		08/20/21 02:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: HGWA-48D **Lab ID: 92555501002** Collected: 08/12/21 11:30 Received: 08/13/21 14:55 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		08/16/21 10:09		
pH	**7.44**	Std. Units			1		08/16/21 10:09		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**59.5**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:17	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	08/18/21 12:41	08/19/21 14:54	7440-36-0	
Arsenic	**0.0013J**	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 14:54	7440-38-2	
Barium	**0.10**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 14:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 14:54	7440-41-7	
Boron	**0.012J**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 14:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 14:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 14:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 14:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 14:54	7439-92-1	
Lithium	**0.0037J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 14:54	7439-93-2	
Molybdenum	**0.0019J**	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 14:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 14:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 14:54	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00018J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 13:36	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**234**	mg/L	10.0	10.0	1		08/18/21 08:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.2**	mg/L	1.0	0.60	1		08/20/21 03:13	16887-00-6	
Fluoride	**0.064J**	mg/L	0.10	0.050	1		08/20/21 03:13	16984-48-8	
Sulfate	**4.3**	mg/L	1.0	0.50	1		08/20/21 03:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: HGWA-111 **Lab ID: 92555501003** Collected: 08/12/21 13:15 Received: 08/13/21 14:55 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		08/16/21 10:09		
pH	**6.67**	Std. Units			1		08/16/21 10:09		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**45.4**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:22	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	08/18/21 12:41	08/19/21 18:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:42	7440-38-2	
Barium	**0.029**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 18:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 18:42	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 18:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 18:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 18:42	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 18:42	7439-92-1	
Lithium	**0.0020J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 18:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 18:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 18:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 18:42	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	0.000078	1	08/26/21 15:30	08/27/21 13:39	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**157**	mg/L	10.0	10.0	1		08/18/21 08:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.5**	mg/L	1.0	0.60	1		08/20/21 03:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 03:58	16984-48-8	
Sulfate	**1.3**	mg/L	1.0	0.50	1		08/20/21 03:58	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.: 92555501

Sample: HGWA-112 **Lab ID: 92555501004** Collected: 08/12/21 12:55 Received: 08/13/21 14:55 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		08/16/21 10:09		
pH	**5.50**	Std. Units			1		08/16/21 10:09		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**6.9**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:36	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	08/18/21 12:41	08/19/21 18:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:48	7440-38-2	
Barium	**0.028**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 18:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 18:48	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 18:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 18:48	7440-43-9	
Chromium	**0.0041J**	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 18:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 18:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 18:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 18:48	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 18:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 18:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00011J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 13:42	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**63.0**	mg/L	10.0	10.0	1		08/18/21 08:31		
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		08/20/21 04:13	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 04:13	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/20/21 04:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: HGWA-113 **Lab ID: 92555501005** Collected: 08/12/21 15:08 Received: 08/13/21 14:55 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		08/16/21 10:10		
pH	**6.08**	Std. Units			1		08/16/21 10:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**8.4**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:41	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	08/18/21 12:41	08/19/21 18:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:54	7440-38-2	
Barium	**0.033**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 18:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 18:54	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 18:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 18:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 18:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 18:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 18:54	7439-92-1	
Lithium	**0.00094J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 18:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 18:54	7439-98-7	
Selenium	**0.0023J**	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 18:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 18:54	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	0.000078	1	08/26/21 15:30	08/27/21 13:44	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**92.0**	mg/L	10.0	10.0	1		08/18/21 08:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1.5**	mg/L	1.0	0.60	1		08/20/21 04:28	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.050	1		08/20/21 04:28	16984-48-8	
Sulfate	**10.0**	mg/L	1.0	0.50	1		08/20/21 04:28	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.: 92555501

Sample: HGWC-117A **Lab ID: 92555501006** Collected: 08/12/21 17:57 Received: 08/13/21 14:55 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		08/16/21 10:10		
pH	**6.27**	Std. Units			1		08/16/21 10:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**50.7**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:46	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	08/18/21 12:41	08/20/21 15:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:22	7440-38-2	
Barium	**0.079**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:22	7440-41-7	
Boron	**0.34**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:22	7440-42-8	
Cadmium	**0.00016J**	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:22	7440-47-3	
Cobalt	**0.0024J**	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:22	7439-92-1	
Lithium	**0.0036J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.000094J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 13:53	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**256**	mg/L	10.0	10.0	1		08/18/21 08:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.3**	mg/L	1.0	0.60	1		08/20/21 05:13	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 05:13	16984-48-8	
Sulfate	**64.6**	mg/L	1.0	0.50	1		08/20/21 05:13	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.: 92555501

Sample: HGWC-102 **Lab ID: 92555501007** Collected: 08/13/21 17:16 Received: 08/16/21 13:25 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		08/16/21 17:34		
pH	**5.45**	Std. Units			1		08/16/21 17:34		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**119**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:50	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	08/18/21 12:41	08/20/21 15:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:28	7440-38-2	
Barium	**0.026**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:28	7440-41-7	
Boron	**2.4**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:28	7440-42-8	
Cadmium	**0.00069**	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:28	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:28	7440-47-3	
Cobalt	**0.00085J**	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:28	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:28	7439-92-1	
Lithium	**0.0011J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:28	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00010J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 13:55	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**647**	mg/L	10.0	10.0	1		08/19/21 15:09		
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		08/20/21 13:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 13:28	16984-48-8	
Sulfate	**248**	mg/L	6.0	3.0	6		08/20/21 14:30	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.: 92555501

Sample: HGWC-105 **Lab ID: 92555501008** Collected: 08/13/21 15:35 Received: 08/16/21 13:25 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		08/16/21 17:34		
pH	**6.44**	Std. Units			1		08/16/21 17:34		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**102**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 19:55	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	08/18/21 12:41	08/20/21 15:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:33	7440-38-2	
Barium	**0.073**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:33	7440-41-7	
Boron	**1.2**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:33	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:33	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:33	7439-92-1	
Lithium	**0.0038J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:33	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00022**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 13:58	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**441**	mg/L	10.0	10.0	1		08/19/21 15:10		
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		08/20/21 14:15	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 14:15	16984-48-8	
Sulfate	**142**	mg/L	3.0	1.5	3		08/20/21 14:45	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.: 92555501

Sample: HGWC-107 **Lab ID: 92555501009** Collected: 08/13/21 14:10 Received: 08/16/21 13:25 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		08/16/21 17:34		
pH	**6.11**	Std. Units			1		08/16/21 17:34		
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	08/18/21 12:15	08/18/21 20:00	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	08/18/21 12:41	08/20/21 15:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:39	7440-38-2	
Barium	**0.033**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:39	7440-41-7	
Boron	**0.73**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:39	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:39	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:39	7439-92-1	
Lithium	**0.00084J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.000084J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:01	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**291**	mg/L	10.0	10.0	1		08/19/21 15:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.1**	mg/L	1.0	0.60	1		08/20/21 19:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 19:31	16984-48-8	
Sulfate	**112**	mg/L	2.0	1.0	2		08/21/21 01:35	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.: 92555501

Sample: HGWC-109 **Lab ID: 92555501010** Collected: 08/13/21 12:00 Received: 08/16/21 13:25 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		08/16/21 17:34		
pH	**6.71**	Std. Units			1		08/16/21 17:34		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**43.5**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:04	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	08/18/21 12:41	08/20/21 15:45	7440-36-0	
Arsenic	**0.0019J**	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:45	7440-38-2	
Barium	**0.080**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:45	7440-41-7	
Boron	**0.24**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:45	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:45	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.000080J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:04	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**189**	mg/L	10.0	10.0	1		08/19/21 15:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.0**	mg/L	1.0	0.60	1		08/20/21 19:46	16887-00-6	
Fluoride	**0.086J**	mg/L	0.10	0.050	1		08/20/21 19:46	16984-48-8	
Sulfate	**24.4**	mg/L	1.0	0.50	1		08/20/21 19:46	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.: 92555501

Sample: HGWC-118 **Lab ID: 92555501011** Collected: 08/13/21 14:18 Received: 08/16/21 13:25 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		08/16/21 17:35		
pH	**6.78**	Std. Units			1		08/16/21 17:35		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**84.3**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:09	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	08/18/21 12:41	08/20/21 15:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:51	7440-38-2	
Barium	**0.043**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:51	7440-41-7	
Boron	**0.59**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:51	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:51	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:51	7439-92-1	
Lithium	**0.0017J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:51	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.000081J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:07	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**336**	mg/L	10.0	10.0	1		08/19/21 15:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.0**	mg/L	1.0	0.60	1		08/20/21 20:01	16887-00-6	
Fluoride	**0.075J**	mg/L	0.10	0.050	1		08/20/21 20:01	16984-48-8	
Sulfate	**75.1**	mg/L	1.0	0.50	1		08/20/21 20:01	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.: 92555501

Sample: DUP-4 **Lab ID: 92555501012** Collected: 08/13/21 00:00 Received: 08/16/21 13:25 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								
Calcium	**44.7**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:14	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	08/18/21 12:41	08/20/21 15:56	7440-36-0	
Arsenic	**0.0021J**	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:56	7440-38-2	
Barium	**0.084**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 15:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 15:56	7440-41-7	
Boron	**0.24**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 15:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 15:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 15:56	7440-47-3	
Cobalt	**0.0012J**	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 15:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 15:56	7439-92-1	
Lithium	**0.00077J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 15:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 15:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 15:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 15:56	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	0.000078	1	08/26/21 15:30	08/27/21 14:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**196**	mg/L	10.0	10.0	1		08/19/21 15:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.0**	mg/L	1.0	0.60	1		08/20/21 20:46	16887-00-6	
Fluoride	**0.087J**	mg/L	0.10	0.050	1		08/20/21 20:46	16984-48-8	
Sulfate	**24.3**	mg/L	1.0	0.50	1		08/20/21 20:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: HGWC-101 **Lab ID: 92555501013** Collected: 08/16/21 12:50 Received: 08/17/21 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		08/17/21 16:27		
pH	**5.40**	Std. Units			1		08/17/21 16:27		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**22.8**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:19	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	08/18/21 12:41	08/20/21 16:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 16:02	7440-38-2	
Barium	**0.037**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 16:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 16:02	7440-41-7	
Boron	**0.13**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 16:02	7440-42-8	
Cadmium	**0.00015J**	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 16:02	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 16:02	7440-47-3	
Cobalt	**0.0026J**	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 16:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 16:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 16:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 16:02	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 16:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 16:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.000099J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:12	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**206**	mg/L	10.0	10.0	1		08/19/21 15:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.4**	mg/L	1.0	0.60	1		08/24/21 20:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/24/21 20:58	16984-48-8	
Sulfate	**72.1**	mg/L	2.0	1.0	2		08/25/21 09:20	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.: 92555501

Sample: HGWC-103 **Lab ID: 92555501014** Collected: 08/16/21 10:50 Received: 08/17/21 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		08/17/21 16:28		
pH	**5.59**	Std. Units			1		08/17/21 16:28		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**124**	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:33	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	08/18/21 12:41	08/20/21 16:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 16:08	7440-38-2	
Barium	**0.037**	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/20/21 16:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/20/21 16:08	7440-41-7	
Boron	**3.2**	mg/L	0.040	0.0086	1	08/18/21 12:41	08/20/21 16:08	7440-42-8	
Cadmium	**0.00081**	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/20/21 16:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/20/21 16:08	7440-47-3	
Cobalt	**0.0022J**	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/20/21 16:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/20/21 16:08	7439-92-1	
Lithium	**0.0016J**	mg/L	0.030	0.00073	1	08/18/21 12:41	08/20/21 16:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/20/21 16:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/20/21 16:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/20/21 16:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00027**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:15	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**672**	mg/L	20.0	20.0	1		08/19/21 15:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**10.4**	mg/L	1.0	0.60	1		08/22/21 23:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/22/21 23:02	16984-48-8	
Sulfate	**354**	mg/L	8.0	4.0	8		08/23/21 12:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: FB-4 **Lab ID: 92555501015** Collected: 08/16/21 11:30 Received: 08/17/21 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								
Calcium	ND	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:43	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	08/18/21 12:41	08/19/21 20:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 20:11	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 20:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 20:11	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 20:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 20:11	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 20:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 20:11	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 20:11	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 20:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 20:11	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 20:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 20:11	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00012J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:18	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/19/21 15:12		
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		08/22/21 23:47	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/22/21 23:47	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/21 23:47	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.: 92555501

Sample: EB-4 **Lab ID: 92555501016** Collected: 08/16/21 11:30 Received: 08/17/21 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								
Calcium	ND	mg/L	1.0	0.12	1	08/18/21 12:15	08/18/21 20:48	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	08/18/21 12:41	08/19/21 20:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 20:17	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/18/21 12:41	08/19/21 20:17	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 12:41	08/19/21 20:17	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 12:41	08/19/21 20:17	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 12:41	08/19/21 20:17	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 12:41	08/19/21 20:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 12:41	08/19/21 20:17	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 12:41	08/19/21 20:17	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/18/21 12:41	08/19/21 20:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 12:41	08/19/21 20:17	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 12:41	08/19/21 20:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 12:41	08/19/21 20:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00012J**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:26	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/19/21 15:12		
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		08/23/21 00:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/23/21 00:02	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/23/21 00:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92555501

Sample: HGWC-117 **Lab ID: 92555501017** Collected: 08/19/21 18:28 Received: 08/20/21 12:15 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		08/20/21 15:24		
pH	**6.04**	Std. Units			1		08/20/21 15:24		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**40.9**	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 19:27	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	08/24/21 12:10	08/27/21 13:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:08	7440-38-2	
Barium	**0.041**	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 13:08	7440-39-3	
Beryllium	**0.000056J**	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 13:08	7440-41-7	
Boron	**0.78**	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 13:08	7440-42-8	
Cadmium	**0.0012**	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 13:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:08	7440-47-3	
Cobalt	**0.017**	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 13:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 13:08	7439-92-1	
Lithium	**0.0017J**	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 13:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 13:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 13:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 13:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	**0.00030**	mg/L	0.00020	0.000078	1	08/26/21 15:30	08/27/21 14:29	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**253**	mg/L	10.0	10.0	1		08/25/21 19:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.0**	mg/L	1.0	0.60	1		08/27/21 07:20	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 07:20	16984-48-8	
Sulfate	**108**	mg/L	2.0	1.0	2		08/27/21 18:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 641241
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006, 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016

METHOD BLANK: 3365563 Matrix: Water
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006, 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/21 18:43	

LABORATORY CONTROL SAMPLE: 3365564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365565 3365566

Parameter	Units	92555501001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	71.2	1	1	71.5	71.1	27	-15	75-125	1	20	M1

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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.: 92555501

QC Batch: 642523
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501017

METHOD BLANK: 3371892 Matrix: Water
Associated Lab Samples: 92555501017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/24/21 19:17	

LABORATORY CONTROL SAMPLE: 3371893

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: 3371894 3371895

Parameter	Units	92555504012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	203	1	1	208	205	523	223	75-125	1	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 641254
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006, 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016

METHOD BLANK: 3365648 Matrix: Water
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006, 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.0012J	0.0030	0.00078	08/19/21 14:24	
Arsenic	mg/L	ND	0.0050	0.0011	08/19/21 14:24	
Barium	mg/L	ND	0.0050	0.00067	08/19/21 14:24	
Beryllium	mg/L	ND	0.00050	0.000054	08/19/21 14:24	
Boron	mg/L	ND	0.040	0.0086	08/19/21 14:24	
Cadmium	mg/L	ND	0.00050	0.00011	08/19/21 14:24	
Chromium	mg/L	ND	0.0050	0.0011	08/19/21 14:24	
Cobalt	mg/L	ND	0.0050	0.00039	08/19/21 14:24	
Lead	mg/L	ND	0.0010	0.00089	08/19/21 14:24	
Lithium	mg/L	ND	0.030	0.00073	08/19/21 14:24	
Molybdenum	mg/L	ND	0.010	0.00074	08/19/21 14:24	
Selenium	mg/L	ND	0.0050	0.0014	08/19/21 14:24	
Thallium	mg/L	ND	0.0010	0.00018	08/19/21 14:24	

LABORATORY CONTROL SAMPLE: 3365649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	106	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	103	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	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365650 3365651

Parameter	Units	92555501002 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	0.10	105	104	75-125	1	20	
Arsenic	mg/L	0.0013J	0.1	0.1	0.10	0.10	99	99	75-125	0	20	
Barium	mg/L	0.10	0.1	0.1	0.20	0.20	98	97	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Boron	mg/L	0.012J	1	1	1.0	1.0	98	99	75-125	0	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	103	104	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	1	20	
Lithium	mg/L	0.0037J	0.1	0.1	0.098	0.10	95	97	75-125	3	20	
Molybdenum	mg/L	0.0019J	0.1	0.1	0.11	0.10	103	102	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	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.: 92555501

QC Batch: 642521
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555501017

METHOD BLANK: 3371879 Matrix: Water
Associated Lab Samples: 92555501017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/27/21 12:56	
Arsenic	mg/L	ND	0.0050	0.0011	08/27/21 12:56	
Barium	mg/L	ND	0.0050	0.00067	08/27/21 12:56	
Beryllium	mg/L	ND	0.00050	0.000054	08/27/21 12:56	
Boron	mg/L	ND	0.040	0.0086	08/27/21 12:56	
Cadmium	mg/L	ND	0.00050	0.00011	08/27/21 12:56	
Chromium	mg/L	ND	0.0050	0.0011	08/27/21 12:56	
Cobalt	mg/L	ND	0.0050	0.00039	08/27/21 12:56	
Lead	mg/L	ND	0.0010	0.00089	08/27/21 12:56	
Lithium	mg/L	ND	0.030	0.00073	08/27/21 12:56	
Molybdenum	mg/L	ND	0.010	0.00074	08/27/21 12:56	
Selenium	mg/L	ND	0.0050	0.0014	08/27/21 12:56	
Thallium	mg/L	ND	0.0010	0.00018	08/27/21 12:56	

LABORATORY CONTROL SAMPLE: 3371880

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	0.10	101	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3371881 3371882

Parameter	Units	92555501017 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	0.099	0.10	99	102	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3371881 3371882

Parameter	Units	92555501017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.041	0.1	0.1	0.16	0.16	114	117	75-125	1	20	
Beryllium	mg/L	0.000056J	0.1	0.1	0.092	0.094	92	94	75-125	3	20	
Boron	mg/L	0.78	1	1	1.8	1.9	103	108	75-125	3	20	
Cadmium	mg/L	0.0012	0.1	0.1	0.097	0.098	96	97	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20	
Cobalt	mg/L	0.017	0.1	0.1	0.11	0.11	91	96	75-125	4	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.097	93	97	75-125	4	20	
Lithium	mg/L	0.0017J	0.1	0.1	0.095	0.098	93	96	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	5	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 643221
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006, 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016, 92555501017

METHOD BLANK: 3375102 Matrix: Water
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006, 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016, 92555501017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00010J	0.00020	0.000078	08/27/21 13:14	

LABORATORY CONTROL SAMPLE: 3375103

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0021	84	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375104 3375105

Parameter	Units	92555501001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000081J	0.0025	0.0025	0.0021	0.0022	81	85	75-125	4	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 640931 | Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006

METHOD BLANK: 3363778 Matrix: Water
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/18/21 08:29	

LABORATORY CONTROL SAMPLE: 3363779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	90-111	

SAMPLE DUPLICATE: 3363780

Parameter	Units	92555514001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	366	378	3	10	

SAMPLE DUPLICATE: 3363781

Parameter	Units	92555501001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	212	217	2	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 641466
QC Batch Method: SM 2540C-2011
Analysis Method: SM 2540C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016

METHOD BLANK: 3366949 Matrix: Water
Associated Lab Samples: 92555501007, 92555501008, 92555501009, 92555501010, 92555501011, 92555501012, 92555501013, 92555501014, 92555501015, 92555501016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/19/21 15:09	

LABORATORY CONTROL SAMPLE: 3366950

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	90-111	

SAMPLE DUPLICATE: 3366951

Parameter	Units	92555514003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	118	131	10	10	

SAMPLE DUPLICATE: 3366952

Parameter	Units	92555514005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	272	268	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 642674
QC Batch Method: SM 2540C-2011
Analysis Method: SM 2540C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555501017

METHOD BLANK: 3372854 Matrix: Water
Associated Lab Samples: 92555501017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/25/21 19:40	

LABORATORY CONTROL SAMPLE: 3372855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	90-111	

SAMPLE DUPLICATE: 3372856

Parameter	Units	92555948018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	682	726	6	10	

SAMPLE DUPLICATE: 3372857

Parameter	Units	92557081004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	22.0	15.0	38	10	D6

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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 641753
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: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006

METHOD BLANK: 3368331 Matrix: Water
Associated Lab Samples: 92555501001, 92555501002, 92555501003, 92555501004, 92555501005, 92555501006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/19/21 22:58	
Fluoride	mg/L	ND	0.10	0.050	08/19/21 22:58	
Sulfate	mg/L	ND	1.0	0.50	08/19/21 22:58	

LABORATORY CONTROL SAMPLE: 3368332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368333 3368334

Parameter	Units	92554551025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.4	50	50	56.6	56.8	106	107	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	99	100	90-110	2	10	
Sulfate	mg/L	6.9	50	50	59.8	60.3	106	107	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368335 3368336

Parameter	Units	92555501002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.2	50	50	50.0	54.8	95	105	90-110	9	10	
Fluoride	mg/L	0.064J	2.5	2.5	2.4	2.6	92	102	90-110	10	10	
Sulfate	mg/L	4.3	50	50	51.7	56.7	95	105	90-110	9	10	

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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 641754
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: 92555501007, 92555501008

METHOD BLANK: 3368337 Matrix: Water
Associated Lab Samples: 92555501007, 92555501008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/21 06:43	
Fluoride	mg/L	ND	0.10	0.050	08/20/21 06:43	
Sulfate	mg/L	ND	1.0	0.50	08/20/21 06:43	

LABORATORY CONTROL SAMPLE: 3368338

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.9	96	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	47.3	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368339 3368340

Parameter	Units	92555514002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.5	50	50	53.7	54.7	100	102	90-110	2	10	
Fluoride	mg/L	0.15	2.5	2.5	2.6	2.6	98	99	90-110	1	10	
Sulfate	mg/L	30.5	50	50	81.4	81.9	102	103	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368341 3368342

Parameter	Units	92555652002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.3	50	50	52.0	56.1	99	108	90-110	8	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.7	96	105	90-110	9	10	
Sulfate	mg/L	8.3	50	50	58.0	62.4	99	108	90-110	7	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.: 92555501

QC Batch: 641887
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: 92555501009, 92555501010, 92555501011, 92555501012

METHOD BLANK: 3368749 Matrix: Water
Associated Lab Samples: 92555501009, 92555501010, 92555501011, 92555501012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/21 15:20	
Fluoride	mg/L	ND	0.10	0.050	08/20/21 15:20	
Sulfate	mg/L	ND	1.0	0.50	08/20/21 15:20	

LABORATORY CONTROL SAMPLE: 3368750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.5	103	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	51.4	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368751 3368752

Parameter	Units	92556598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	13.8	50	50	63.6	64.6	100	102	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	108	90-110	1	10	
Sulfate	mg/L	2.1	50	50	52.0	52.9	100	102	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368753 3368754

Parameter	Units	92555514006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.6	50	50	53.3	54.0	101	103	90-110	1	10	
Fluoride	mg/L	0.065J	2.5	2.5	2.6	2.6	102	103	90-110	1	10	
Sulfate	mg/L	42.1	50	50	90.9	91.6	98	99	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 641893
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: 92555501013

METHOD BLANK: 3368781 Matrix: Water
Associated Lab Samples: 92555501013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/21 17:02	
Fluoride	mg/L	ND	0.10	0.050	08/20/21 17:02	
Sulfate	mg/L	ND	1.0	0.50	08/20/21 17:02	

LABORATORY CONTROL SAMPLE: 3368782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.3	99	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	50	49.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368783 3368784

Parameter	Units	92554403009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.0	50	50	70.3	68.4	99	95	90-110	3	10	
Fluoride	mg/L	0.080J	2.5	2.5	2.3	2.3	90	87	90-110	3	10	M1
Sulfate	mg/L	129	50	50	175	177	94	97	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368785 3368786

Parameter	Units	92554403019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.5	50	50	48.0	50.1	91	95	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.0	2.1	79	82	90-110	4	10	M1
Sulfate	mg/L	76.5	50	50	124	123	95	93	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 642138
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: 92555501014, 92555501015, 92555501016

METHOD BLANK: 3370171 Matrix: Water
Associated Lab Samples: 92555501014, 92555501015, 92555501016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/22/21 20:47	
Fluoride	mg/L	ND	0.10	0.050	08/22/21 20:47	
Sulfate	mg/L	ND	1.0	0.50	08/22/21 20:47	

LABORATORY CONTROL SAMPLE: 3370172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.1	98	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	50	48.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370173 3370174

Parameter	Units	92555535001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.0	50	50	65.0	66.6	102	105	90-110	2	10	
Fluoride	mg/L	0.19	2.5	2.5	2.7	2.8	102	104	90-110	2	10	
Sulfate	mg/L	35.2	50	50	84.4	85.9	98	101	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370177 3370178

Parameter	Units	92555938002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.4	50	50	54.7	55.6	104	106	90-110	2	10	
Fluoride	mg/L	0.39	2.5	2.5	3.0	3.0	104	106	90-110	2	10	
Sulfate	mg/L	211	50	50	255	257	88	92	90-110	1	10	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-4
Pace Project No.: 92555501

QC Batch: 643305
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: 92555501017

METHOD BLANK: 3375684 Matrix: Water
Associated Lab Samples: 92555501017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/26/21 22:51	
Fluoride	mg/L	ND	0.10	0.050	08/26/21 22:51	
Sulfate	mg/L	ND	1.0	0.50	08/26/21 22:51	

LABORATORY CONTROL SAMPLE: 3375685

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	45.9	92	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	50	46.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375686 3375687

Parameter	Units	92556821008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	124	50	50	166	167	84	86	90-110	1	10	M1
Fluoride	mg/L	2.5	2.5	2.5	2.9	2.9	19	19	90-110	0	10	M1
Sulfate	mg/L	315	50	50	353	355	75	80	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375688 3375689

Parameter	Units	92557476001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	12.3	50	50	59.9	60.1	95	96	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	95	95	90-110	0	10	
Sulfate	mg/L	3.0	50	50	51.2	51.5	96	97	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-4
Pace Project No.: 92555501

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

B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555501001	**HGWA-47**				
92555501002	**HGWA-48D**				
92555501003	**HGWA-111**				
92555501004	**HGWA-112**				
92555501005	**HGWA-113**				
92555501006	**HGWC-117A**				
92555501007	**HGWC-102**				
92555501008	**HGWC-105**				
92555501009	**HGWC-107**				
92555501010	**HGWC-109**				
92555501011	**HGWC-118**				
92555501013	**HGWC-101**				
92555501014	**HGWC-103**				
92555501017	**HGWC-117**				
92555501001	**HGWA-47**	EPA 3010A	641241	EPA 6010D	641346
92555501002	**HGWA-48D**	EPA 3010A	641241	EPA 6010D	641346
92555501003	**HGWA-111**	EPA 3010A	641241	EPA 6010D	641346
92555501004	**HGWA-112**	EPA 3010A	641241	EPA 6010D	641346
92555501005	**HGWA-113**	EPA 3010A	641241	EPA 6010D	641346
92555501006	**HGWC-117A**	EPA 3010A	641241	EPA 6010D	641346
92555501007	**HGWC-102**	EPA 3010A	641241	EPA 6010D	641346
92555501008	**HGWC-105**	EPA 3010A	641241	EPA 6010D	641346
92555501009	**HGWC-107**	EPA 3010A	641241	EPA 6010D	641346
92555501010	**HGWC-109**	EPA 3010A	641241	EPA 6010D	641346
92555501011	**HGWC-118**	EPA 3010A	641241	EPA 6010D	641346
92555501012	**DUP-4**	EPA 3010A	641241	EPA 6010D	641346
92555501013	**HGWC-101**	EPA 3010A	641241	EPA 6010D	641346
92555501014	**HGWC-103**	EPA 3010A	641241	EPA 6010D	641346
92555501015	**FB-4**	EPA 3010A	641241	EPA 6010D	641346
92555501016	**EB-4**	EPA 3010A	641241	EPA 6010D	641346
92555501017	**HGWC-117**	EPA 3010A	642523	EPA 6010D	642626
92555501001	**HGWA-47**	EPA 3005A	641254	EPA 6020B	641359
92555501002	**HGWA-48D**	EPA 3005A	641254	EPA 6020B	641359
92555501003	**HGWA-111**	EPA 3005A	641254	EPA 6020B	641359
92555501004	**HGWA-112**	EPA 3005A	641254	EPA 6020B	641359
92555501005	**HGWA-113**	EPA 3005A	641254	EPA 6020B	641359
92555501006	**HGWC-117A**	EPA 3005A	641254	EPA 6020B	641359
92555501007	**HGWC-102**	EPA 3005A	641254	EPA 6020B	641359
92555501008	**HGWC-105**	EPA 3005A	641254	EPA 6020B	641359
92555501009	**HGWC-107**	EPA 3005A	641254	EPA 6020B	641359
92555501010	**HGWC-109**	EPA 3005A	641254	EPA 6020B	641359
92555501011	**HGWC-118**	EPA 3005A	641254	EPA 6020B	641359
92555501012	**DUP-4**	EPA 3005A	641254	EPA 6020B	641359
92555501013	**HGWC-101**	EPA 3005A	641254	EPA 6020B	641359
92555501014	**HGWC-103**	EPA 3005A	641254	EPA 6020B	641359
92555501015	**FB-4**	EPA 3005A	641254	EPA 6020B	641359
92555501016	**EB-4**	EPA 3005A	641254	EPA 6020B	641359

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555501017	**HGWC-117**	EPA 3005A	642521	EPA 6020B	642652
92555501001	**HGWA-47**	EPA 7470A	643221	EPA 7470A	643598
92555501002	**HGWA-48D**	EPA 7470A	643221	EPA 7470A	643598
92555501003	**HGWA-111**	EPA 7470A	643221	EPA 7470A	643598
92555501004	**HGWA-112**	EPA 7470A	643221	EPA 7470A	643598
92555501005	**HGWA-113**	EPA 7470A	643221	EPA 7470A	643598
92555501006	**HGWC-117A**	EPA 7470A	643221	EPA 7470A	643598
92555501007	**HGWC-102**	EPA 7470A	643221	EPA 7470A	643598
92555501008	**HGWC-105**	EPA 7470A	643221	EPA 7470A	643598
92555501009	**HGWC-107**	EPA 7470A	643221	EPA 7470A	643598
92555501010	**HGWC-109**	EPA 7470A	643221	EPA 7470A	643598
92555501011	**HGWC-118**	EPA 7470A	643221	EPA 7470A	643598
92555501012	**DUP-4**	EPA 7470A	643221	EPA 7470A	643598
92555501013	**HGWC-101**	EPA 7470A	643221	EPA 7470A	643598
92555501014	**HGWC-103**	EPA 7470A	643221	EPA 7470A	643598
92555501015	**FB-4**	EPA 7470A	643221	EPA 7470A	643598
92555501016	**EB-4**	EPA 7470A	643221	EPA 7470A	643598
92555501017	**HGWC-117**	EPA 7470A	643221	EPA 7470A	643598
92555501001	**HGWA-47**	SM 2540C-2011	640931		
92555501002	**HGWA-48D**	SM 2540C-2011	640931		
92555501003	**HGWA-111**	SM 2540C-2011	640931		
92555501004	**HGWA-112**	SM 2540C-2011	640931		
92555501005	**HGWA-113**	SM 2540C-2011	640931		
92555501006	**HGWC-117A**	SM 2540C-2011	640931		
92555501007	**HGWC-102**	SM 2540C-2011	641466		
92555501008	**HGWC-105**	SM 2540C-2011	641466		
92555501009	**HGWC-107**	SM 2540C-2011	641466		
92555501010	**HGWC-109**	SM 2540C-2011	641466		
92555501011	**HGWC-118**	SM 2540C-2011	641466		
92555501012	**DUP-4**	SM 2540C-2011	641466		
92555501013	**HGWC-101**	SM 2540C-2011	641466		
92555501014	**HGWC-103**	SM 2540C-2011	641466		
92555501015	**FB-4**	SM 2540C-2011	641466		
92555501016	**EB-4**	SM 2540C-2011	641466		
92555501017	**HGWC-117**	SM 2540C-2011	642674		
92555501001	**HGWA-47**	EPA 300.0 Rev 2.1 1993	641753		
92555501002	**HGWA-48D**	EPA 300.0 Rev 2.1 1993	641753		
92555501003	**HGWA-111**	EPA 300.0 Rev 2.1 1993	641753		
92555501004	**HGWA-112**	EPA 300.0 Rev 2.1 1993	641753		
92555501005	**HGWA-113**	EPA 300.0 Rev 2.1 1993	641753		
92555501006	**HGWC-117A**	EPA 300.0 Rev 2.1 1993	641753		
92555501007	**HGWC-102**	EPA 300.0 Rev 2.1 1993	641754		
92555501008	**HGWC-105**	EPA 300.0 Rev 2.1 1993	641754		
92555501009	**HGWC-107**	EPA 300.0 Rev 2.1 1993	641887		
92555501010	**HGWC-109**	EPA 300.0 Rev 2.1 1993	641887		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4
Pace Project No.: 92555501

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555501011	**HGWC-118**	EPA 300.0 Rev 2.1 1993	641887		
92555501012	**DUP-4**	EPA 300.0 Rev 2.1 1993	641887		
92555501013	**HGWC-101**	EPA 300.0 Rev 2.1 1993	641893		
92555501014	**HGWC-103**	EPA 300.0 Rev 2.1 1993	642138		
92555501015	**FB-4**	EPA 300.0 Rev 2.1 1993	642138		
92555501016	**EB-4**	EPA 300.0 Rev 2.1 1993	642138		
92555501017	**HGWC-117**	EPA 300.0 Rev 2.1 1993	643305		

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92555501

92555501

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

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

Date/Initials Person Examining Contents: 8/13/21 KRW

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

KRW 8/13/21

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

Thermometer: ☑ IR Gun ID: THR083 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 1.8 | 3.7 **Correction Factor:** Add/Subtract (°C) +0

Cooler Temp Corrected (°C): 1.8 | 3.7

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**

Project #

WO# : 92555501

PM: NMG Due Date: 08/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BPIN	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1	1			1	1																	2				
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pH Adjustment Log for Preserved Samples

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

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

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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: Kevin Herring
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	Y/N	Analysis Test: Chloride, Fluoride, Sulfate	B, Ca, F, As, Ba, Be, Cd, Sb	Cr, Co, Pb, Li, Hg, Mo, Se, Tl	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-47	WT	G	8/12/21	11:08			21	5	2		3							X	X	X	X	X		pH = 7.38
2	HGWA-48D	WT	G	8/12/21	11:30			22	5	2		3							X	X	X	X	X		pH = 7.44
3	HGWA-111	WT	G	8/12/21	13:15			24	5	2		3							X	X	X	X	X		pH = 6.67
4	HGWA-112	WT	G	8/12/21	12:55			21	5	2		3							X	X	X	X	X		pH = 5.50
5	HGWA-113	WT	G	8/12/21	15:08			27	5	2		3							X	X	X	X	X		pH = 6.08
6	HGWC-117A	WT	G	8/12/21	17:57			23	5	2		3							X	X	X	X	X		pH = 6.27
7																									
8																									
9																									
10																									
11																									TJ
12																									8/12/2021

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike thorough any wells not sampled, and note when the last sample for the event has been taken.	Thomas Hessler / Geo	8/13/21	1445	Connor Cain	8/13/21	1445	
	Connor Cain / Geo	8/13/21	1455	Ryan Williams / Pace	8/13/21	1456	
	Ryan Williams / Pace	8/13/21	1660		8/13/21	1656	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Ashley Ramsey, Connor

SIGNATURE of SAMPLER: TH AR CC DATE Signed (MM/DD/YY): 8/12/2021 CC/TH

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO#: 92555501**

PM: NMG Due Date: 08/27/21
CLIENT: GA-GA Power

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

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

Date/Initials Person Examining Contents: 8/14/21 KDW

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

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

Thermometer: ☑ IR Gun ID: THR230 Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 4.3/5.4 Correction Factor: Add/Subtract (°C) +0.1

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

Cooler Temp Corrected (°C): 4.4/5.5

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

Project # **WO# : 92555501**

PM: NMG Due Date: 08/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1	1			1																			2				
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pH Adjustment Log for Preserved Samples

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

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

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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: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number:	Pace Profile #: 10839

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

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.
1	HGWC-102	WT	G	8/13/21	17:16			21	5	2		3							X	X	X	X		pH = 5.45
2	HGWC-105	WT	G	8/13/21	15:35			20	5	2		3							X	X	X	X		pH = 6.44
3	HGWC-107	WT	G	8/13/21	14:10			21	5	2		3							X	X	X	X		pH = 6.11
4	HGWC-109	WT	G	8/13/21	12:00			23	5	2		3							X	X	X	X		pH = 6.71
5	HGWC-118	WT	G	8/13/21	14:18			25	5	2		3							X	X	X	X		pH = 6.78
6	Dup-4	WT	G	8/13/21	0:00			20	5	2		3							X	X	X	X		
7																								
8																								
9																								TJ 8/13/2021
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.	Connor Cain / GEO	8/16/21	1325	Ryan Williams / Pace	8/16/21	1325	
	Ryan Williams / Pace	8/16/21	1538	Ryan Williams / Pace	8/16/21	1538	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Connor Cain Ashley Bumgarner

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/13/2021

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92555501**

PM: NMG **Due Date: 08/27/21**

CLIENT: GA-GA Power

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

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

Date/Initials Person Examining Contents: 3/17/21 KRW

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

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

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

Cooler Temp: 3.2 **Correction Factor:** Add/Subtract (°C) +0.1

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. 10 Day
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

Project # **WO# : 92555501**

PM: NMG **Due Date: 08/27/21**

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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pH Adjustment Log for Preserved Samples

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

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

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: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number:	Pace Profile #: 10838

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: 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.
1	HGWC-101	WT	G	8/16/21	12:50			23	5	2		3							X	X	X	X		pH = 5.40
2	HGWC-103	WT	G	8/16/21	10:50			19	5	2		3							X	X	X	X		pH = 5.59
3	FB-4	WT	G	8/16/21	11:30			19	5	2		3							X	X	X	X		
4	EB-4	WT	G	8/16/21	11:30			19	5	2		3							X	X	X	X		Last Sample.
5																								
6																								
7																								
8																								TJ
9																								8/16/2021
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.	Thomas Kessler/Geo	8/17/21					
	Ashley Ramsey/Geo	8/16/21	1500	Thomas Kessler/Geo	8/16/21	1500	
	Thomas Kessler/Geo	8/17/21	1125	Ryan Williams/Pace	8/17/21	1126	
	Ryan Williams/Pace	8/17/21	1500	[signature]/Pace	8/17/21	1500	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ashley Ramsey

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/16/2021

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

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

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

Date/Initials Person Examining Contents: MS 8/20/21

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: 4.4 **Correction Factor:** Add/Subtract (°C) ±0

Cooler Temp Corrected (°C): 4.4

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples 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.	WT			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

Person contacted _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

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

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

Project #

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (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)	B P W	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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 DEHNR 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: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number:	Pace Profile #: 10639

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 DATE	COLLECTED TIME	COMPOSITE DATE	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.
1	HGWC-117	WT	G	8/19/21	18:28			21	5	2		3							X	X	X	X		pH = 6.04
2																								Last sample
3																								
4																								
5																								
6																								T.I
7																								8/19/2021
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Thomas Hessler / Geos	8/20/21	1215	Ryan Williams / Pace	8/20/21	1215				
	Ryan Williams / Pace	8/20/21	1330		8/20/21	1330	4.4	Y	N	Y

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 Hessler					
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 8/19/21				

*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

October 01, 2021

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

RE: Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 20, 2021. 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
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.: 92555497

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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

SAMPLE SUMMARY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555497001	**HGWA-47**	Water	08/12/21 11:08	08/13/21 14:55
92555497002	**HGWA-48D**	Water	08/12/21 11:30	08/13/21 14:55
92555497003	**HGWA-111**	Water	08/12/21 13:15	08/13/21 14:55
92555497004	**HGWA-112**	Water	08/12/21 12:55	08/13/21 14:55
92555497005	**HGWA-113**	Water	08/12/21 15:08	08/13/21 14:55
92555497006	**HGWC-117A**	Water	08/12/21 17:57	08/13/21 14:55
92555497007	**HGWC-102**	Water	08/13/21 17:15	08/16/21 13:25
92555497008	**HGWC-105**	Water	08/13/21 15:35	08/16/21 13:25
92555497009	**HGWC-107**	Water	08/13/21 14:10	08/16/21 13:25
92555497010	**HGWC-109**	Water	08/13/21 12:00	08/16/21 13:25
92555497011	**HGWC-118**	Water	08/13/21 14:18	08/16/21 13:25
92555497012	**DUP-4**	Water	08/13/21 00:00	08/16/21 13:25
92555497013	**HGWC-101**	Water	08/16/21 12:50	08/17/21 11:25
92555497014	**HGWC-103**	Water	08/16/21 10:50	08/17/21 11:25
92555497015	**FB-4**	Water	08/16/21 11:30	08/17/21 11:25
92555497016	**EB-4**	Water	08/16/21 11:30	08/17/21 11:25
92555497017	**HGWC-117**	Water	08/19/21 18:28	08/20/21 12:15

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.: 92555497

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555497001	**HGWA-47**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497002	**HGWA-48D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497003	**HGWA-111**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497004	**HGWA-112**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497005	**HGWA-113**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497006	**HGWC-117A**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497007	**HGWC-102**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497008	**HGWC-105**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497009	**HGWC-107**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497010	**HGWC-109**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497011	**HGWC-118**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497012	**DUP-4**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497013	**HGWC-101**	EPA 9315	LAL	1	PASI-PA

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.: 92555497

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497014	**HGWC-103**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497015	**FB-4**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497016	**EB-4**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555497017	**HGWC-117**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	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.: 92555497

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555497001	**HGWA-47**					
EPA 9315	Radium-226	0.0277 ± 0.104 (0.268) C:71% T:NA	pCi/L		09/17/21 07:26	
EPA 9320	Radium-228	0.434 ± 0.368 (0.735) C:70% T:90%	pCi/L		09/03/21 14:24	
Total Radium Calculation	Total Radium	0.462 ± 0.472 (1.00)	pCi/L		09/17/21 16:27	
92555497002	**HGWA-48D**					
EPA 9315	Radium-226	0.194 ± 0.151 (0.260) C:91% T:NA	pCi/L		09/17/21 07:26	
EPA 9320	Radium-228	0.0801 ± 0.367 (0.840) C:67% T:82%	pCi/L		09/03/21 14:24	
Total Radium Calculation	Total Radium	0.274 ± 0.518 (1.10)	pCi/L		09/17/21 16:27	
92555497003	**HGWA-111**					
EPA 9315	Radium-226	0.0749 ± 0.137 (0.312) C:78% T:NA	pCi/L		09/17/21 07:26	
EPA 9320	Radium-228	0.457 ± 0.418 (0.847) C:68% T:83%	pCi/L		09/03/21 14:24	
Total Radium Calculation	Total Radium	0.532 ± 0.555 (1.16)	pCi/L		09/17/21 16:27	
92555497004	**HGWA-112**					
EPA 9315	Radium-226	0.0698 ± 0.160 (0.378) C:67% T:NA	pCi/L		09/16/21 14:16	
EPA 9320	Radium-228	0.153 ± 0.449 (1.00) C:69% T:89%	pCi/L		09/03/21 14:24	
Total Radium Calculation	Total Radium	0.223 ± 0.609 (1.38)	pCi/L		09/17/21 16:27	

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.: 92555497

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555497005	**HGWA-113**					
EPA 9315	Radium-226	-0.00761 ± 0.141 (0.384) C:69% T:NA	pCi/L		09/16/21 14:16	
EPA 9320	Radium-228	0.312 ± 0.433 (0.930) C:66% T:95%	pCi/L		09/03/21 14:24	
Total Radium Calculation	Total Radium	0.312 ± 0.574 (1.31)	pCi/L		09/17/21 16:27	
92555497006	**HGWC-117A**					
EPA 9315	Radium-226	0.124 ± 0.187 (0.412) C:60% T:NA	pCi/L		09/16/21 15:50	
EPA 9320	Radium-228	-0.124 ± 0.301 (0.738) C:70% T:90%	pCi/L		09/03/21 14:24	
Total Radium Calculation	Total Radium	0.124 ± 0.488 (1.15)	pCi/L		09/17/21 16:27	
92555497007	**HGWC-102**					
EPA 9315	Radium-226	0.141 ± 0.152 (0.309) C:94% T:NA	pCi/L		09/20/21 07:01	
EPA 9320	Radium-228	0.687 ± 0.348 (0.582) C:72% T:85%	pCi/L		09/16/21 11:08	
Total Radium Calculation	Total Radium	0.828 ± 0.500 (0.891)	pCi/L		09/22/21 09:14	
92555497008	**HGWC-105**					
EPA 9315	Radium-226	0.0919 ± 0.125 (0.268) C:94% T:NA	pCi/L		09/20/21 07:01	
EPA 9320	Radium-228	0.421 ± 0.328 (0.643) C:67% T:98%	pCi/L		09/16/21 11:08	
Total Radium Calculation	Total Radium	0.513 ± 0.453 (0.911)	pCi/L		09/22/21 09:14	

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.: 92555497

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555497009	**HGWC-107**					
EPA 9315	Radium-226	0.0526 ± 0.128 (0.304) C:89% T:NA	pCi/L		09/20/21 07:01	
EPA 9320	Radium-228	0.762 ± 0.421 (0.759) C:66% T:89%	pCi/L		09/16/21 11:08	
Total Radium Calculation	Total Radium	0.815 ± 0.549 (1.06)	pCi/L		09/22/21 09:14	
92555497010	**HGWC-109**					
EPA 9315	Radium-226	0.0372 ± 0.110 (0.269) C:92% T:NA	pCi/L		09/20/21 07:01	
EPA 9320	Radium-228	0.757 ± 0.444 (0.819) C:65% T:86%	pCi/L		09/16/21 11:08	
Total Radium Calculation	Total Radium	0.794 ± 0.554 (1.09)	pCi/L		09/22/21 09:14	
92555497011	**HGWC-118**					
EPA 9315	Radium-226	-0.0605 ± 0.119 (0.354) C:91% T:NA	pCi/L		09/20/21 07:01	
EPA 9320	Radium-228	0.228 ± 0.407 (0.890) C:68% T:84%	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	0.228 ± 0.526 (1.24)	pCi/L		09/22/21 09:14	
92555497012	**DUP-4**					
EPA 9315	Radium-226	0.159 ± 0.135 (0.243) C:93% T:NA	pCi/L		09/20/21 07:38	
EPA 9320	Radium-228	0.287 ± 0.474 (1.03) C:69% T:88%	pCi/L		09/16/21 11:13	
Total Radium Calculation	Total Radium	0.446 ± 0.609 (1.27)	pCi/L		09/22/21 09:14	

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.: 92555497

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555497013	**HGWC-101**					
EPA 9315	Radium-226	0.146 ± 0.134 (0.254) C:96% T:NA	pCi/L		09/20/21 07:38	
EPA 9320	Radium-228	0.521 ± 0.456 (0.932) C:69% T:88%	pCi/L		09/16/21 11:13	
Total Radium Calculation	Total Radium	0.667 ± 0.590 (1.19)	pCi/L		09/22/21 09:14	
92555497014	**HGWC-103**					
EPA 9315	Radium-226	0.224 ± 0.172 (0.318) C:96% T:NA	pCi/L		09/20/21 07:38	
EPA 9320	Radium-228	0.269 ± 0.459 (1.00) C:69% T:93%	pCi/L		09/16/21 11:13	
Total Radium Calculation	Total Radium	0.493 ± 0.631 (1.32)	pCi/L		09/22/21 09:14	
92555497015	**FB-4**					
EPA 9315	Radium-226	0.0770 ± 0.115 (0.251) C:97% T:NA	pCi/L		09/20/21 07:38	
EPA 9320	Radium-228	-0.166 ± 0.411 (0.978) C:70% T:87%	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	0.0770 ± 0.526 (1.23)	pCi/L		09/22/21 09:14	
92555497016	**EB-4**					
EPA 9315	Radium-226	0.0588 ± 0.113 (0.259) C:98% T:NA	pCi/L		09/20/21 07:38	
EPA 9320	Radium-228	0.484 ± 0.448 (0.917) C:68% T:85%	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	0.543 ± 0.561 (1.18)	pCi/L		09/22/21 09:14	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555497017	**HGWC-117**					
EPA 9315	Radium-226	0.155 ± 0.183 (0.387) C:86% T:NA	pCi/L		09/20/21 07:38	
EPA 9320	Radium-228	-0.0327 ± 0.420 (0.974) C:71% T:86%	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	0.155 ± 0.603 (1.36)	pCi/L		09/22/21 16:02	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWA-47 **Lab ID: 92555497001** Collected: 08/12/21 11:08 Received: 08/13/21 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0277 ± 0.104 (0.268) C:71% T:NA**	pCi/L	09/17/21 07:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.434 ± 0.368 (0.735) C:70% T:90%**	pCi/L	09/03/21 14:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.462 ± 0.472 (1.00)**	pCi/L	09/17/21 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWA-48D **Lab ID: 92555497002** Collected: 08/12/21 11:30 Received: 08/13/21 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.194 ± 0.151 (0.260) C:91% T:NA**	pCi/L	09/17/21 07:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.0801 ± 0.367 (0.840) C:67% T:82%**	pCi/L	09/03/21 14:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.274 ± 0.518 (1.10)**	pCi/L	09/17/21 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWA-111 **Lab ID: 92555497003** Collected: 08/12/21 13:15 Received: 08/13/21 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0749 ± 0.137 (0.312) C:78% T:NA**	pCi/L	09/17/21 07:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.457 ± 0.418 (0.847) C:68% T:83%**	pCi/L	09/03/21 14:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.532 ± 0.555 (1.16)**	pCi/L	09/17/21 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWA-112 **Lab ID: 92555497004** Collected: 08/12/21 12:55 Received: 08/13/21 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0698 ± 0.160 (0.378) C:67% T:NA**	pCi/L	09/16/21 14:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.153 ± 0.449 (1.00) C:69% T:89%**	pCi/L	09/03/21 14:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.223 ± 0.609 (1.38)**	pCi/L	09/17/21 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWA-113 **Lab ID: 92555497005** Collected: 08/12/21 15:08 Received: 08/13/21 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.00761 ± 0.141 (0.384) C:69% T:NA**	pCi/L	09/16/21 14:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.312 ± 0.433 (0.930) C:66% T:95%**	pCi/L	09/03/21 14:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.312 ± 0.574 (1.31)**	pCi/L	09/17/21 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-117A **Lab ID: 92555497006** Collected: 08/12/21 17:57 Received: 08/13/21 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.124 ± 0.187 (0.412) C:60% T:NA**	pCi/L	09/16/21 15:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.124 ± 0.301 (0.738) C:70% T:90%**	pCi/L	09/03/21 14:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.124 ± 0.488 (1.15)**	pCi/L	09/17/21 16:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-102 **Lab ID: 92555497007** Collected: 08/13/21 17:15 Received: 08/16/21 13:25 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	**0.141 ± 0.152 (0.309) C:94% T:NA**	pCi/L	09/20/21 07:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.687 ± 0.348 (0.582) C:72% T:85%**	pCi/L	09/16/21 11:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.828 ± 0.500 (0.891)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-105 **Lab ID: 92555497008** Collected: 08/13/21 15:35 Received: 08/16/21 13:25 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	**0.0919 ± 0.125 (0.268) C:94% T:NA**	pCi/L	09/20/21 07:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.421 ± 0.328 (0.643) C:67% T:98%**	pCi/L	09/16/21 11:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.513 ± 0.453 (0.911)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-107 **Lab ID: 92555497009** Collected: 08/13/21 14:10 Received: 08/16/21 13:25 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	**0.0526 ± 0.128 (0.304) C:89% T:NA**	pCi/L	09/20/21 07:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.762 ± 0.421 (0.759) C:66% T:89%**	pCi/L	09/16/21 11:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.815 ± 0.549 (1.06)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-109 **Lab ID: 92555497010** Collected: 08/13/21 12:00 Received: 08/16/21 13:25 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	**0.0372 ± 0.110 (0.269) C:92% T:NA**	pCi/L	09/20/21 07:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.757 ± 0.444 (0.819) C:65% T:86%**	pCi/L	09/16/21 11:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.794 ± 0.554 (1.09)**	pCi/L	09/22/21 09:14	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-118 **Lab ID: 92555497011** Collected: 08/13/21 14:18 Received: 08/16/21 13:25 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	**-0.0605 ± 0.119 (0.354) C:91% T:NA**	pCi/L	09/20/21 07:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.228 ± 0.407 (0.890) C:68% T:84%**	pCi/L	09/16/21 11:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.228 ± 0.526 (1.24)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: DUP-4 **Lab ID: 92555497012** Collected: 08/13/21 00:00 Received: 08/16/21 13:25 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	**0.159 ± 0.135 (0.243) C:93% T:NA**	pCi/L	09/20/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.287 ± 0.474 (1.03) C:69% T:88%**	pCi/L	09/16/21 11:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.446 ± 0.609 (1.27)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-101 **Lab ID: 92555497013** Collected: 08/16/21 12:50 Received: 08/17/21 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	**0.146 ± 0.134 (0.254) C:96% T:NA**	pCi/L	09/20/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.521 ± 0.456 (0.932) C:69% T:88%**	pCi/L	09/16/21 11:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.667 ± 0.590 (1.19)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-103 **Lab ID: 92555497014** Collected: 08/16/21 10:50 Received: 08/17/21 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	**0.224 ± 0.172 (0.318) C:96% T:NA**	pCi/L	09/20/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.269 ± 0.459 (1.00) C:69% T:93%**	pCi/L	09/16/21 11:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.493 ± 0.631 (1.32)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: FB-4 **Lab ID: 92555497015** Collected: 08/16/21 11:30 Received: 08/17/21 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	**0.0770 ± 0.115 (0.251) C:97% T:NA**	pCi/L	09/20/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.166 ± 0.411 (0.978) C:70% T:87%**	pCi/L	09/16/21 14:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0770 ± 0.526 (1.23)**	pCi/L	09/22/21 09:14	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: EB-4 **Lab ID: 92555497016** Collected: 08/16/21 11:30 Received: 08/17/21 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	**0.0588 ± 0.113 (0.259) C:98% T:NA**	pCi/L	09/20/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.484 ± 0.448 (0.917) C:68% T:85%**	pCi/L	09/16/21 14:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.543 ± 0.561 (1.18)**	pCi/L	09/22/21 09:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

Sample: HGWC-117 **Lab ID: 92555497017** Collected: 08/19/21 18:28 Received: 08/20/21 12:15 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	**0.155 ± 0.183 (0.387) C:86% T:NA**	pCi/L	09/20/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0327 ± 0.420 (0.974) C:71% T:86%**	pCi/L	09/16/21 14:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.155 ± 0.603 (1.36)**	pCi/L	09/22/21 16:02	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

QC Batch: 463426 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92555497001, 92555497002, 92555497003, 92555497004, 92555497005, 92555497006

METHOD BLANK: 2237360 Matrix: Water
Associated Lab Samples: 92555497001, 92555497002, 92555497003, 92555497004, 92555497005, 92555497006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.250 ± 0.184 (0.307) C:77% T:NA	pCi/L	09/16/21 08:31	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

QC Batch: 463380
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92555497012, 92555497013, 92555497014, 92555497015, 92555497016, 92555497017

METHOD BLANK: 2237271 Matrix: Water
Associated Lab Samples: 92555497012, 92555497013, 92555497014, 92555497015, 92555497016, 92555497017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.141 ± 0.135 (0.261) C:99% T:NA	pCi/L	09/20/21 07:37	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

QC Batch: 463379
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92555497012, 92555497013, 92555497014, 92555497015, 92555497016, 92555497017

METHOD BLANK: 2237270 Matrix: Water
Associated Lab Samples: 92555497012, 92555497013, 92555497014, 92555497015, 92555497016, 92555497017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.257 ± 0.278 (0.577) C:77% T:86%	pCi/L	09/16/21 11:10	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

QC Batch: 461961
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92555497001, 92555497002, 92555497003, 92555497004, 92555497005, 92555497006

METHOD BLANK: 2230398 Matrix: Water
Associated Lab Samples: 92555497001, 92555497002, 92555497003, 92555497004, 92555497005, 92555497006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.353 ± 0.350 (0.718) C:73% T:86%	pCi/L	09/03/21 14:24	

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 RADS
Pace Project No.: 92555497

QC Batch: 463377
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92555497007, 92555497008, 92555497009, 92555497010, 92555497011

METHOD BLANK: 2237266 Matrix: Water
Associated Lab Samples: 92555497007, 92555497008, 92555497009, 92555497010, 92555497011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.209 ± 0.312 (0.674) C:74% T:86%	pCi/L	09/16/21 11:10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92555497

QC Batch: 463378 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92555497007, 92555497008, 92555497009, 92555497010, 92555497011

METHOD BLANK: 2237267 Matrix: Water
Associated Lab Samples: 92555497007, 92555497008, 92555497009, 92555497010, 92555497011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0874 ± 0.121 (0.260) C:97% T:NA	pCi/L	09/20/21 07:00	

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 RADS
Pace Project No.: 92555497

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.: 92555497

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555497001	**HGWA-47**	EPA 9315	463426		
92555497002	**HGWA-48D**	EPA 9315	463426		
92555497003	**HGWA-111**	EPA 9315	463426		
92555497004	**HGWA-112**	EPA 9315	463426		
92555497005	**HGWA-113**	EPA 9315	463426		
92555497006	**HGWC-117A**	EPA 9315	463426		
92555497007	**HGWC-102**	EPA 9315	463378		
92555497008	**HGWC-105**	EPA 9315	463378		
92555497009	**HGWC-107**	EPA 9315	463378		
92555497010	**HGWC-109**	EPA 9315	463378		
92555497011	**HGWC-118**	EPA 9315	463378		
92555497012	**DUP-4**	EPA 9315	463380		
92555497013	**HGWC-101**	EPA 9315	463380		
92555497014	**HGWC-103**	EPA 9315	463380		
92555497015	**FB-4**	EPA 9315	463380		
92555497016	**EB-4**	EPA 9315	463380		
92555497017	**HGWC-117**	EPA 9315	463380		
92555497001	**HGWA-47**	EPA 9320	461961		
92555497002	**HGWA-48D**	EPA 9320	461961		
92555497003	**HGWA-111**	EPA 9320	461961		
92555497004	**HGWA-112**	EPA 9320	461961		
92555497005	**HGWA-113**	EPA 9320	461961		
92555497006	**HGWC-117A**	EPA 9320	461961		
92555497007	**HGWC-102**	EPA 9320	463377		
92555497008	**HGWC-105**	EPA 9320	463377		
92555497009	**HGWC-107**	EPA 9320	463377		
92555497010	**HGWC-109**	EPA 9320	463377		
92555497011	**HGWC-118**	EPA 9320	463377		
92555497012	**DUP-4**	EPA 9320	463379		
92555497013	**HGWC-101**	EPA 9320	463379		
92555497014	**HGWC-103**	EPA 9320	463379		
92555497015	**FB-4**	EPA 9320	463379		
92555497016	**EB-4**	EPA 9320	463379		
92555497017	**HGWC-117**	EPA 9320	463379		
92555497001	**HGWA-47**	Total Radium Calculation	464617		
92555497002	**HGWA-48D**	Total Radium Calculation	464617		
92555497003	**HGWA-111**	Total Radium Calculation	464617		
92555497004	**HGWA-112**	Total Radium Calculation	464617		
92555497005	**HGWA-113**	Total Radium Calculation	464617		
92555497006	**HGWC-117A**	Total Radium Calculation	464617		
92555497007	**HGWC-102**	Total Radium Calculation	464986		
92555497008	**HGWC-105**	Total Radium Calculation	464986		
92555497009	**HGWC-107**	Total Radium Calculation	464986		
92555497010	**HGWC-109**	Total Radium Calculation	464986		
92555497011	**HGWC-118**	Total Radium Calculation	464986		

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 RADS
Pace Project No.: 92555497

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555497012	**DUP-4**	Total Radium Calculation	464986		
92555497013	**HGWC-101**	Total Radium Calculation	464986		
92555497014	**HGWC-103**	Total Radium Calculation	464986		
92555497015	**FB-4**	Total Radium Calculation	464986		
92555497016	**EB-4**	Total Radium Calculation	464986		
92555497017	**HGWC-117**	Total Radium Calculation	465155		

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

WO# : 92555497

92555497

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

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

Date/Initials Person Examining Contents: 8/13/21 KPW

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☑ Other (8/13/21 KPW)

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

Thermometer:
☑ IR Gun ID: IR2033 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 1.8 | 3.7 **Correction Factor:** Add/Subtract (°C) +0

Cooler Temp Corrected (°C): 1.8 | 3.7

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:** _____

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 2 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

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

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

Project # **WO# : 92555497**

PM: NMG Due Date: 09/03/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BPIN	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	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				
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pH Adjustment Log for Preserved Samples

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

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

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:

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: Kevin Herring
Pace Profile #: 10839

REGULATORY AGENCY
NPDES GROUND WATER DRINKING WATER
UST RCRA ✓ OTHER FCR

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	B, Ca, F, As, Sa, Be, Cd, Sb	Cr, Co, Pb, Li, Hg, Mo, Se, Tl	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-47	WT	G	8/12/21	11:08			21	5	2		3							X	X	X	X	X		pH = 7.38
2	HGWA-48D	WT	G	8/12/21	11:30			22	5	2		3							X	X	X	X	X		pH = 7.44
3	HGWA-111	WT	G	8/12/21	13:15			24	5	2		3							X	X	X	X	X		pH = 6.67
4	HGWA-112	WT	G	8/12/21	12:55			21	5	2		3							X	X	X	X	X		pH = 5.50
5	HGWA-113	WT	G	8/12/21	15:08			27	5	2		3							X	X	X	X	X		pH = 6.08
6	HGWC-117A	WT	G	8/12/21	17:57			23	5	2		3							X	X	X	X	X		pH = 6.27
7																									
8																									
9																									
10																									
11																									TJ
12																									8/12/2021

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike through any wells not sampled and note when the last sample for the event has been taken.	Thomas Hessler / Geo	8/13/21	1445	Connor Cain	8/13/21	1445	
	Connor Cain / Geo	8/13/21	1455	Ryan Williams / Pace	8/13/21	1456	
	Ryan Williams / Pace	8/13/21	1650		8/13/21	1650	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Ashley Ramsey, Connor Cain

SIGNATURE of SAMPLER: TH AR CC DATE Signed (MM/DD/YY): 8/12/2021

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92555497**

PM: NMG Due Date: 09/03/21

CLIENT: GA-GA Power

Courier: ☐ Commercial ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Paco ☐ Other:____

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

Date/Initials Person Examining Contents: 8/16/21 KRW

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

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

Thermometer: ☐ IR Gun ID: THR230 Type of Ice: ☐ Wet ☐ Blue ☐ None

Cooler Temp: 4.3/5.4 Correction Factor: Add/Subtract (°C) +0.1

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

Cooler Temp Corrected (°C): 4.4/5.5

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

Project # **WO# : 92555497**

PM: NMG Due Date: 09/03/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (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)	BP1N	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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12																												

pH Adjustment Log for Preserved Samples

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

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

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: Kevin Herring
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.
1	HGWC-102	WT	G	8/13/21	17:16			21	5	2		3						X	X	X	X			pH = 5.45
2	HGWC-105	WT	G	8/13/21	15:35			20	5	2		3						X	X	X	X			pH = 6.44
3	HGWC-107	WT	G	8/13/21	14:10			21	5	2		3						X	X	X	X			pH = 6.11
4	HGWC-109	WT	G	8/13/21	12:00			23	5	2		3						X	X	X	X			pH = 5.71
5	HGWC-118	WT	G	8/13/21	14:18			25	5	2		3						X	X	X	X			pH = 6.78
6	Dup-4	WT	G	8/13/21	0:00			20	5	2		3						X	X	X	X			
7																								
8																								
9																								TJ
10																								8/13/2021
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells; strike through any wells not sampled, and note when the last sample for the event has been taken.	Connor Cain / GEO	8/16/21	1325	Ryan Williams / Pace	8/16/21	1325	
	Ryan Williams / Pace	8/16/21	1538	Ryan Williams / Pace	8/16/21	1538	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Connor Cain Ashley Rumsey

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/13/2021

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92555497**

PM: NMG Due Date: 09/03/21
CLIENT: GA-GA Power

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

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

Date/Initials Person Examining Contents: 3/17/21 KRW

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

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

Thermometer: ☑ ~~IR Gun~~ ID: THI230

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 3.2 Correction Factor: Add/Subtract (°C) +0.1

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

Cooler Temp Corrected (°C): 3.3

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. 10 Day
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

Project

WO# : 92555497

PM: NMG **Due Date: 09/03/21**

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BPIN	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	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																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

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

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

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: Kevin Herring
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: 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	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.
1	HGWC-101	WT	G	8/16/21	12:50				23	5	2		3						X	X	X	X		pH = 5.40
2	HGWC-103	WT	G	8/16/21	10:50				19	5	2		3						X	X	X	X		pH = 5.59
3	FB-4	WT	G	8/16/21	11:30				19	5	2		3						X	X	X	X		
4	EB-4	WT	G	8/16/21	11:30				19	5	2		3						X	X	X	X		Last Sample.
5																								
6																								
7																								
8																								TJ
9																								8/16/2021
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.	Thomas Hessler/Geo	8/17/21					
	Ashley Ramsey/Geo	8/16/21	1500	Thomas Hessler/Geo	8/16/21	1500	
	Thomas Hessler/Geo	8/17/21	1125	Ryan Williams/Pace	8/17/21	1126	
	Ryan Williams/Pace	8/17/21	1500	Kevin Herring/Pace	8/17/21	1500	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ashley Ramsey

SIGNATURE of SAMPLER: AR

DATE Signed (MM/DD/YY): 8/16/2021

SAMPLE CONDITIONS: 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.

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	9/10/2021
Worklist:	62579
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2237271
MB concentration:	0.141
M/B Counting Uncertainty:	0.134
MB MDC:	0.261
MB Numerical Performance Indicator:	2.07
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS62579	LCSD62579
Count Date:	9/20/2021	9/20/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.034	24.034
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.503
Target Conc. (pCi/L, g, F):	4.761	4.776
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.885	4.409
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.554	0.532
Numerical Performance Indicator:	0.44	-1.34
Percent Recovery:	102.62%	92.32%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS62579	92555497012
Duplicate Sample I.D.	LCSD62579	92555497012DUP
Sample Result (pCi/L, g, F):	4.885	0.159
Sample Result Counting Uncertainty (pCi/L, g, F):	0.554	0.133
Sample Duplicate Result (pCi/L, g, F):	4.409	0.093
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.532	0.105
Are sample and/or duplicate results below RL?	NO	See Below ##
Duplicate Numerical Performance Indicator:	1.214	0.762
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.57%	52.40%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Fail***
% RPD Limit:	25%	25%

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

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

Comments:

***~~Batch must be re-prepped due to unacceptable precision~~. N/A
VAM 9/20/21

VAM 9/20/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: JC2
Date: 9/1/2021
Worklist: 62391
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2230398
MB concentration:	0.353
M/B 2 Sigma CSU:	0.350
MB MDC:	0.718
MB Numerical Performance Indicator:	1.97
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS62391	LCSD62391
Count Date:	9/3/2021	9/3/2021
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	38.363	38.363
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.809	0.805
Target Conc. (pCi/L, g, F):	4.742	4.764
Uncertainty (Calculated):	0.232	0.233
Result (pCi/L, g, F):	3.364	3.328
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.857	0.867
Numerical Performance Indicator:	-3.04	-3.14
Percent Recovery:	70.96%	69.85%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:	LCS62391	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD62391	
Sample Result (pCi/L, g, F):	3.364	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.857	
Sample Duplicate Result (pCi/L, g, F):	3.328	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.867	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.059	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.58%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

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

Comments:

9/7/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/14/2021
Worklist: 62576
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2237266
MB concentration:	0.209
M/B 2 Sigma CSU:	0.312
MB MDC:	0.674
MB Numerical Performance Indicator:	1.31
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS62576	LCSD62576
Count Date:	9/16/2021	9/16/2021
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	38.200	38.200
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.811	0.809
Target Conc. (pCi/L, g, F):	4.708	4.722
Uncertainty (Calculated):	0.231	0.231
Result (pCi/L, g, F):	5.680	5.498
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.224	1.181
Numerical Performance Indicator:	1.53	1.26
Percent Recovery:	120.65%	116.43%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS62576	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD62576	
Sample Result (pCi/L, g, F):	5.680	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.224	
Sample Duplicate Result (pCi/L, g, F):	5.498	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.181	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.209	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.56%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

9/17/21

9/17/21

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	9/10/2021
Worklist:	62577
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2237267
MB concentration:	0.087
M/B Counting Uncertainty:	0.121
MB MDC:	0.260
MB Numerical Performance Indicator:	1.42
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS62577	LCSD62577
Count Date:	9/20/2021	9/20/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.034	24.034
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.517	0.516
Target Conc. (pCi/L, g, F):	4.653	4.655
Uncertainty (Calculated):	0.056	0.056
Result (pCi/L, g, F):	4.506	4.521
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.528	0.537
Numerical Performance Indicator:	-0.54	-0.49
Percent Recovery:	96.85%	97.11%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS62577	92555497007
Duplicate Sample I.D.	LCSD62577	92555497007DUP
Sample Result (pCi/L, g, F):	4.506	0.141
Sample Result Counting Uncertainty (pCi/L, g, F):	0.528	0.150
Sample Duplicate Result (pCi/L, g, F):	4.521	0.202
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.537	0.163
Are sample and/or duplicate results below RL?	NO	See Below ##
Duplicate Numerical Performance Indicator:	-0.039	-0.540
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	0.27%	35.65%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Fail***
% RPD Limit:	25%	25%

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A
LAM 9/21/21

LAM 9/21/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JC2
Date:	9/14/2021
Worklist:	62578
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2237270
MB concentration:	0.257
M/B 2 Sigma CSU:	0.278
MB MDC:	0.577
MB Numerical Performance Indicator:	1.81
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS62578	LCSD62578
Count Date:	9/16/2021	9/16/2021
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	38.200	38.200
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.807	0.808
Target Conc. (pCi/L, g, F):	4.735	4.730
Uncertainty (Calculated):	0.232	0.232
Result (pCi/L, g, F):	6.192	5.055
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.333	1.121
Numerical Performance Indicator:	2.11	0.56
Percent Recovery:	130.77%	106.87%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS62578	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD62578	
Sample Result (pCi/L, g, F):	6.192	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.333	
Sample Duplicate Result (pCi/L, g, F):	5.055	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.121	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.280	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.11%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

9/17/21

9/17/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	CLA
Date:	1/0/1900
Worklist:	62605
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2237360
MB concentration:	0.250
M/B Counting Uncertainty:	0.180
MB MDC:	0.307
MB Numerical Performance Indicator:	2.72
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS62605	LCSD62605
Count Date:	9/15/2021	9/15/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.034	24.034
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.503	0.505
Target Conc. (pCi/L, g, F):	4.775	4.759
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.197	3.605
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.681	0.612
Numerical Performance Indicator:	-1.66	-3.68
Percent Recovery:	87.89%	75.74%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS62605	92555928001
Duplicate Sample I.D.	LCSD62605	92555928001DUP
Sample Result (pCi/L, g, F):	4.197	0.048
Sample Result Counting Uncertainty (pCi/L, g, F):	0.681	0.100
Sample Duplicate Result (pCi/L, g, F):	3.605	0.160
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.612	0.106
Are sample and/or duplicate results below RL?	NO	See Below ##
Duplicate Numerical Performance Indicator:	1.269	-1.509
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.86%	108.01%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Fail***
% RPD Limit:	25%	25%

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

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

Comments:

***Batch must be re-prepped due to unacceptable precision.

September 2021

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

October 14, 2021

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

RE: Project: HAMMOND AP-4
Pace Project No.: 92564042

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2021. 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.

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CERTIFICATIONS

Project: HAMMOND AP-4
Pace Project No.: 92564042

Pace Analytical Services Charlotte
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001

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SAMPLE SUMMARY

Project: HAMMOND AP-4
Pace Project No.: 92564042

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92564042001	**HGWC-117**	Water	09/27/21 15:26	09/29/21 11:50
92564042002	**HGWC-117A**	Water	09/27/21 13:47	09/29/21 11:50

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4
Pace Project No.: 92564042

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92564042001	**HGWC-117**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92564042002	**HGWC-117A**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

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

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SUMMARY OF DETECTION

Project: HAMMOND AP-4
Pace Project No.: 92564042

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92564042001	**HGWC-117**					
	Performed by	CUSTOMER			09/29/21 16:22	
	pH	5.66	Std. Units		09/29/21 16:22	
EPA 6010D	Calcium	37.5	mg/L	1.0	10/07/21 19:54	
EPA 6020B	Barium	0.038	mg/L	0.0050	10/08/21 21:33	
EPA 6020B	Boron	0.67	mg/L	0.040	10/08/21 21:33	
EPA 6020B	Cadmium	0.00098	mg/L	0.00050	10/08/21 21:33	
EPA 6020B	Cobalt	0.015	mg/L	0.0050	10/08/21 21:33	
EPA 6020B	Lithium	0.0016J	mg/L	0.030	10/08/21 21:33	
SM 2540C-2011	Total Dissolved Solids	242	mg/L	10.0	10/03/21 11:38	
EPA 300.0 Rev 2.1 1993	Chloride	3.4	mg/L	1.0	10/01/21 02:09	
EPA 300.0 Rev 2.1 1993	Sulfate	104	mg/L	2.0	10/01/21 10:48	
92564042002	**HGWC-117A**					
	Performed by	CUSTOMER			09/29/21 16:22	
	pH	6.14	Std. Units		09/29/21 16:22	
EPA 6010D	Calcium	47.2	mg/L	1.0	10/07/21 20:08	
EPA 6020B	Barium	0.062	mg/L	0.0050	10/08/21 21:39	
EPA 6020B	Boron	0.30	mg/L	0.040	10/08/21 21:39	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	10/08/21 21:39	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	10/08/21 21:39	
SM 2540C-2011	Total Dissolved Solids	223	mg/L	10.0	10/03/21 11:38	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	10/01/21 02:25	
EPA 300.0 Rev 2.1 1993	Sulfate	69.7	mg/L	1.0	10/01/21 02:25	

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.: 92564042

Sample: HGWC-117 **Lab ID: 92564042001** Collected: 09/27/21 15:26 Received: 09/29/21 11:50 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		09/29/21 16:22		
pH	**5.66**	Std. Units			1		09/29/21 16:22		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**37.5**	mg/L	1.0	0.12	1	10/07/21 11:53	10/07/21 19:54	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	10/08/21 10:25	10/08/21 21:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	10/08/21 10:25	10/08/21 21:33	7440-38-2	
Barium	**0.038**	mg/L	0.0050	0.00067	1	10/08/21 10:25	10/08/21 21:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	10/08/21 10:25	10/08/21 21:33	7440-41-7	
Boron	**0.67**	mg/L	0.040	0.0086	1	10/08/21 10:25	10/08/21 21:33	7440-42-8	
Cadmium	**0.00098**	mg/L	0.00050	0.00011	1	10/08/21 10:25	10/08/21 21:33	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	10/08/21 10:25	10/08/21 21:33	7440-47-3	
Cobalt	**0.015**	mg/L	0.0050	0.00039	1	10/08/21 10:25	10/08/21 21:33	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	10/08/21 10:25	10/08/21 21:33	7439-92-1	
Lithium	**0.0016J**	mg/L	0.030	0.00073	1	10/08/21 10:25	10/08/21 21:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	10/08/21 10:25	10/08/21 21:33	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	10/08/21 10:25	10/08/21 21:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	10/08/21 10:25	10/08/21 21:33	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	0.000078	1	10/13/21 07:00	10/13/21 11:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**242**	mg/L	10.0	10.0	1		10/03/21 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.4**	mg/L	1.0	0.60	1		10/01/21 02:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/21 02:09	16984-48-8	
Sulfate	**104**	mg/L	2.0	1.0	2		10/01/21 10:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-4
Pace Project No.: 92564042

Sample: HGWC-117A **Lab ID: 92564042002** Collected: 09/27/21 13:47 Received: 09/29/21 11:50 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		09/29/21 16:22		
pH	**6.14**	Std. Units			1		09/29/21 16:22		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**47.2**	mg/L	1.0	0.12	1	10/07/21 11:53	10/07/21 20:08	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	10/08/21 10:25	10/08/21 21:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	10/08/21 10:25	10/08/21 21:39	7440-38-2	
Barium	**0.062**	mg/L	0.0050	0.00067	1	10/08/21 10:25	10/08/21 21:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	10/08/21 10:25	10/08/21 21:39	7440-41-7	
Boron	**0.30**	mg/L	0.040	0.0086	1	10/08/21 10:25	10/08/21 21:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	10/08/21 10:25	10/08/21 21:39	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	10/08/21 10:25	10/08/21 21:39	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.0050	0.00039	1	10/08/21 10:25	10/08/21 21:39	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	10/08/21 10:25	10/08/21 21:39	7439-92-1	
Lithium	**0.0035J**	mg/L	0.030	0.00073	1	10/08/21 10:25	10/08/21 21:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	10/08/21 10:25	10/08/21 21:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	10/08/21 10:25	10/08/21 21:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	10/08/21 10:25	10/08/21 21:39	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	0.000078	1	10/13/21 07:00	10/13/21 11:31	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**223**	mg/L	10.0	10.0	1		10/03/21 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.5**	mg/L	1.0	0.60	1		10/01/21 02:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/21 02:25	16984-48-8	
Sulfate	**69.7**	mg/L	1.0	0.50	1		10/01/21 02:25	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.: 92564042

QC Batch: 651397
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92564042001, 92564042002

METHOD BLANK: 3416096 Matrix: Water
Associated Lab Samples: 92564042001, 92564042002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	10/07/21 18:37	

LABORATORY CONTROL SAMPLE: 3416097

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: 3416098 3416099

Parameter	Units	92563761001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	7.5	1	1	8.4	8.4	94	91	75-125	0	20	

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

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.: 92564042

QC Batch: 651684
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92564042001, 92564042002

METHOD BLANK: 3417564 Matrix: Water
Associated Lab Samples: 92564042001, 92564042002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	10/08/21 19:44	
Arsenic	mg/L	ND	0.0050	0.0011	10/08/21 19:44	
Barium	mg/L	ND	0.0050	0.00067	10/08/21 19:44	
Beryllium	mg/L	ND	0.00050	0.000054	10/08/21 19:44	
Boron	mg/L	ND	0.040	0.0086	10/08/21 19:44	
Cadmium	mg/L	ND	0.00050	0.00011	10/08/21 19:44	
Chromium	mg/L	ND	0.0050	0.0011	10/08/21 19:44	
Cobalt	mg/L	ND	0.0050	0.00039	10/08/21 19:44	
Lead	mg/L	ND	0.0010	0.00089	10/08/21 19:44	
Lithium	mg/L	ND	0.030	0.00073	10/08/21 19:44	
Molybdenum	mg/L	ND	0.010	0.00074	10/08/21 19:44	
Selenium	mg/L	ND	0.0050	0.0014	10/08/21 19:44	
Thallium	mg/L	ND	0.0010	0.00018	10/08/21 19:44	

LABORATORY CONTROL SAMPLE: 3417565

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.092	92	80-120	
Boron	mg/L	1	0.91	91	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.094	94	80-120	
Cobalt	mg/L	0.1	0.090	90	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.092	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417566 3417567

Parameter	Units	92563761001 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	107	108	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	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.: 92564042

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417566 3417567

Parameter	Units	92563761001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.025	0.1	0.1	0.12	0.12	96	98	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.089	0.090	89	90	75-125	2	20	
Boron	mg/L	ND	1	1	0.87	0.91	86	91	75-125	5	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.091	0.092	91	92	75-125	1	20	
Cobalt	mg/L	0.0022J	0.1	0.1	0.091	0.092	88	90	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Lithium	mg/L	ND	0.1	0.1	0.093	0.093	92	93	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.096	0.099	96	98	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.092	0.093	92	93	75-125	1	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.: 92564042

QC Batch: 652379
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92564042001, 92564042002

METHOD BLANK: 3420817 Matrix: Water
Associated Lab Samples: 92564042001, 92564042002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	10/13/21 10:39	

LABORATORY CONTROL SAMPLE: 3420818

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420819 3420820

Parameter	Units	92563761002 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	0.0022	0.0015	86	59	75-125	37	20	M1,R1

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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.: 92564042

QC Batch: 650392
QC Batch Method: SM 2540C-2011
Analysis Method: SM 2540C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92564042001, 92564042002

METHOD BLANK: 3411236 Matrix: Water
Associated Lab Samples: 92564042001, 92564042002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/03/21 11:38	

LABORATORY CONTROL SAMPLE: 3411237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	387	97	90-111	

SAMPLE DUPLICATE: 3411239

Parameter	Units	92563761007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	181	181	0	10	

SAMPLE DUPLICATE: 3412138

Parameter	Units	92563761002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1560	1580	2	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.: 92564042

QC Batch: 650124
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: 92564042001, 92564042002

METHOD BLANK: 3409716 Matrix: Water
Associated Lab Samples: 92564042001, 92564042002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/30/21 20:19	
Fluoride	mg/L	ND	0.10	0.050	09/30/21 20:19	
Sulfate	mg/L	ND	1.0	0.50	09/30/21 20:19	

LABORATORY CONTROL SAMPLE: 3409717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	46.9	94	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	51.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3409718 3409719

Parameter	Units	92563761009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	27.2	50	50	74.3	75.0	94	95	90-110	1	10	
Fluoride	mg/L	1.6	2.5	2.5	4.3	4.4	107	110	90-110	2	10	
Sulfate	mg/L	1670	50	50	1680	1680	26	13	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3409720 3409721

Parameter	Units	92563226014 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	47.4	47.9	95	96	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	98	100	90-110	1	10	
Sulfate	mg/L	ND	50	50	50.4	51.0	101	102	90-110	1	10	

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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.: 92564042

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.: 92564042

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92564042001	**HGWC-117**				
92564042002	**HGWC-117A**				
92564042001	**HGWC-117**	EPA 3010A	651397	EPA 6010D	651486
92564042002	**HGWC-117A**	EPA 3010A	651397	EPA 6010D	651486
92564042001	**HGWC-117**	EPA 3005A	651684	EPA 6020B	651759
92564042002	**HGWC-117A**	EPA 3005A	651684	EPA 6020B	651759
92564042001	**HGWC-117**	EPA 7470A	652379	EPA 7470A	652560
92564042002	**HGWC-117A**	EPA 7470A	652379	EPA 7470A	652560
92564042001	**HGWC-117**	SM 2540C-2011	650392		
92564042002	**HGWC-117A**	SM 2540C-2011	650392		
92564042001	**HGWC-117**	EPA 300.0 Rev 2.1 1993	650124		
92564042002	**HGWC-117A**	EPA 300.0 Rev 2.1 1993	650124		

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: G A Power

Project #: WO# : 92564042

92564042

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

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

Date/Initials Person Examining Contents: 9/29/21 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: 1.8 **Correction Factor:** Add/Subtract (°C) +0.1

Cooler Temp Corrected (°C): 1.9

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**

Project # **WO# : 92564042**

PM: NMG Due Date: 10/13/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	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																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

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 of

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	Kevin Herring
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
SOLID/SOIL	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	Y/N	Analysis Test: Chloride, Fluoride, Sulfate	Full App III and IV metals	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWC-117	WT	G	9/27/21	15:26			22	5	2		3							X	X	X	X		pH = ~~6.65~~ 5.66
2	HGWC-117A	WT	G	9/27/21	~~15:30~~ 15:41			23	5	2		3							X	X	X	X		pH = 6.14
3																								Last Sample
4																								
5																								
6																								TJ
7																								9/27/2021
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Hessler / Geo	9/29/21	1150	Ryan Williams / Pace	9/29/21	1150	
	Ryan Williams / Pace	9/29/21	1400	Charles Hunter	9/29/21	1400	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 09/27/21

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

November 16, 2021

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

RE: Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2021. 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: Christine Hug, Geosyntec Consultants, Inc.
Kristen Jurinko
Thomas Kessler, Geosyntec
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Company
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.: 92564026

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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(770)734-4200

SAMPLE SUMMARY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92564026001	**HGWC-117**	Water	09/27/21 15:26	09/29/21 11:50
92564026002	**HGWC-117A**	Water	09/27/21 13:47	09/29/21 11:50

REPORT OF LABORATORY ANALYSIS

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(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92564026001	**HGWC-117**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92564026002	**HGWC-117A**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92564026001	**HGWC-117**					
EPA 9315	Radium-226	0.0709 ± 0.0871 (0.177) C:79% T:NA	pCi/L		11/11/21 09:31	
EPA 9320	Radium-228	0.834 ± 0.403 (0.686) C:83% T:79%	pCi/L		11/08/21 11:14	
Total Radium Calculation	Total Radium	0.905 ± 0.490 (0.863)	pCi/L		11/15/21 16:33	
92564026002	**HGWC-117A**					
EPA 9315	Radium-226	0.191 ± 0.129 (0.219) C:84% T:NA	pCi/L		11/11/21 09:31	
EPA 9320	Radium-228	0.861 ± 0.494 (0.916) C:73% T:75%	pCi/L		11/11/21 11:10	
Total Radium Calculation	Total Radium	1.05 ± 0.623 (1.14)	pCi/L		11/15/21 16:33	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Sample: HGWC-117 **Lab ID: 92564026001** Collected: 09/27/21 15:26 Received: 09/29/21 11:50 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	**0.0709 ± 0.0871 (0.177) C:79% T:NA**	pCi/L	11/11/21 09:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.834 ± 0.403 (0.686) C:83% T:79%**	pCi/L	11/08/21 11:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.905 ± 0.490 (0.863)**	pCi/L	11/15/21 16:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Sample: HGWC-117A **Lab ID: 92564026002** Collected: 09/27/21 13:47 Received: 09/29/21 11:50 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	**0.191 ± 0.129 (0.219) C:84% T:NA**	pCi/L	11/11/21 09:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.861 ± 0.494 (0.916) C:73% T:75%**	pCi/L	11/11/21 11:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.05 ± 0.623 (1.14)**	pCi/L	11/15/21 16:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

QC Batch: 468246
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92564026001, 92564026002

METHOD BLANK: 2260780 Matrix: Water
Associated Lab Samples: 92564026001, 92564026002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0444 ± 0.0346 (0.179) C:69% T:NA	pCi/L	11/10/21 15:48	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

QC Batch: 470825
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92564026001, 92564026002

METHOD BLANK: 2272894 Matrix: Water
Associated Lab Samples: 92564026001, 92564026002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.934 ± 0.482 (0.855) C:70% T:80%	pCi/L	11/11/21 11:10	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 RADS
Pace Project No.: 92564026

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92564026001	**HGWC-117**	EPA 9315	468246		
92564026002	**HGWC-117A**	EPA 9315	468246		
92564026001	**HGWC-117**	EPA 9320	470825		
92564026002	**HGWC-117A**	EPA 9320	470825		
92564026001	**HGWC-117**	Total Radium Calculation	472681		
92564026002	**HGWC-117A**	Total Radium Calculation	472681		

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

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

Sample Condition Upon Receipt

Client Name: G Power

Project #: WO# : 92564026

92564026

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

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

Date/Initials Person Examining Contents: 9/29/21 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: 1.8 **Correction Factor:** Add/Subtract (°C) +0.1

Cooler Temp Corrected (°C): 1.9

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**

Project # **WO# : 92564026**

PM: NMG Due Date: 10/20/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	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																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

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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: of

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	Kevin Herring
Pace Profile #	10639

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	Requested Analysis Filtered (Y/N): Chloride, Fluoride, Sulfate	Full App II and IV metals	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWC-117	WT	G	9/27/21	15:26			22	5	2		3							X	X	X	X		pH = ~~6.65~~ 5.66
2	HGWC-117A	WT	G	9/27/21	~~14:45~~ 15:45			23	5	2		3							X	X	X	X		pH = 6.14
3																								Lost Sample
4																								
5																								
6																								TJ
7																								9/27/2021
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Thomas Hessler / GOO	9/29/21	1150	Ryan Williams / Pace	9/29/21	1150	
	Ryan Williams / Pace	9/29/21	1400	Charles Hunt	9/29/21	1400	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 09/27/21

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.

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	JJY
Date:	10/26/2021
Worklist:	63152
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2260780
MB concentration:	-0.044
M/B Counting Uncertainty:	0.034
MB MDC:	0.179
MB Numerical Performance Indicator:	-2.56
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS63152	LCSD63152
Count Date:	11/10/2021	11/10/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.032	24.032
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.513	0.517
Target Conc. (pCi/L, g, F):	4.681	4.650
Uncertainty (Calculated):	0.056	0.056
Result (pCi/L, g, F):	5.478	5.141
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.549	0.630
Numerical Performance Indicator:	2.83	1.52
Percent Recovery:	117.02%	110.56%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS63152	92563753001
Duplicate Sample I.D.	LCSD63152	92563753001DUP
Sample Result (pCi/L, g, F):	5.478	0.001
Sample Result Counting Uncertainty (pCi/L, g, F):	0.549	0.060
Sample Duplicate Result (pCi/L, g, F):	5.141	0.135
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.630	0.107
Are sample and/or duplicate results below RL?	NO	See Below ##
Duplicate Numerical Performance Indicator:	0.789	-2.135
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.68%	~~196.84%~~
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	~~Fail***~~
% RPD Limit:	25%	25%

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~

Results LUDC, NA 11/12/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 11/4/2021
Worklist: 63439
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2272894
MB concentration:	3.363
M/B 2 Sigma CSU:	0.826
MB MDC:	0.757
MB Numerical Performance Indicator:	7.98
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Fail*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS63439	LCSD63439
Count Date:	11/8/2021	11/8/2021
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	37.538	37.538
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.811	0.815
Target Conc. (pCi/L, g, F):	4.626	4.607
Uncertainty (Calculated):	0.227	0.226
Result (pCi/L, g, F):	4.616	5.769
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.009	1.203
Numerical Performance Indicator:	-0.02	1.86
Percent Recovery:	99.79%	125.22%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS63439	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD63439	
Sample Result (pCi/L, g, F):	4.616	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.009	
Sample Duplicate Result (pCi/L, g, F):	5.769	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.203	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.439	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.61%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:
*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: VAL
Date: 11/9/2021
Worklist: 63439
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2272694
MB concentration:	0.934
MB 2 Sigma CSU:	0.482
MB MDC:	0.855
MB Numerical Performance Indicator:	3.60
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS63439	LCSD63439
Count Date:	#N/A	#N/A
Spike I.D.:	#N/A	#N/A
Decay Corrected Spike Concentration (pCi/mL):	#N/A	#N/A
Volume Used (mL):		#N/A
Aliquot Volume (L, g, F):	#N/A	#N/A
Target Conc. (pCi/L, g, F):	#N/A	#N/A
Uncertainty (Calculated):	#N/A	#N/A
Result (pCi/L, g, F):	#N/A	#N/A
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	#N/A	
Numerical Performance Indicator:	#N/A	#N/A
Percent Recovery:	#N/A	#N/A
Status vs Numerical Indicator:	#N/A	#N/A
Status vs Recovery:	#N/A	#N/A
Upper % Recovery Limits:	#N/A	#N/A
Lower % Recovery Limits:	#N/A	#N/A

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

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.
#N/A

11/11/21

VALIDATION REPORTS

August 2021

Geosyntec consultants

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Memorandum

Date:	November 18, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92555497 and 92555501**

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 equipment blank and one field blank, collected 12-19 August 2021, 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 US EPA Methods 3005A/6020B
- Mercury by US EPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

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

- Anions (Chloride, Fluoride and Sulfate) by US EPA Method 300.0

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);
- 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
92555497001	HGWA-47
92555497002	HGWA-48D
92555497003	HGWA-111
92555497004	HGWA-112
92555497005	HGWA-113
92555497006	HGWC-117A
92555497007	HGWC-102
92555497008	HGWC-105
92555497009	HGWC-107
92555497010	HGWC-109
92555497011	HGWC-118
92555497012	DUP-4
92555497013	HGWC-101
92555497014	HGWC-103
92555497015	FB-4
92555497016	EB-4
92555497017	HGWC-117

Laboratory ID	Client ID
92555501001	HGWA-47
92555501002	HGWA-48D
92555501003	HGWA-111
92555501004	HGWA-112
92555501005	HGWA-113
92555501006	HGWC-117A
92555501007	HGWC-102
92555501008	HGWC-105
92555501009	HGWC-107
92555501010	HGWC-109
92555501011	HGWC-118
92555501012	DUP-4
92555501013	HGWC-101
92555501014	HGWC-103
92555501015	FB-4
92555501016	EB-4
92555501017	HGWC-117

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

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by US EPA methods 3010A/6010D and US EPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
✓ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 641241, 642523, 641254 and 642521). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 641254 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since antimony was not detected in the associated samples, no qualifications were applied to the data.

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples HGWA-47, HGWA-48D and HGWC-117. The relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

The recoveries of calcium in the MS/MSD pair using sample HGWA-47 were low and outside of the laboratory specified acceptance criteria. Since the calcium concentration in sample HGWA-47 was greater than four times the spiked concentration, no qualifications were applied to the data based on the MS/MSD recovery results.

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 based on the MS/MSD recovery results.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-4. Metals were not detected in the equipment blank 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 above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-109, with the following exception.

Lithium was not detected in HGWC-109 and was detected in DUP-4 at an estimated concentration greater than the MDL and less than the RL, resulting in a noncalculable RPD. Therefore, the non-detect lithium result in HGWC-109 was UJ qualified as estimated less than the MDL and the lithium concentration in DUP-4 was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier*	Reason Code*
HGWC-109	Lithium	0.00073	U	NC	0.00073	UJ	7
DUP-4	Lithium	0.00077	J		0.00077	J	7

mg/L-milligram per liter
J-estimated concentration greater than the MDL and less than the RL
U-not detected at or above the MDL
NC-not calculable

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were 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 Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of

valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 643221).

Mercury was detected in the method blank in batch 643221 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated mercury concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-47	Mercury	0.000081	J B	0.00020	U	3
HGWA-48D	Mercury	0.00018	J B	0.00020	U	3
HGWA-112	Mercury	0.00011	J B	0.00020	U	3
HGWC-117A	Mercury	0.000094	J B	0.00020	U	3
HGWC-102	Mercury	0.00010	J B	0.00020	U	3
HGWC-107	Mercury	0.000084	J B	0.00020	U	3
HGWC-109	Mercury	0.000080	J B	0.00020	U	3
HGWC-118	Mercury	0.000081	J B	0.00020	U	3
HGWC-101	Mercury	0.000099	J B	0.00020	U	3
FB-4	Mercury	0.00012	J B	0.00020	U	3
EB-4	Mercury	0.00012	J B	0.00020	U	3

mg/L-milligrams per liter
J-estimated concentration greater than the MDL and less than the RL
B-laboratory flag indicating analyte was detected in the method blank

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 HGWA-47. 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, EB-01.

Mercury was detected in the equipment blank at an estimated concentration greater than the MDL and less than the RL. Since the mercury concentration in the equipment blank was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

2.7 Field Blank

One field blank was collected with the sample set, FB-4.

Mercury was detected in the field blank at an estimated concentration greater than the MDL and less than the RL. Since the mercury concentration in the field blank was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-109.

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 Standard method 2540C and anions by US EPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for TDS (batches 640931, 641466 and 642674) and six method blanks were reported for the anions (batches 641753, 641754, 641887, 641893, 642138 and 643305). 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 the anions using sample HGWA-43D. The recovery and RPD results were within the laboratory specified acceptance criteria.

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

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for TDS using sample HGWA-1. The RPD result was within the laboratory specified acceptance criteria.

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 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 above the MDLs.

3.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-109.

3.10 Sensitivity

The samples were reported to the MDLs. 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.

4.0 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

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio

of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-226 data (batches 463426, 463380 and 463378). Three method blanks were reported for the radium-228 data (batches 461961, 463379 and 463377). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

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

4.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for radium-226 using samples HGWC-102 and DUP-4. The RER results were 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.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Equipment Blank

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

4.9 Field Blank

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

4.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, HGWC-109.

4.11 Sensitivity

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

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

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

September 2021

Geosyntec consultants

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Memorandum

Date:	November 18, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92564026 and 92564042**

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of two aqueous samples collected 27 September 2021, 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 US EPA Methods 3005A/6020B
- Mercury by US EPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

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

- Anions (Chloride, Fluoride and Sulfate) by US EPA Method 300.0

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);
- 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
92564026001	HGWC-117
92564026002	HGWC-117A

Laboratory ID	Client ID
92564042001	HGWC-117
92564042002	HGWC-117A

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

The field pH data included in the laboratory report were not validated.

Incorrect error corrections were observed on the chain of custody (COC), instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

1.0 METALS

The samples were analyzed for metals by US EPA methods 3010A/6010D and US EPA 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
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 651397 and 651684). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data based on the MS/MSD recovery results.

1.5 Laboratory Control Sample (LCS)

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

1.6 Sensitivity

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

1.7 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
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 652379). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One batch MS/MSD pair was reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data based on the MS/MSD recovery results.

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 Sensitivity

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

2.7 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C and anions by US EPA 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
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 650392) and one method blank was reported for the anions (batch 650124). 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). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

Two batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Sensitivity

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

3.8 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by 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
✓ Sensitivity
✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-226 data (batch 468246). One method blank was reported for the radium-228 data (batch 470825). Radium-226 was not detected in the method blank above the minimum detectable concentrations (MDCs).

Radium-228 (0.934 pCi/L) was detected in the method blank in batch 470825 at a concentration greater than the MDC. Therefore, the radium-228 and total radium concentrations in sample HGWC-117 were U qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
HGWC-117	Radium-228	0.834	NA	0.834	U	3
HGWC-117	Combined Radium 226 + 228	0.905	NA	0.905	U	3

pCi/L-picocuries per liter
NA-not applicable
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. One LCS/LCSD pair was reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Sensitivity

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

4.9 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

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 2021

Low-Flow Test Report:

Test Date / Time: 8/12/2021 10:31:13 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

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** **Initial Depth to Water: 8.40 ft**	**Pump Type: Peristaltic** **Tubing Type: Polyethylene** **Pump Intake From TOC: 38.74 ft** **Estimated Total Volume Pumped: 9 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Five bottles: Full app. III and IV.

Weather Conditions:
Cloudy, 82 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 10:31 AM	00:00	7.39 pH	21.99 °C	379.62 µS/cm	0.35 mg/L	1.00 NTU	-50.7 mV	8.44 ft	200.00 ml/min
8/12/2021 10:33 AM	02:10	7.39 pH	21.74 °C	380.23 µS/cm	0.42 mg/L	1.00 NTU	-52.3 mV	8.44 ft	200.00 ml/min
8/12/2021 10:38 AM	07:10	7.39 pH	21.53 °C	380.25 µS/cm	0.39 mg/L	1.00 NTU	-55.8 mV	8.44 ft	200.00 ml/min
8/12/2021 10:43 AM	12:10	7.39 pH	21.36 °C	377.78 µS/cm	0.35 mg/L	0.35 NTU	-47.6 mV	8.44 ft	200.00 ml/min
8/12/2021 10:48 AM	17:10	7.38 pH	21.47 °C	376.63 µS/cm	0.35 mg/L	0.43 NTU	-27.5 mV	8.45 ft	200.00 ml/min
8/12/2021 10:53 AM	22:10	7.38 pH	21.33 °C	375.39 µS/cm	0.33 mg/L	0.52 NTU	-21.8 mV	8.45 ft	200.00 ml/min
8/12/2021 10:58 AM	27:10	7.38 pH	21.26 °C	373.40 µS/cm	0.36 mg/L	1.01 NTU	-23.4 mV	8.45 ft	200.00 ml/min
8/12/2021 11:03 AM	32:10	7.38 pH	21.32 °C	372.19 µS/cm	0.36 mg/L	0.60 NTU	-24.5 mV	8.45 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-7D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 10:55:23 AM
Project: GP-Plant Hammond
Operator Name: Ashley Ramsey

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: 8.22 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 67.97 ft** **Estimated Total Volume Pumped: 4 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 3.09 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Sunny, 91degrees.

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	
8/12/2021 10:55 AM	00:00	7.49 pH	24.03 °C	396.26 µS/cm	1.54 mg/L	5.98 NTU	-50.5 mV	8.22 ft	200.00 ml/min
8/12/2021 11:00 AM	05:00	7.43 pH	20.97 °C	420.45 µS/cm	0.33 mg/L	13.10 NTU	-91.0 mV	9.91 ft	200.00 ml/min
8/12/2021 11:05 AM	10:00	7.45 pH	20.70 °C	414.15 µS/cm	0.55 mg/L	5.00 NTU	-110.0 mV	10.70 ft	200.00 ml/min
8/12/2021 11:10 AM	15:00	7.44 pH	21.43 °C	419.49 µS/cm	0.71 mg/L	3.35 NTU	-106.8 mV	11.04 ft	100.00 ml/min
8/12/2021 11:15 AM	20:00	7.45 pH	21.51 °C	417.86 µS/cm	0.63 mg/L	4.36 NTU	-124.8 mV	11.14 ft	100.00 ml/min
8/12/2021 11:20 AM	25:00	7.45 pH	21.46 °C	416.31 µS/cm	0.56 mg/L	3.84 NTU	-122.4 mV	11.21 ft	100.00 ml/min
8/12/2021 11:25 AM	30:00	7.44 pH	21.54 °C	420.85 µS/cm	0.76 mg/L	3.57 NTU	-121.8 mV	11.31 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-48D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 12:26:55 PM
Project: GP-Plant Hammond
Operator Name: Ashley Ramsey

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: 12.51 ft**	**Pump Type: Peri** **Tubing Type: Polyethylene** **Pump Intake From TOC: 38.67 ft** **Estimated Total Volume Pumped: 7.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0.23 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Sunny, 91 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 12:26 PM	00:00	6.57 pH	27.82 °C	127.43 µS/cm	4.10 mg/L	2.92 NTU	96.0 mV	12.51 ft	200.00 ml/min
8/12/2021 12:31 PM	05:00	6.25 pH	23.07 °C	137.73 µS/cm	3.81 mg/L	3.83 NTU	98.0 mV	12.63 ft	200.00 ml/min
8/12/2021 12:36 PM	10:00	6.23 pH	22.74 °C	146.22 µS/cm	3.85 mg/L	3.49 NTU	97.3 mV	12.74 ft	200.00 ml/min
8/12/2021 12:41 PM	15:00	6.23 pH	22.68 °C	149.07 µS/cm	3.80 mg/L	4.19 NTU	97.0 mV	12.79 ft	200.00 ml/min
8/12/2021 12:46 PM	20:00	6.23 pH	22.67 °C	151.96 µS/cm	3.82 mg/L	3.82 NTU	96.7 mV	12.83 ft	200.00 ml/min
8/12/2021 12:51 PM	25:00	6.32 pH	22.98 °C	176.38 µS/cm	3.80 mg/L	4.98 NTU	116.2 mV	12.84 ft	200.00 ml/min
8/12/2021 12:56 PM	30:00	6.56 pH	23.18 °C	229.90 µS/cm	3.61 mg/L	3.44 NTU	85.4 mV	12.85 ft	200.00 ml/min
8/12/2021 1:01 PM	35:00	6.62 pH	23.75 °C	240.54 µS/cm	3.51 mg/L	1.66 NTU	104.7 mV	12.78 ft	100.00 ml/min
8/12/2021 1:06 PM	40:00	6.66 pH	23.75 °C	247.20 µS/cm	3.41 mg/L	0.88 NTU	82.2 mV	12.75 ft	100.00 ml/min
8/12/2021 1:11 PM	45:00	6.67 pH	23.79 °C	251.42 µS/cm	3.37 mg/L	1.15 NTU	81.0 mV	12.74 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-111	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 11:59:11 AM
Project: GP-Plant Hammond
Operator Name: Connor Cain

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: 12.55 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **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: 2.43 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728541**

Test Notes:
Five bottles: Full app. III and IV.

Weather Conditions:
Cloudy, 80 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 11:59 AM	00:00	5.51 pH	21.94 °C	79.17 µS/cm	1.46 mg/L	6.05 NTU	199.8 mV	13.25 ft	200.00 ml/min
8/12/2021 12:04 PM	05:00	5.52 pH	20.62 °C	80.62 µS/cm	2.10 mg/L	4.70 NTU	182.9 mV	13.74 ft	200.00 ml/min
8/12/2021 12:09 PM	10:00	5.52 pH	20.68 °C	81.08 µS/cm	1.81 mg/L	3.35 NTU	178.9 mV	13.88 ft	200.00 ml/min
8/12/2021 12:14 PM	15:00	5.49 pH	20.62 °C	80.92 µS/cm	1.33 mg/L	3.43 NTU	178.0 mV	13.93 ft	200.00 ml/min
8/12/2021 12:19 PM	20:00	5.49 pH	20.52 °C	80.84 µS/cm	1.59 mg/L	2.86 NTU	175.6 mV	13.98 ft	200.00 ml/min
8/12/2021 12:24 PM	25:00	5.50 pH	20.60 °C	67.59 µS/cm	1.55 mg/L	2.36 NTU	171.8 mV	13.98 ft	200.00 ml/min
8/12/2021 12:29 PM	30:00	5.51 pH	20.59 °C	81.51 µS/cm	1.29 mg/L	2.11 NTU	169.1 mV	14.00 ft	200.00 ml/min
8/12/2021 12:34 PM	35:00	5.50 pH	20.57 °C	80.88 µS/cm	1.68 mg/L	1.89 NTU	168.6 mV	14.98 ft	200.00 ml/min
8/12/2021 12:39 PM	40:00	5.50 pH	20.59 °C	81.02 µS/cm	1.19 mg/L	1.83 NTU	166.8 mV	14.98 ft	200.00 ml/min
8/12/2021 12:44 PM	45:00	5.50 pH	20.60 °C	82.21 µS/cm	1.24 mg/L	1.62 NTU	165.0 mV	14.98 ft	200.00 ml/min
8/12/2021 12:49 PM	50:00	5.50 pH	20.73 °C	78.36 µS/cm	1.18 mg/L	1.52 NTU	163.1 mV	14.98 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-112	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 12:23:29 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: 26.53 ft** **Total Depth: 36.53 ft** **Initial Depth to Water: 9.90 ft**	**Pump Type: Peristaltic** **Tubing Type: Polyethylene** **Pump Intake From TOC: 31.53 ft** **Estimated Total Volume Pumped: 16.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 9.39 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Five bottles: Full app. III and IV.

Weather Conditions:
Cloudy, 90 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 12:23 PM	00:00	6.11 pH	24.27 °C	119.74 µS/cm	1.09 mg/L	0.89 NTU	144.9 mV	11.30 ft	100.00 ml/min
8/12/2021 12:28 PM	05:00	6.09 pH	24.67 °C	119.45 µS/cm	0.99 mg/L	3.44 NTU	122.6 mV	11.25 ft	100.00 ml/min
8/12/2021 12:33 PM	10:00	6.08 pH	24.89 °C	119.06 µS/cm	0.93 mg/L	2.25 NTU	119.1 mV	11.80 ft	100.00 ml/min
8/12/2021 12:38 PM	15:00	6.07 pH	25.02 °C	119.81 µS/cm	0.90 mg/L	3.78 NTU	113.8 mV	12.19 ft	100.00 ml/min
8/12/2021 12:43 PM	20:00	6.07 pH	25.15 °C	122.03 µS/cm	0.92 mg/L	4.16 NTU	116.4 mV	12.65 ft	100.00 ml/min
8/12/2021 12:48 PM	25:00	6.07 pH	25.48 °C	122.56 µS/cm	0.90 mg/L	4.04 NTU	114.7 mV	13.10 ft	100.00 ml/min
8/12/2021 12:53 PM	30:00	6.05 pH	26.04 °C	121.92 µS/cm	0.87 mg/L	3.15 NTU	113.8 mV	13.50 ft	100.00 ml/min
8/12/2021 12:58 PM	35:00	6.05 pH	26.31 °C	121.84 µS/cm	0.86 mg/L	1.73 NTU	113.1 mV	13.95 ft	100.00 ml/min
8/12/2021 1:03 PM	40:00	6.05 pH	26.25 °C	121.49 µS/cm	0.85 mg/L	4.50 NTU	112.4 mV	14.28 ft	100.00 ml/min
8/12/2021 1:08 PM	45:00	6.06 pH	25.77 °C	119.53 µS/cm	0.85 mg/L	6.19 NTU	111.4 mV	14.64 ft	100.00 ml/min
8/12/2021 1:13 PM	50:00	6.05 pH	25.50 °C	120.68 µS/cm	0.84 mg/L	2.45 NTU	109.8 mV	15.00 ft	100.00 ml/min
8/12/2021 1:18 PM	55:00	6.06 pH	26.09 °C	122.75 µS/cm	0.84 mg/L	1.90 NTU	108.3 mV	15.25 ft	100.00 ml/min
8/12/2021 1:23 PM	01:00:00	6.07 pH	25.59 °C	123.12 µS/cm	0.84 mg/L	1.07 NTU	107.5 mV	15.65 ft	100.00 ml/min

8/12/2021 1:28 PM	01:05:00	6.07 pH	25.36 °C	124.12 µS/cm	0.85 mg/L	2.55 NTU	105.3 mV	15.80 ft	100.00 ml/min
8/12/2021 1:33 PM	01:10:00	6.07 pH	25.18 °C	123.96 µS/cm	0.86 mg/L	0.93 NTU	105.1 mV	16.10 ft	100.00 ml/min
8/12/2021 1:38 PM	01:15:00	6.08 pH	24.74 °C	121.65 µS/cm	0.87 mg/L	1.72 NTU	105.7 mV	16.35 ft	100.00 ml/min
8/12/2021 1:43 PM	01:20:00	6.07 pH	25.22 °C	121.96 µS/cm	0.86 mg/L	1.28 NTU	104.8 mV	16.60 ft	100.00 ml/min
8/12/2021 1:48 PM	01:25:00	6.07 pH	25.51 °C	125.97 µS/cm	0.86 mg/L	1.10 NTU	103.4 mV	16.80 ft	100.00 ml/min
8/12/2021 1:53 PM	01:30:00	6.06 pH	26.13 °C	125.58 µS/cm	0.85 mg/L	0.98 NTU	104.2 mV	17.03 ft	100.00 ml/min
8/12/2021 1:58 PM	01:35:00	6.07 pH	26.05 °C	126.27 µS/cm	0.85 mg/L	3.44 NTU	103.8 mV	17.30 ft	100.00 ml/min
8/12/2021 2:03 PM	01:40:00	6.07 pH	26.69 °C	127.86 µS/cm	0.85 mg/L	1.11 NTU	104.1 mV	17.50 ft	100.00 ml/min
8/12/2021 2:08 PM	01:45:00	6.07 pH	26.82 °C	127.24 µS/cm	0.86 mg/L	1.56 NTU	104.9 mV	17.68 ft	100.00 ml/min
8/12/2021 2:13 PM	01:50:00	6.06 pH	26.55 °C	125.87 µS/cm	0.86 mg/L	1.25 NTU	103.7 mV	17.86 ft	100.00 ml/min
8/12/2021 2:18 PM	01:55:00	6.07 pH	26.42 °C	126.67 µS/cm	0.86 mg/L	1.11 NTU	103.8 mV	18.04 ft	100.00 ml/min
8/12/2021 2:23 PM	02:00:00	6.07 pH	26.65 °C	126.09 µS/cm	0.87 mg/L	1.12 NTU	103.9 mV	18.20 ft	100.00 ml/min
8/12/2021 2:28 PM	02:05:00	6.06 pH	26.78 °C	125.79 µS/cm	0.86 mg/L	1.28 NTU	102.7 mV	18.38 ft	100.00 ml/min
8/12/2021 2:33 PM	02:10:00	6.07 pH	26.98 °C	125.52 µS/cm	0.86 mg/L	1.16 NTU	102.5 mV	18.50 ft	100.00 ml/min
8/12/2021 2:38 PM	02:15:00	6.07 pH	27.17 °C	124.39 µS/cm	0.86 mg/L	0.98 NTU	101.7 mV	18.70 ft	100.00 ml/min
8/12/2021 2:43 PM	02:20:00	6.07 pH	26.96 °C	128.48 µS/cm	0.88 mg/L	1.10 NTU	101.0 mV	18.85 ft	100.00 ml/min
8/12/2021 2:48 PM	02:25:00	6.08 pH	26.73 °C	128.47 µS/cm	0.91 mg/L	2.78 NTU	102.2 mV	19.00 ft	100.00 ml/min
8/12/2021 2:53 PM	02:30:00	6.08 pH	26.86 °C	129.97 µS/cm	0.93 mg/L	1.09 NTU	101.4 mV	19.15 ft	100.00 ml/min
8/12/2021 2:58 PM	02:35:00	6.08 pH	27.06 °C	128.99 µS/cm	0.93 mg/L	2.12 NTU	101.8 mV	19.29 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-113	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/16/2021 12:10:43 PM
Project: GP-Plant Hammond
Operator Name: Ashley Ramsey

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: 12.76 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 32.94 ft** **Estimated Total Volume Pumped: 4.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 3.12 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Partly cloudy, 88 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/16/2021 12:10 PM	00:00	5.33 pH	22.91 °C	297.58 µS/cm	1.32 mg/L	5.62 NTU	126.6 mV	12.76 ft	200.00 ml/min
8/16/2021 12:14 PM	04:12	5.33 pH	21.12 °C	267.47 µS/cm	0.85 mg/L	3.18 NTU	132.1 mV	14.68 ft	200.00 ml/min
8/16/2021 12:19 PM	09:12	5.35 pH	21.02 °C	263.35 µS/cm	0.57 mg/L	3.17 NTU	128.7 mV	15.55 ft	200.00 ml/min
8/16/2021 12:24 PM	14:12	5.34 pH	22.04 °C	267.73 µS/cm	0.60 mg/L	3.24 NTU	158.1 mV	15.60 ft	200.00 ml/min
8/16/2021 12:29 PM	19:12	5.32 pH	22.31 °C	304.85 µS/cm	0.46 mg/L	2.80 NTU	147.7 mV	15.68 ft	200.00 ml/min
8/16/2021 12:34 PM	24:12	5.33 pH	22.54 °C	315.20 µS/cm	0.49 mg/L	2.77 NTU	116.2 mV	15.75 ft	200.00 ml/min
8/16/2021 12:39 PM	29:12	5.37 pH	22.59 °C	317.63 µS/cm	0.46 mg/L	2.56 NTU	108.8 mV	15.83 ft	200.00 ml/min
8/16/2021 12:44 PM	34:12	5.40 pH	22.58 °C	329.06 µS/cm	0.46 mg/L	2.34 NTU	103.5 mV	15.88 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-101	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/13/2021 4:01:32 PM
Project: GP-Plant Hammond
Operator Name: Connor Cain

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: 12.93 ft**	**Pump Type: Peristaltic** **Tubing Type: Polyethylene** **Pump Intake From TOC: 32.43 ft** **Estimated Total Volume Pumped: 15 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728541**

Test Notes:
Five bottles: Full app III and IV.

Weather Conditions:
Partly cloudy, 88 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 4:01 PM	00:00	5.49 pH	22.67 °C	839.36 µS/cm	2.01 mg/L	1.41 NTU	51.8 mV	13.18 ft	200.00 ml/min
8/13/2021 4:06 PM	05:00	5.45 pH	21.60 °C	854.73 µS/cm	1.13 mg/L	3.05 NTU	58.1 mV	13.18 ft	200.00 ml/min
8/13/2021 4:11 PM	10:00	5.44 pH	21.51 °C	846.58 µS/cm	0.55 mg/L	3.11 NTU	65.3 mV	13.19 ft	200.00 ml/min
8/13/2021 4:16 PM	15:00	5.44 pH	21.27 °C	861.60 µS/cm	2.10 mg/L	2.48 NTU	69.1 mV	13.19 ft	200.00 ml/min
8/13/2021 4:21 PM	20:00	5.44 pH	21.37 °C	861.20 µS/cm	1.79 mg/L	2.99 NTU	71.3 mV	13.21 ft	200.00 ml/min
8/13/2021 4:26 PM	25:00	5.45 pH	21.33 °C	860.04 µS/cm	0.43 mg/L	1.88 NTU	84.4 mV	13.21 ft	200.00 ml/min
8/13/2021 4:31 PM	30:00	5.44 pH	21.33 °C	860.65 µS/cm	1.45 mg/L	4.43 NTU	74.1 mV	13.21 ft	200.00 ml/min
8/13/2021 4:36 PM	35:00	5.44 pH	21.38 °C	860.82 µS/cm	0.78 mg/L	1.58 NTU	74.7 mV	13.21 ft	200.00 ml/min
8/13/2021 4:41 PM	40:00	5.44 pH	21.29 °C	862.30 µS/cm	0.60 mg/L	2.31 NTU	75.4 mV	13.21 ft	200.00 ml/min
8/13/2021 4:46 PM	45:00	5.45 pH	21.22 °C	863.06 µS/cm	0.99 mg/L	3.43 NTU	75.9 mV	13.22 ft	200.00 ml/min
8/13/2021 4:51 PM	50:00	5.45 pH	21.29 °C	860.51 µS/cm	1.19 mg/L	2.41 NTU	86.1 mV	13.22 ft	200.00 ml/min
8/13/2021 4:56 PM	55:00	5.45 pH	21.32 °C	858.89 µS/cm	1.56 mg/L	1.97 NTU	75.9 mV	13.22 ft	200.00 ml/min
8/13/2021 5:01 PM	01:00:00	5.44 pH	21.33 °C	859.49 µS/cm	0.23 mg/L	1.03 NTU	87.0 mV	13.22 ft	200.00 ml/min
8/13/2021 5:06 PM	01:05:00	5.45 pH	21.37 °C	858.60 µS/cm	0.40 mg/L	0.85 NTU	77.3 mV	13.22 ft	200.00 ml/min

8/13/2021 5:11 PM	01:10:00	5.45 pH	21.25 °C	862.24 µS/cm	0.56 mg/L	1.05 NTU	76.8 mV	13.22 ft	200.00 ml/min
8/13/2021 5:16 PM	01:15:00	5.46 pH	21.13 °C	862.41 µS/cm	0.48 mg/L	1.67 NTU	89.4 mV	13.22 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-102	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/16/2021 8:58:58 AM
Project: GP-Plant Hammond
Operator Name: Ashley Ramsey

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: 12.96 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 32.68 ft** **Estimated Total Volume Pumped: 22 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.22 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Cloudy, 88 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/16/2021 8:58 AM	00:00	5.65 pH	19.68 °C	886.50 µS/cm	1.08 mg/L	1,638.0 NTU	80.1 mV	12.96 ft	200.00 ml/min
8/16/2021 9:03 AM	05:00	5.62 pH	18.79 °C	915.50 µS/cm	0.79 mg/L	--	101.9 mV	13.16 ft	200.00 ml/min
8/16/2021 9:08 AM	10:00	5.62 pH	18.61 °C	936.34 µS/cm	0.25 mg/L	71.60 NTU	105.0 mV	13.18 ft	200.00 ml/min
8/16/2021 9:13 AM	15:00	5.61 pH	18.60 °C	934.90 µS/cm	0.17 mg/L	46.50 NTU	123.4 mV	13.18 ft	200.00 ml/min
8/16/2021 9:18 AM	20:00	5.61 pH	18.59 °C	935.76 µS/cm	0.21 mg/L	30.10 NTU	122.3 mV	13.18 ft	200.00 ml/min
8/16/2021 9:23 AM	25:00	5.61 pH	18.61 °C	931.72 µS/cm	0.16 mg/L	19.30 NTU	102.5 mV	13.18 ft	200.00 ml/min
8/16/2021 9:28 AM	30:00	5.60 pH	18.61 °C	931.70 µS/cm	0.20 mg/L	14.10 NTU	102.8 mV	13.18 ft	200.00 ml/min
8/16/2021 9:33 AM	35:00	5.60 pH	18.64 °C	937.26 µS/cm	0.20 mg/L	11.90 NTU	102.3 mV	13.18 ft	200.00 ml/min
8/16/2021 9:38 AM	40:00	5.59 pH	18.77 °C	931.31 µS/cm	0.13 mg/L	11.56 NTU	121.1 mV	13.18 ft	200.00 ml/min
8/16/2021 9:43 AM	45:00	5.59 pH	18.79 °C	931.56 µS/cm	0.13 mg/L	9.29 NTU	121.0 mV	13.16 ft	200.00 ml/min
8/16/2021 9:48 AM	50:00	5.59 pH	18.82 °C	930.23 µS/cm	0.15 mg/L	10.27 NTU	120.6 mV	13.18 ft	200.00 ml/min
8/16/2021 9:53 AM	55:00	5.59 pH	18.83 °C	931.44 µS/cm	0.16 mg/L	8.16 NTU	120.8 mV	13.18 ft	200.00 ml/min
8/16/2021 9:58 AM	01:00:00	5.59 pH	18.84 °C	927.82 µS/cm	0.22 mg/L	7.52 NTU	120.6 mV	13.18 ft	200.00 ml/min

8/16/2021 10:03 AM	01:05:00	5.60 pH	18.88 °C	930.00 µS/cm	0.15 mg/L	6.55 NTU	119.7 mV	13.18 ft	200.00 ml/min
8/16/2021 10:08 AM	01:10:00	5.58 pH	18.94 °C	929.75 µS/cm	0.18 mg/L	7.24 NTU	119.9 mV	13.18 ft	200.00 ml/min
8/16/2021 10:13 AM	01:15:00	5.59 pH	19.03 °C	931.09 µS/cm	0.18 mg/L	6.80 NTU	120.5 mV	13.18 ft	200.00 ml/min
8/16/2021 10:18 AM	01:20:00	5.59 pH	18.93 °C	927.18 µS/cm	0.15 mg/L	6.10 NTU	119.1 mV	13.18 ft	200.00 ml/min
8/16/2021 10:23 AM	01:25:00	5.59 pH	19.06 °C	927.83 µS/cm	0.16 mg/L	6.54 NTU	99.7 mV	13.18 ft	200.00 ml/min
8/16/2021 10:28 AM	01:30:00	5.58 pH	19.06 °C	926.63 µS/cm	0.18 mg/L	5.84 NTU	118.2 mV	13.18 ft	200.00 ml/min
8/16/2021 10:33 AM	01:35:00	5.59 pH	19.10 °C	928.79 µS/cm	0.21 mg/L	5.33 NTU	118.1 mV	13.18 ft	200.00 ml/min
8/16/2021 10:38 AM	01:40:00	5.58 pH	18.97 °C	932.27 µS/cm	0.12 mg/L	5.09 NTU	99.5 mV	13.18 ft	200.00 ml/min
8/16/2021 10:43 AM	01:45:00	5.59 pH	19.15 °C	927.49 µS/cm	0.11 mg/L	4.48 NTU	117.3 mV	13.18 ft	200.00 ml/min
8/16/2021 10:48 AM	01:50:00	5.59 pH	19.15 °C	927.65 µS/cm	0.10 mg/L	4.80 NTU	116.9 mV	13.18 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-103	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/13/2021 2:50:07 PM
Project: GP-Plant Hammond
Operator Name: Ashley Ramsey

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: 17.62 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene Pump** **Intake From TOC: 39.67 ft** **Estimated Total Volume Pumped: 8 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.29 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Sunny, 91 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 2:50 PM	00:00	6.44 pH	22.87 °C	554.71 µS/cm	0.90 mg/L	45.80 NTU	30.2 mV	17.62 ft	200.00 ml/min
8/13/2021 2:55 PM	05:00	6.50 pH	21.59 °C	666.25 µS/cm	0.58 mg/L	17.00 NTU	39.0 mV	17.85 ft	200.00 ml/min
8/13/2021 3:00 PM	10:00	6.50 pH	21.21 °C	677.77 µS/cm	0.37 mg/L	12.90 NTU	26.9 mV	17.91 ft	200.00 ml/min
8/13/2021 3:05 PM	15:00	6.50 pH	20.68 °C	677.36 µS/cm	0.30 mg/L	10.99 NTU	20.3 mV	17.91 ft	200.00 ml/min
8/13/2021 3:10 PM	20:00	6.49 pH	20.34 °C	671.91 µS/cm	0.28 mg/L	9.75 NTU	16.3 mV	17.91 ft	200.00 ml/min
8/13/2021 3:15 PM	25:00	6.48 pH	20.15 °C	666.13 µS/cm	0.22 mg/L	8.80 NTU	12.6 mV	17.91 ft	200.00 ml/min
8/13/2021 3:20 PM	30:00	6.46 pH	20.04 °C	662.37 µS/cm	0.18 mg/L	7.58 NTU	10.3 mV	17.91 ft	200.00 ml/min
8/13/2021 3:25 PM	35:00	6.45 pH	19.93 °C	658.74 µS/cm	0.18 mg/L	6.69 NTU	8.4 mV	17.91 ft	200.00 ml/min
8/13/2021 3:30 PM	40:00	6.44 pH	19.94 °C	654.63 µS/cm	0.16 mg/L	4.61 NTU	6.4 mV	17.91 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-105	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/13/2021 1:37:16 PM
Project: GP-Plant Hammond
Operator Name: Ashley Ramsey

Location Name: HGWC-107 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 28.20 ft Total Depth: 38.20 ft** **Initial Depth to Water: 14.87 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 33.20 ft** **Estimated Total Volume Pumped: 6 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: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Sunny, 91 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 1:37 PM	00:00	6.24 pH	26.60 °C	377.93 µS/cm	2.19 mg/L	4.83 NTU	70.6 mV	14.87 ft	200.00 ml/min
8/13/2021 1:42 PM	05:00	6.16 pH	21.24 °C	410.45 µS/cm	0.50 mg/L	4.09 NTU	102.3 mV	14.90 ft	200.00 ml/min
8/13/2021 1:47 PM	10:00	6.12 pH	20.84 °C	411.83 µS/cm	0.23 mg/L	3.50 NTU	132.2 mV	14.90 ft	200.00 ml/min
8/13/2021 1:52 PM	15:00	6.12 pH	20.70 °C	409.01 µS/cm	0.15 mg/L	3.15 NTU	106.3 mV	14.90 ft	200.00 ml/min
8/13/2021 1:57 PM	20:00	6.11 pH	20.60 °C	410.11 µS/cm	0.12 mg/L	2.84 NTU	105.8 mV	14.90 ft	200.00 ml/min
8/13/2021 2:02 PM	25:00	6.11 pH	20.62 °C	408.78 µS/cm	0.11 mg/L	2.98 NTU	106.1 mV	14.90 ft	200.00 ml/min
8/13/2021 2:07 PM	30:00	6.11 pH	20.57 °C	408.11 µS/cm	0.11 mg/L	2.85 NTU	105.9 mV	14.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-107	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/13/2021 9:06:20 AM
Project: GP-Plant Hammond Bladder
Operator Name: Ashley Ramsey

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: 8.49 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 26.36 ft** **Estimated Total Volume Pumped: 3.4 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: 728623**

Test Notes:
Five bottles: Full app. III & IV.

Weather Conditions:
Sunny, 91 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 9:06 AM	00:00	6.77 pH	19.50 °C	363.48 µS/cm	0.19 mg/L	136.00 NTU	-68.4 mV	8.49 ft	200.00 ml/min
8/13/2021 9:11 AM	05:00	6.74 pH	19.53 °C	359.35 µS/cm	0.24 mg/L	85.00 NTU	-69.3 mV	8.52 ft	200.00 ml/min
8/13/2021 9:16 AM	10:00	6.74 pH	19.50 °C	356.64 µS/cm	0.19 mg/L	86.60 NTU	-69.5 mV	8.52 ft	200.00 ml/min
8/13/2021 9:21 AM	15:00	6.73 pH	19.44 °C	355.50 µS/cm	0.17 mg/L	79.60 NTU	-68.3 mV	8.52 ft	200.00 ml/min
8/13/2021 9:26 AM	20:00	6.73 pH	19.57 °C	354.47 µS/cm	0.24 mg/L	69.00 NTU	-76.4 mV	8.52 ft	200.00 ml/min
8/13/2021 9:31 AM	25:00	6.73 pH	19.46 °C	355.43 µS/cm	0.18 mg/L	46.40 NTU	-76.6 mV	8.52 ft	200.00 ml/min
8/13/2021 9:36 AM	30:00	6.72 pH	19.53 °C	354.30 µS/cm	0.16 mg/L	42.00 NTU	-75.9 mV	8.52 ft	200.00 ml/min
8/13/2021 9:41 AM	35:00	6.71 pH	19.51 °C	355.66 µS/cm	0.15 mg/L	31.40 NTU	-67.7 mV	8.52 ft	200.00 ml/min
8/13/2021 9:46 AM	40:00	6.72 pH	19.51 °C	356.09 µS/cm	0.16 mg/L	24.10 NTU	-67.2 mV	8.52 ft	200.00 ml/min
8/13/2021 9:51 AM	45:00	6.72 pH	19.41 °C	356.66 µS/cm	0.15 mg/L	22.90 NTU	-74.5 mV	8.52 ft	200.00 ml/min
8/13/2021 9:56 AM	50:00	6.72 pH	19.53 °C	354.35 µS/cm	0.15 mg/L	15.80 NTU	-66.7 mV	8.52 ft	200.00 ml/min
8/13/2021 10:01 AM	55:00	6.72 pH	19.68 °C	354.94 µS/cm	0.15 mg/L	14.50 NTU	-74.5 mV	8.52 ft	200.00 ml/min
8/13/2021 10:06 AM	01:00:00	6.71 pH	19.43 °C	355.02 µS/cm	0.15 mg/L	14.00 NTU	-65.6 mV	8.52 ft	200.00 ml/min

8/13/2021 10:11 AM	01:05:00	6.72 pH	20.83 °C	360.20 µS/cm	0.16 mg/L	12.50 NTU	-76.7 mV	8.52 ft	200.00 ml/min
8/13/2021 10:16 AM	01:10:00	6.71 pH	21.48 °C	355.90 µS/cm	0.23 mg/L	13.20 NTU	-67.6 mV	8.52 ft	200.00 ml/min
8/13/2021 10:21 AM	01:15:00	6.71 pH	21.78 °C	355.26 µS/cm	0.25 mg/L	13.70 NTU	-67.1 mV	8.52 ft	200.00 ml/min
8/13/2021 10:26 AM	01:20:00	6.71 pH	21.78 °C	354.53 µS/cm	0.26 mg/L	12.20 NTU	-66.0 mV	8.52 ft	200.00 ml/min
8/13/2021 10:31 AM	01:25:00	6.69 pH	21.96 °C	355.47 µS/cm	0.27 mg/L	11.90 NTU	-65.7 mV	8.52 ft	200.00 ml/min
8/13/2021 10:36 AM	01:30:00	6.70 pH	22.08 °C	356.10 µS/cm	0.27 mg/L	11.30 NTU	-65.9 mV	8.52 ft	200.00 ml/min
8/13/2021 10:41 AM	01:35:00	6.71 pH	22.13 °C	356.13 µS/cm	0.28 mg/L	11.06 NTU	-73.0 mV	8.52 ft	200.00 ml/min
8/13/2021 10:46 AM	01:40:00	6.71 pH	22.05 °C	354.87 µS/cm	0.27 mg/L	10.89 NTU	-65.2 mV	8.52 ft	200.00 ml/min
8/13/2021 10:51 AM	01:45:00	6.71 pH	22.18 °C	355.67 µS/cm	0.28 mg/L	9.90 NTU	-72.7 mV	8.52 ft	200.00 ml/min
8/13/2021 10:56 AM	01:50:00	6.70 pH	22.01 °C	355.69 µS/cm	0.27 mg/L	9.70 NTU	-64.5 mV	8.52 ft	200.00 ml/min
8/13/2021 11:01 AM	01:55:00	6.71 pH	22.13 °C	357.32 µS/cm	0.28 mg/L	9.77 NTU	-72.3 mV	8.52 ft	200.00 ml/min
8/13/2021 11:06 AM	02:00:00	6.72 pH	22.27 °C	356.75 µS/cm	0.27 mg/L	8.42 NTU	-65.5 mV	8.52 ft	200.00 ml/min
8/13/2021 11:11 AM	02:05:00	6.72 pH	22.14 °C	357.02 µS/cm	0.27 mg/L	7.65 NTU	-72.5 mV	8.52 ft	200.00 ml/min
8/13/2021 11:16 AM	02:10:00	6.72 pH	22.13 °C	356.33 µS/cm	0.27 mg/L	7.22 NTU	-65.0 mV	8.52 ft	200.00 ml/min
8/13/2021 11:21 AM	02:15:00	6.71 pH	22.05 °C	355.92 µS/cm	0.27 mg/L	6.82 NTU	-64.3 mV	8.52 ft	200.00 ml/min
8/13/2021 11:26 AM	02:20:00	6.71 pH	22.31 °C	356.52 µS/cm	0.27 mg/L	6.14 NTU	-64.8 mV	8.52 ft	200.00 ml/min
8/13/2021 11:31 AM	02:25:00	6.72 pH	22.27 °C	355.33 µS/cm	0.27 mg/L	5.87 NTU	-64.4 mV	8.52 ft	200.00 ml/min
8/13/2021 11:36 AM	02:30:00	6.72 pH	22.27 °C	357.39 µS/cm	0.27 mg/L	5.73 NTU	-64.9 mV	8.52 ft	200.00 ml/min
8/13/2021 11:41 AM	02:35:00	6.72 pH	22.68 °C	354.76 µS/cm	0.27 mg/L	5.42 NTU	-71.9 mV	8.52 ft	200.00 ml/min
8/13/2021 11:46 AM	02:40:00	6.72 pH	22.81 °C	355.02 µS/cm	0.26 mg/L	5.21 NTU	-65.1 mV	8.52 ft	200.00 ml/min
8/13/2021 11:51 AM	02:45:00	6.70 pH	22.98 °C	354.44 µS/cm	0.26 mg/L	4.57 NTU	-71.4 mV	8.52 ft	200.00 ml/min
8/13/2021 11:56 AM	02:50:00	6.71 pH	23.21 °C	354.19 µS/cm	0.26 mg/L	4.47 NTU	-65.1 mV	8.52 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-109	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/19/2021 5:44:41 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

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** **Initial Depth to Water: 14.91 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 35.26 ft** **Estimated Total Volume Pumped: 9 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.04 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Cloudy, 80 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 5:44 PM	00:00	5.81 pH	20.70 °C	219.66 µS/cm	0.28 mg/L	1.95 NTU	148.1 mV	14.95 ft	200.00 ml/min
8/19/2021 5:48 PM	03:55	5.79 pH	20.56 °C	217.09 µS/cm	0.22 mg/L	1.87 NTU	122.4 mV	14.95 ft	200.00 ml/min
8/19/2021 5:53 PM	08:55	5.79 pH	20.52 °C	214.70 µS/cm	0.18 mg/L	1.47 NTU	135.9 mV	14.95 ft	200.00 ml/min
8/19/2021 5:58 PM	13:55	5.79 pH	20.60 °C	215.93 µS/cm	0.17 mg/L	0.87 NTU	96.8 mV	14.95 ft	200.00 ml/min
8/19/2021 6:03 PM	18:55	5.82 pH	20.69 °C	235.24 µS/cm	0.16 mg/L	0.95 NTU	93.0 mV	14.95 ft	200.00 ml/min
8/19/2021 6:08 PM	23:55	5.93 pH	20.96 °C	290.70 µS/cm	0.16 mg/L	0.99 NTU	86.4 mV	14.95 ft	200.00 ml/min
8/19/2021 6:13 PM	28:55	6.01 pH	21.06 °C	328.84 µS/cm	0.17 mg/L	0.96 NTU	80.1 mV	14.95 ft	200.00 ml/min
8/19/2021 6:18 PM	33:55	6.01 pH	21.16 °C	342.07 µS/cm	0.16 mg/L	0.85 NTU	77.8 mV	14.95 ft	200.00 ml/min
8/19/2021 6:23 PM	38:55	6.04 pH	21.19 °C	345.48 µS/cm	0.15 mg/L	1.10 NTU	75.4 mV	14.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-117	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 4:56:31 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-117A **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.40 ft** **Total Depth: 40.40** **Initial Depth to Water: 16.34 ft**	**Pump Type: Peristaltic** **Tubing Type: Polyethylene** **Intake From TOC: 35.40 ft** **Estimated Total Volume Pumped: 12 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Five bottles: Full app. III and IV.

Weather Conditions:
Sunny, 96 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 4:56 PM	00:00	5.88 pH	25.42 °C	324.03 µS/cm	0.36 mg/L	14.40 NTU	154.3 mV	16.32 ft	100.00 ml/min
8/12/2021 5:01 PM	05:00	5.81 pH	23.51 °C	334.10 µS/cm	0.23 mg/L	12.51 NTU	163.1 mV	16.32 ft	100.00 ml/min
8/12/2021 5:06 PM	10:00	5.80 pH	23.37 °C	335.19 µS/cm	0.17 mg/L	6.01 NTU	113.1 mV	16.32 ft	100.00 ml/min
8/12/2021 5:11 PM	15:00	5.83 pH	23.42 °C	333.20 µS/cm	0.15 mg/L	5.85 NTU	104.3 mV	16.32 ft	100.00 ml/min
8/12/2021 5:16 PM	20:00	5.87 pH	23.38 °C	329.22 µS/cm	0.14 mg/L	7.68 NTU	133.5 mV	16.32 ft	100.00 ml/min
8/12/2021 5:21 PM	25:00	5.96 pH	23.16 °C	327.03 µS/cm	0.13 mg/L	7.34 NTU	126.5 mV	16.32 ft	100.00 ml/min
8/12/2021 5:26 PM	30:00	6.05 pH	23.26 °C	332.62 µS/cm	0.12 mg/L	9.68 NTU	88.2 mV	16.32 ft	100.00 ml/min
8/12/2021 5:31 PM	35:00	6.11 pH	23.34 °C	337.44 µS/cm	0.12 mg/L	10.29 NTU	108.4 mV	16.32 ft	100.00 ml/min
8/12/2021 5:36 PM	40:00	6.19 pH	23.38 °C	341.86 µS/cm	0.11 mg/L	10.34 NTU	79.4 mV	16.32 ft	100.00 ml/min
8/12/2021 5:41 PM	45:00	6.22 pH	23.33 °C	342.58 µS/cm	0.11 mg/L	8.27 NTU	98.8 mV	16.32 ft	100.00 ml/min
8/12/2021 5:46 PM	50:00	6.25 pH	23.42 °C	345.88 µS/cm	0.11 mg/L	7.65 NTU	73.6 mV	16.32 ft	100.00 ml/min
8/12/2021 5:51 PM	55:00	6.27 pH	23.34 °C	347.29 µS/cm	0.10 mg/L	4.92 NTU	91.7 mV	16.32 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWC-117A	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/13/2021 1:43:15 PM
Project: GP-Plant Hammond
Operator Name: Connor Cain

Location Name: HGWC-118 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.90 ft** **Total Depth: 40.90 ft** **Initial Depth to Water: 13.12 ft**	**Pump Type: Peristaltic** **Tubing Type: Polyethylene** **Pump Intake From TOC: 35.90 ft** **Estimated Total Volume Pumped: 7 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: 728541**

Test Notes:
Five bottles: Full App. III and IV.

Weather Conditions:
Sunny, 92 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 1:43 PM	00:00	6.94 pH	27.69 °C	508.13 µS/cm	0.88 mg/L	0.67 NTU	20.4 mV	13.20 ft	200.00 ml/min
8/13/2021 1:48 PM	05:00	6.78 pH	24.64 °C	527.16 µS/cm	0.40 mg/L	0.22 NTU	34.1 mV	13.20 ft	200.00 ml/min
8/13/2021 1:53 PM	10:00	6.78 pH	24.69 °C	527.15 µS/cm	0.33 mg/L	0.67 NTU	39.5 mV	13.20 ft	200.00 ml/min
8/13/2021 1:58 PM	15:00	6.77 pH	24.33 °C	526.59 µS/cm	0.55 mg/L	0.21 NTU	37.6 mV	13.20 ft	200.00 ml/min
8/13/2021 2:03 PM	20:00	6.78 pH	24.72 °C	528.67 µS/cm	0.39 mg/L	0.95 NTU	34.5 mV	13.20 ft	200.00 ml/min
8/13/2021 2:08 PM	25:00	6.77 pH	24.99 °C	523.31 µS/cm	0.36 mg/L	0.22 NTU	31.2 mV	13.20 ft	200.00 ml/min
8/13/2021 2:13 PM	30:00	6.78 pH	24.78 °C	519.98 µS/cm	0.44 mg/L	0.85 NTU	33.2 mV	13.20 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-118	Grab sample.

September 2021

Low-Flow Test Report:

Test Date / Time: 9/27/2021 12:45:25 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-117A **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30 ft** **Total Depth: 40.4 ft** **Initial Depth to Water: 15.76 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 35 ft** **Estimated Total Volume Pumped: 6.3 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: 728638**

Test Notes:
5 bottles

Weather Conditions:
Sunny, 82 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/27/2021 12:45 PM	00:00	5.53 pH	22.64 °C	274.20 µS/cm	2.09 mg/L	0.12 NTU	14.5 mV	15.78 ft	200.00 ml/min
9/27/2021 12:47 PM	01:44	5.54 pH	22.57 °C	279.66 µS/cm	0.44 mg/L	0.12 NTU	8.3 mV	15.78 ft	200.00 ml/min
9/27/2021 12:52 PM	06:44	5.56 pH	22.39 °C	284.32 µS/cm	0.49 mg/L	0.00 NTU	1.1 mV	15.78 ft	200.00 ml/min
9/27/2021 12:57 PM	11:44	5.57 pH	22.44 °C	284.04 µS/cm	0.37 mg/L	0.09 NTU	-12.3 mV	15.78 ft	200.00 ml/min
9/27/2021 1:02 PM	16:44	5.57 pH	22.65 °C	284.62 µS/cm	0.43 mg/L	0.33 NTU	-0.6 mV	15.78 ft	200.00 ml/min
9/27/2021 1:07 PM	21:44	5.65 pH	22.52 °C	273.84 µS/cm	0.44 mg/L	0.37 NTU	-1.9 mV	15.78 ft	200.00 ml/min
9/27/2021 1:12 PM	26:44	5.74 pH	22.62 °C	294.96 µS/cm	0.35 mg/L	0.51 NTU	-3.1 mV	15.78 ft	200.00 ml/min
9/27/2021 1:17 PM	31:44	5.84 pH	22.80 °C	302.09 µS/cm	0.50 mg/L	0.41 NTU	-3.0 mV	15.78 ft	200.00 ml/min
9/27/2021 1:22 PM	36:44	5.93 pH	22.80 °C	311.76 µS/cm	0.42 mg/L	0.33 NTU	-1.3 mV	15.78 ft	200.00 ml/min
9/27/2021 1:23 PM	38:18	5.94 pH	22.80 °C	313.14 µS/cm	0.48 mg/L	--	-1.9 mV	15.78 ft	200.00 ml/min
9/27/2021 1:28 PM	43:18	6.01 pH	22.63 °C	320.51 µS/cm	0.39 mg/L	0.23 NTU	0.0 mV	15.78 ft	200.00 ml/min
9/27/2021 1:33 PM	48:18	6.07 pH	22.72 °C	324.85 µS/cm	0.42 mg/L	0.74 NTU	1.3 mV	15.78 ft	200.00 ml/min
9/27/2021 1:38 PM	53:18	6.11 pH	22.68 °C	329.89 µS/cm	0.41 mg/L	0.31 NTU	-7.6 mV	15.78 ft	200.00 ml/min

9/27/2021 1:44 PM	58:38	6.14 pH	22.59 °C	335.41 µS/cm	0.44 mg/L	0.27 NTU	8.9 mV	15.78 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-117A	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 9/27/2021 2:41:28 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

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: 15.99 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly** **Pump Intake From TOC: 35.25 ft** **Estimated Total Volume Pumped: 9 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: 728638**

Test Notes:
5 bottles.

Weather Conditions:
Sunny, 80 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/27/2021 2:41 PM	00:00	5.45 pH	24.10 °C	256.29 µS/cm	0.41 mg/L	8.89 NTU	92.3 mV	16.00 ft	200.00 ml/min
9/27/2021 2:46 PM	05:00	5.57 pH	22.63 °C	301.84 µS/cm	0.33 mg/L	7.89 NTU	65.9 mV	16.00 ft	200.00 ml/min
9/27/2021 2:51 PM	10:00	5.61 pH	22.46 °C	318.72 µS/cm	0.23 mg/L	6.20 NTU	60.2 mV	16.00 ft	200.00 ml/min
9/27/2021 2:56 PM	15:00	5.63 pH	22.26 °C	325.32 µS/cm	0.27 mg/L	3.31 NTU	77.8 mV	16.00 ft	200.00 ml/min
9/27/2021 3:01 PM	20:00	5.63 pH	22.31 °C	331.12 µS/cm	0.23 mg/L	3.37 NTU	53.9 mV	16.00 ft	200.00 ml/min
9/27/2021 3:06 PM	25:00	5.65 pH	22.13 °C	335.67 µS/cm	0.23 mg/L	2.90 NTU	69.7 mV	16.00 ft	200.00 ml/min
9/27/2021 3:11 PM	30:00	5.65 pH	22.22 °C	354.46 µS/cm	0.23 mg/L	2.07 NTU	71.9 mV	16.00 ft	200.00 ml/min
9/27/2021 3:16 PM	35:00	5.65 pH	22.26 °C	345.82 µS/cm	0.21 mg/L	2.02 NTU	54.1 mV	16.00 ft	200.00 ml/min
9/27/2021 3:21 PM	40:00	5.66 pH	22.35 °C	345.47 µS/cm	0.20 mg/L	1.92 NTU	70.6 mV	16.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-117	Grab Sample.

CALIBRATION REPORTS

August 2021

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN

Date: 8/12/21

Time (start): 0720

Time (finish): 0751

smarTroll SN: 728541

Turbidity Meter Type: LaMote 2020we

SN: 2953

Weather Conditions: Cloudy, 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)	20440203 02/22	23.79	4490	4511.8	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.98	4.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20440203 2/22	29.16	4.00	4.03	4.0	+/- 0.1 SU	Yes / No	
pH (7)	19450117 2/22	25.45	7.00	6.95	7.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19450117 2/22	28.69	7.00	7.0	7.0	+/- 0.1 SU	Yes / No	
pH (10)	21010067 2/22	25.36	10.00	10.02	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	21010067 2/22	28.25	10.00	10.0	10.0	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 2/22	25.57	228	229.4	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	99.16	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.08	0.08	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.73	1.0	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	12.56	10.0	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Hressler | Date: 6/17/2021 | Time (start): 0720 | Time (finish): 0750

smarTroll SN: 728634 | Turbidity Meter Type: LaMote 2020we | SN: 5473-1515

Weather Conditions: Sunny | 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)	20440203 2/22	24.37	4490	4625.4	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.96	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	" "	✓	4.00	4.02	✓	+/- 0.1 SU	Yes No	
pH (7)	21680158 6/22	24.81	7.00	6.98	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	" "	✓	7.00	6.97	✓	+/- 0.1 SU	Yes No	
pH (10)	21050189 6/22	25.17	10.00	9.95	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	" "	✓	10.00	10.08	✓	+/- 0.1 SU	Yes No	
ORP (mV)	19160161 2/22	25.27	228	236.0	228	+/- 20mV	Yes (No)	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	97	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.47	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.91	0.98	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.15	10.04	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsey

Date: 8/12/21

Time (start): 0720

Time (finish): 0745

smarTroll SN: 728623

Turbidity Meter Type: LaMote 2020we

SN: 1859-0412

Weather Conditions: Sunny, 91

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)	2044023 2/22	23.48	4490	4421.8	4490.0	+/- 5 %	Yes / No	
pH (4)			4.00	3.97	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		31.76	4.00	3.97		+/- 0.1 SU	Yes / No	
pH (7)	21080188 6/22	23.70	7.00	6.97	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check		31.52	7.00	7.02		+/- 0.1 SU	Yes / No	
pH (10)	21080189 6/22	23.54	10.00	9.99	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check		30.89	10.00	9.98		+/- 0.1 SU	Yes / No	
ORP (mV)	1946961 2/22	23.43	228	234.7	228.0	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	100.60	100.00	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.85	0.00	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	2.32	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	7.62	10.00	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: C.CAIN

Date: 8/13/21

Time (start): 0725

Time (finish): 0750

smarTroll SN: 728541

Turbidity Meter Type: LaMote 2020we

SN: 2953

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)	20440203 2/22	25.48	4490	4461	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.97	4.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		37.31	4.00	4.37	4.0	+/- 0.1 SU	Yes / No	
pH (7)	19450117 2/22	26.33	7.00	6.96	7.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check		34.48	7.00	7.13	7.0	+/- 0.1 SU	Yes / No	
pH (10)	21010067 2/22	25.97	10.00	9.97	10.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check		33.61	10.00	9.80	10.0	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 2/22	26.15	228	225.6	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	100.25	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.06	0.05	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.74	1.0	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	12.2	10.0	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsey | Date: 8/13/21 | Time (start): 0725 | Time (finish): 0750

smarTroll SN: 728623 | Turbidity Meter Type: LaMote 2020we | SN: 1859-0412

Weather Conditions: sunny, 91 | 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)	2044025 2/22	25.65	4490	4535.2	4490.0	+/- 5 %	Yes No	
pH (4)			4.00	4.03	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	" "	31.56	4.00	4.03		+/- 0.1 SU	Yes No	
pH (7)	21080188 6/22	25.86	7.00	7.02	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	" "	31.89	7.00	7.03		+/- 0.1 SU	Yes No	
pH (10)	21080189 6/22	25.91	10.00	9.99	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	" "	30.88	10.00	10.02		+/- 0.1 SU	Yes No	
ORP (mV)	19460167 2/22	25.78	228	226.3	228.0	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.33	100.00	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.61	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	2.12	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	7.57	10.0	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsey

Date: 8/16/21

Time (start): 0735

Time (finish): 0805

smarTroll SN: 728623

Turbidity Meter Type: LaMote 2020we

SN: 1459-6412

Weather Conditions: Cloudy, 88

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)	2044203 2/22	26.15	4490	4384.9	4490.0	+/- 5 %	Yes / No	
pH (4)			4.00	4.02	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	21080188 6/22	26.18 (30.39)	4.00	4.03	—	+/- 0.1 SU	Yes / No	
pH (7)	↓	↓	7.00	6.95	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	" "	30.44	7.00	7.03	—	+/- 0.1 SU	Yes / No	
pH (10)	21080180 6/22	26.15	10.00	9.91	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	" "	30.49	10.00	9.96	—	+/- 0.1 SU	Yes / No	
ORP (mV)	19460162 2/22	26.10	228	225.0	228.0	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	99.83	100.0	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	1.00	0.00	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.47	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	6.86	10.00	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kussler | Date: 8/19 | Time (start): 0728 | Time (finish): 0815

smarTroll SN: 726634 | Turbidity Meter Type: LaMote 2020we | SN: 5773-1515

Weather Conditions: Sunny | 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)	2047089 02122	24.95	4490	4576.1	4490	+/- 5 %	Yes No	
pH (4)			4.00	~~6.94~~ 4.024		+/- 0.1 SU	Yes No	pH = 4.00
Mid-Day pH (4) check	" "	"	4.00	4.01		+/- 0.1 SU	Yes No	
pH (7)	21660188 6122	26.00	7.00	6.95	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	" "		7.00	6.99		+/- 0.1 SU	Yes No	
pH (10)	21050169 06122	26.50	10.00	9.92	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"		10.00	9.97		+/- 0.1 SU	Yes No	
ORP (mV)	19160167 2122	26.36	228	218.9	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	84.39	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	1.23	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.94	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.89	9.95	+/- 0.5 NTU	Yes No	

September 2021

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Hesslin | Date: 9/27/21 | Time (start): 1110 | Time (finish): 1130

smarTroll SN: 728638 | Turbidity Meter Type: LaMote 2020we | SN: 1729-5011

Weather Conditions: Sunny, hot | 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)	21070KD 08/22	21.15	4490	4589.0	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.09	4.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	21050046 08/22	21.77	4.00	7.08	7.0	+/- 0.1 SU	(Yes) No	
pH (7)			7.00			+/- 0.1 SU	Yes No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	06/22 21050184	22.59	10.00	10.00	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	21100141 08/22	22.44	228	227.6	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	106.9	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.08	0.06	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.91	1.00	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	7.32	10.02	+/- 0.5 NTU	(Yes) No	

APPENDIX D

Statistical Analysis Report

GROUNDWATER STATS CONSULTING

February 28, 2022

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 2021 Sample Event – Statistical Analysis

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August 2021 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 currently has at least 8 samples; therefore, data from this well were evaluated during this statistical

analysis. Upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and currently have a maximum of 6 samples which were pooled with neighboring upgradient well data for construction of interwell prediction limits. Upgradient well data are included in construction of interwell prediction limits when a minimum of 2 samples are available. Since piezometer HGWC-117A was first sampled in August 2021 and has only been sampled twice, data were included on time series and box plots, but no formal statistics were required. Data from this well will be evaluated with confidence intervals once a minimum of 4 samples have been collected.

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 and delineation 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) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits

constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for boron or fluoride, making these constituents eligible for interwell analyses. Variation was noted for calcium, chloride, pH, sulfate, and TDS. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

Statistical Evaluation of Appendix III Parameters – August 2021

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 2021 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The August 2021 sample from each downgradient well is compared to the background limit to determine whether statistically significant increases (SSIs) are present. Note that during this analysis, the reporting limit for boron decreased from 0.1 mg/L to 0.04 mg/L. While this resulted in a decrease for the interwell prediction limit, this did not result in any additional exceedances.

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
- Boron: HGWC-107
- Calcium: HGWC-105 and HGWCA-113 (upgradient)

Decreasing
- Boron: HGWC-109
- Sulfate: 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 2021

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 2021 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. The background limits were then used when determining the groundwater protection standard (GWPS) under Georgia EPD Rule 391-3-4-.10(6)(a). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL

Groundwater Protection Standards

Following the above Georgia EPD Rule requirements, GWPS were established for statistical comparison of Appendix IV constituents for the August 2021 sample event according to the state rules (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. Those confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. A summary of the confidence intervals follows this letter. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Note that reporting limits decreased for the following constituents during this analysis:

- Selenium from 0.01 mg/L to 0.005 mg/L

As a result, background limits were lower for selenium. However, the established MCL was higher than the background limits; therefore, the GWPS was not affected. Additionally, some of the confidence intervals constructed on downgradient wells resulted in decreased upper and lower confidence limits since all historical non-detects within a given well are replaced with the most recent reporting limit. A summary of the confidence intervals follows this letter. Exceedances were identified for the following well/constituent pairs:

- Cobalt: HGWC-117

Resample Reports – September 2021

Additional data were collected in September 2021 for all Appendix III and IV constituents in downgradient well HGWC-117 and piezometer HGWC-117A. The resample data for piezometer HGWC-117A are plotted on time series graphs only.

Interwell prediction limits were constructed for Appendix III parameters, using pooled upgradient well data through August 2021, to compare the September 2021 sample at well HGWC-117 (Figure I). Exceedances were identified for the following well/constituent pairs:

- Boron: HGWC-117
- Sulfate: HGWC-117

Confidence intervals were constructed for well HGWC-117 and were compared to the established GWPS (Figure J). An 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,

Abdul Diane
Groundwater Analyst

Andrew T. Collins
Project Manager

100% Non-Detects: Downgradient Appendix IV

Analysis Run 10/13/2021 4:33 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Antimony (mg/L)
HGWC-101, HGWC-105, HGWC-109, HGWC-117, HGWC-118

Arsenic (mg/L)
HGWC-103, HGWC-105, HGWC-107

Beryllium (mg/L)
HGWC-102, HGWC-105, HGWC-107, HGWC-109

Cadmium (mg/L)
HGWC-105, HGWC-109, HGWC-118

Cobalt (mg/L)
HGWC-107

Lithium (mg/L)
HGWC-101

Molybdenum (mg/L)
HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Selenium (mg/L)
HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Thallium (mg/L)
HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 3:49 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	0.02002	n/a	8/16/2021	0.13	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.02002	n/a	8/13/2021	2.4	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.02002	n/a	8/16/2021	3.2	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.02002	n/a	8/13/2021	1.2	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.02002	n/a	8/13/2021	0.73	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.02002	n/a	8/13/2021	0.24	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.02002	n/a	8/19/2021	0.78	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.02002	n/a	8/13/2021	0.59	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-102	73.3	n/a	8/13/2021	119	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.3	n/a	8/16/2021	124	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.3	n/a	8/13/2021	102	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.3	n/a	8/13/2021	84.3	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	6.743	n/a	8/16/2021	10.4	Yes	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.47	8/16/2021	5.4	Yes	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.47	8/13/2021	5.45	Yes	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	18.71	n/a	8/16/2021	72.1	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-102	18.71	n/a	8/13/2021	248	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-103	18.71	n/a	8/16/2021	354	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-105	18.71	n/a	8/13/2021	142	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-107	18.71	n/a	8/13/2021	112	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-109	18.71	n/a	8/13/2021	24.4	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-117	18.71	n/a	8/19/2021	108	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-118	18.71	n/a	8/13/2021	75.1	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	302.5	n/a	8/13/2021	647	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	302.5	n/a	8/16/2021	672	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	302.5	n/a	8/13/2021	441	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	302.5	n/a	8/13/2021	336	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 3:49 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**	**0.02002**	**n/a**	**8/16/2021**	**0.13**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-102**	**0.02002**	**n/a**	**8/13/2021**	**2.4**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-103**	**0.02002**	**n/a**	**8/16/2021**	**3.2**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-105**	**0.02002**	**n/a**	**8/13/2021**	**1.2**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-107**	**0.02002**	**n/a**	**8/13/2021**	**0.73**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-109**	**0.02002**	**n/a**	**8/13/2021**	**0.24**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-117**	**0.02002**	**n/a**	**8/19/2021**	**0.78**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-118**	**0.02002**	**n/a**	**8/13/2021**	**0.59**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-101	73.3	n/a	8/16/2021	22.8	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-102**	**73.3**	**n/a**	**8/13/2021**	**119**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-103**	**73.3**	**n/a**	**8/16/2021**	**124**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-105**	**73.3**	**n/a**	**8/13/2021**	**102**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-107	73.3	n/a	8/13/2021	57.8	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.3	n/a	8/13/2021	43.5	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-117	73.3	n/a	8/19/2021	40.9	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-118**	**73.3**	**n/a**	**8/13/2021**	**84.3**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-101	6.743	n/a	8/16/2021	5.4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-102	6.743	n/a	8/13/2021	6	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	**HGWC-103**	**6.743**	**n/a**	**8/16/2021**	**10.4**	**Yes**	**54**	**1.066**	**0.4274**	**0**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Chloride (mg/L)	HGWC-105	6.743	n/a	8/13/2021	3.7	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-107	6.743	n/a	8/13/2021	3.1	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-109	6.743	n/a	8/13/2021	4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-117	6.743	n/a	8/19/2021	4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-118	6.743	n/a	8/13/2021	4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-101	0.166	n/a	8/16/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.166	n/a	8/13/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.166	n/a	8/16/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.166	n/a	8/13/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.166	n/a	8/13/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.166	n/a	8/13/2021	0.086J	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.166	n/a	8/19/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.166	n/a	8/13/2021	0.075J	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
pH (s.u.)	**HGWC-101**	**7.54**	**5.47**	**8/16/2021**	**5.4**	**Yes**	**60**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001038**	**NP Inter (normality) 1 of 2**
pH (s.u.)	**HGWC-102**	**7.54**	**5.47**	**8/13/2021**	**5.45**	**Yes**	**60**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001038**	**NP Inter (normality) 1 of 2**
pH (s.u.)	HGWC-103	7.54	5.47	8/16/2021	5.59	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.47	8/13/2021	6.44	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.47	8/13/2021	6.11	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.47	8/13/2021	6.71	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.47	8/19/2021	6.04	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.47	8/13/2021	6.78	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-101**	**18.71**	**n/a**	**8/16/2021**	**72.1**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-102**	**18.71**	**n/a**	**8/13/2021**	**248**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-103**	**18.71**	**n/a**	**8/16/2021**	**354**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-105**	**18.71**	**n/a**	**8/13/2021**	**142**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-107**	**18.71**	**n/a**	**8/13/2021**	**112**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-109**	**18.71**	**n/a**	**8/13/2021**	**24.4**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-117**	**18.71**	**n/a**	**8/19/2021**	**108**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-118**	**18.71**	**n/a**	**8/13/2021**	**75.1**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-101	302.5	n/a	8/16/2021	206	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-102**	**302.5**	**n/a**	**8/13/2021**	**647**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-103**	**302.5**	**n/a**	**8/16/2021**	**672**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-105**	**302.5**	**n/a**	**8/13/2021**	**441**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-107	302.5	n/a	8/13/2021	291	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	302.5	n/a	8/13/2021	189	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	302.5	n/a	8/19/2021	253	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-118**	**302.5**	**n/a**	**8/13/2021**	**336**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**

Appendix III Interwell Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 4:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWC-107**	**0.03493**	**54**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.03174**	**-59**	**-53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3831**	**56**	**48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**5.461**	**75**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.511**	**-57**	**-48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Interwell Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 4:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0	-1	-48	No	14	21.43	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.0006186	-19	-48	No	14	28.57	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.0002897	5	48	No	14	14.29	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.008902	4	14	No	6	33.33	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.003338	-5	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101	0.008189	35	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102	-0.4582	-22	-30	No	10	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.05703	27	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.01211	12	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-107**	**0.03493**	**54**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.03174**	**-59**	**-53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-117	0.06827	35	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.009865	-12	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.338	17	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.07036	20	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3831**	**56**	**48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWA-47 (bg)	-1.977	-2	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	0	0	14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-13.74	-12	-30	No	10	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	4.868	47	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-105**	**5.461**	**75**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-118	1.341	37	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.07374	-11	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	0	3	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.08329	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	-0.4451	-4	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.339	43	53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-111 (bg)	0.0425	9	58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.02404	-36	-58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02701	38	58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-47 (bg)	-0.04171	-1	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-48D (bg)	0.02086	2	14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01297	35	63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-102	0.06557	7	30	No	10	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	-0.02369	-18	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02426	-40	-48	No	14	21.43	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.511**	**-57**	**-48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-47 (bg)	-2.098	-9	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-3.129	-5	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-4.001	-39	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-22.81	-5	-30	No	10	10	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	3.195	11	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-7.471	-48	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.198	-36	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-3.066	-49	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117	-1.092	-13	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-0.8812	-18	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	4.854	10	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.162	-10	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	0	-1	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	11.87	1	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0	0	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-55.37	-17	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	0	-1	-53	No	15	0	n/a	n/a	0.01	NP

Appendix III Interwell Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 4:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Total Dissolved Solids (mg/L)	HGWC-105	15.72	35	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-118	-6.518	-23	-53	No	15	0	n/a	n/a	0.01	NP

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/15/2021, 3:36 PM

Constituent	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	43	93.02	n/a	0.1102	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	57	91.23	n/a	0.05373	NP Inter(NDs)
Barium (mg/L)	0.1	n/a	n/a	n/a	n/a	57	0	n/a	0.05373	NP Inter(normality)
Beryllium (mg/L)	0.0019	n/a	n/a	n/a	n/a	57	87.72	n/a	0.05373	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	57	100	n/a	0.05373	NP Inter(NDs)
Chromium (mg/L)	0.0061	n/a	n/a	n/a	n/a	57	31.58	n/a	0.05373	NP Inter(normality)
Cobalt (mg/L)	0.005	n/a	n/a	n/a	n/a	57	85.96	n/a	0.05373	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	1.362	n/a	n/a	n/a	n/a	57	0	No	0.05	Inter
Fluoride (mg/L)	0.1688	n/a	n/a	n/a	n/a	60	26.67	No	0.05	Inter
Lead (mg/L)	0.0016	n/a	n/a	n/a	n/a	57	63.16	n/a	0.05373	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	n/a	n/a	57	42.11	n/a	0.05373	NP Inter(normality)
Mercury (mg/L)	0.0002	n/a	n/a	n/a	n/a	43	72.09	n/a	0.1102	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	43	86.05	n/a	0.1102	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	43	79.07	n/a	0.1102	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	43	100	n/a	0.1102	NP Inter(NDs)

PLANT HAMMOND AP-4 GWPS			
Constituent Name	**MCL**	**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	0.1	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	0.005	0.005
Combined Radium, Total (pCi/L)	5	1.36	5
Fluoride, Total (mg/L)	4	0.17	4
Lead, Total (mg/L)	n/a	0.0016	0.0016
Lithium, Total (mg/L)	n/a	0.03	0.03
Mercury, Total (mg/L)	0.002	0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.005	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

**MCL = Maximum Contaminant Level*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/21/2021, 3:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-117**	**0.01056**	**0.005291**	**0.005**	**Yes**	**15**	**0.00389**	**0**	**No**	**0.01**	**Param.**
Mercury (mg/L)	**HGWC-103**	**0.0005**	**0.00027**	**0.0002**	**Yes**	**11**	**0.0001382**	**81.82**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-105**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.00008442**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-107**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.0001254**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-117**	**0.0005**	**0.0003**	**0.0002**	**Yes**	**11**	**0.0001374**	**81.82**	**No**	**0.006**	**NP (NDs)**

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/21/2021, 3:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.00076	0.006	No	9	0.0007467	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.003	0.006	No	11	0.0002412	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.003	0.006	No	11	0.0005729	90.91	No	0.006	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	15	0.00119	93.33	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	10	0.00223	60	No	0.011	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002628	0.001457	0.01	No	15	0.0009493	0	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	15	0.001195	93.33	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	15	0.001033	93.33	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04648	0.04023	2	No	15	0.004608	0	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03383	0.02637	2	No	10	0.004175	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04095	0.0354	2	No	15	0.004409	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.0745	0.066	2	No	15	0.0049	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03954	0.03685	2	No	15	0.002162	0	x^4	0.01	Param.
Barium (mg/L)	HGWC-109	0.08824	0.08183	2	No	15	0.004732	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.05093	0.04098	2	No	15	0.007342	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.06321	0.05287	2	No	15	0.007629	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	15	0.0002263	53.33	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	15	0.0001797	80	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.0005	0.000066	0.004	No	15	0.00022	60	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	15	0.0001051	93.33	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0002208	0.0001439	0.005	No	15	0.00005678	13.33	No	0.01	Param.
Cadmium (mg/L)	HGWC-102	0.0007379	0.0002681	0.005	No	10	0.0002633	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007934	0.0006692	0.005	No	15	0.00009164	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.00025	0.00009	0.005	No	15	0.00007792	53.33	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117	0.0008752	0.0005888	0.005	No	15	0.0002113	0	No	0.01	Param.
Chromium (mg/L)	HGWC-101	0.005	0.00075	0.1	No	15	0.00195	73.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	10	0.001868	80	No	0.011	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00069	0.1	No	15	0.002021	60	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.00064	0.1	No	15	0.001963	73.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	15	0.0011	93.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	15	0.001412	86.67	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.001	0.1	No	15	0.0019	73.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.00098	0.1	No	15	0.00186	66.67	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002799	0.002028	0.005	No	15	0.0005693	6.667	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002228	0.0009205	0.005	No	10	0.000888	0	x^(1/3)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.002324	0.001782	0.005	No	15	0.0003998	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00045	0.005	No	15	0.0008864	26.67	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002163	0.001246	0.005	No	15	0.000677	0	No	0.01	Param.
Cobalt (mg/L)	**HGWC-117**	**0.01056**	**0.005291**	**0.005**	**Yes**	**15**	**0.00389**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	HGWC-118	0.0025	0.0004	0.005	No	15	0.001028	46.67	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.9272	0.4325	5	No	15	0.365	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.353	0.5045	5	No	9	0.4397	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.9516	0.4448	5	No	15	0.3739	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.9251	0.5184	5	No	15	0.3001	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.136	0.5262	5	No	15	0.4499	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8434	0.5213	5	No	15	0.2376	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.8698	0.3744	5	No	15	0.3655	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.186	0.4655	5	No	14	0.5089	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.05	4	No	16	0.02082	87.5	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.1	0.1	4	No	10	0.03795	90	No	0.011	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.06	4	No	16	0.02358	75	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-105	0.13	0.07	4	No	16	0.03042	56.25	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-107	0.16	0.057	4	No	16	0.03732	56.25	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-109	0.1208	0.07397	4	No	16	0.03597	12.5	No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.09	4	No	16	0.05844	56.25	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-118	0.3	0.075	4	No	17	0.2024	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.0016	No	15	0.00002582	93.33	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.001	0.0016	No	10	0.0002814	90	No	0.011	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00024	0.0016	No	15	0.0003768	66.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.001	0.000068	0.0016	No	15	0.000428	73.33	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00021	0.0016	No	15	0.0003796	73.33	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.0016	No	15	0.0003322	86.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-117	0.001	0.00019	0.0016	No	15	0.0003822	66.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.001	0.00025	0.0016	No	15	0.0003512	66.67	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.00128	0.001028	0.03	No	10	0.0001408	0	No	0.01	Param.
Lithium (mg/L)	HGWC-103	0.03	0.0015	0.03	No	15	0.01175	20	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.004166	0.003821	0.03	No	15	0.0002549	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.03	No	15	0.015	53.33	No	0.01	NP (NDs)

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/21/2021, 3:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Lithium (mg/L)	HGWC-109	0.03	0.001	0.03	No	15	0.01493	53.33	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-117	0.03	0.0017	0.03	No	15	0.01147	20	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.03	No	15	0.01418	40	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0005	0.000099	0.0002	No	11	0.0001634	81.82	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0005	0.0001	0.0002	No	9	0.0001333	88.89	No	0.002	NP (NDs)
Mercury (mg/L)	**HGWC-103**	**0.0005**	**0.00027**	**0.0002**	**Yes**	**11**	**0.0001382**	**81.82**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-105**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.00008442**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-107**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.0001254**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	HGWC-109	0.0005	0.00008	0.0002	No	11	0.0001699	81.82	No	0.006	NP (NDs)
Mercury (mg/L)	**HGWC-117**	**0.0005**	**0.0003**	**0.0002**	**Yes**	**11**	**0.0001374**	**81.82**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	HGWC-118	0.0005	0.00009	0.0002	No	11	0.0001677	81.82	No	0.006	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.0015	0.05	No	9	0.001167	88.89	No	0.002	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.00008	0.002	No	9	0.0003067	88.89	No	0.002	NP (NDs)

Appendix III - Interwell Prediction Limits - Resample Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 11/18/2021, 7:00 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-117**	**0.02002**	**n/a**	**9/27/2021**	**0.67**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-117	73.3	n/a	9/27/2021	37.5	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	6.743	n/a	9/27/2021	3.4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.166	n/a	9/27/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-117	7.54	5.47	9/27/2021	5.66	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-117**	**18.71**	**n/a**	**9/27/2021**	**104**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-117	302.5	n/a	9/27/2021	242	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2

Confidence Interval Summary Table - Resample Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 11/18/2021, 2:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-117**	**0.01107**	**0.005667**	**0.005**	**Yes**	**16**	**0.004153**	**0**	**No**	**0.01**	**Param.**

Confidence Interval Summary Table - Resample All Results

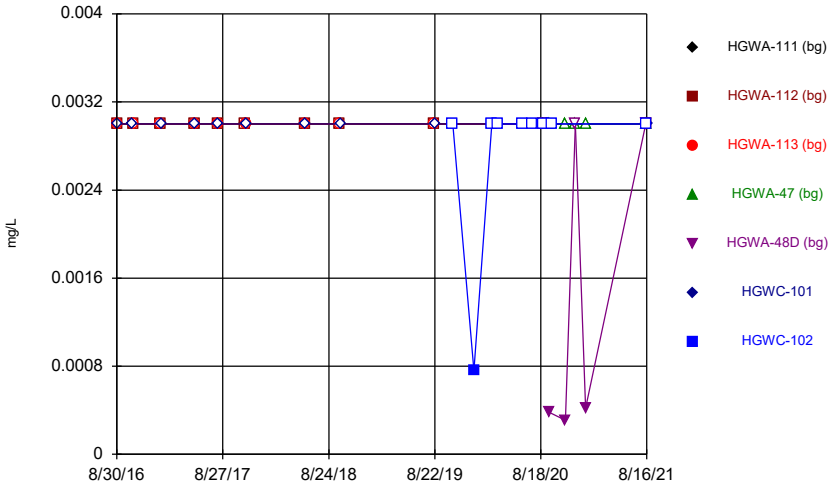
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 11/18/2021, 2:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	16	0.001157	93.75	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-117	0.05025	0.04066	2	No	16	0.007366	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-117	0.0005	0.000066	0.004	No	16	0.0002169	62.5	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117	0.0008863	0.0006087	0.005	No	16	0.0002133	0	No	0.01	Param.
Chromium (mg/L)	HGWC-117	0.005	0.001	0.1	No	16	0.001856	75	No	0.01	NP (NDs)
Cobalt (mg/L)	**HGWC-117**	**0.01107**	**0.005667**	**0.005**	**Yes**	**16**	**0.004153**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.9055	0.4918	5	No	16	0.3601	0	x^2	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.1	4	No	17	0.05662	58.82	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-117	0.001	0.00019	0.0016	No	16	0.0003748	68.75	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-117	0.0035	0.0016	0.03	No	16	0.01925	18.75	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-117	0.0003	0.00007	0.002	No	12	0.00004938	83.33	No	0.01	NP (NDs)

FIGURE A.

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 11/18/2021 2:04 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

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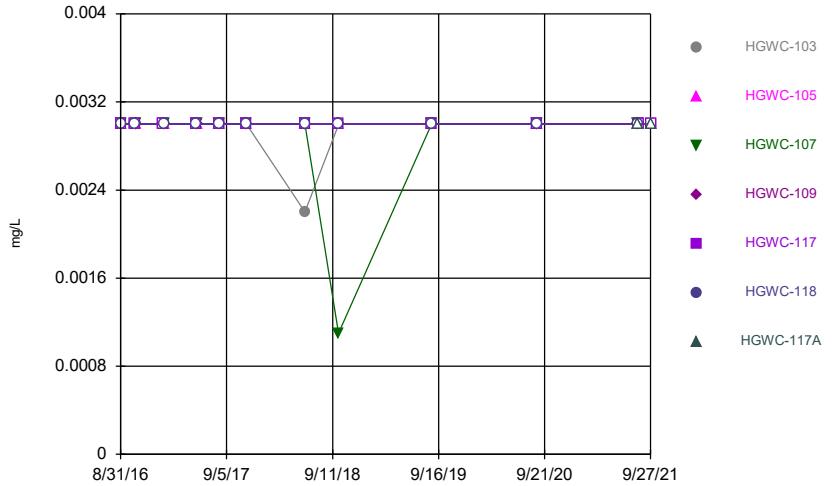

Constituent: Antimony Analysis Run 11/18/2021 2:04 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

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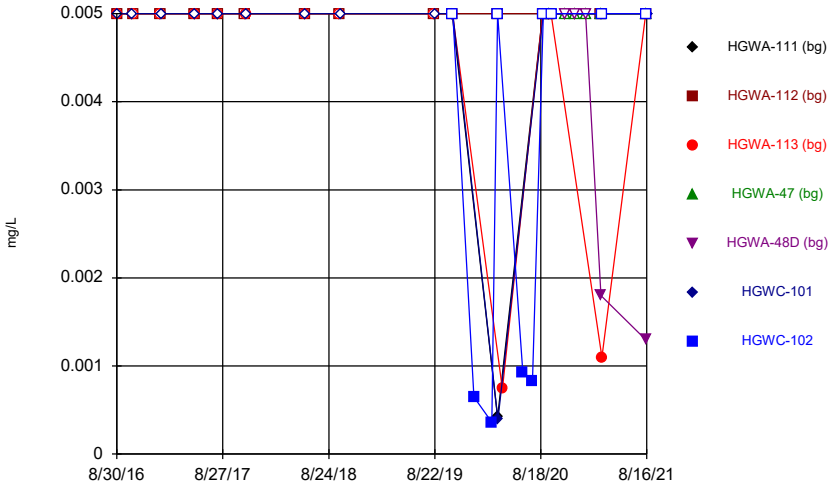

Constituent: Arsenic Analysis Run 11/18/2021 2:04 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

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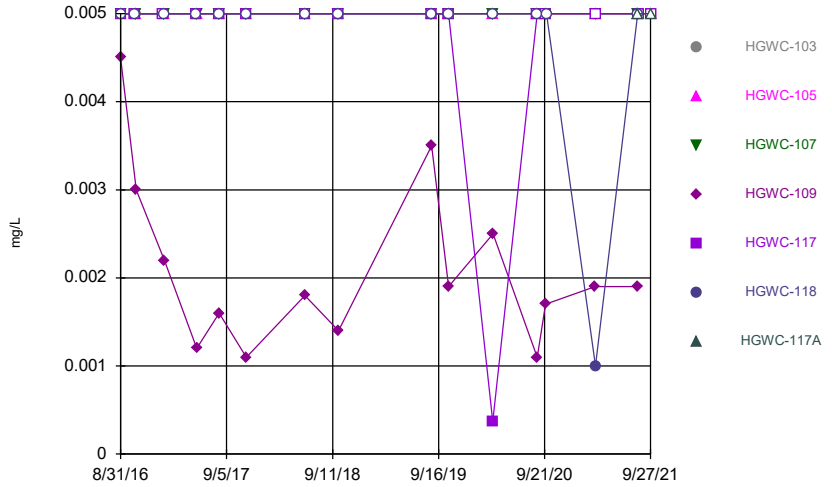

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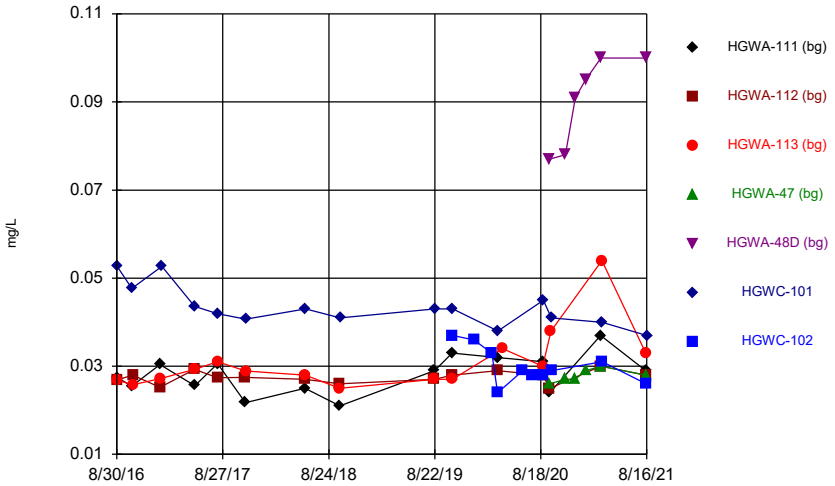
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

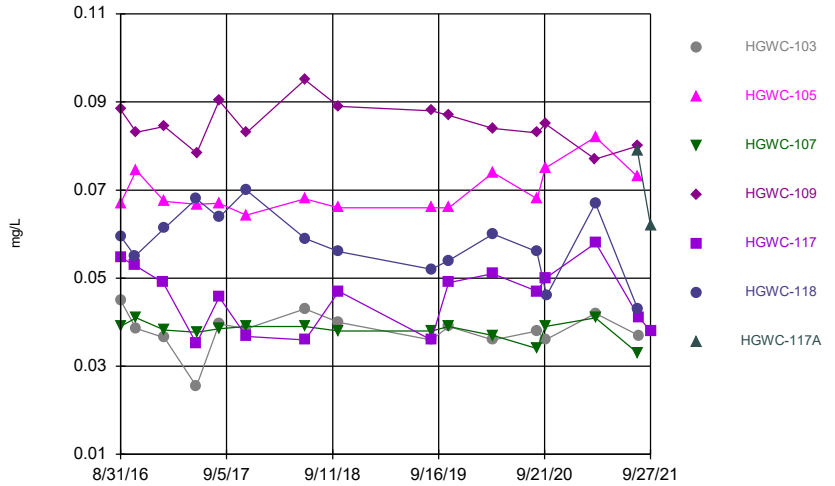
Time Series



Constituent: Barium Analysis Run 11/18/2021 2:04 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Time Series



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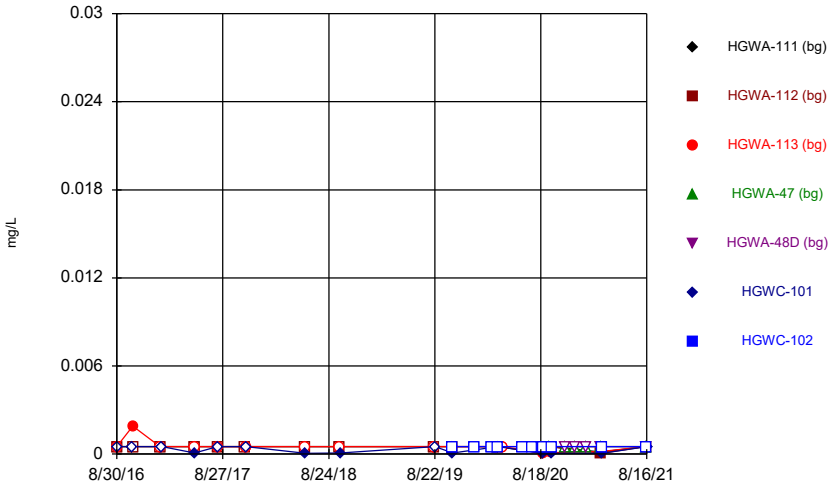

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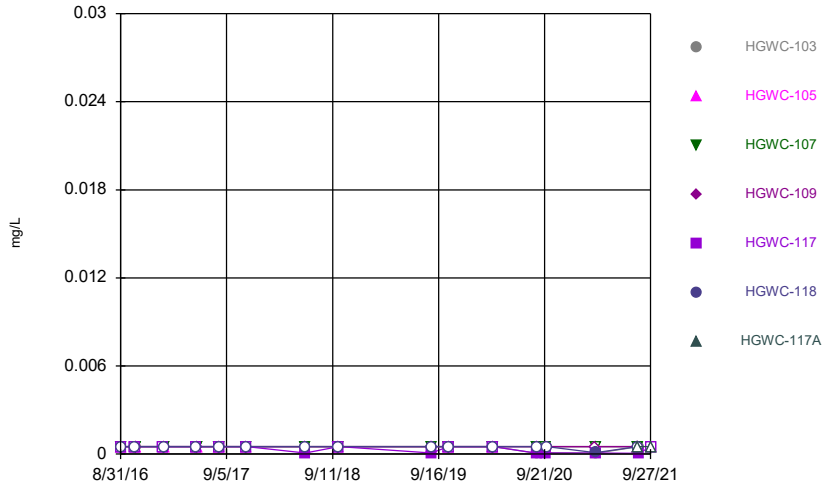

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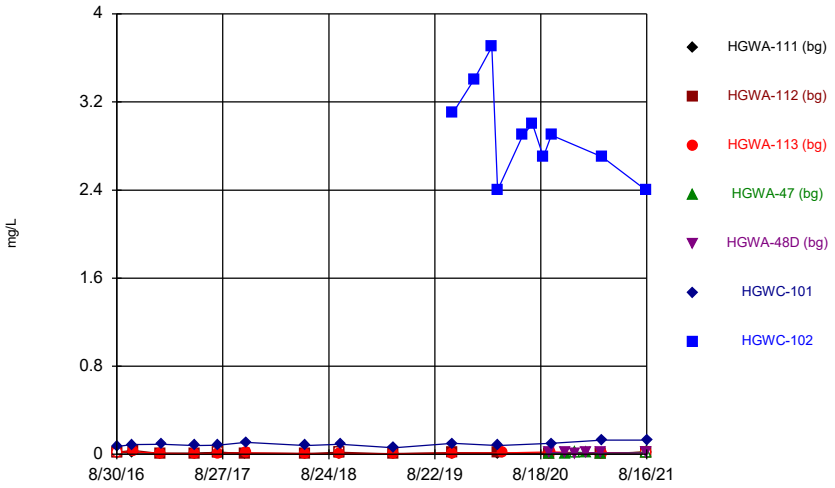

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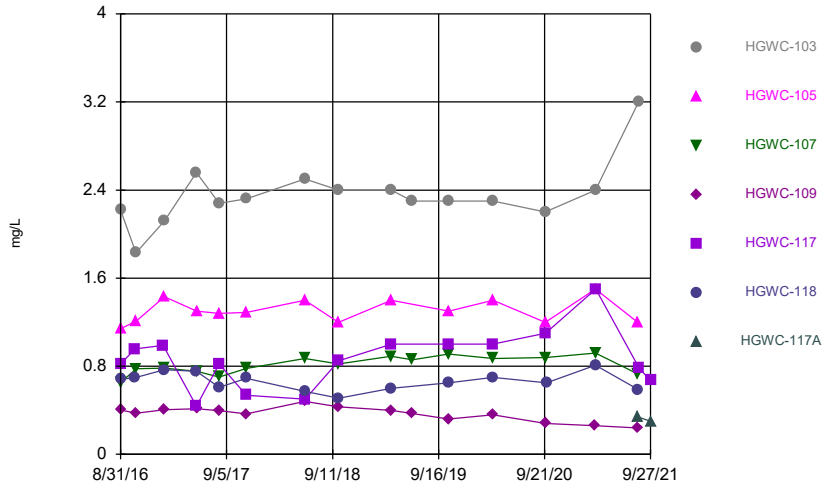
Sanitas™ v.9.6.31 . UG

Time Series



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Sanitas™ v.9.6.31 . UG
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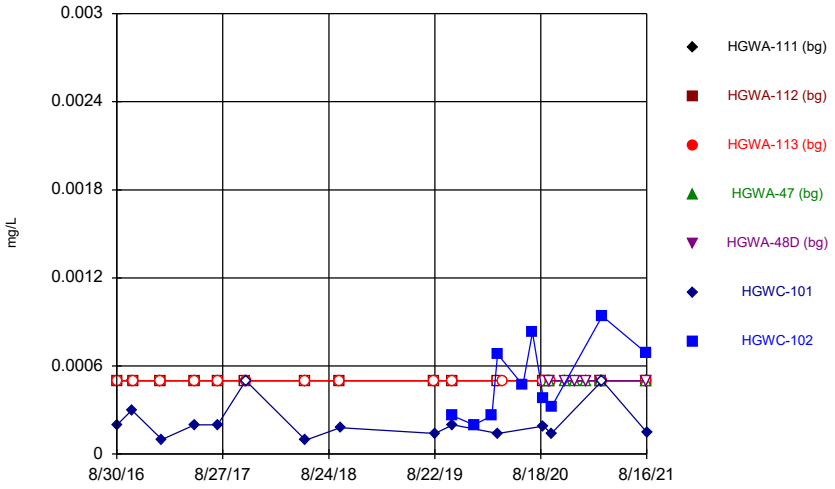

Constituent: Cadmium Analysis Run 11/18/2021 2:04 PM View: Constituents View
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Sanitas™ v.9.6.31 . UG
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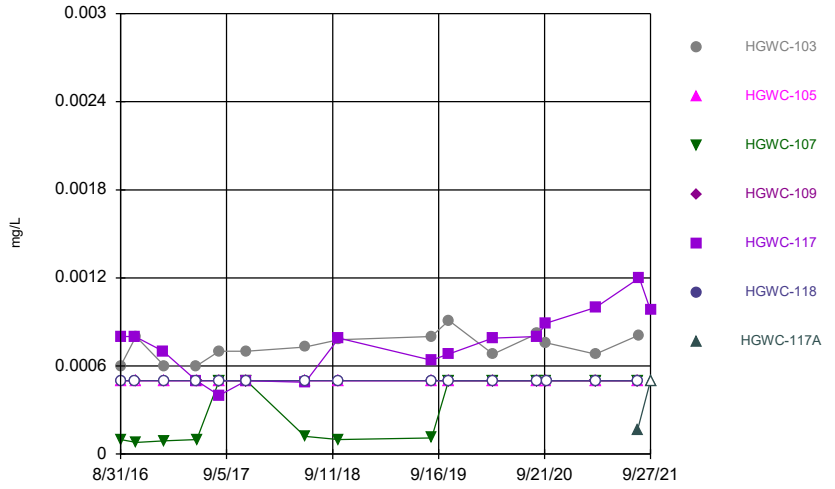

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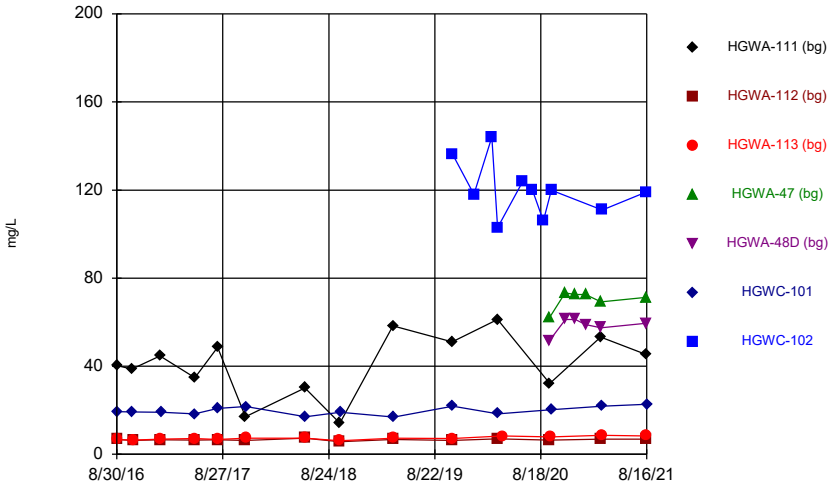
Sanitas™ v.9.6.31 . UG

Time Series



Constituent: Calcium Analysis Run 11/18/2021 2:04 PM View: Constituents View
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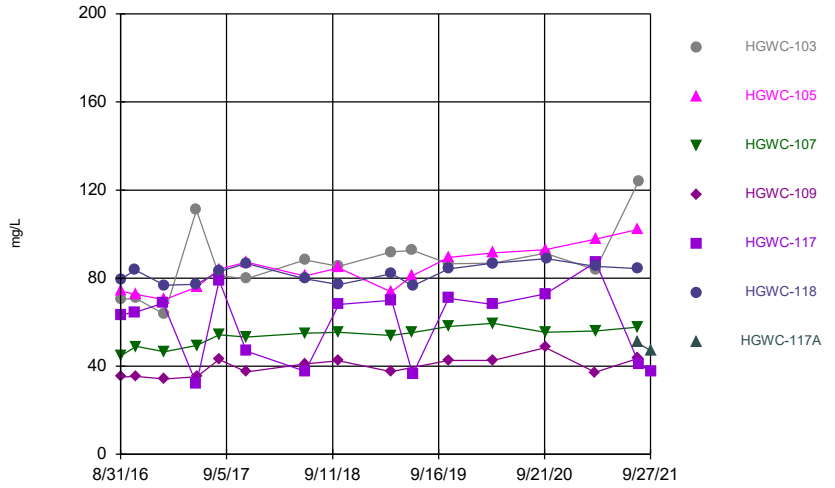
Sanitas™ v.9.6.31 . UG

Time Series



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Sanitas™ v.9.6.31 . UG

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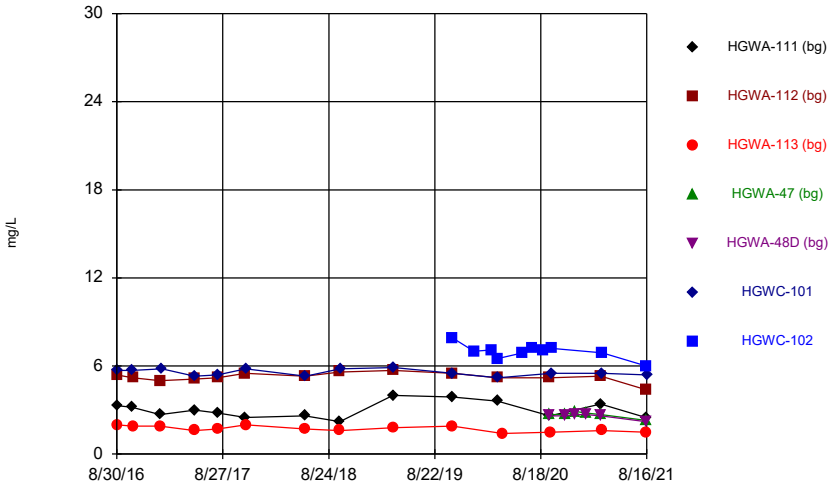

Constituent: Chloride Analysis Run 11/18/2021 2:04 PM View: Constituents View
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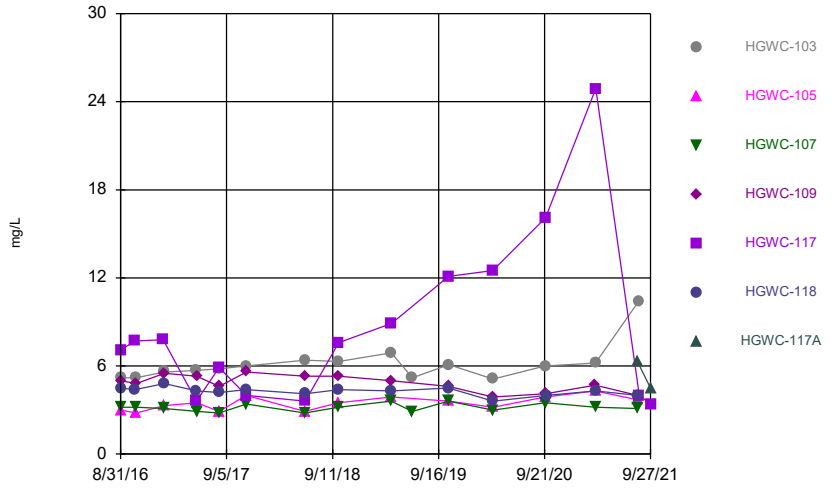
Sanitas™ v.9.6.31 . UG

Time Series



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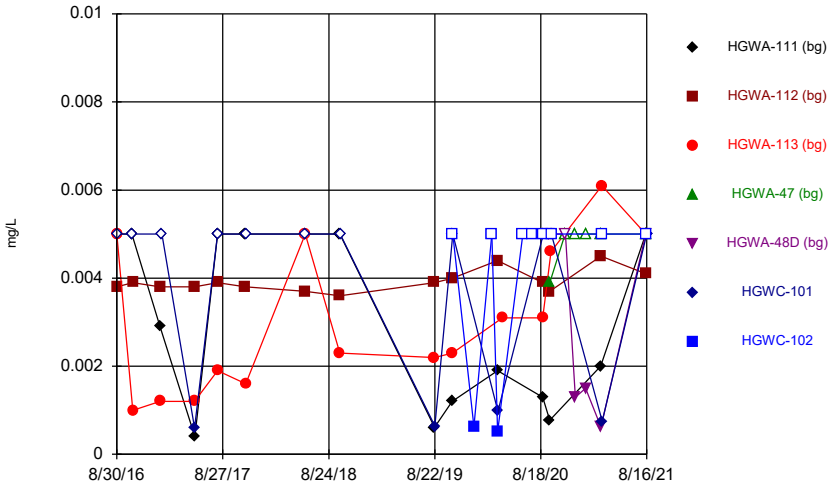

Constituent: Chromium Analysis Run 11/18/2021 2:04 PM View: Constituents View
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Sanitas™ v.9.6.31 . UG
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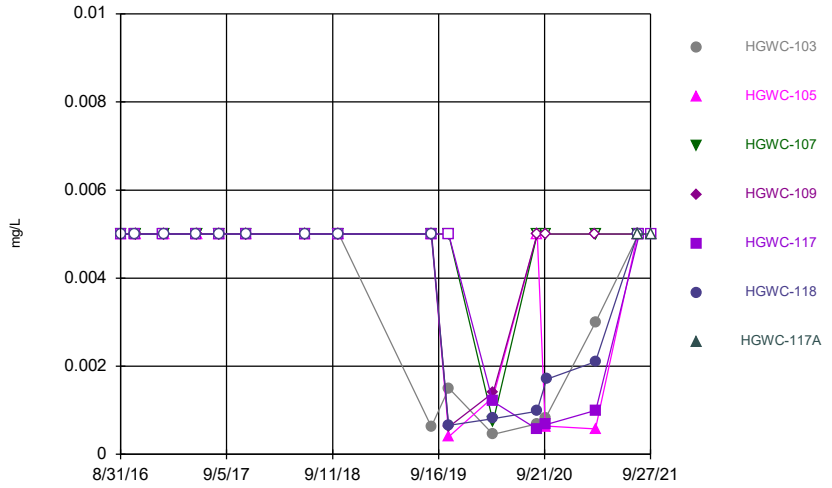

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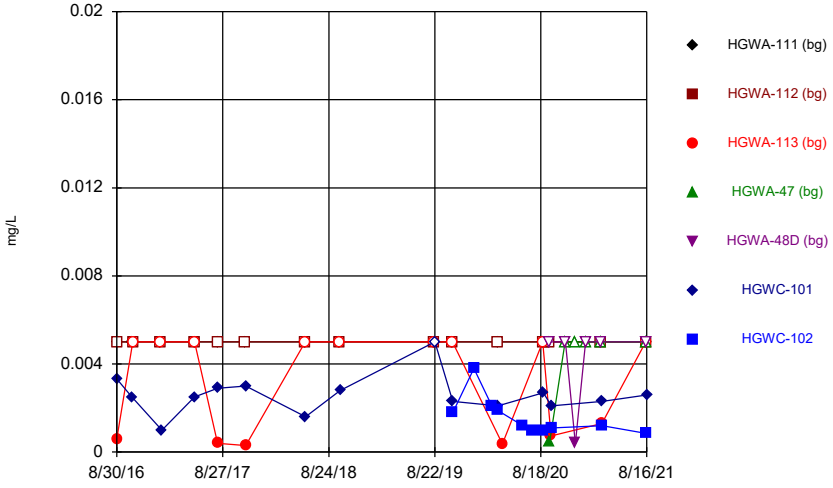

Constituent: Cobalt Analysis Run 11/18/2021 2:04 PM View: Constituents View
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Sanitas™ v.9.6.31 . UG
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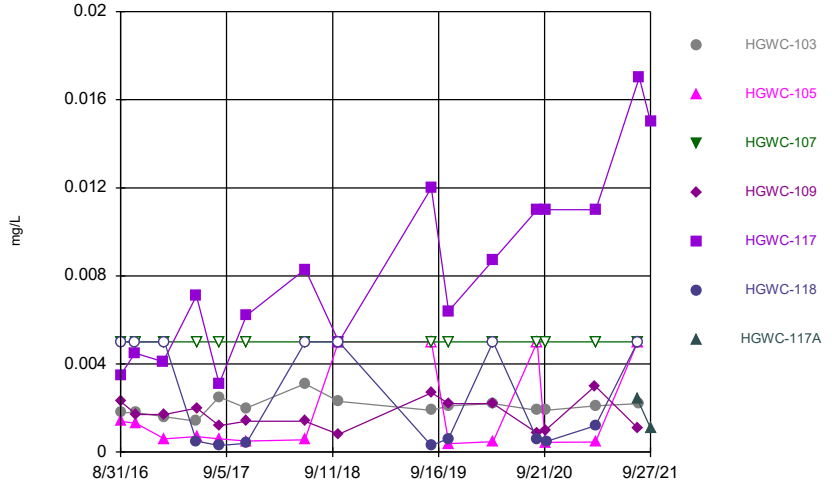

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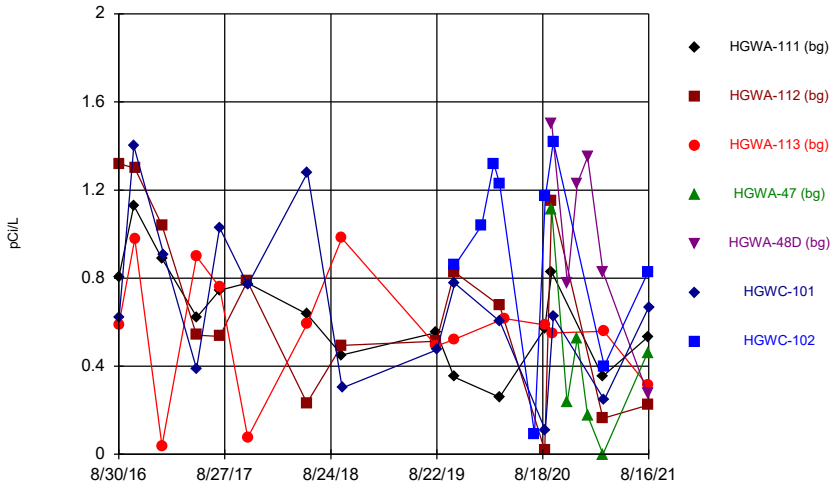
Sanitas™ v.9.6.31 . UG

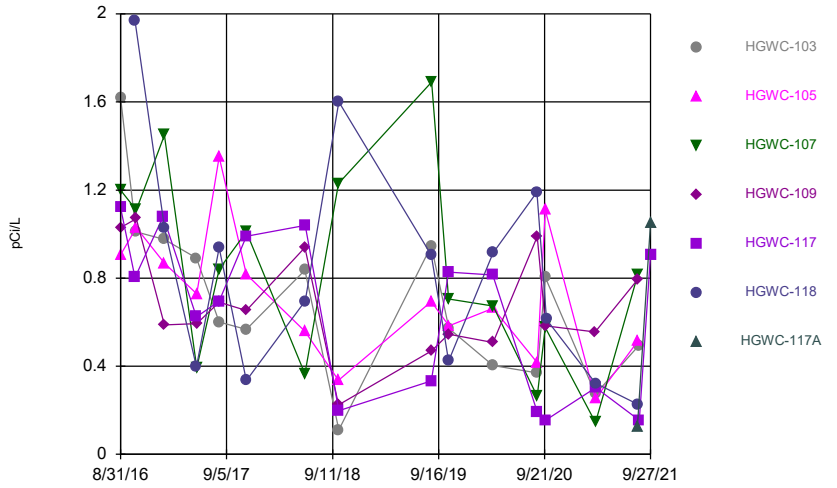
Time Series



Constituent: Combined Radium 226 & 228 Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

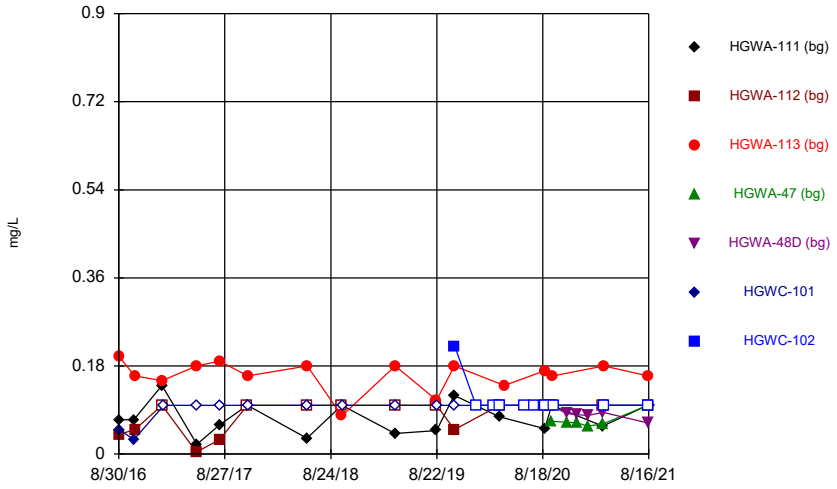
Time Series



Constituent: Combined Radium 226 & 228 Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

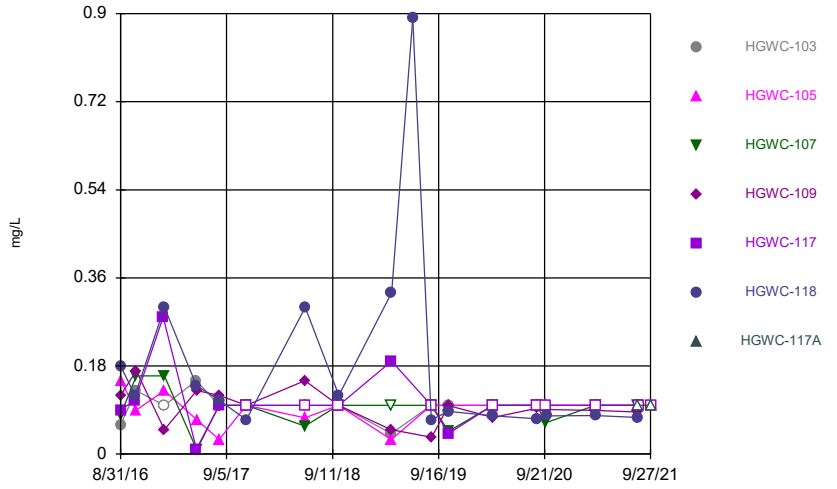
Time Series



Constituent: Fluoride Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Time Series



Constituent: Fluoride Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

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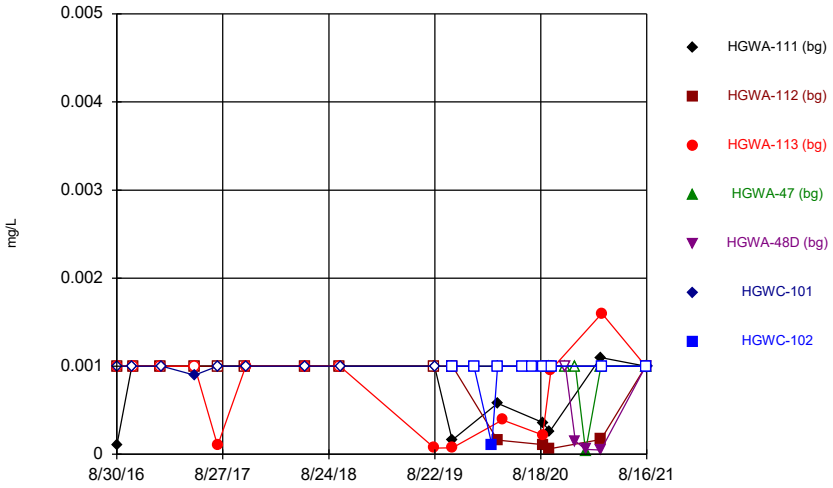

Constituent: Lead Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
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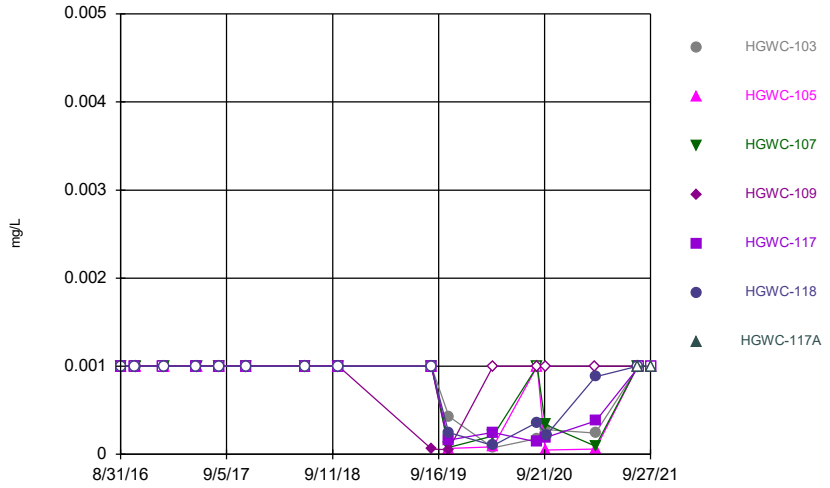
Time Series



Constituent: Lead Analysis Run 11/18/2021 2:05 PM View: Constituents View
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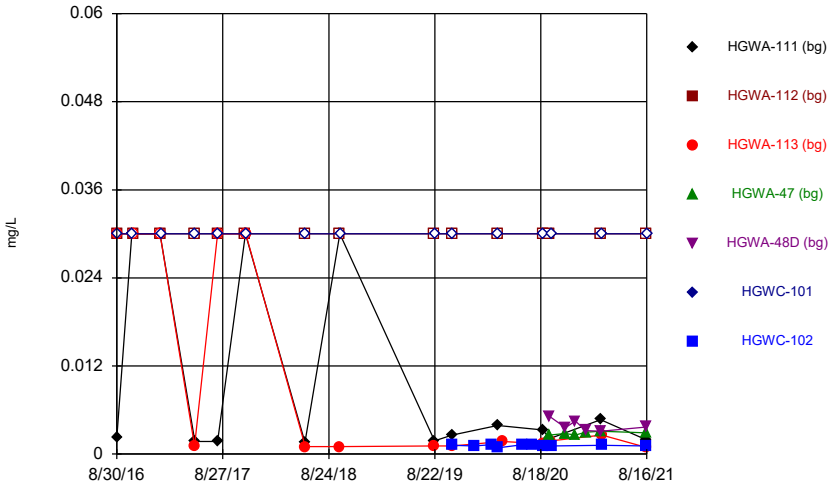

Constituent: Lithium Analysis Run 11/18/2021 2:05 PM View: Constituents View
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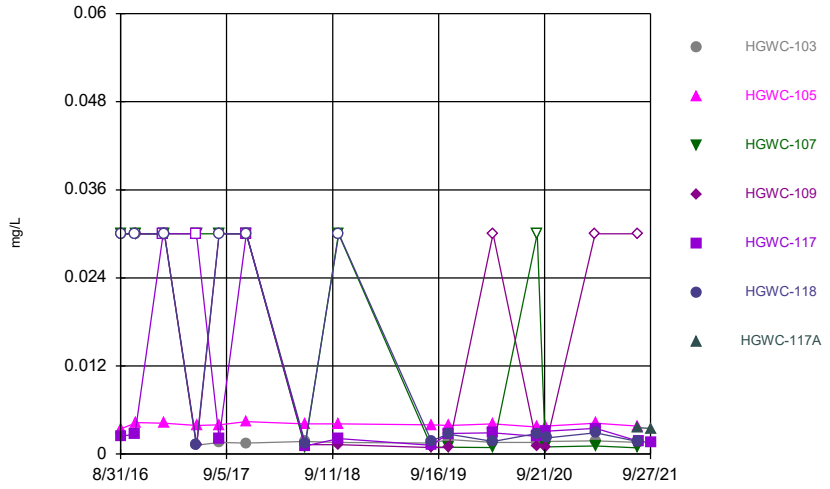

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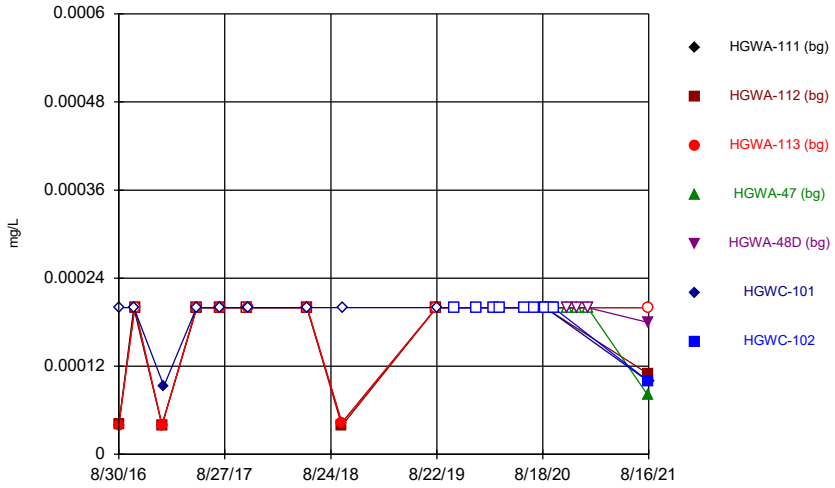
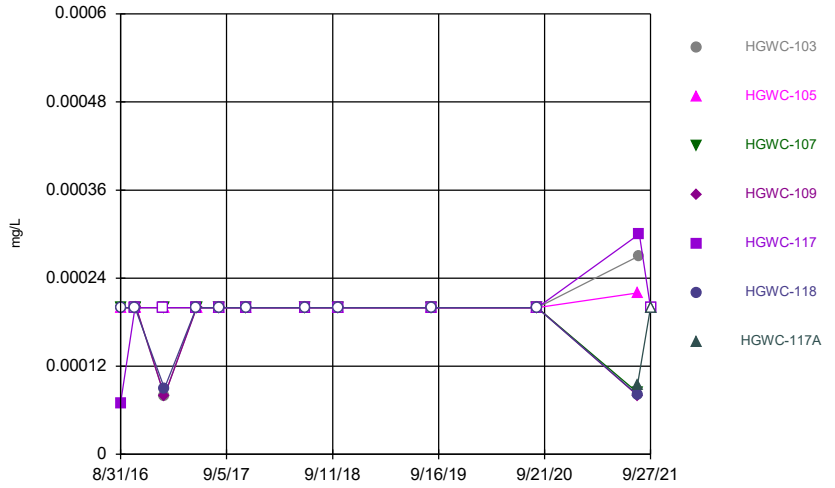


Constituent: Mercury Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Time Series



Constituent: Mercury Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
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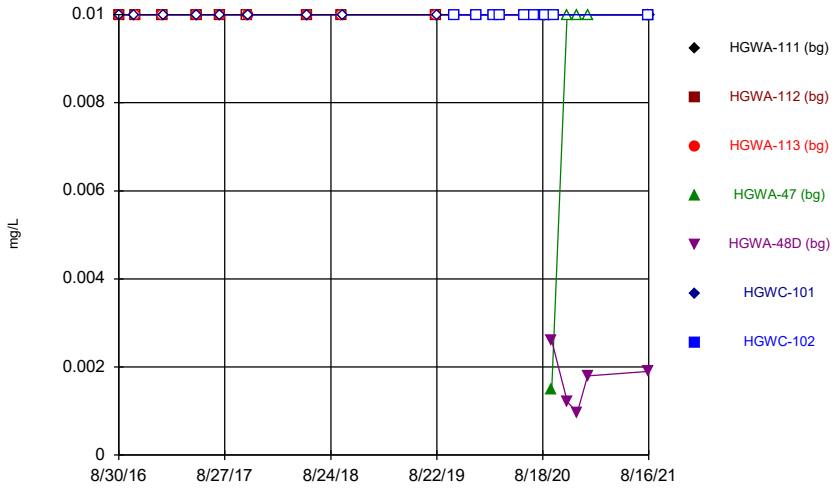
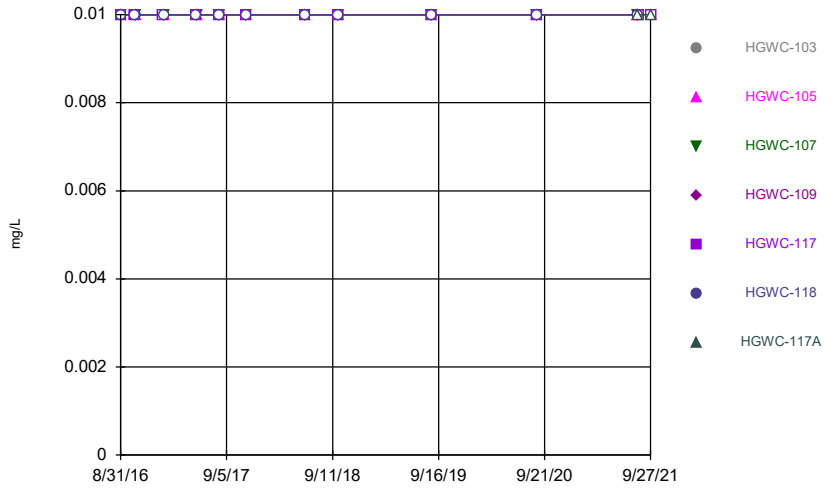


Constituent: Molybdenum Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Time Series



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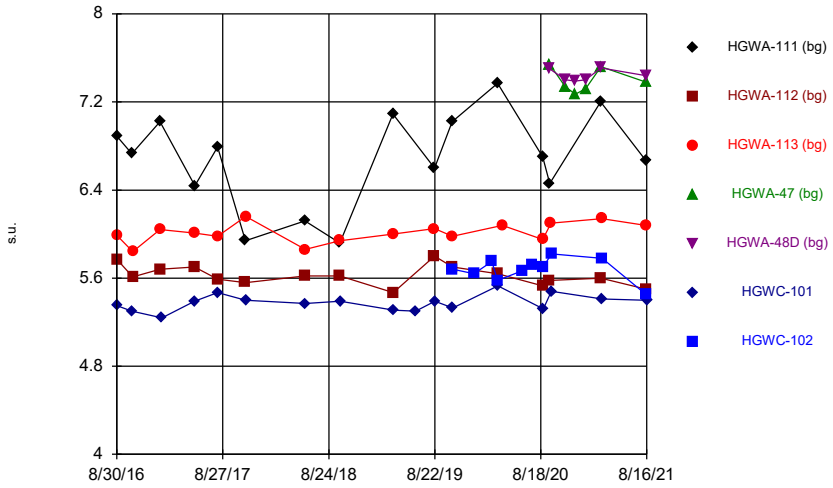
Sanitas™ v.9.6.31 . UG

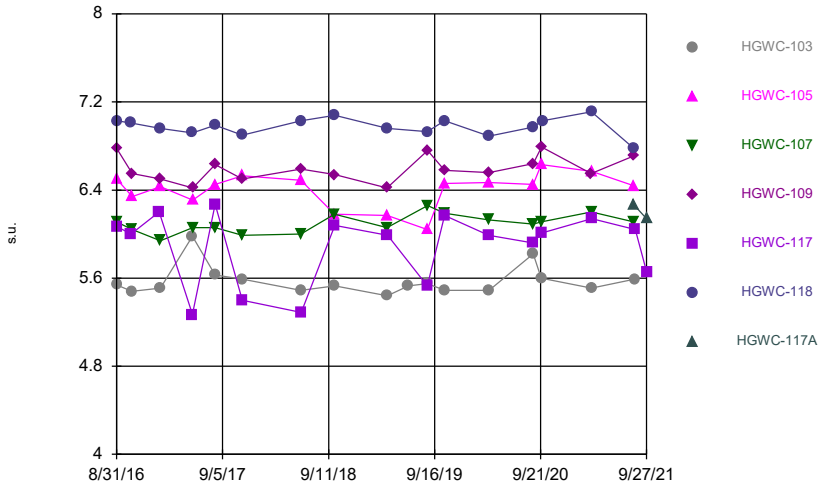
Time Series



Constituent: pH Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

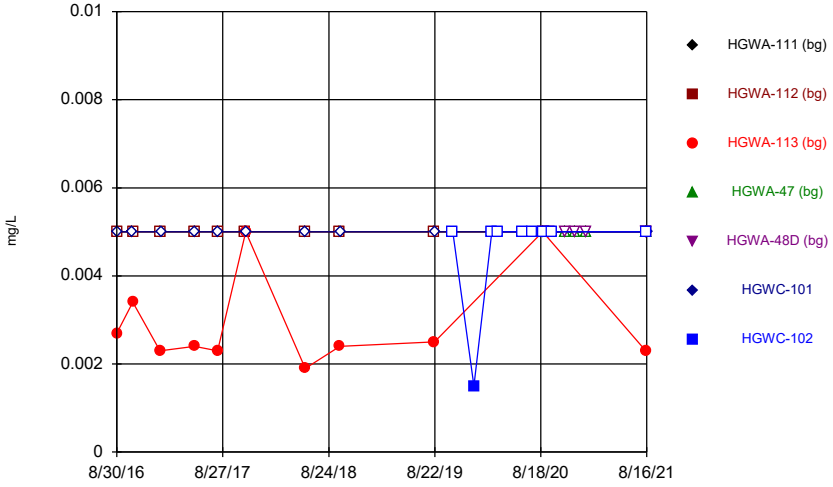
Time Series



Constituent: pH Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

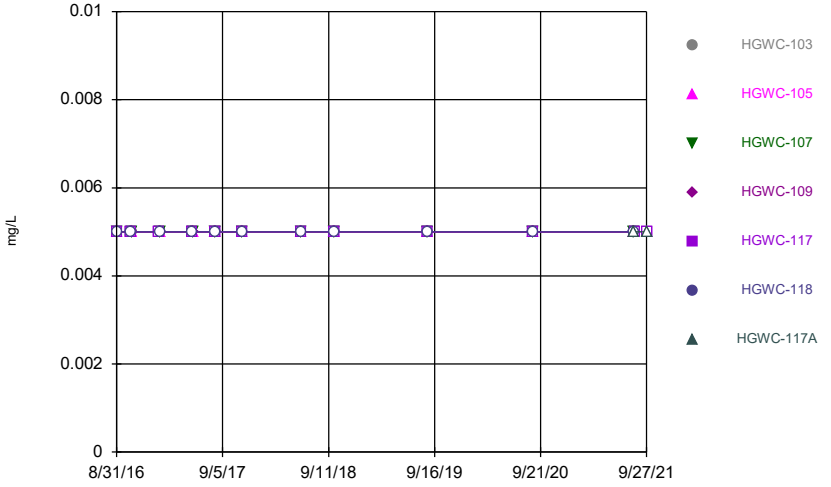
Time Series



Constituent: Selenium Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

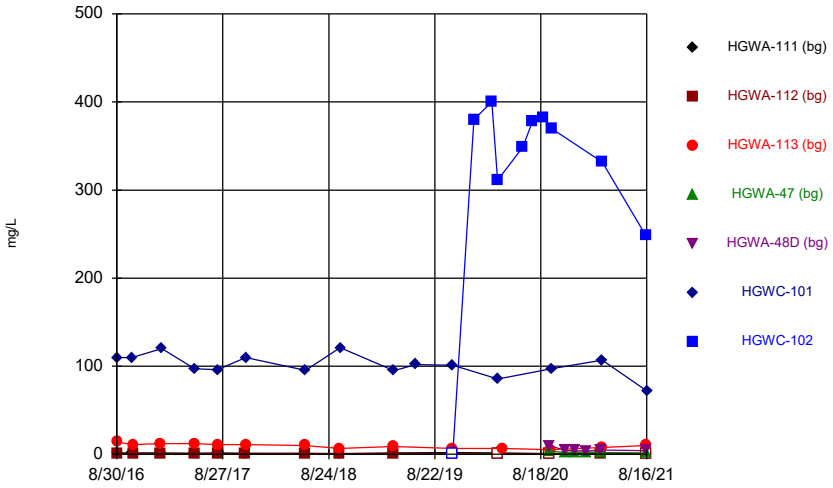
Time Series



Constituent: Selenium Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

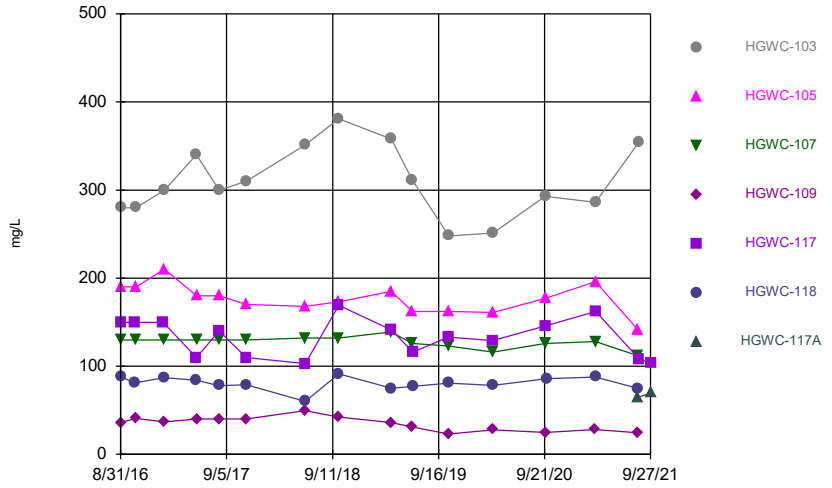
Time Series



Constituent: Sulfate Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

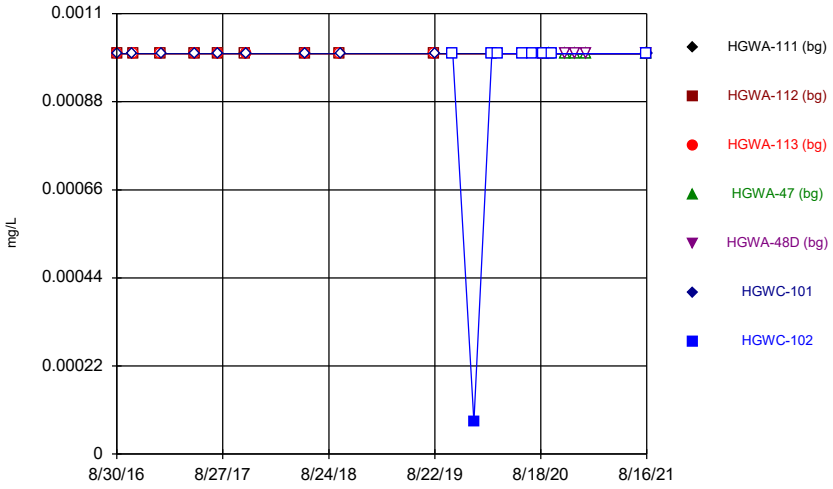
Time Series



Constituent: Sulfate Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

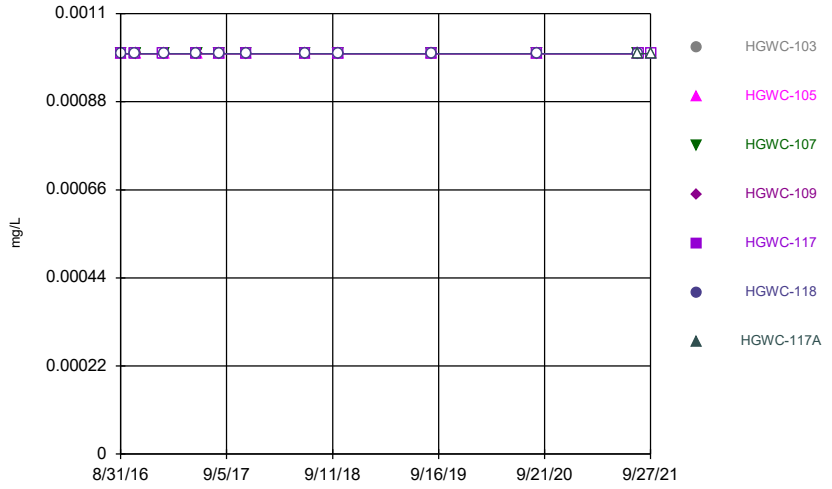
Time Series



Constituent: Thallium Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

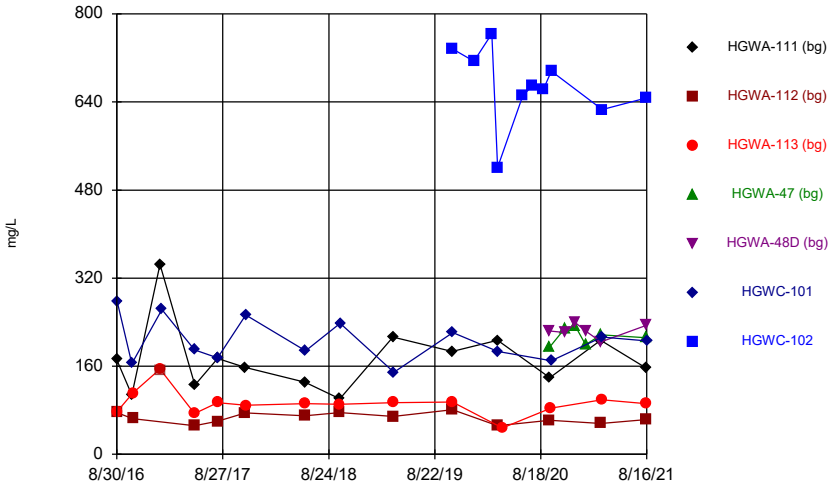
Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

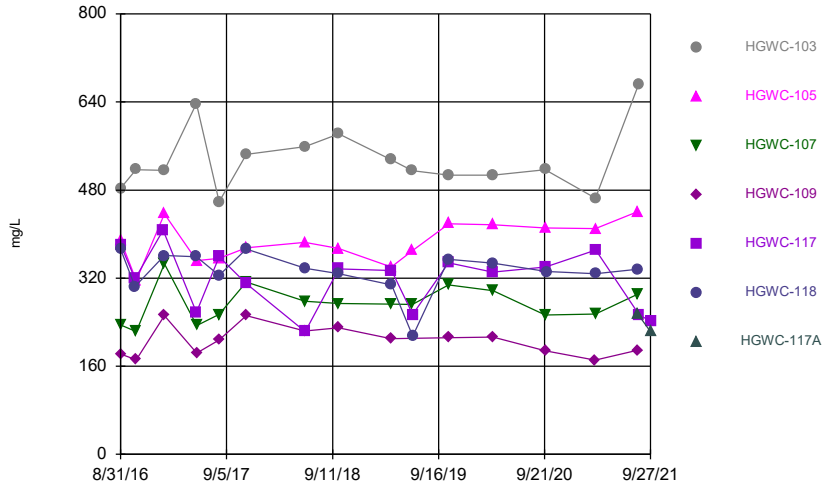
Time Series



Constituent: Total Dissolved Solids Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 11/18/2021 2:05 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Barium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Barium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Boron (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Boron (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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)	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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)

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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)	

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Lead (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Lead (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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)

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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)	

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: pH (s.u.) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: pH (s.u.) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

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	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/18/2021 2:06 PM View: Constituents View

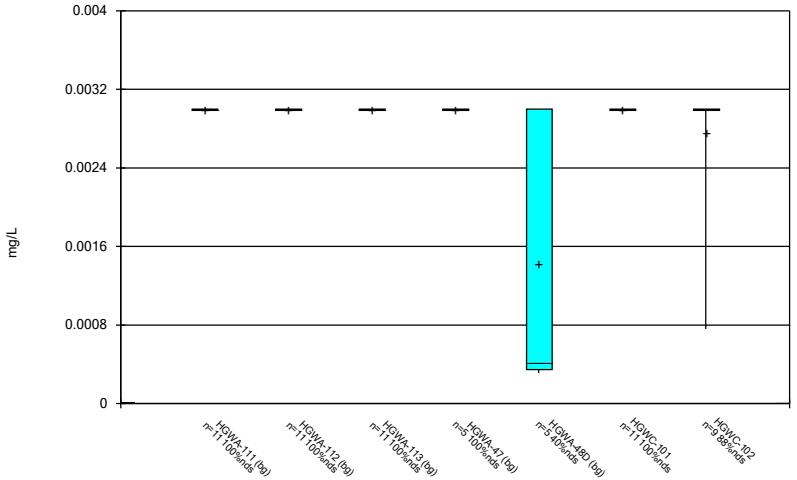
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	HGWC-117A
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

FIGURE B.

Sanitas™ v.9.6.31 . UG

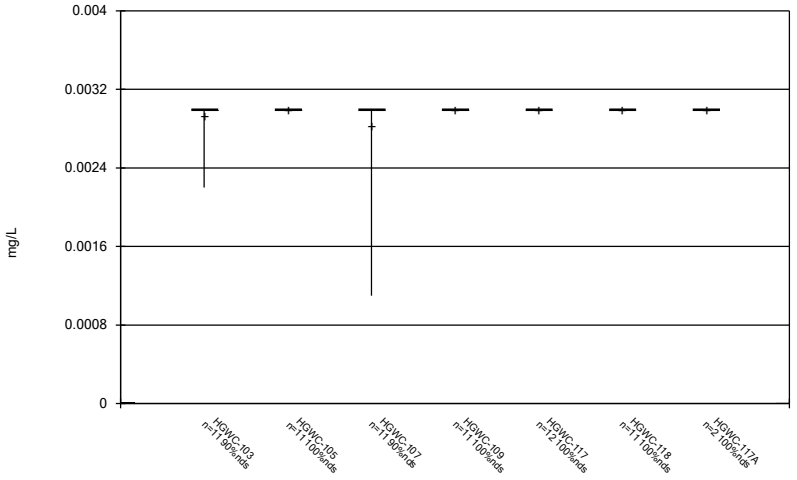
Box & Whiskers Plot



Constituent: Antimony Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

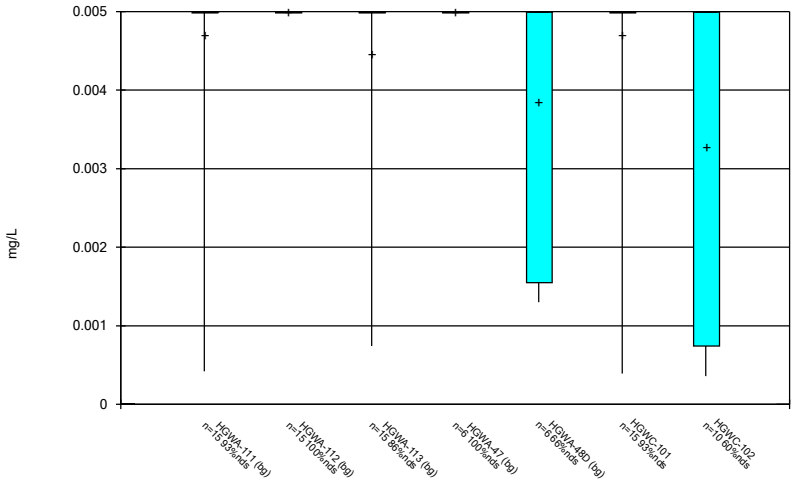
Box & Whiskers Plot



Constituent: Antimony Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

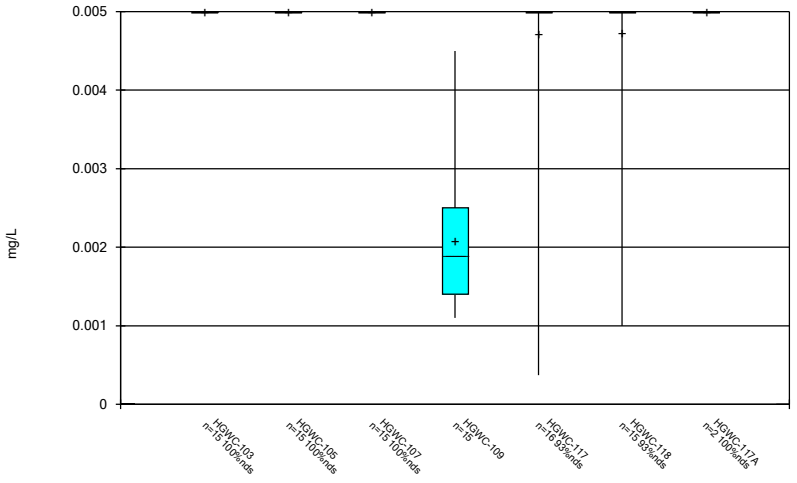
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

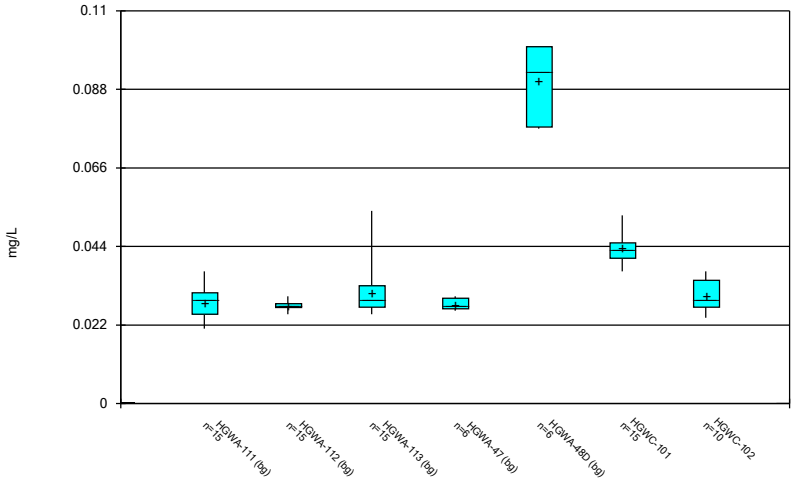
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

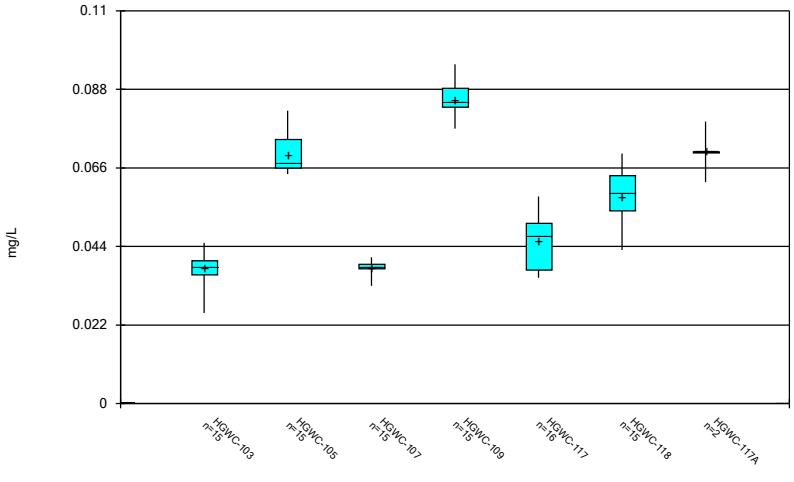
Box & Whiskers Plot



Constituent: Barium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

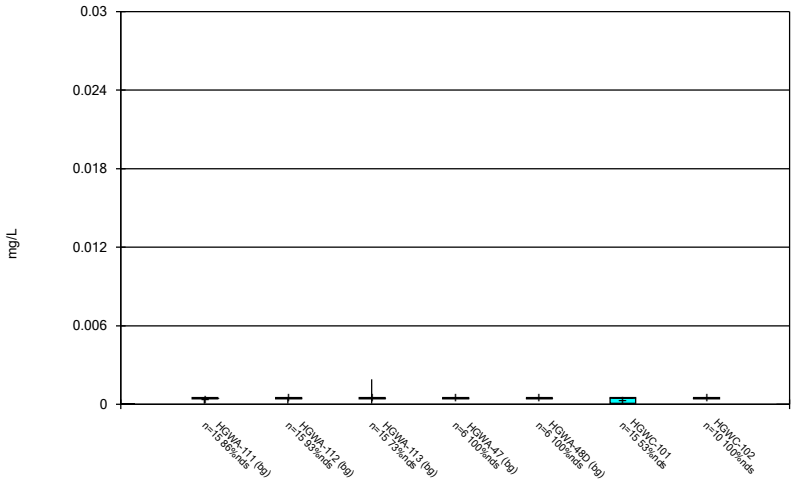
Box & Whiskers Plot



Constituent: Barium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

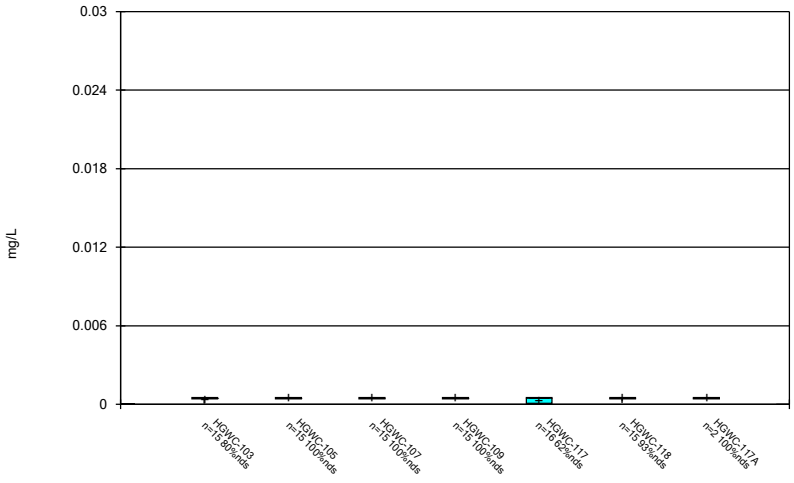
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

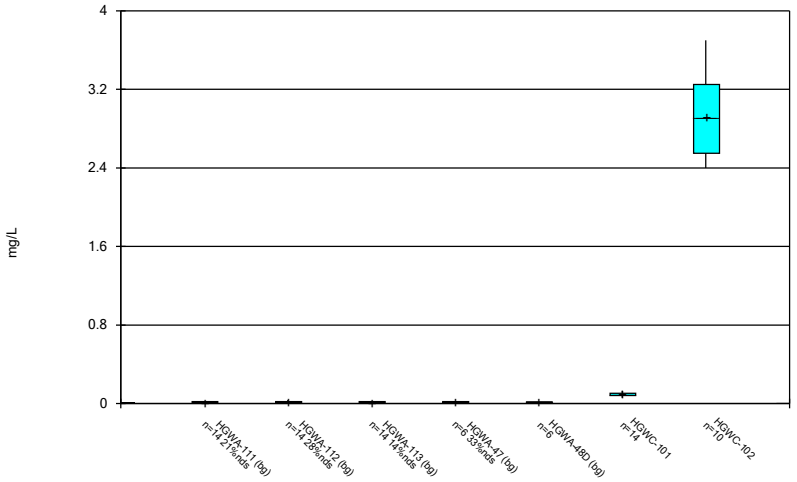
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

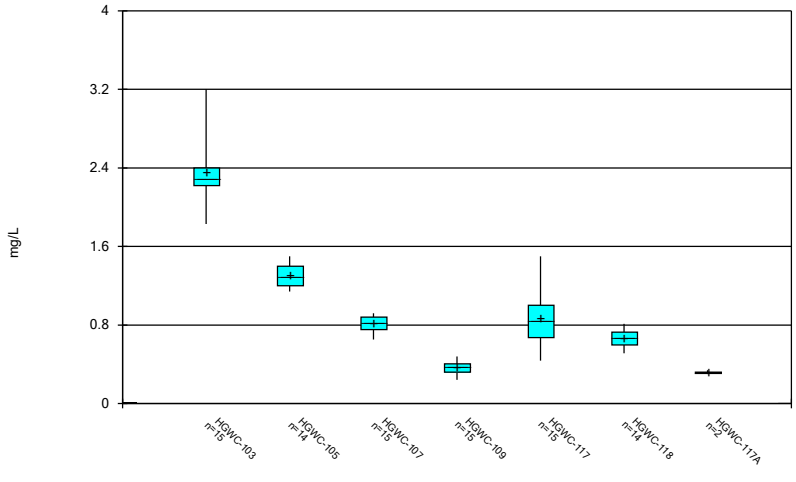
Box & Whiskers Plot



Constituent: Boron Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

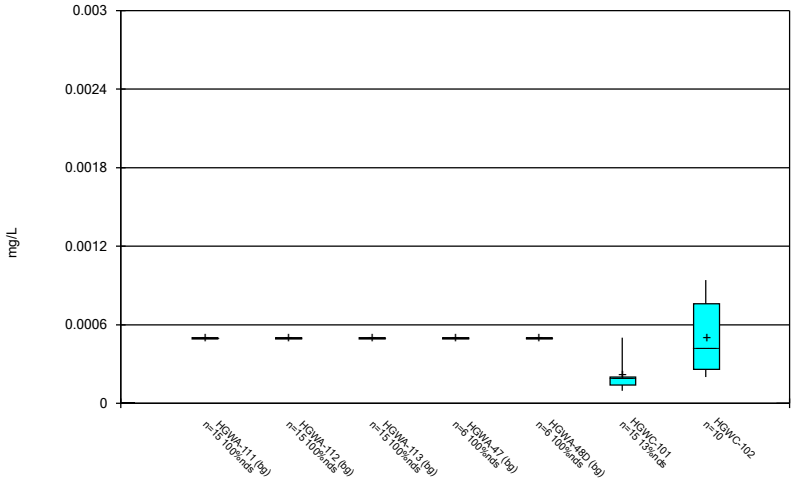
Box & Whiskers Plot



Constituent: Boron Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

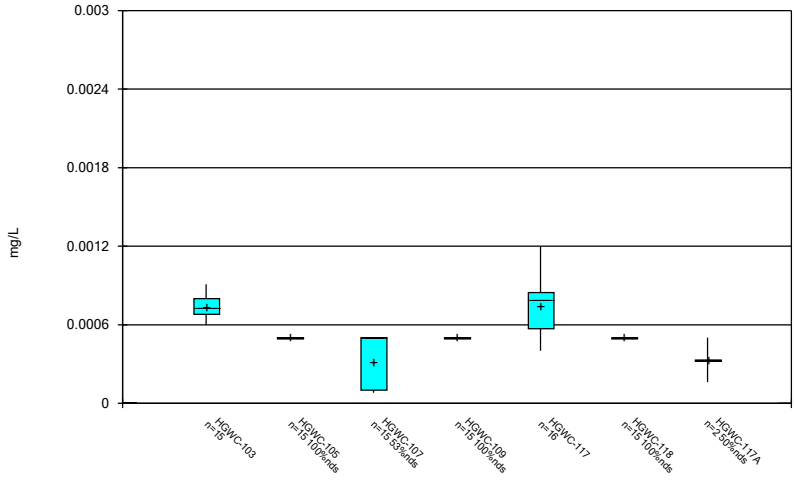
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

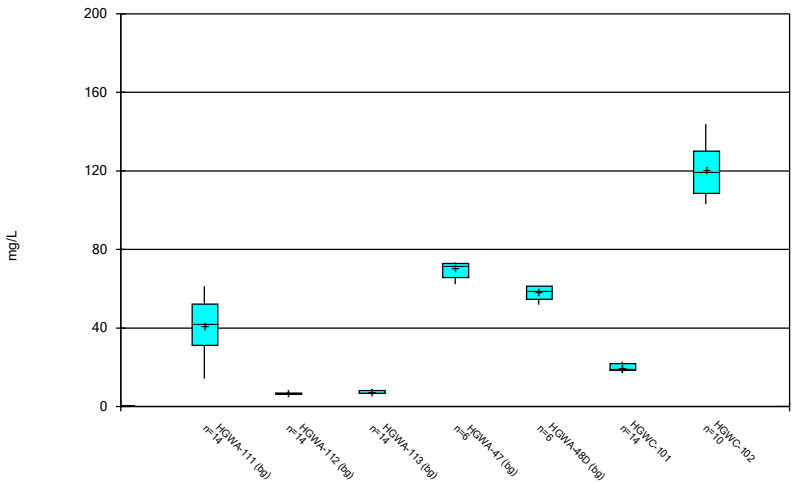
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

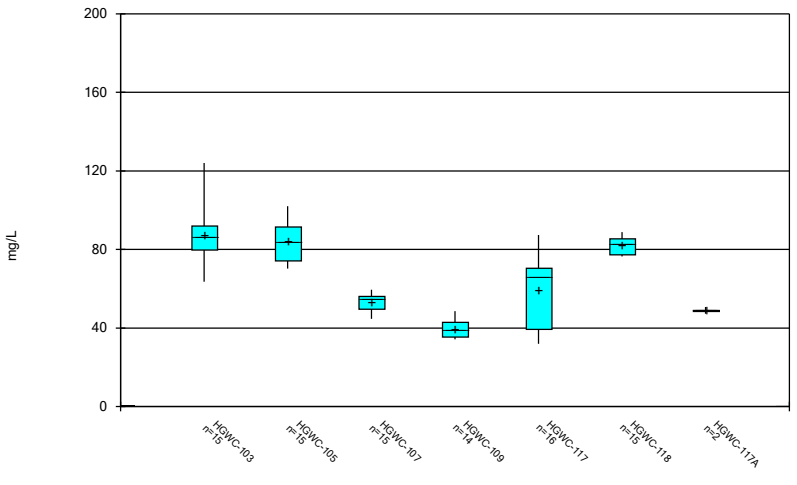
Box & Whiskers Plot



Constituent: Calcium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

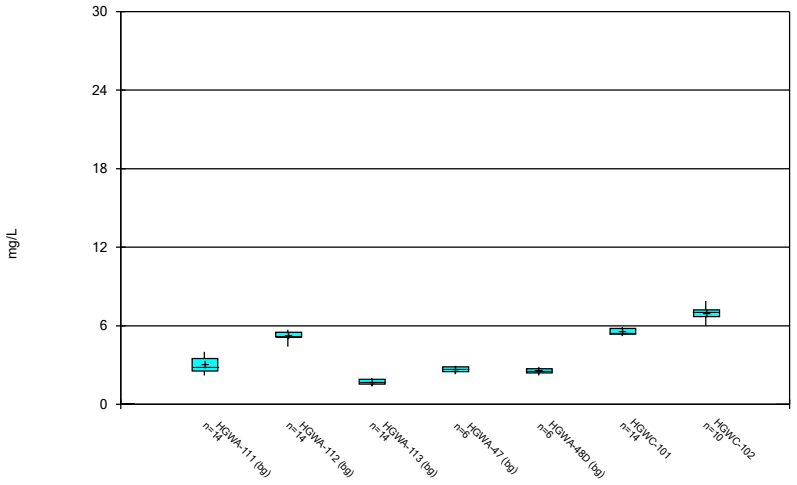
Box & Whiskers Plot



Constituent: Calcium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

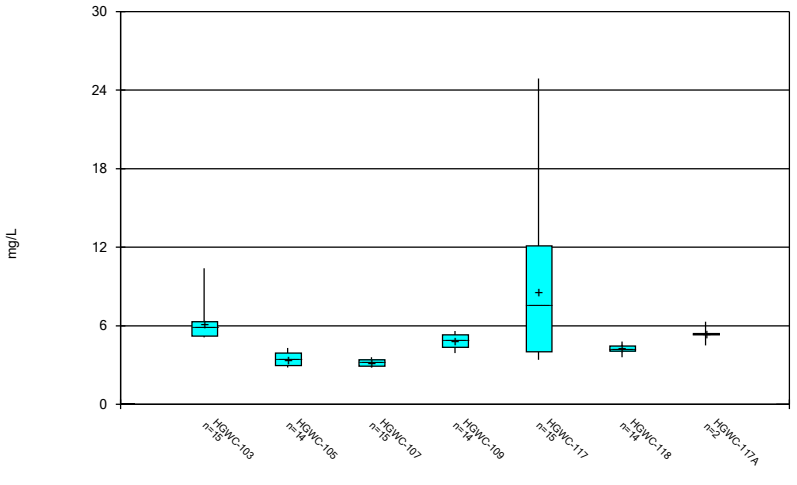
Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

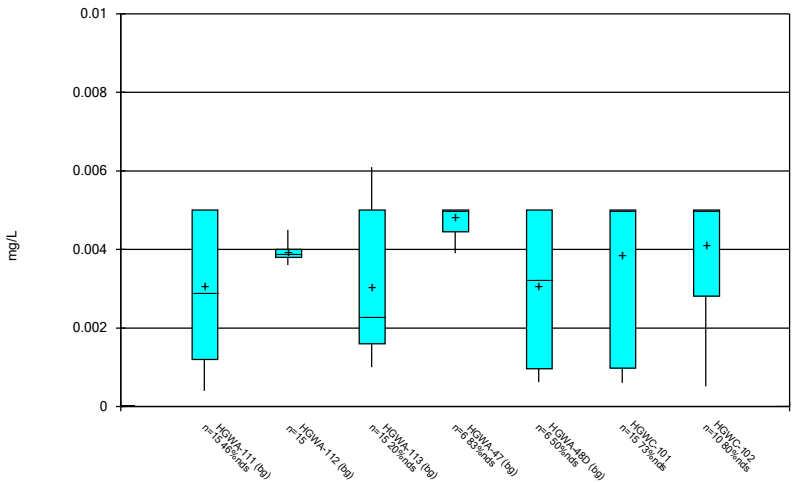
Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

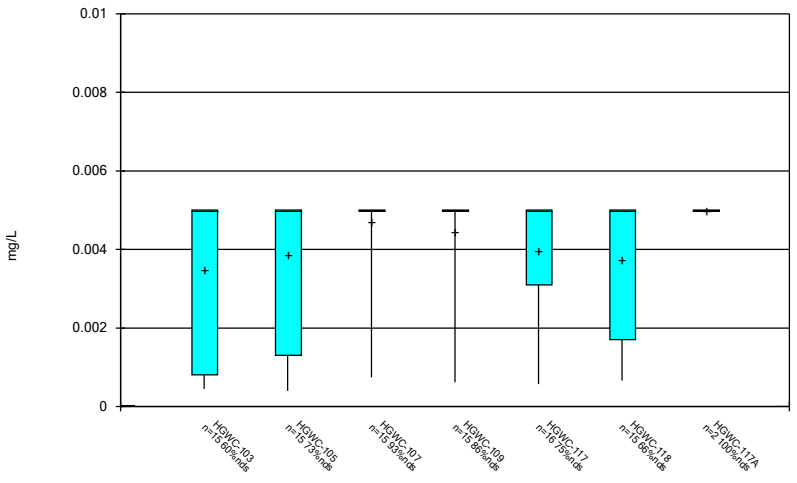
Box & Whiskers Plot



Constituent: Chromium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

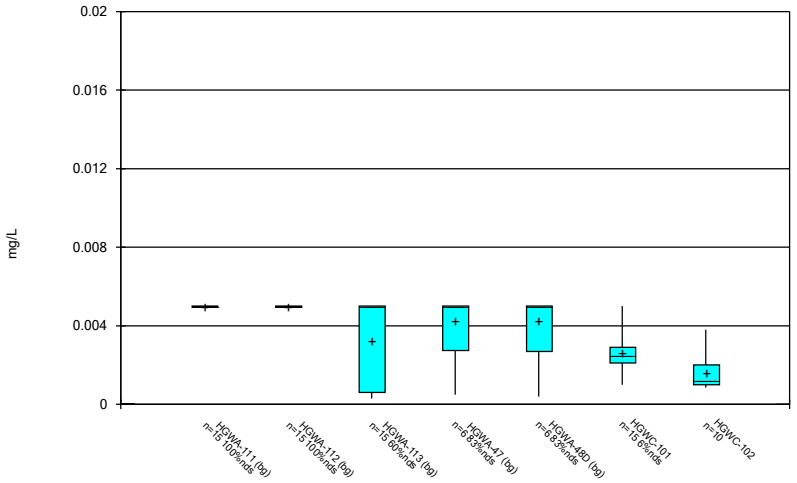
Box & Whiskers Plot



Constituent: Chromium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

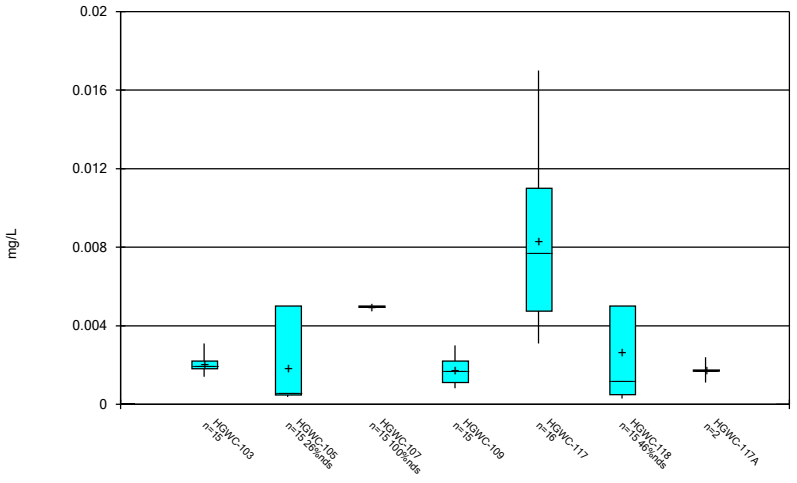
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

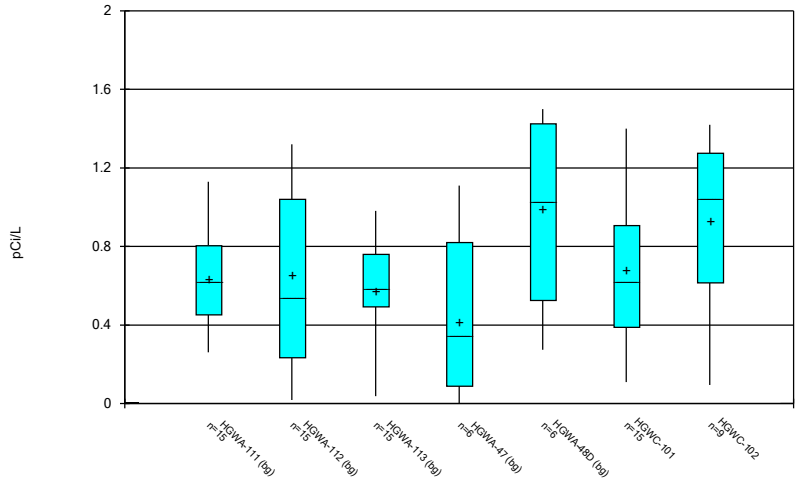
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

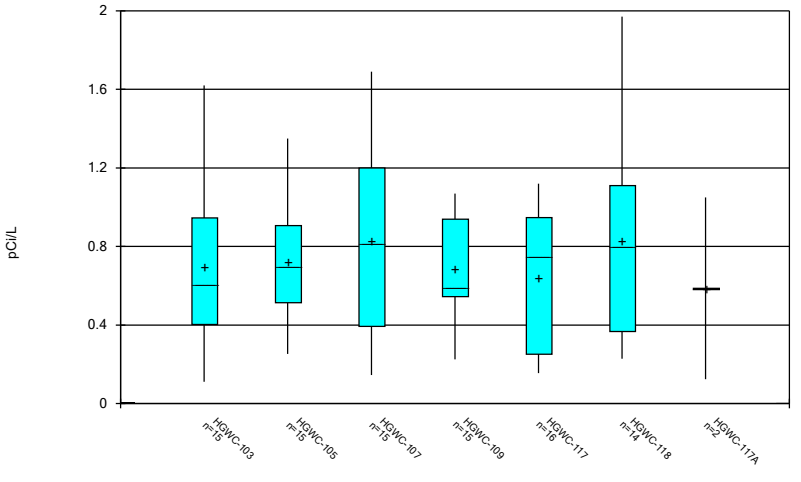
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

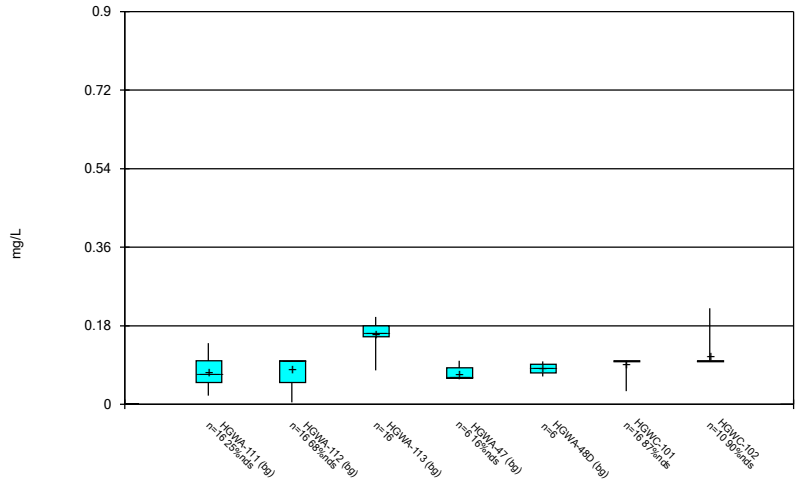
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

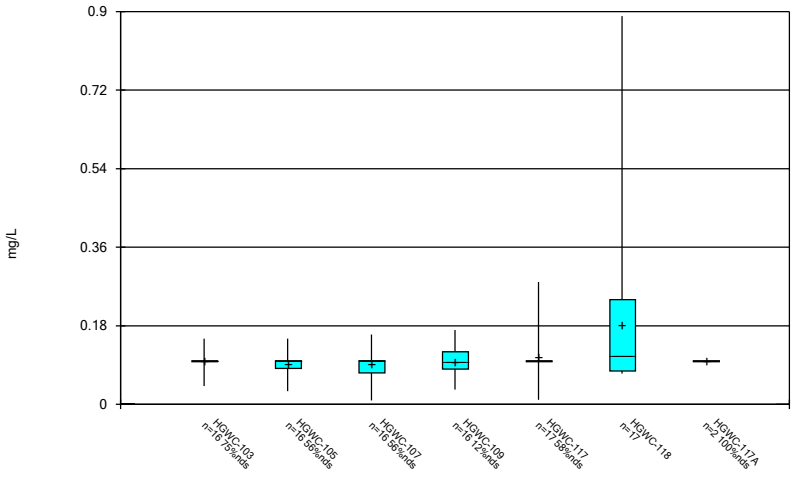
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

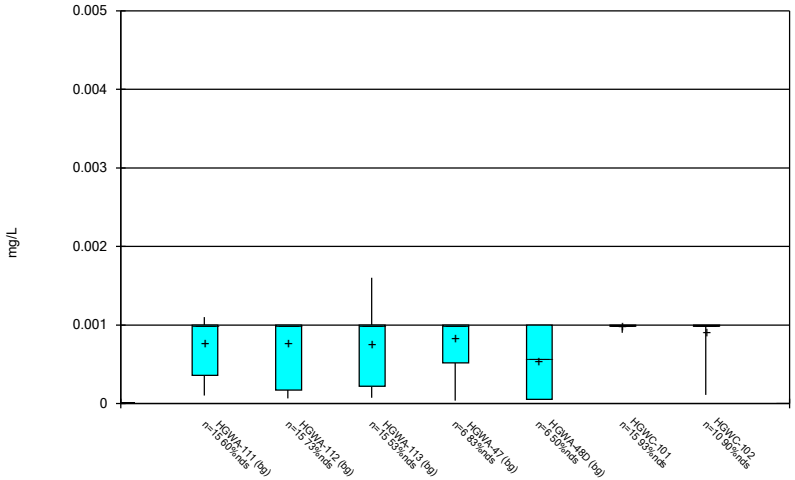
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

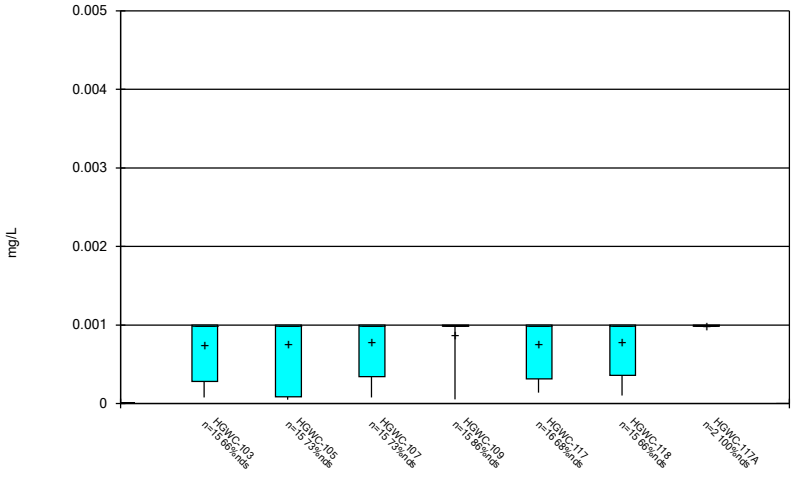
Box & Whiskers Plot



Constituent: Lead Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

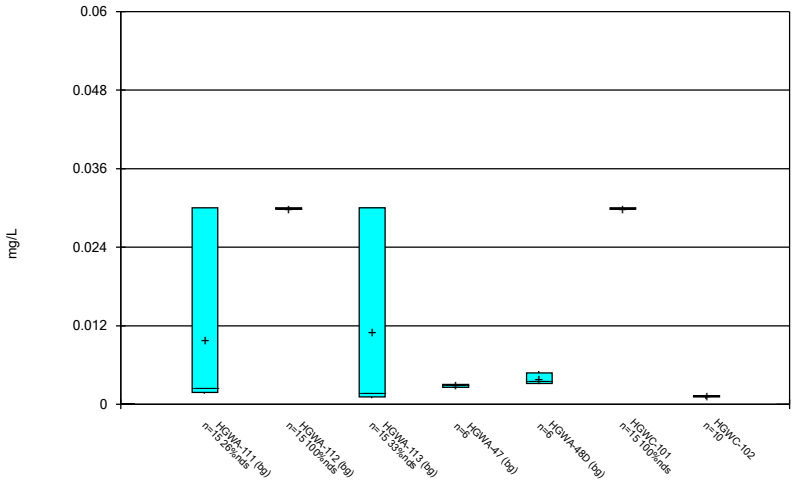
Box & Whiskers Plot



Constituent: Lead Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

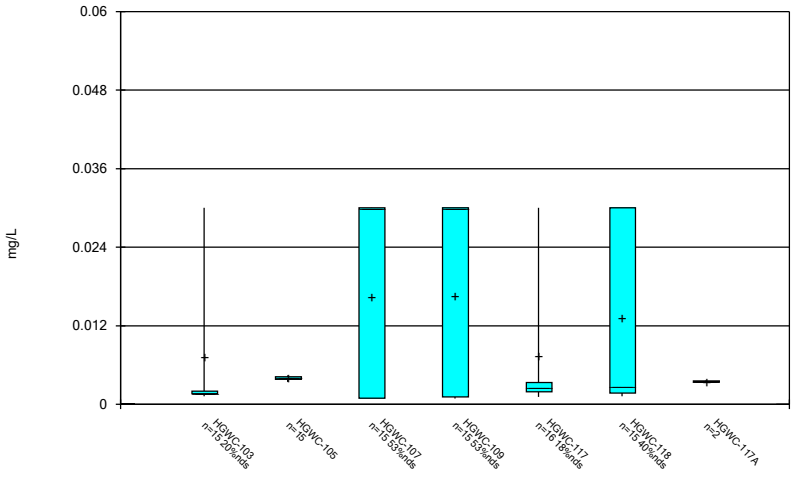
Box & Whiskers Plot



Constituent: Lithium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

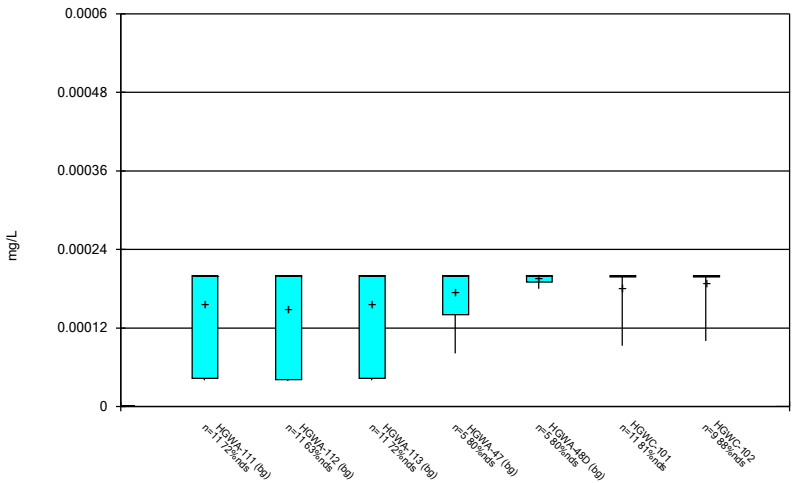
Box & Whiskers Plot



Constituent: Lithium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

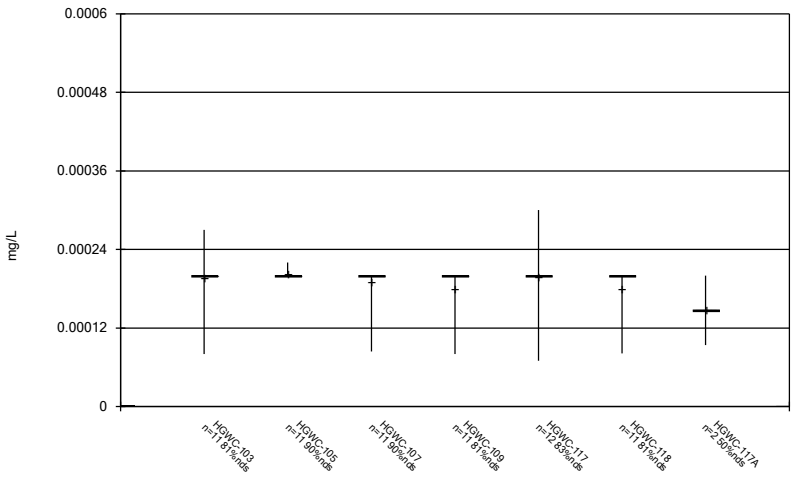
Box & Whiskers Plot



Constituent: Mercury Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

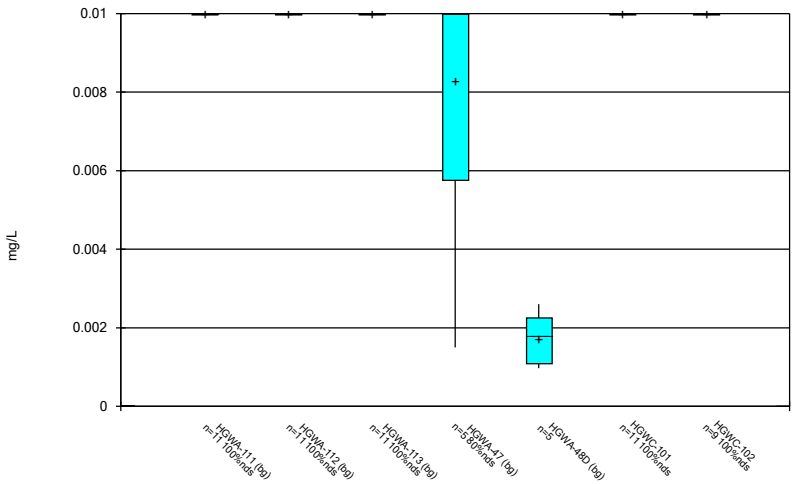
Box & Whiskers Plot



Constituent: Mercury Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

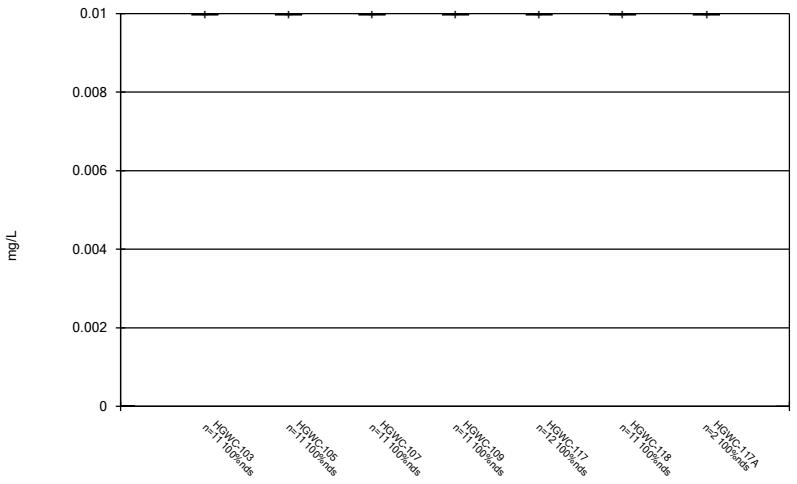
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

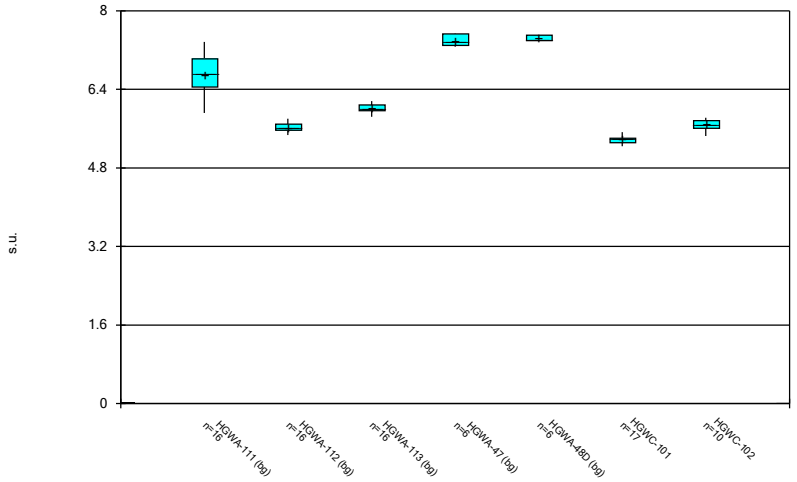
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

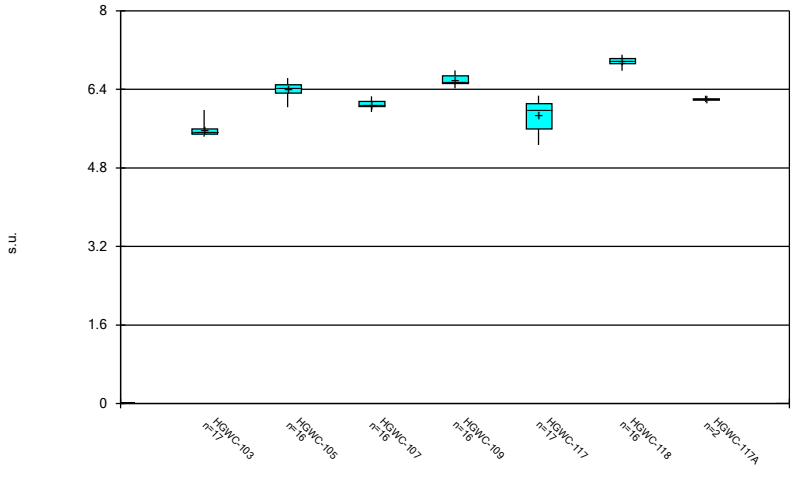
Box & Whiskers Plot



Constituent: pH Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

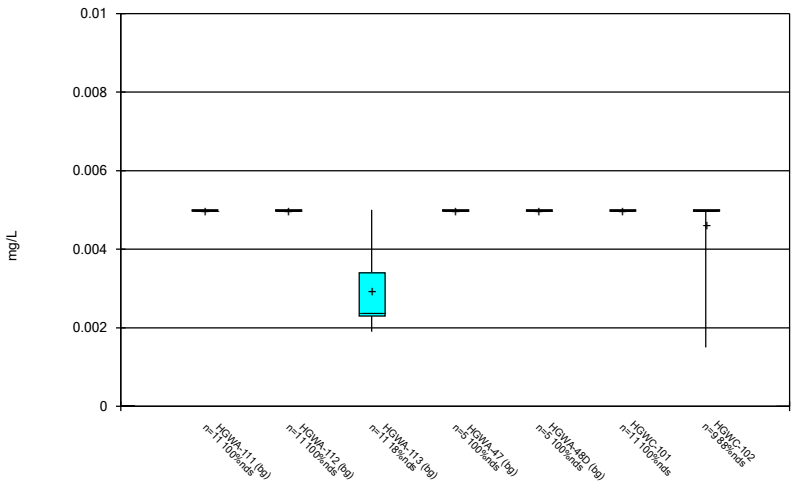
Box & Whiskers Plot



Constituent: pH Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

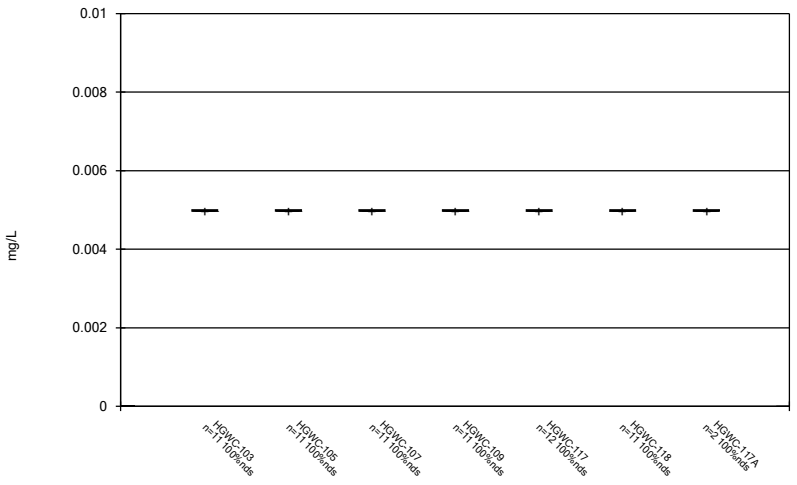
Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

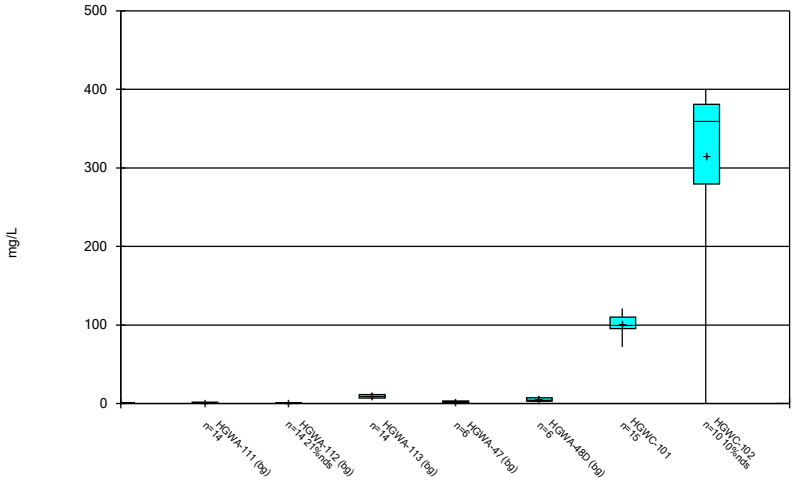
Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

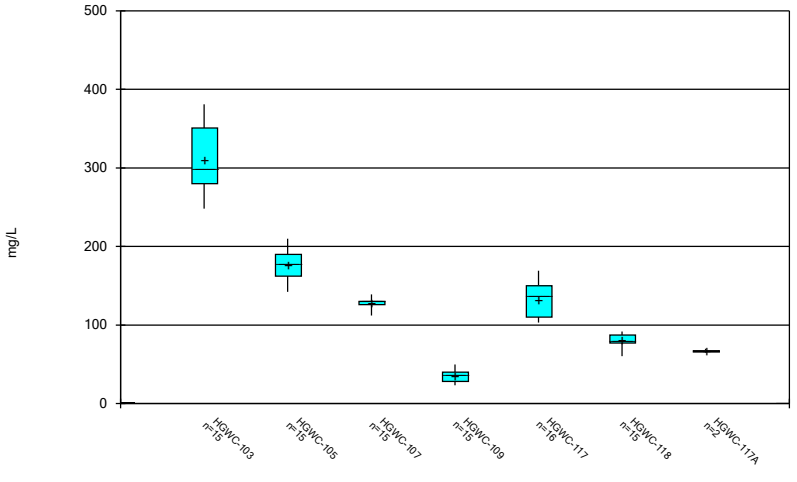
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

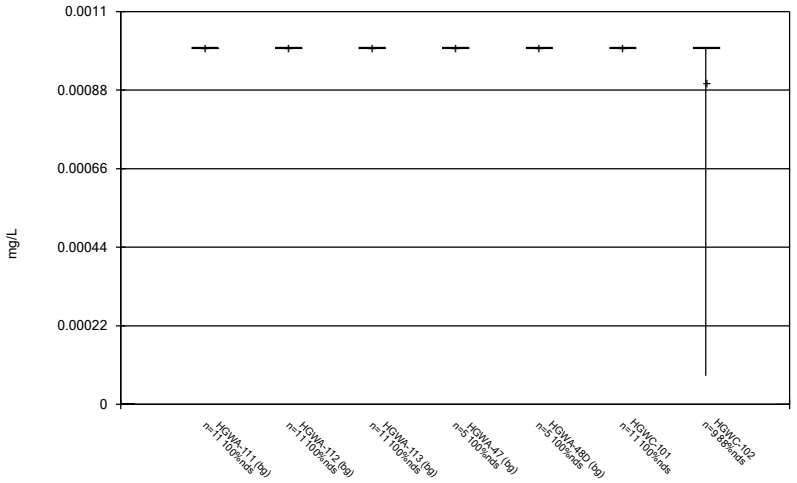
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

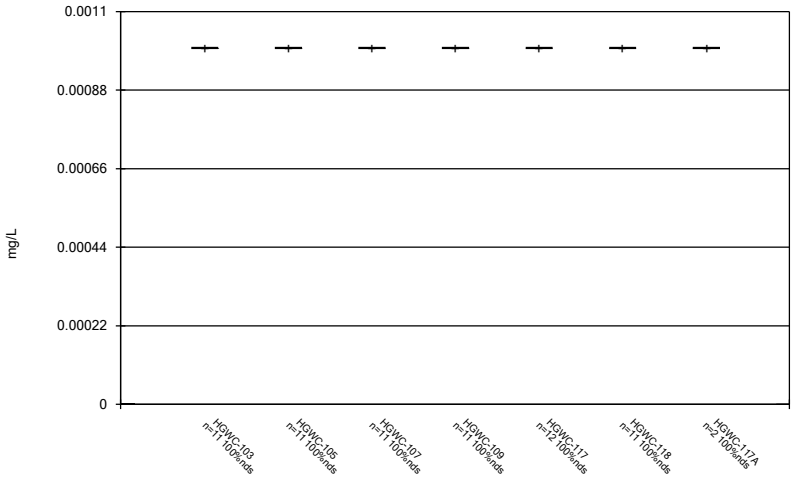
Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

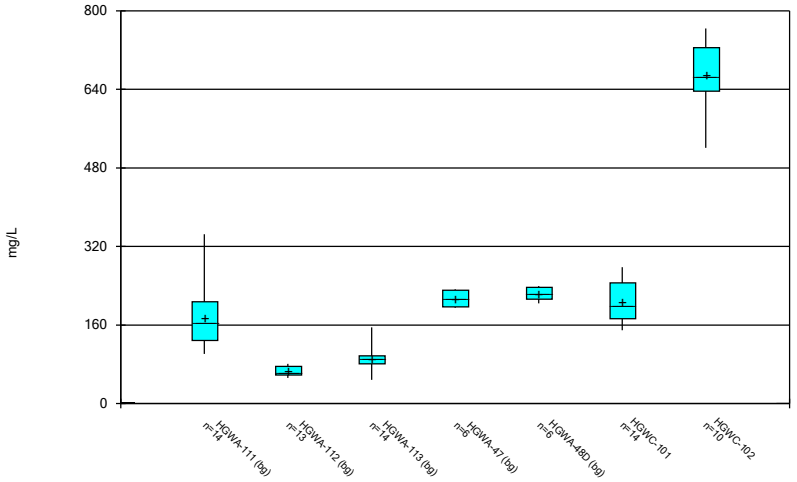
Sanitas™ v.9.6.31 . UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

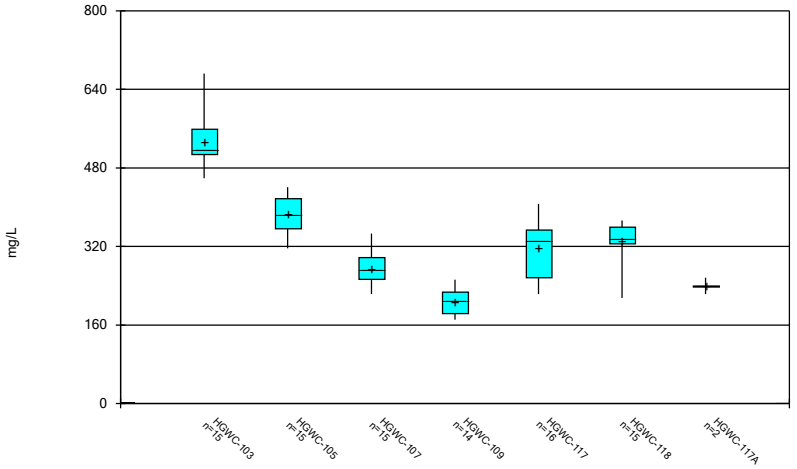
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/18/2021 2:08 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 3:46 PM

	HGWA-112 Total Dissolved Solids (mg/L)
1/25/2017	152 (o)

FIGURE D.

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 3:49 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	0.02002	n/a	8/16/2021	0.13	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.02002	n/a	8/13/2021	2.4	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.02002	n/a	8/16/2021	3.2	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.02002	n/a	8/13/2021	1.2	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.02002	n/a	8/13/2021	0.73	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.02002	n/a	8/13/2021	0.24	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.02002	n/a	8/19/2021	0.78	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.02002	n/a	8/13/2021	0.59	Yes	54	0.2065	0.03296	20.37	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-102	73.3	n/a	8/13/2021	119	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.3	n/a	8/16/2021	124	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.3	n/a	8/13/2021	102	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.3	n/a	8/13/2021	84.3	Yes	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	6.743	n/a	8/16/2021	10.4	Yes	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.47	8/16/2021	5.4	Yes	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.47	8/13/2021	5.45	Yes	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	18.71	n/a	8/16/2021	72.1	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-102	18.71	n/a	8/13/2021	248	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-103	18.71	n/a	8/16/2021	354	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-105	18.71	n/a	8/13/2021	142	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-107	18.71	n/a	8/13/2021	112	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-109	18.71	n/a	8/13/2021	24.4	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-117	18.71	n/a	8/19/2021	108	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-118	18.71	n/a	8/13/2021	75.1	Yes	54	0.7984	1.08	5.556	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	302.5	n/a	8/13/2021	647	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	302.5	n/a	8/16/2021	672	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	302.5	n/a	8/13/2021	441	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	302.5	n/a	8/13/2021	336	Yes	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 3:49 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**	**0.02002**	**n/a**	**8/16/2021**	**0.13**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-102**	**0.02002**	**n/a**	**8/13/2021**	**2.4**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-103**	**0.02002**	**n/a**	**8/16/2021**	**3.2**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-105**	**0.02002**	**n/a**	**8/13/2021**	**1.2**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-107**	**0.02002**	**n/a**	**8/13/2021**	**0.73**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-109**	**0.02002**	**n/a**	**8/13/2021**	**0.24**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-117**	**0.02002**	**n/a**	**8/19/2021**	**0.78**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-118**	**0.02002**	**n/a**	**8/13/2021**	**0.59**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-101	73.3	n/a	8/16/2021	22.8	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-102**	**73.3**	**n/a**	**8/13/2021**	**119**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-103**	**73.3**	**n/a**	**8/16/2021**	**124**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-105**	**73.3**	**n/a**	**8/13/2021**	**102**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-107	73.3	n/a	8/13/2021	57.8	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.3	n/a	8/13/2021	43.5	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-117	73.3	n/a	8/19/2021	40.9	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-118**	**73.3**	**n/a**	**8/13/2021**	**84.3**	**Yes**	**54**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0006486**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-101	6.743	n/a	8/16/2021	5.4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-102	6.743	n/a	8/13/2021	6	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	**HGWC-103**	**6.743**	**n/a**	**8/16/2021**	**10.4**	**Yes**	**54**	**1.066**	**0.4274**	**0**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Chloride (mg/L)	HGWC-105	6.743	n/a	8/13/2021	3.7	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-107	6.743	n/a	8/13/2021	3.1	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-109	6.743	n/a	8/13/2021	4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-117	6.743	n/a	8/19/2021	4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	HGWC-118	6.743	n/a	8/13/2021	4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-101	0.166	n/a	8/16/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.166	n/a	8/13/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.166	n/a	8/16/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.166	n/a	8/13/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.166	n/a	8/13/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.166	n/a	8/13/2021	0.086J	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.166	n/a	8/19/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.166	n/a	8/13/2021	0.075J	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
pH (s.u.)	**HGWC-101**	**7.54**	**5.47**	**8/16/2021**	**5.4**	**Yes**	**60**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001038**	**NP Inter (normality) 1 of 2**
pH (s.u.)	**HGWC-102**	**7.54**	**5.47**	**8/13/2021**	**5.45**	**Yes**	**60**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001038**	**NP Inter (normality) 1 of 2**
pH (s.u.)	HGWC-103	7.54	5.47	8/16/2021	5.59	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.47	8/13/2021	6.44	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.47	8/13/2021	6.11	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.47	8/13/2021	6.71	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.47	8/19/2021	6.04	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.47	8/13/2021	6.78	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-101**	**18.71**	**n/a**	**8/16/2021**	**72.1**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-102**	**18.71**	**n/a**	**8/13/2021**	**248**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-103**	**18.71**	**n/a**	**8/16/2021**	**354**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-105**	**18.71**	**n/a**	**8/13/2021**	**142**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-107**	**18.71**	**n/a**	**8/13/2021**	**112**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-109**	**18.71**	**n/a**	**8/13/2021**	**24.4**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-117**	**18.71**	**n/a**	**8/19/2021**	**108**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-118**	**18.71**	**n/a**	**8/13/2021**	**75.1**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-101	302.5	n/a	8/16/2021	206	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-102**	**302.5**	**n/a**	**8/13/2021**	**647**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-103**	**302.5**	**n/a**	**8/16/2021**	**672**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-105**	**302.5**	**n/a**	**8/13/2021**	**441**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-107	302.5	n/a	8/13/2021	291	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	302.5	n/a	8/13/2021	189	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	302.5	n/a	8/19/2021	253	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-118**	**302.5**	**n/a**	**8/13/2021**	**336**	**Yes**	**53**	**4.997**	**0.8691**	**0**	**None**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**

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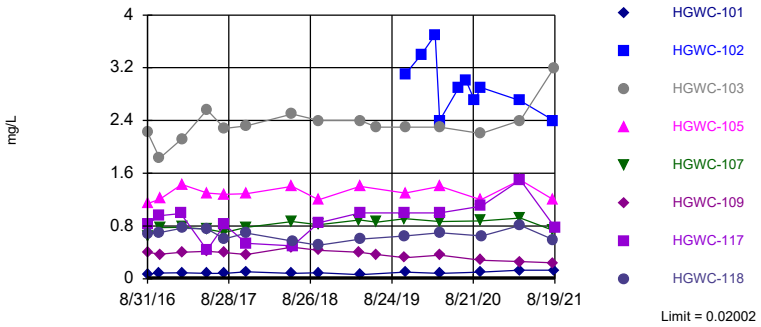
Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.2065, Std. Dev.=0.03296, n=54, 20.37% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9515, critical = 0.939. Kappa = 1.972 (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 10/13/2021 3:47 PM View: Constituents View

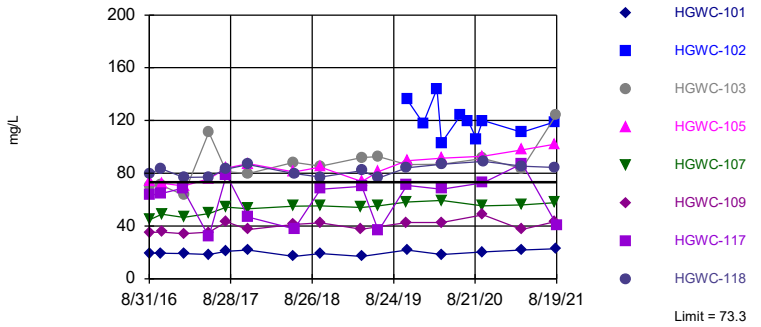
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

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 54 background values. Annual per-constituent alpha = 0.01033. Individual comparison alpha = 0.0006486 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium Analysis Run 10/13/2021 3:47 PM View: Constituents View

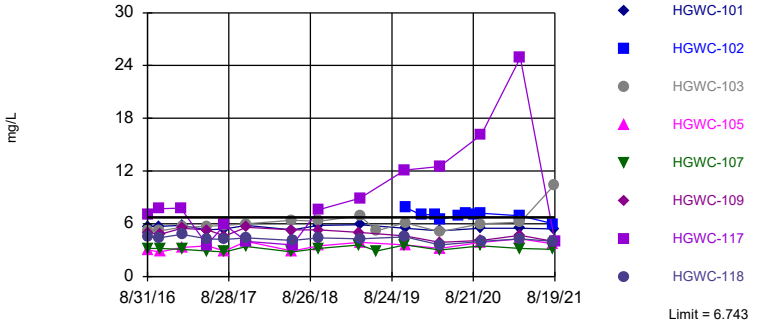
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Exceeds Limit: HGWC-103

Prediction Limit

Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=1.066, Std. Dev.=0.4274, n=54. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9449, critical = 0.939. Kappa = 1.972 (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: Chloride Analysis Run 10/13/2021 3:47 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

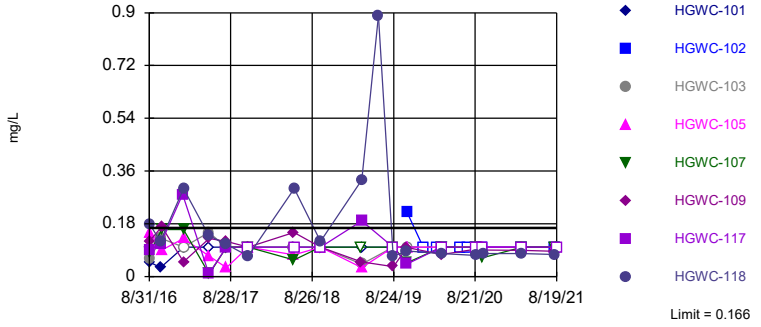
Sanitas™ v.9.6.31 . UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.07488, Std. Dev.=0.04656, n=60, 26.67% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9501, critical = 0.945. Kappa = 1.958 (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 10/13/2021 3:47 PM View: Constituents View

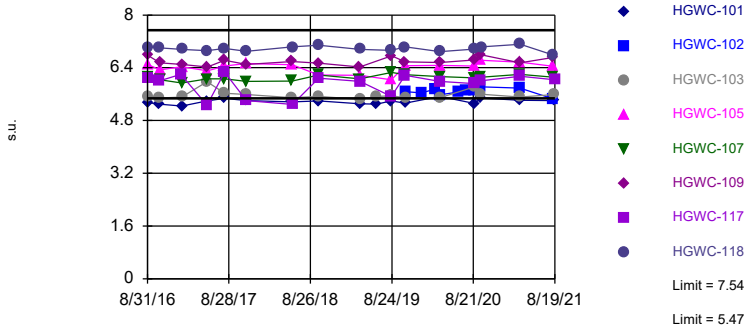
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Exceeds Limits: HGWC-101, HGWC-102

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 60 background values. Annual per-constituent alpha = 0.01655. Individual comparison alpha = 0.001038 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 10/13/2021 3:47 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

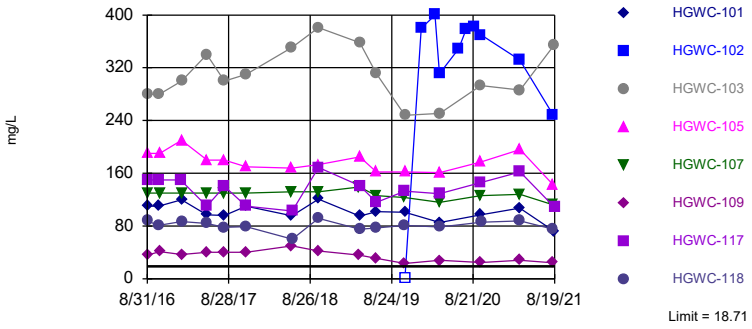
Sanitas™ v.9.6.31 . UG

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 Parametric



Background Data Summary (based on natural log transformation): Mean=0.7984, Std. Dev.=1.08, n=54, 5.556% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9408, critical = 0.939. Kappa = 1.972 (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: Sulfate Analysis Run 10/13/2021 3:47 PM View: Constituents View

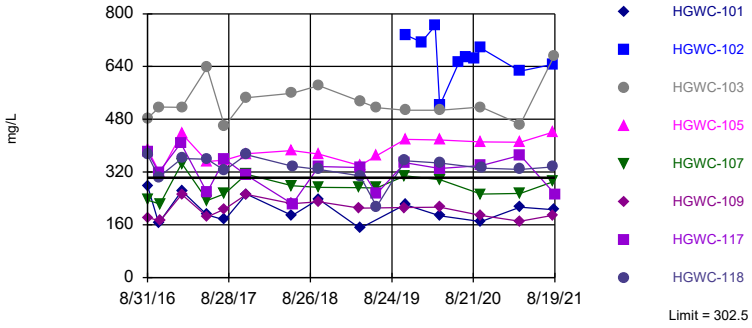
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105, HGWC-118

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=4.997, Std. Dev.=0.8691, n=53. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9406, critical = 0.938. Kappa = 1.975 (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: Total Dissolved Solids Analysis Run 10/13/2021 3:47 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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	<0.04	<0.04	<0.04						
8/31/2016				2.22	1.14	0.651	0.821	0.681	0.402
10/20/2016	0.016 (J)						0.956	0.697	
10/24/2016		0.0226 (J)	0.0367 (J)	1.83					
10/25/2016					1.21	0.778			0.372
1/25/2017	0.0095 (J)	0.009 (J)	0.0075 (J)						
1/27/2017							0.99		
1/31/2017				2.12	1.43	0.782		0.768	0.404
5/23/2017		0.0082 (J)	0.0073 (J)	2.56			0.438	0.754	
5/24/2017	0.0094 (J)				1.3	0.753			0.415
8/10/2017	<0.04	0.0061 (J)	<0.04	2.28	1.28	0.702	0.821	0.608	0.397
11/13/2017	0.0103 (J)		0.0089 (J)						
11/14/2017		0.012 (J)		2.32	1.29	0.78	0.536	0.691	0.366
6/4/2018	0.0065 (J)		0.007 (J)						
6/5/2018		0.0085 (J)							
6/6/2018				2.5	1.4	0.87			0.48
6/7/2018							0.5	0.57	
10/1/2018	0.0054 (J)	0.0042 (J)	<0.04						
10/2/2018					1.2	0.82			0.43
10/3/2018				2.4			0.85	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	1.4 (X)				
4/5/2019							1 (X)	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	1	0.65	0.32
10/23/2019				2.3	1.3				
1/3/2020									
3/4/2020									
3/24/2020	0.011 (J)		0.012 (J)				1		
3/25/2020				2.3	1.4	0.87		0.7	0.36
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	0.88			
9/25/2020							1.1		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									0.26
3/18/2021				2.4	1.5	0.92		0.81	
3/19/2021							1.5		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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
8/12/2021	<0.04	<0.04	<0.04						
8/13/2021					1.2	0.73		0.59	0.24
8/16/2021				3.2					
8/19/2021							0.78		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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	0.0724 (J)			
10/20/2016	0.0877 (J)			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	0.0928			
5/23/2017	0.0795			
5/24/2017				
8/10/2017	0.0814			
11/13/2017				
11/14/2017	0.108			
6/4/2018				
6/5/2018				
6/6/2018	0.081			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	0.092			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	0.06 (X)			
4/5/2019				
6/17/2019				
10/21/2019				
10/22/2019				
10/23/2019	0.1	3.1		
1/3/2020		3.4		
3/4/2020		3.7		
3/24/2020		2.4		
3/25/2020	0.08 (J)			
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	0.1	2.9		
9/25/2020				
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	0.13	2.7		
3/18/2021				
3/19/2021				

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/12/2021			0.012 (J)	<0.04
8/13/2021		2.4		
8/16/2021	0.13			
8/19/2021				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-118	HGWC-101	HGWC-103	HGWC-109	HGWC-107	HGWC-117
8/30/2016	40.3	6.69	6.72						
8/31/2016				79.3	19.4	70.4	35.1	44.7	63.4
10/20/2016	38.7			83.7	19.3				64.4
10/24/2016		6.25	6.4			70.9			
10/25/2016							35.4	49	
1/25/2017	44.6	6.58	6.87						
1/27/2017									68.6
1/31/2017				76.8	19.1	63.6	34.2	46.6	
5/23/2017		6.4	7.13	77.2	18.3	111			32
5/24/2017	34.8						35.3	49.5	
8/10/2017	48.6	6.54	6.71	83.1	20.9	81.2	43.1	54.2	78.9
11/13/2017	17.1	6.26							
11/14/2017			7.4	86.7	21.7	79.7	37.4	53.2	46.9
6/4/2018	30.1	7.4							
6/5/2018			7.4						
6/6/2018					17	88.3	41.1	55	
6/7/2018				79.7					37.7
10/1/2018	14.2 (J)	5.8	6.2						
10/2/2018							42.5	55.4	
10/3/2018				77.1	19.1 (J)	85.3			68
4/1/2019	58.4								
4/2/2019		6.7	7.4						
4/3/2019							37.5	54	
4/4/2019					16.9	91.9			
4/5/2019				82					70
6/17/2019						92.6		55.3	
6/18/2019				76.5					36.3
10/21/2019	51								
10/22/2019		6.3	7.2	84.2			42.6	58.1	70.9
10/23/2019					21.9	86.5			
1/3/2020									
3/4/2020									
3/24/2020	61.2	7							68
3/25/2020				86.8	18.4	86.8	42.6	59.5	
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					20.3	91.3		55.4	
9/25/2020							48.5		72.8
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				85.4		83.7		56	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-118	HGWC-101	HGWC-103	HGWC-109	HGWC-107	HGWC-117
3/19/2021									87.3
8/12/2021	45.4	6.9	8.4						
8/13/2021				84.3			43.5	57.8	
8/16/2021					22.8	124			
8/19/2021									40.9

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-105	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	74.2			
10/20/2016				
10/24/2016				
10/25/2016	72.5			
1/25/2017				
1/27/2017				
1/31/2017	70.3			
5/23/2017				
5/24/2017	75.9			
8/10/2017	84			
11/13/2017				
11/14/2017	87.2			
6/4/2018				
6/5/2018				
6/6/2018	81			
6/7/2018				
10/1/2018				
10/2/2018	84.7			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	73.8			
4/5/2019				
6/17/2019	81.2			
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	89.4	136		
1/3/2020		118		
3/4/2020		144		
3/24/2020		103		
3/25/2020	91.4			
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	92.9	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	97.7			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-105	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/19/2021				
8/12/2021			71.2 (M1)	59.5
8/13/2021	102	119		
8/16/2021				
8/19/2021				

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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-109	HGWC-117	HGWC-101
8/30/2016	3.3	2	5.4						
8/31/2016				5.2	3	3.2	5	7.1	5.7
10/20/2016	3.2							7.7	5.7
10/24/2016		1.9	5.2	5.2					
10/25/2016					2.8	3.2	4.8		
1/25/2017	2.7	1.9	5						
1/27/2017								7.8	
1/31/2017				5.6	3.3	3.1	5.5		5.8
5/23/2017		1.6	5.1	5.7				3.6	5.3
5/24/2017	3				3.5	2.9	5.3		
8/10/2017	2.8	1.7	5.2	5.8	2.9	2.8	4.6	5.9	5.4
11/13/2017	2.5		5.5						
11/14/2017		2		6	4	3.4	5.6	4	5.8
6/4/2018	2.6		5.3						
6/5/2018		1.7							
6/6/2018				6.4	2.9	2.8	5.3		5.3
6/7/2018								3.6	
10/1/2018	2.2	1.6	5.6						
10/2/2018					3.5	3.2	5.3		
10/3/2018				6.3				7.6	5.8
4/1/2019	4								
4/2/2019		1.8	5.7						
4/3/2019						3.6	5		
4/4/2019				6.9	3.9				5.9
4/5/2019								8.9	
6/17/2019				5.2		2.9			
10/21/2019	3.9								
10/22/2019		1.9	5.5			3.6	4.6	12.1	
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	3.9		5.2
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	3.5			5.5
9/25/2020							4.1	16.1	
9/28/2020									
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							4.7		5.5
3/18/2021				6.2	4.3	3.2			
3/19/2021								24.9	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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-109	HGWC-117	HGWC-101
8/12/2021	2.5	1.5	4.4						
8/13/2021					3.7	3.1	4		
8/16/2021				10.4					5.4
8/19/2021								4	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-118	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	4.5			
10/20/2016	4.4			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	4.8			
5/23/2017	4.3			
5/24/2017				
8/10/2017	4.2			
11/13/2017				
11/14/2017	4.4			
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018	4.1			
10/1/2018				
10/2/2018				
10/3/2018	4.4			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019	4.3			
6/17/2019				
10/21/2019				
10/22/2019	4.5			
10/23/2019		7.9		
1/3/2020		7		
3/4/2020		7.1		
3/24/2020		6.5		
3/25/2020	3.6			
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				
9/28/2020	4			
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		6.9		
3/18/2021	4.3			
3/19/2021				

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-118	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				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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-109	HGWC-117	HGWC-118
8/30/2016	0.07 (J)	0.2 (J)	0.04 (J)						
8/31/2016				0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)	0.18 (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)	0.05 (J)		0.3
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	0.12 (J)	0.1 (J)	0.11 (J)
11/13/2017	<0.1		<0.1						
11/14/2017		0.16 (J)		<0.1	<0.1	<0.1	<0.1	<0.1	0.07 (J)
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)	0.099 (J)	0.042 (J)	0.087 (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	0.075 (J)		0.078 (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	0.094 (J)	<0.1	
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							0.091 (J)	<0.1	
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 10/13/2021 3:49 PM View: Constituents View

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-109	HGWC-117	HGWC-118
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	0.086 (J)		0.075 (J)
8/16/2021				<0.1					
8/19/2021								<0.1	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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 10/13/2021 3:49 PM View: Constituents View

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				

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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 10/13/2021 3:49 PM View: Constituents View

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		

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/13/2021 3:49 PM View: Constituents View

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	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			7.5	7.54
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			7.39	7.27
1/19/2021			7.4	7.32

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
3/11/2021				
3/12/2021			7.51	7.52
3/16/2021				
3/17/2021	5.41	5.78		
3/18/2021				
3/19/2021				
8/12/2021			7.44	7.38
8/13/2021		5.45		
8/16/2021	5.4			
8/19/2021				

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-118	HGWC-101	HGWC-103	HGWC-109	HGWC-107	HGWC-117
8/30/2016	1.6	0.63 (J)	14						
8/31/2016				88	110	280	36	130	150
10/20/2016	1.6			81	110				150
10/24/2016		0.62 (J)	11			280			
10/25/2016							41	130	
1/25/2017	1.6	0.62 (J)	12						
1/27/2017									150
1/31/2017				87	120	300	37	130	
5/23/2017		0.55 (J)	12	84	97	340			110
5/24/2017	1.4						40	130	
8/10/2017	1.6	0.66 (J)	11	78	96	300	40	130	140
11/13/2017	1.3	0.61 (J)							
11/14/2017			11	79	110	310	40	130	110
6/4/2018	1.4	0.73 (J)							
6/5/2018			9.9						
6/6/2018					95.5	351	49.7	132	
6/7/2018				60.1					103
10/1/2018	1	0.52 (J)	6.7						
10/2/2018							42.3	132	
10/3/2018				91.5	121	381			169
4/1/2019	1.7								
4/2/2019		0.78 (J)	8.7						
4/3/2019							36	139	
4/4/2019					95.1	358			
4/5/2019				75.1					141
6/17/2019						311	30.9	126	
6/18/2019				77	102				116
10/21/2019	1.8								
10/22/2019		0.6 (J)	6.8	80.9			23.2	123	133
10/23/2019					101	248			
1/3/2020									
3/4/2020									
3/24/2020	1.6	<1							129
3/25/2020				78.4	85.5	251	27.9	116	
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					97	293		126	
9/25/2020							24.7		146
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				87.8		286		128	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-118	HGWC-101	HGWC-103	HGWC-109	HGWC-107	HGWC-117
3/19/2021									162
8/12/2021	1.3	<1	10						
8/13/2021				75.1			24.4	112	
8/16/2021					72.1	354			
8/19/2021									108

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-105	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	190			
10/20/2016				
10/24/2016				
10/25/2016	190			
1/25/2017				
1/27/2017				
1/31/2017	210			
5/23/2017				
5/24/2017	180			
8/10/2017	180			
11/13/2017				
11/14/2017	170			
6/4/2018				
6/5/2018				
6/6/2018	168			
6/7/2018				
10/1/2018				
10/2/2018	173			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	185			
4/5/2019				
6/17/2019	162			
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	162	<1		
1/3/2020		380		
3/4/2020		400		
3/24/2020		311		
3/25/2020	161			
4/9/2020				
6/18/2020		349		
7/21/2020		378		
8/27/2020		382		
9/18/2020			9.5	3.5
9/22/2020				
9/24/2020	177	370		
9/25/2020				
9/28/2020				
11/10/2020				2.3
11/11/2020			4.5	
12/15/2020			4.2	2.4
1/19/2021			3.9	2.6
3/11/2021				
3/12/2021			4.7	1.9
3/16/2021				
3/17/2021		332		
3/18/2021	196			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-105	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
3/19/2021				
8/12/2021			4.3	1.4
8/13/2021	142	248		
8/16/2021				
8/19/2021				

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-101	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
8/30/2016	172	77	76						
8/31/2016				278	483	389	235	182	373
10/20/2016	108			165					305
10/24/2016		111	65		517				
10/25/2016						316	223	172	
1/25/2017	345	155	152 (o)						
1/27/2017									
1/31/2017				263	516	437	346	252	361
5/23/2017		74	52	190	637				359
5/24/2017	126					352	234	184	
8/10/2017	174	94	60	175	459	356	254	208	325
11/13/2017	158		75						
11/14/2017		89		253	545	375	313	252	373
6/4/2018	131		70						
6/5/2018		92							
6/6/2018				188	559	385	278	224	
6/7/2018									338
10/1/2018	101	91	76						
10/2/2018						374	274	230	
10/3/2018				238	582				328
4/1/2019	213								
4/2/2019		94	69						
4/3/2019							273	210	
4/4/2019				149	535	340			
4/5/2019									308
6/17/2019					515	370	272		
6/18/2019									215
10/21/2019	187								
10/22/2019		95	81				308	212	354
10/23/2019				221	507	419			
1/3/2020									
3/4/2020									
3/24/2020	207		52						
3/25/2020				187	507	417	297	213	347
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				170	517	411	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				213				171	
3/18/2021					465	410	255		328

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-101	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
3/19/2021									
8/12/2021	157	92	63						
8/13/2021						441	291	189	336
8/16/2021				206	672				
8/19/2021									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	381			
10/20/2016	319			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017	407			
1/31/2017				
5/23/2017	258			
5/24/2017				
8/10/2017	359			
11/13/2017				
11/14/2017	310			
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018	223			
10/1/2018				
10/2/2018				
10/3/2018	337			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019	334			
6/17/2019				
6/18/2019	254			
10/21/2019				
10/22/2019	348			
10/23/2019		736		
1/3/2020		714		
3/4/2020		764		
3/24/2020	331	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	340			
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				

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/13/2021 3:49 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/19/2021	371			
8/12/2021			212	234
8/13/2021		647		
8/16/2021				
8/19/2021	253			

FIGURE E.

Appendix III Interwell Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 4:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWC-107**	**0.03493**	**54**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.03174**	**-59**	**-53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3831**	**56**	**48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-105**	**5.461**	**75**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.511**	**-57**	**-48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Interwell Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 4:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0	-1	-48	No	14	21.43	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.0006186	-19	-48	No	14	28.57	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.0002897	5	48	No	14	14.29	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.008902	4	14	No	6	33.33	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.003338	-5	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101	0.008189	35	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102	-0.4582	-22	-30	No	10	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.05703	27	53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.01211	12	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-107**	**0.03493**	**54**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-109**	**-0.03174**	**-59**	**-53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-117	0.06827	35	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.009865	-12	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.338	17	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.07036	20	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWA-113 (bg)**	**0.3831**	**56**	**48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWA-47 (bg)	-1.977	-2	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	0	0	14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-13.74	-12	-30	No	10	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	4.868	47	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-105**	**5.461**	**75**	**53**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-118	1.341	37	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.07374	-11	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	0	3	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.08329	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	-0.4451	-4	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.339	43	53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-111 (bg)	0.0425	9	58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.02404	-36	-58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02701	38	58	No	16	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-47 (bg)	-0.04171	-1	-14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-48D (bg)	0.02086	2	14	No	6	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01297	35	63	No	17	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-102	0.06557	7	30	No	10	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	-0.02369	-18	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02426	-40	-48	No	14	21.43	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-113 (bg)**	**-1.511**	**-57**	**-48**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-47 (bg)	-2.098	-9	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-3.129	-5	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-4.001	-39	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-22.81	-5	-30	No	10	10	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	3.195	11	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-7.471	-48	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.198	-36	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-3.066	-49	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117	-1.092	-13	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-0.8812	-18	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	4.854	10	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.162	-10	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	0	-1	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	11.87	1	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0	0	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-55.37	-17	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	0	-1	-53	No	15	0	n/a	n/a	0.01	NP

Appendix III Interwell Trend Test Summary - All Results

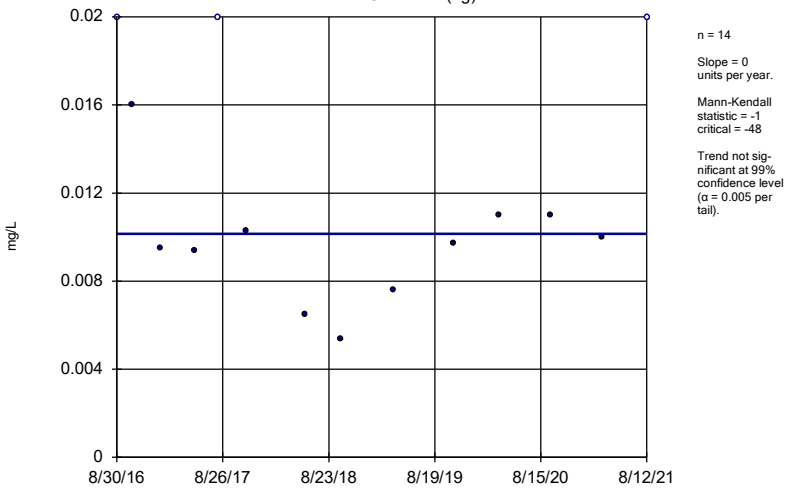
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/13/2021, 4:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Total Dissolved Solids (mg/L)	HGWC-105	15.72	35	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-118	-6.518	-23	-53	No	15	0	n/a	n/a	0.01	NP

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-111 (bg)



n = 14

Slope = 0
units per year.

Mann-Kendall
statistic = -1
critical = -48

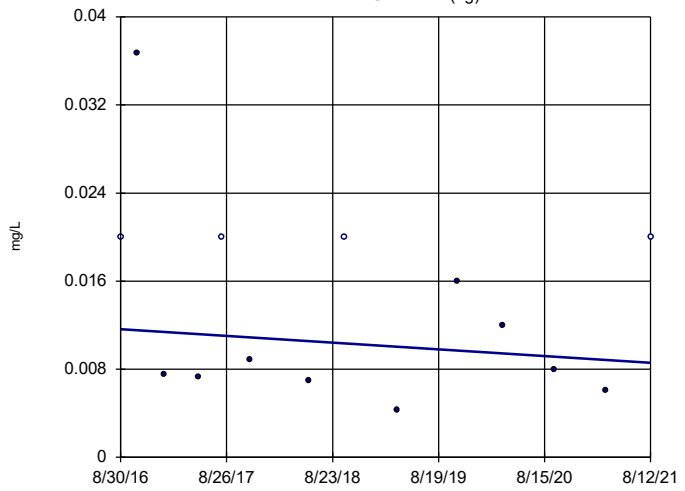
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-112 (bg)



n = 14

Slope = -0.0006186
units per year.

Mann-Kendall
statistic = -19
critical = -48

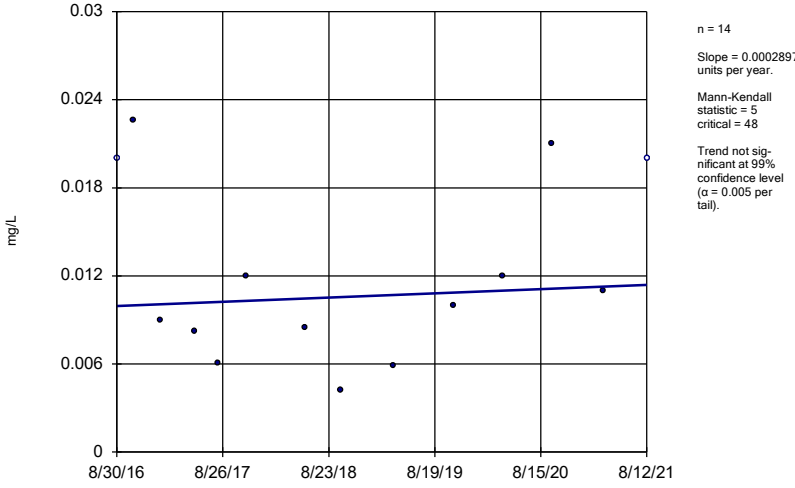
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-113 (bg)



n = 14

Slope = 0.0002897
units per year.

Mann-Kendall
statistic = 5
critical = 48

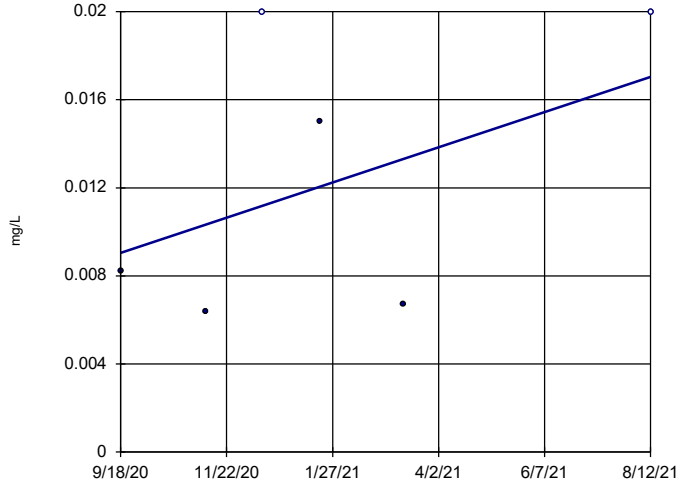
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-47 (bg)



n = 6

Slope = 0.008902
units per year.

Mann-Kendall
statistic = 4
critical = 14

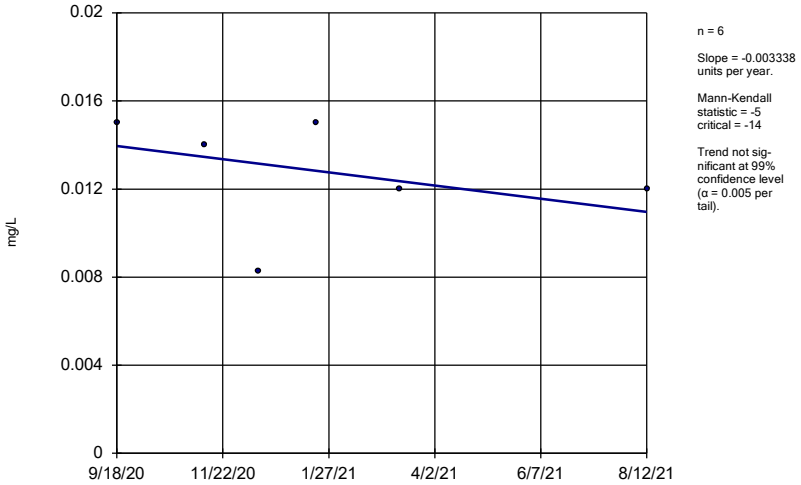
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 6

Slope = -0.003338 units per year.

Mann-Kendall statistic = -5
critical = -14

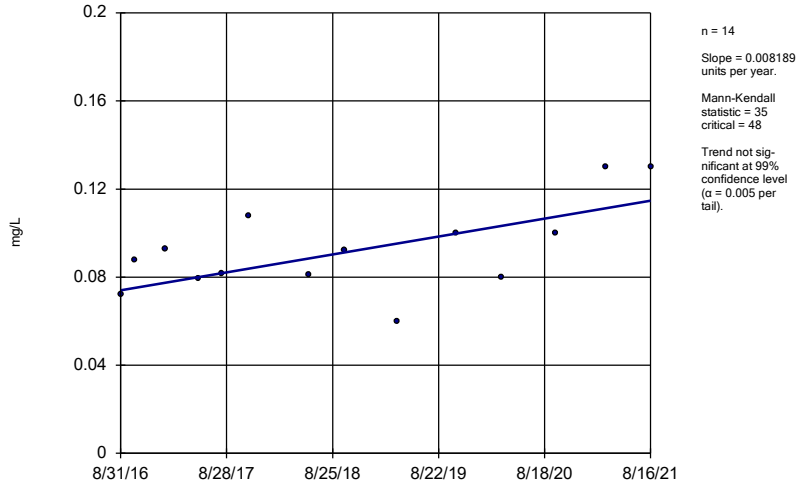
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-101



n = 14

Slope = 0.008189 units per year.

Mann-Kendall statistic = 35
critical = 48

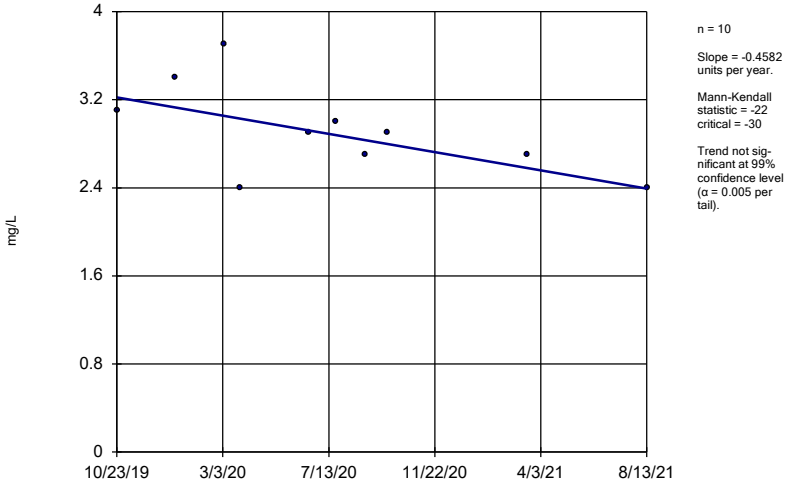
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-102



n = 10

Slope = -0.4582 units per year.

Mann-Kendall statistic = -22
critical = -30

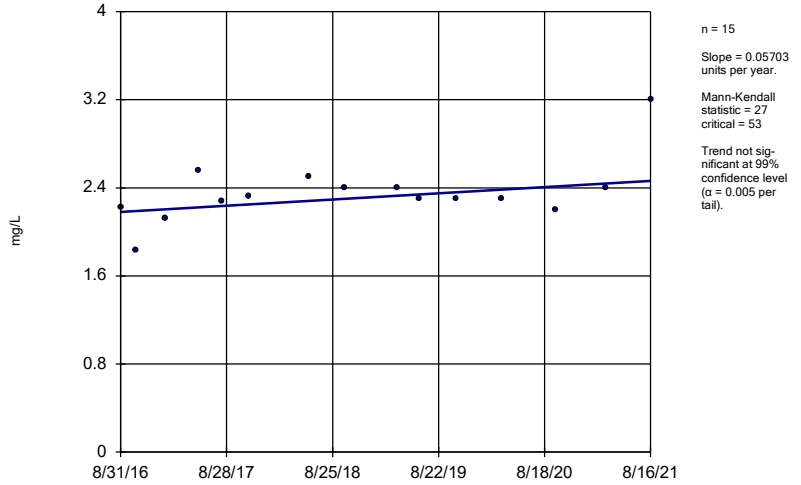
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-103



n = 15

Slope = 0.05703 units per year.

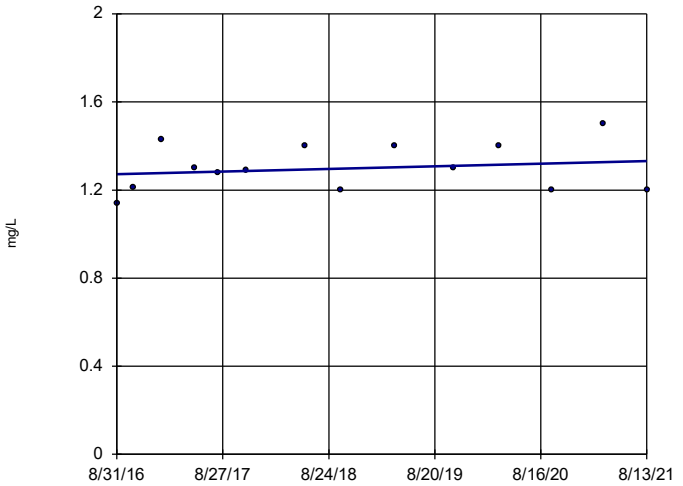
Mann-Kendall statistic = 27
critical = 53

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 14

Slope = 0.01211 units per year.

Mann-Kendall statistic = 12
critical = 48

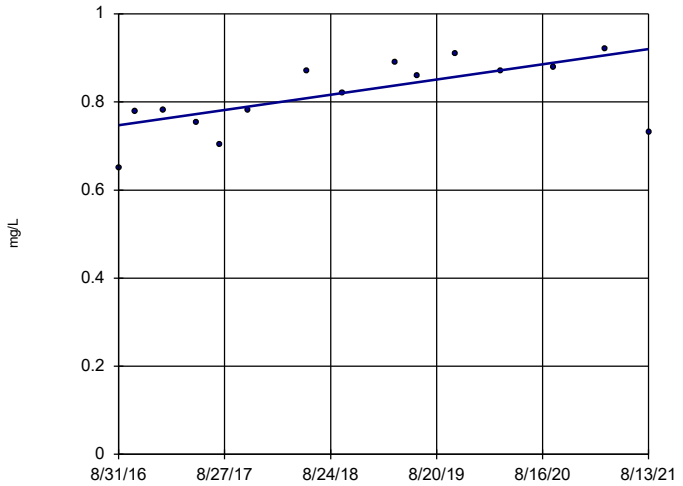
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-107



n = 15

Slope = 0.03493 units per year.

Mann-Kendall statistic = 54
critical = 53

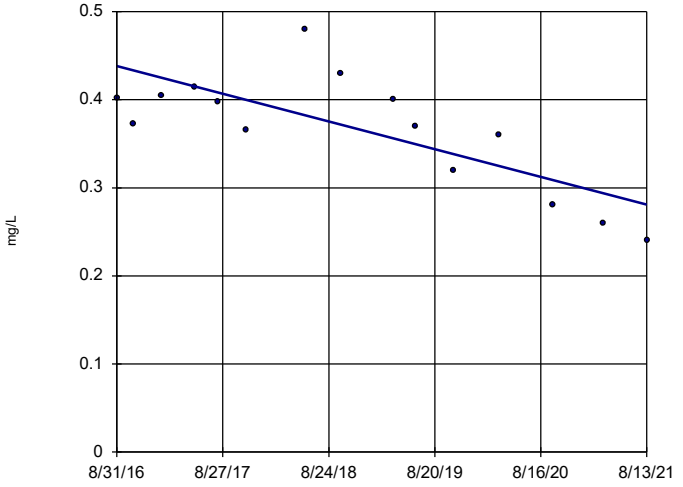
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-109



n = 15

Slope = -0.03174 units per year.

Mann-Kendall statistic = -59
critical = -53

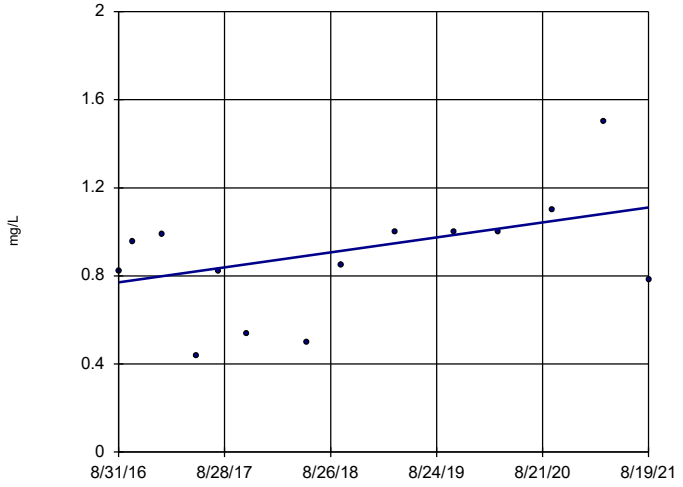
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-117



n = 14

Slope = 0.06827 units per year.

Mann-Kendall statistic = 35
critical = 48

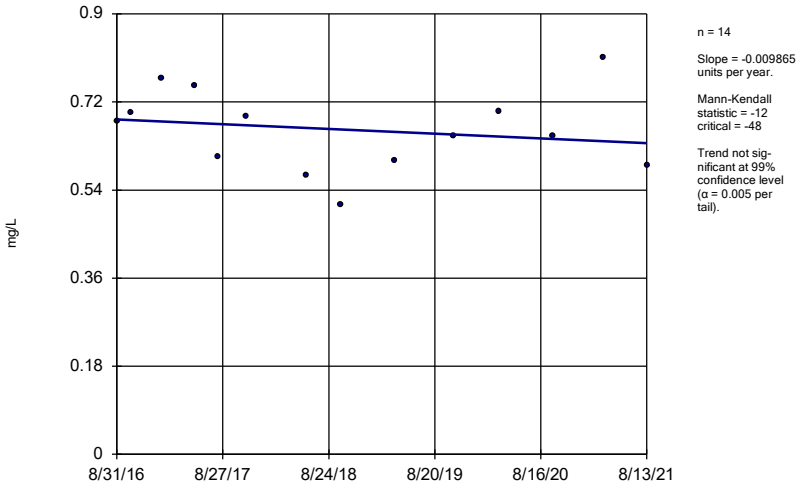
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-118



n = 14

Slope = -0.009865 units per year.

Mann-Kendall statistic = -12
critical = -48

Trend not significant at 99% confidence level (α = 0.005 per tail).

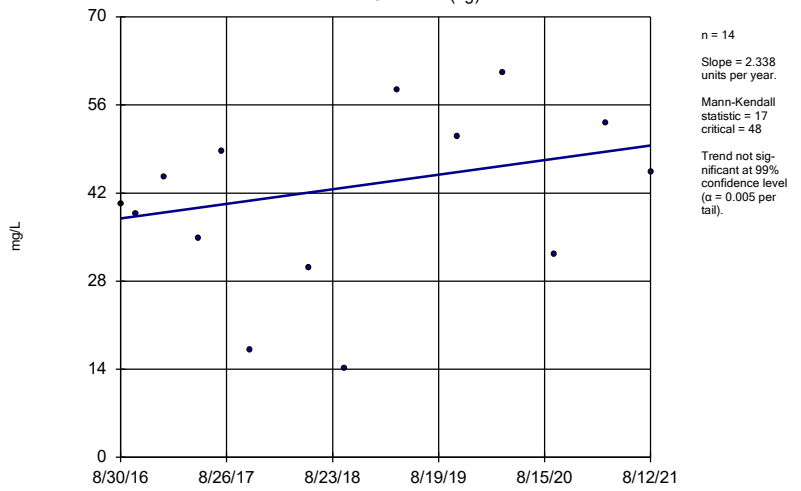
Constituent: Boron Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 14

Slope = 2.338 units per year.

Mann-Kendall statistic = 17
critical = 48

Trend not significant at 99% confidence level (α = 0.005 per tail).

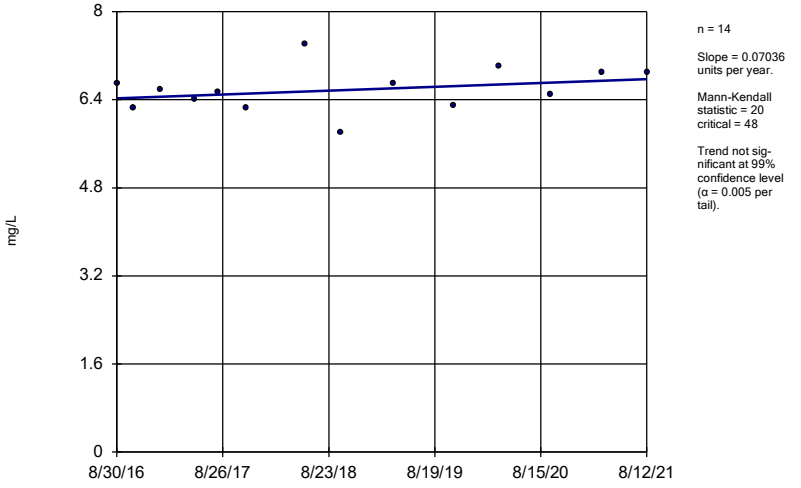
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 14

Slope = 0.07036 units per year.

Mann-Kendall statistic = 20
critical = 48

Trend not significant at 99% confidence level (α = 0.005 per tail).

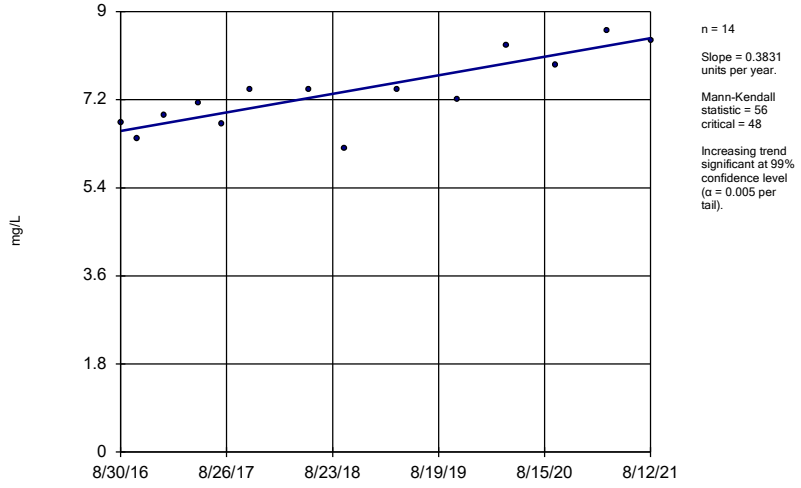
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 14

Slope = 0.3831 units per year.

Mann-Kendall statistic = 56
critical = 48

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

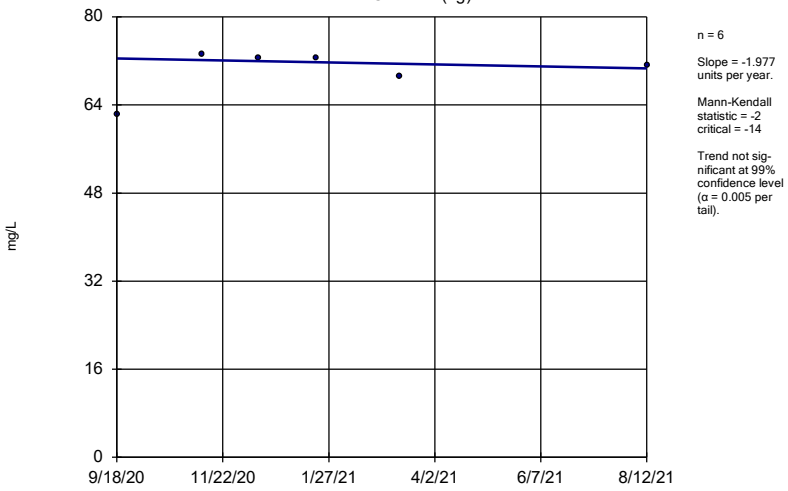
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-47 (bg)



n = 6

Slope = -1.977 units per year.

Mann-Kendall statistic = -2 critical = -14

Trend not significant at 99% confidence level (α = 0.005 per tail).

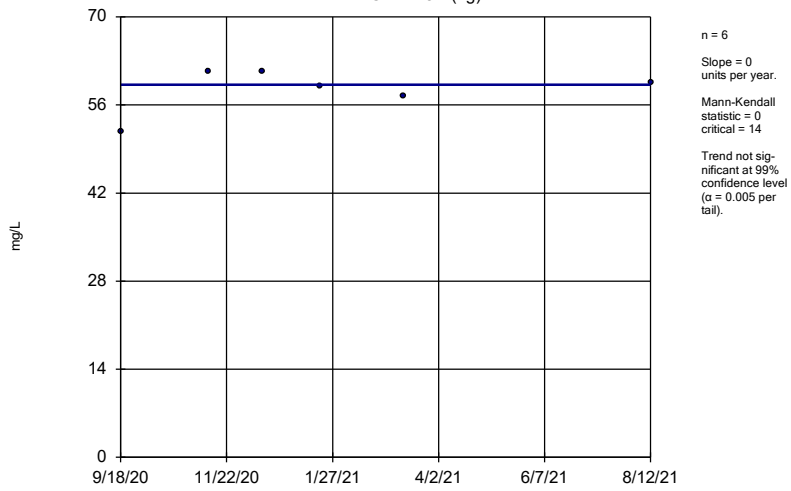
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 6

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 14

Trend not significant at 99% confidence level (α = 0.005 per tail).

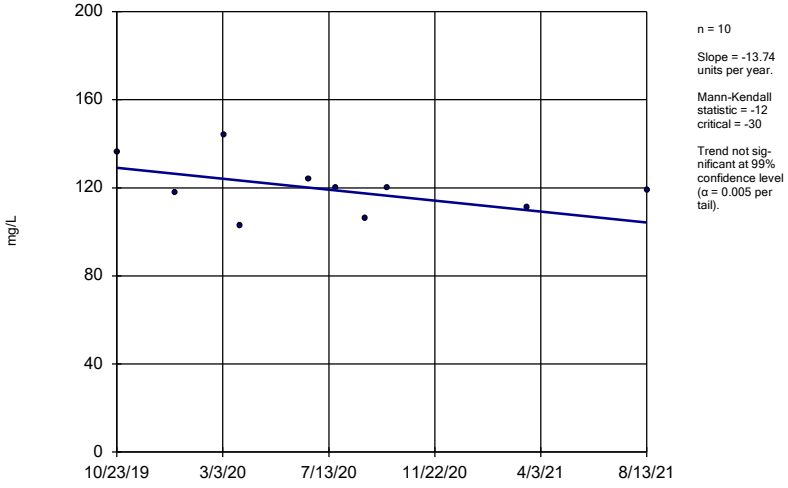
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-102



n = 10

Slope = -13.74 units per year.

Mann-Kendall statistic = -12 critical = -30

Trend not significant at 99% confidence level (α = 0.005 per tail).

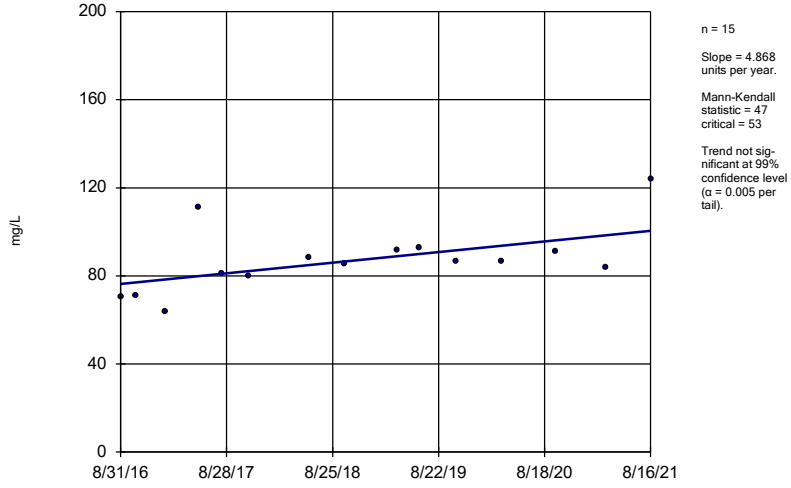
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-103



n = 15

Slope = 4.868 units per year.

Mann-Kendall statistic = 47 critical = 53

Trend not significant at 99% confidence level (α = 0.005 per tail).

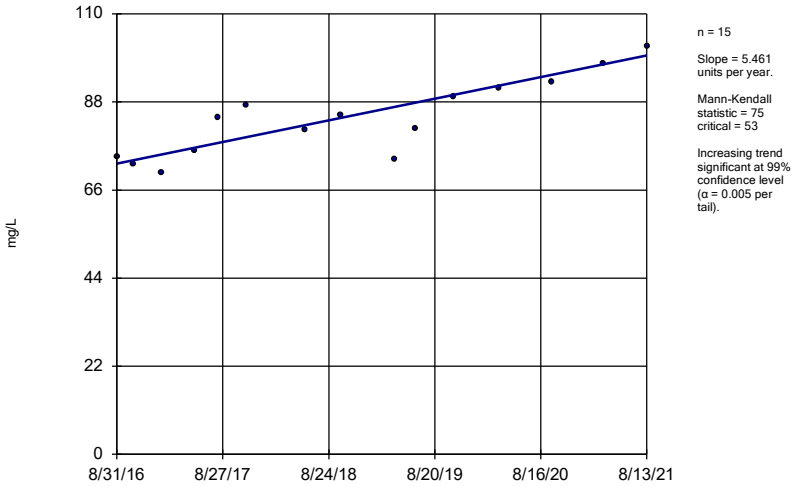
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-105



n = 15

Slope = 5.461 units per year.

Mann-Kendall statistic = 75
critical = 53

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

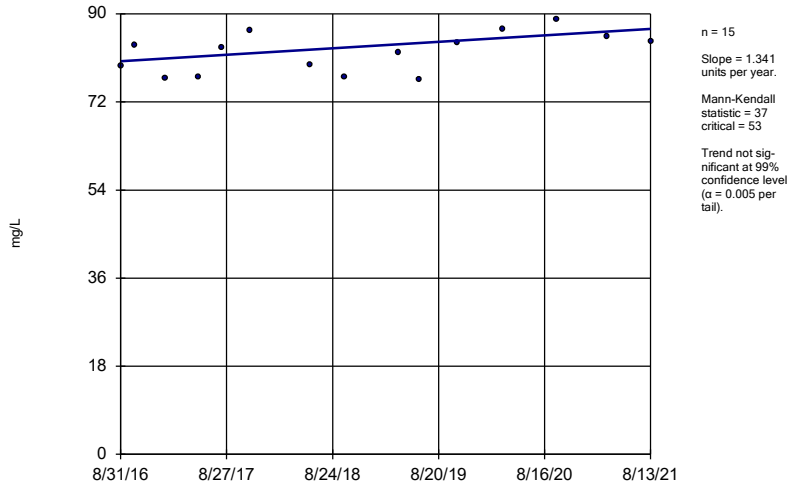
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-118



n = 15

Slope = 1.341 units per year.

Mann-Kendall statistic = 37
critical = 53

Trend not significant at 99% confidence level (α = 0.005 per tail).

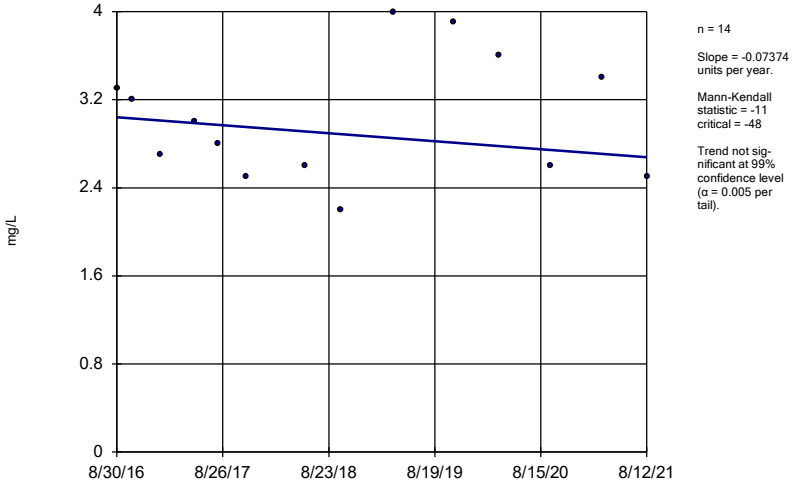
Constituent: Calcium Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 14

Slope = -0.07374 units per year.

Mann-Kendall statistic = -11
critical = -48

Trend not significant at 99% confidence level (α = 0.005 per tail).

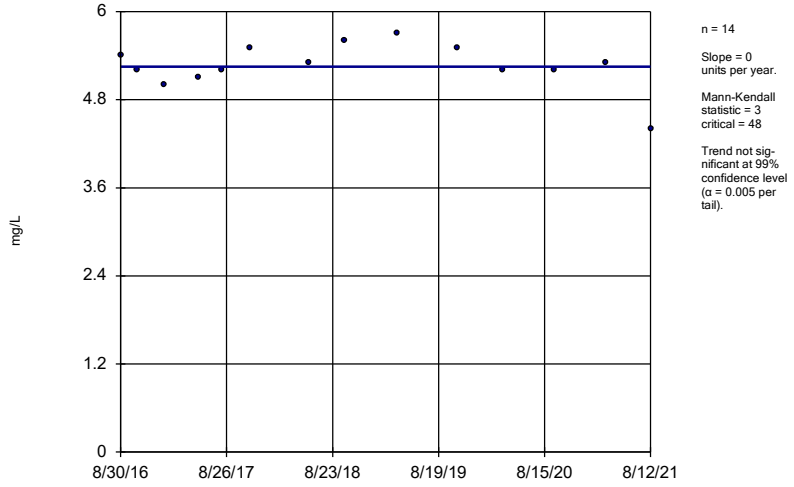
Constituent: Chloride Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = 3
critical = 48

Trend not significant at 99% confidence level (α = 0.005 per tail).

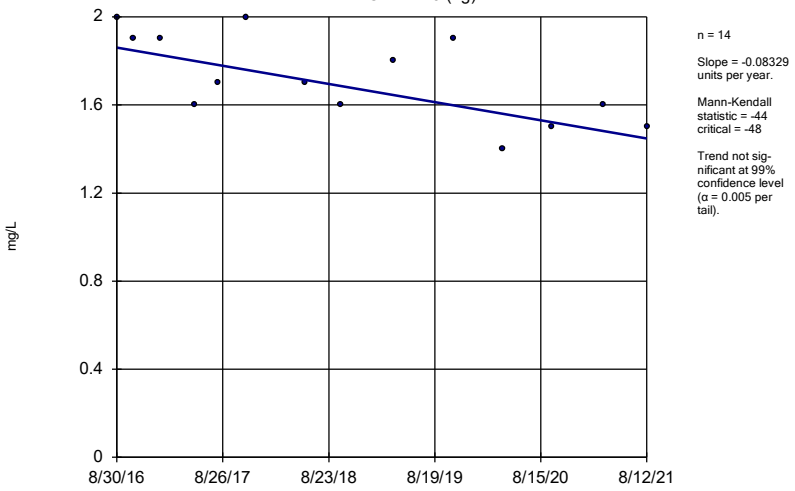
Constituent: Chloride Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 14

Slope = -0.08329 units per year.

Mann-Kendall statistic = -44
critical = -48

Trend not significant at 99% confidence level (α = 0.005 per tail).

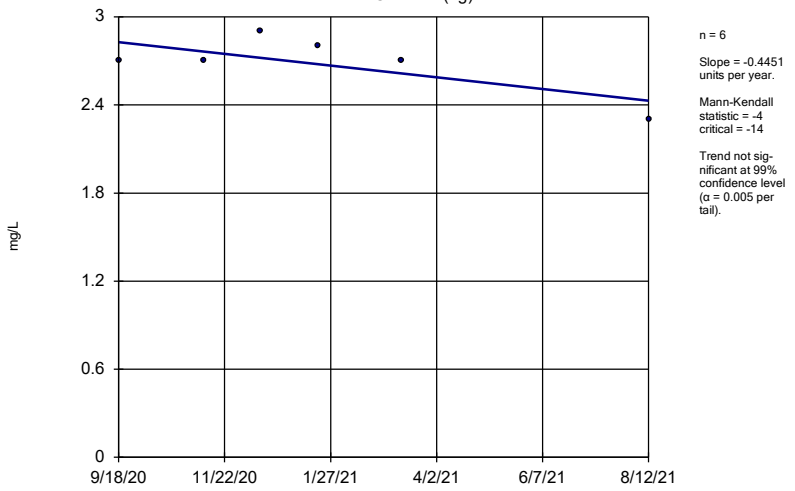
Constituent: Chloride Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-47 (bg)



n = 6

Slope = -0.4451 units per year.

Mann-Kendall statistic = -4
critical = -14

Trend not significant at 99% confidence level (α = 0.005 per tail).

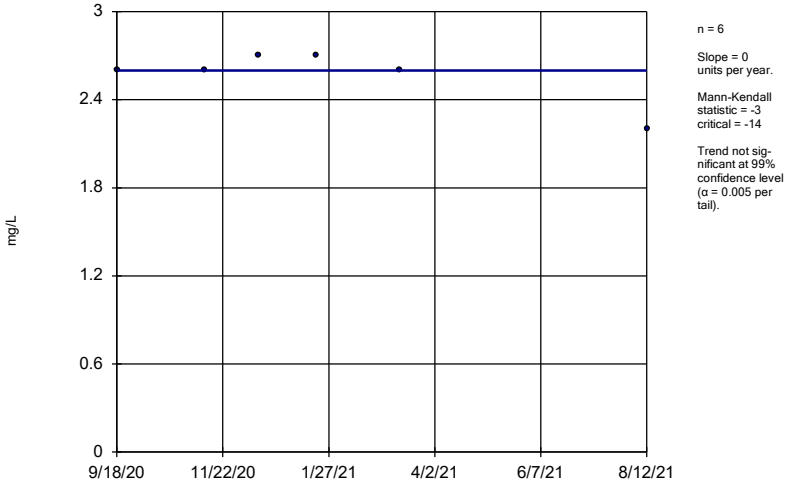
Constituent: Chloride Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 6

Slope = 0 units per year.

Mann-Kendall statistic = -3
critical = -14

Trend not significant at 99% confidence level (α = 0.005 per tail).

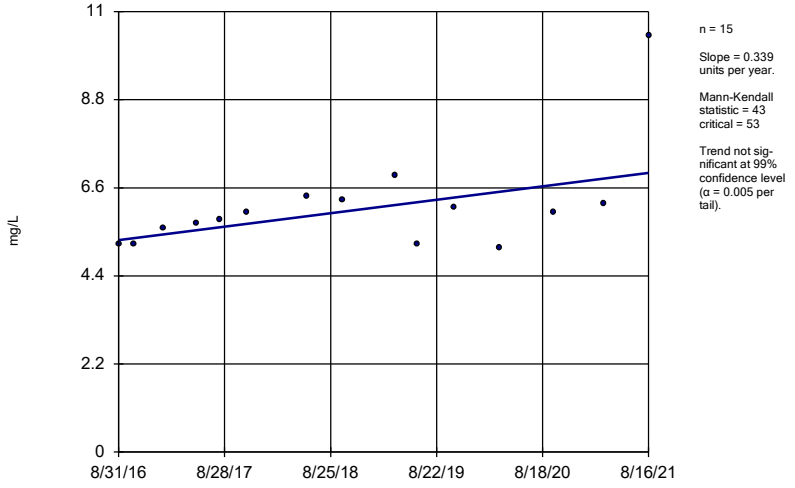
Constituent: Chloride Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-103



n = 15

Slope = 0.339 units per year.

Mann-Kendall statistic = 43
critical = 53

Trend not significant at 99% confidence level (α = 0.005 per tail).

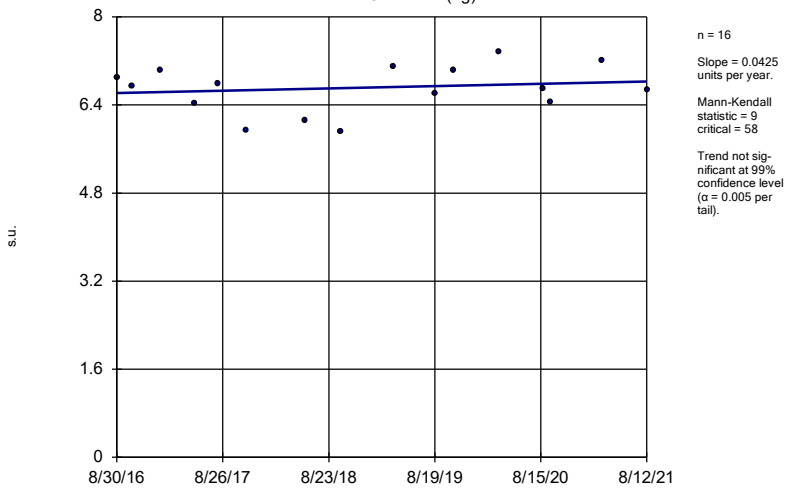
Constituent: Chloride Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 16

Slope = 0.0425 units per year.

Mann-Kendall statistic = 9
critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

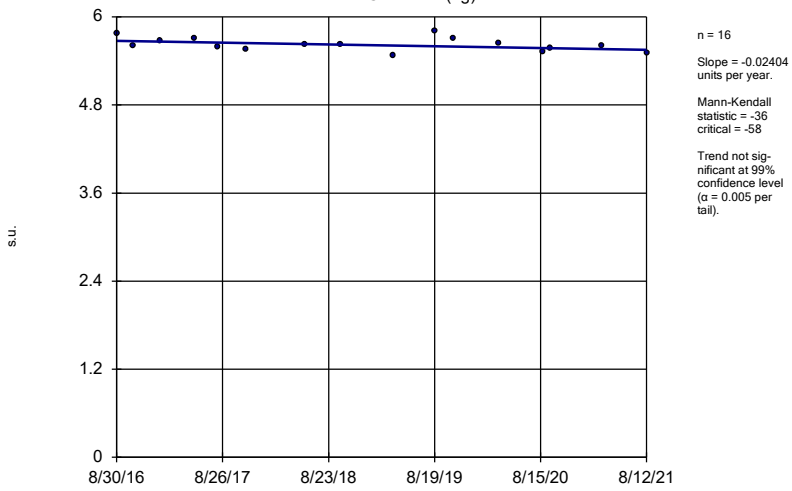
Constituent: pH Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 16

Slope = -0.02404 units per year.

Mann-Kendall statistic = -36
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

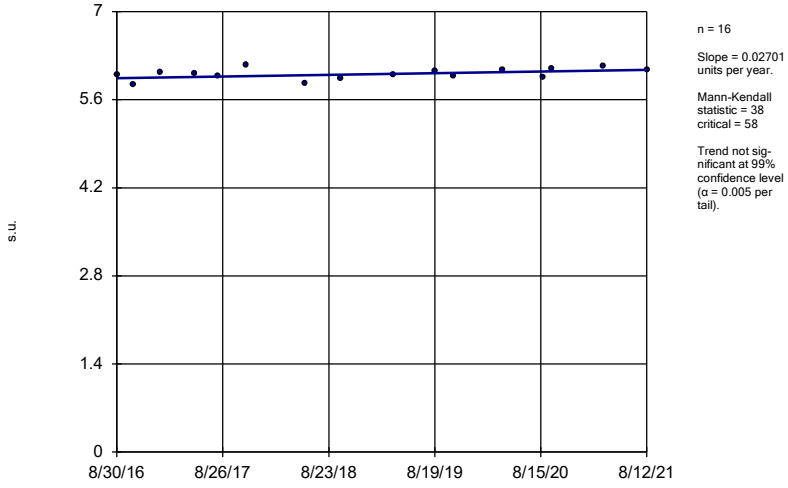
Constituent: pH Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 16

Slope = 0.02701 units per year.

Mann-Kendall statistic = 38
critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

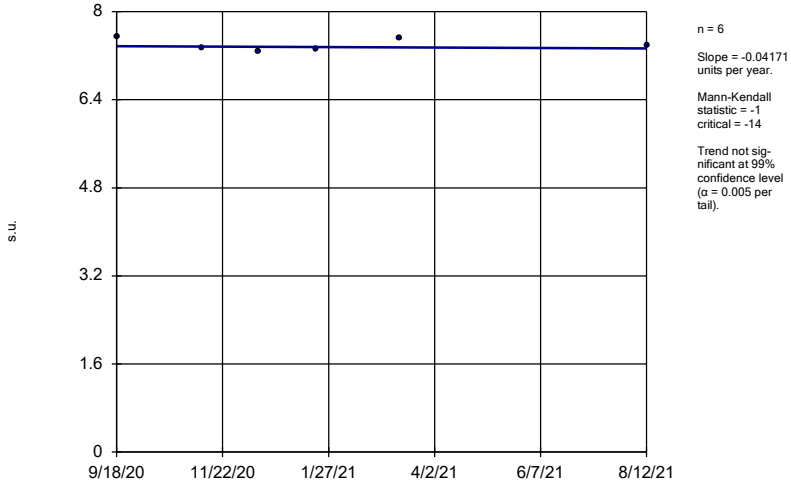
Constituent: pH Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-47 (bg)



n = 6

Slope = -0.04171 units per year.

Mann-Kendall statistic = -1
critical = -14

Trend not significant at 99% confidence level (α = 0.005 per tail).

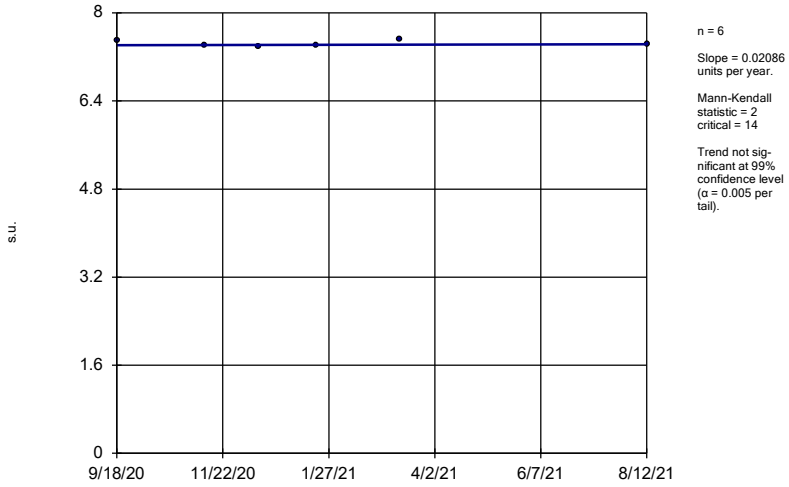
Constituent: pH Analysis Run 10/13/2021 3:58 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 6

Slope = 0.02086 units per year.

Mann-Kendall statistic = 2 critical = 14

Trend not significant at 99% confidence level (α = 0.005 per tail).

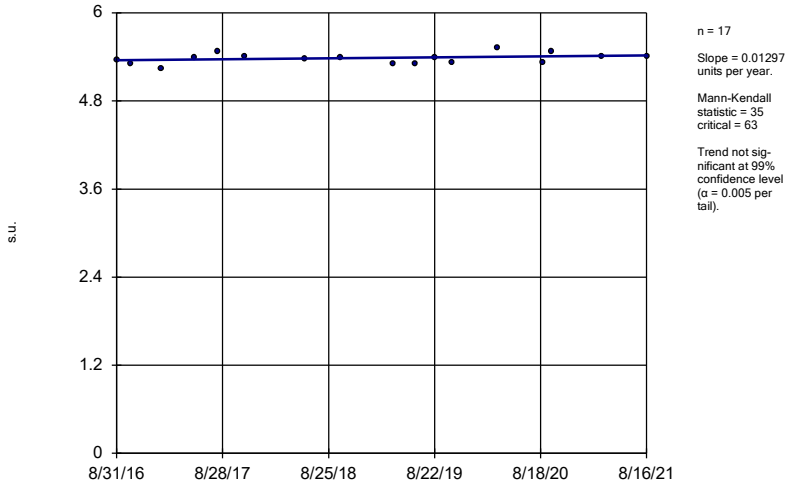
Constituent: pH Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-101



n = 17

Slope = 0.01297 units per year.

Mann-Kendall statistic = 35 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

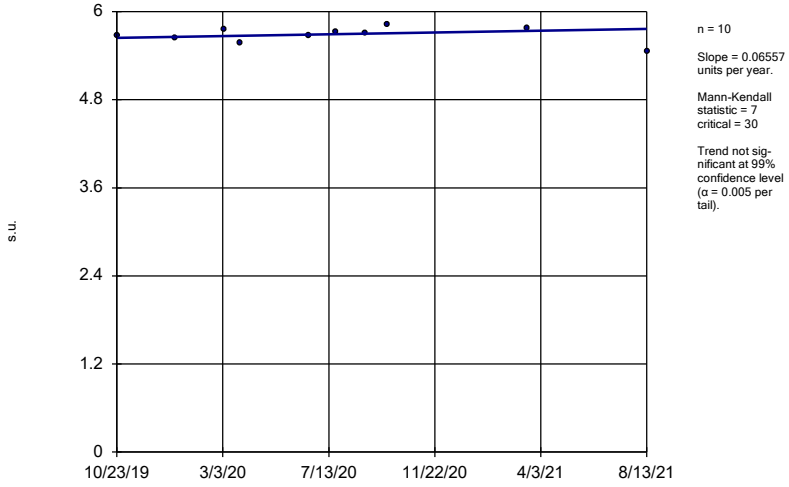
Constituent: pH Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-102



n = 10

Slope = 0.06557 units per year.

Mann-Kendall statistic = 7 critical = 30

Trend not significant at 99% confidence level (α = 0.005 per tail).

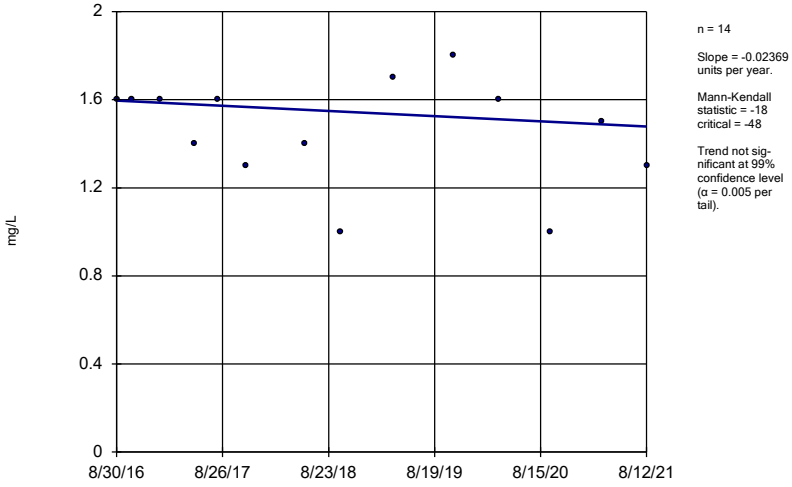
Constituent: pH Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 14

Slope = -0.02369 units per year.

Mann-Kendall statistic = -18 critical = -48

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

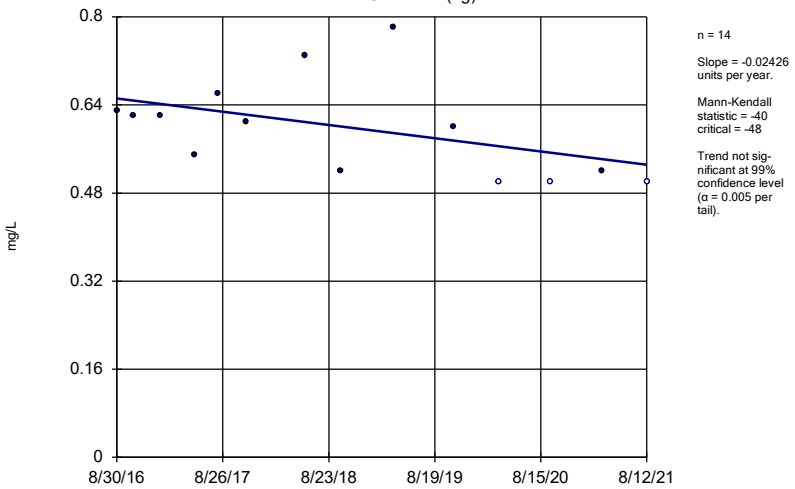
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-112 (bg)



n = 14

Slope = -0.02426 units per year.

Mann-Kendall statistic = -40
critical = -48

Trend not significant at 99% confidence level (α = 0.005 per tail).

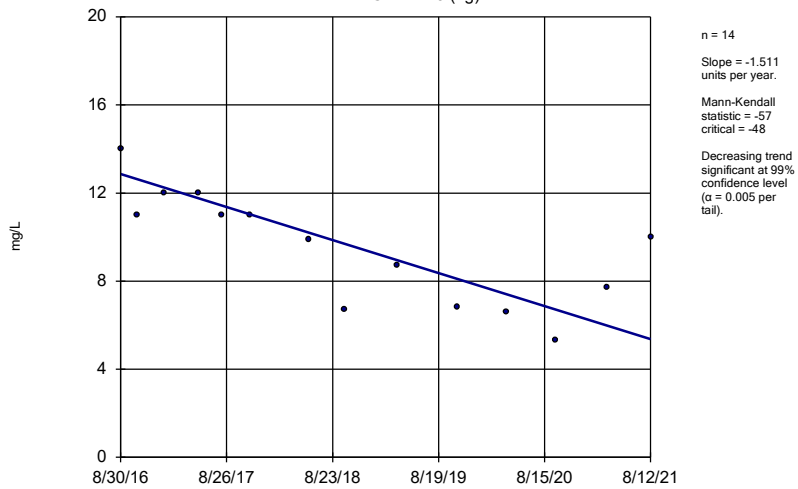
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 14

Slope = -1.511 units per year.

Mann-Kendall statistic = -57
critical = -48

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

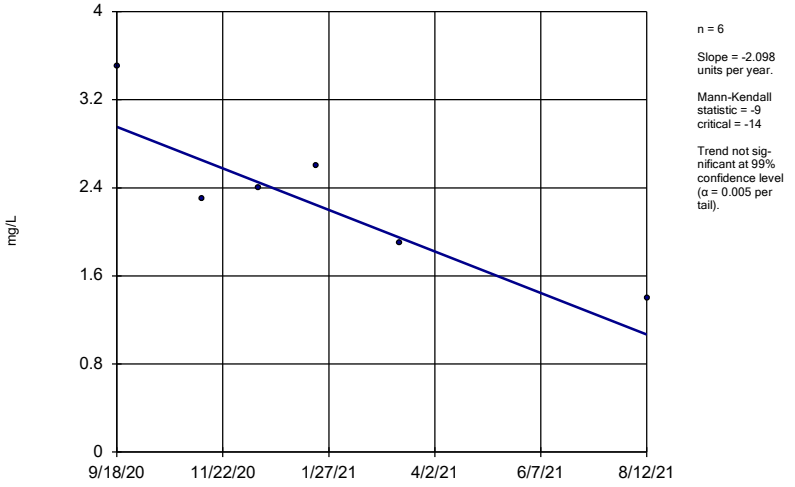
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-47 (bg)



n = 6

Slope = -2.098 units per year.

Mann-Kendall statistic = -9
critical = -14

Trend not significant at 99% confidence level (α = 0.005 per tail).

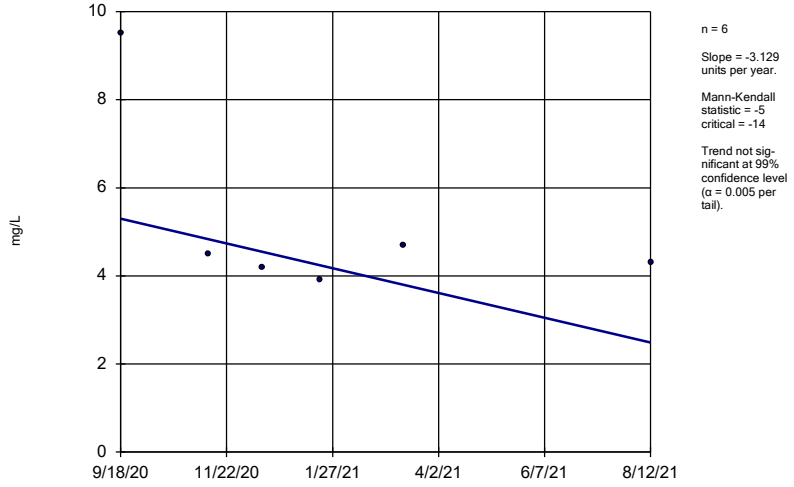
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 6

Slope = -3.129 units per year.

Mann-Kendall statistic = -5
critical = -14

Trend not significant at 99% confidence level (α = 0.005 per tail).

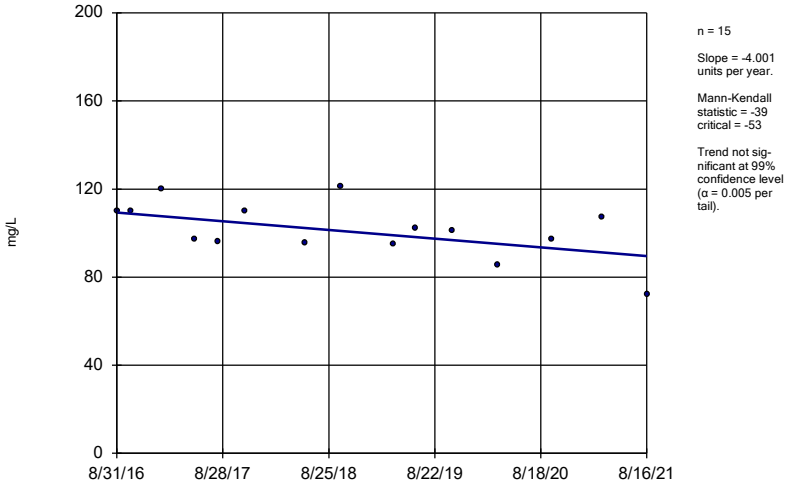
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-101



n = 15

Slope = -4.001 units per year.

Mann-Kendall statistic = -39 critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

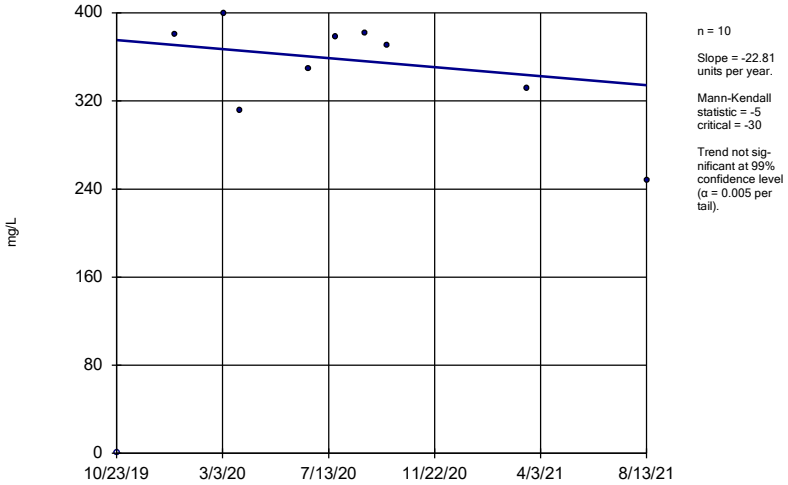
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWC-102



n = 10

Slope = -22.81 units per year.

Mann-Kendall statistic = -5 critical = -30

Trend not significant at 99% confidence level (α = 0.005 per tail).

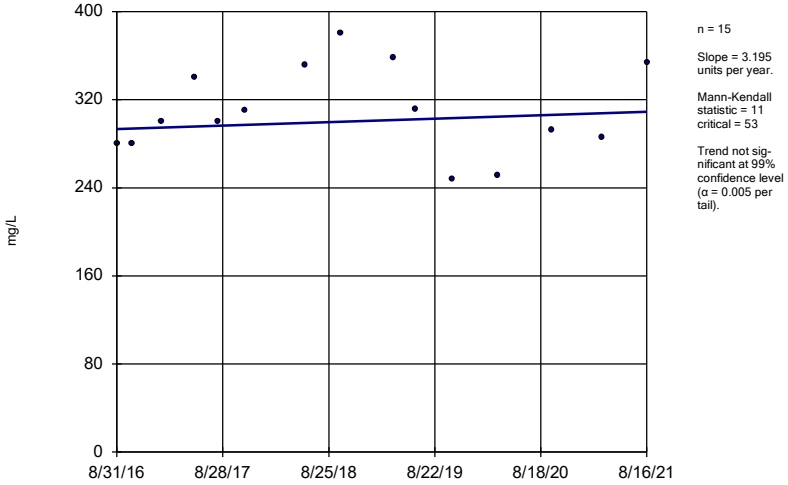
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-103



n = 15

Slope = 3.195 units per year.

Mann-Kendall statistic = 11 critical = 53

Trend not significant at 99% confidence level (α = 0.005 per tail).

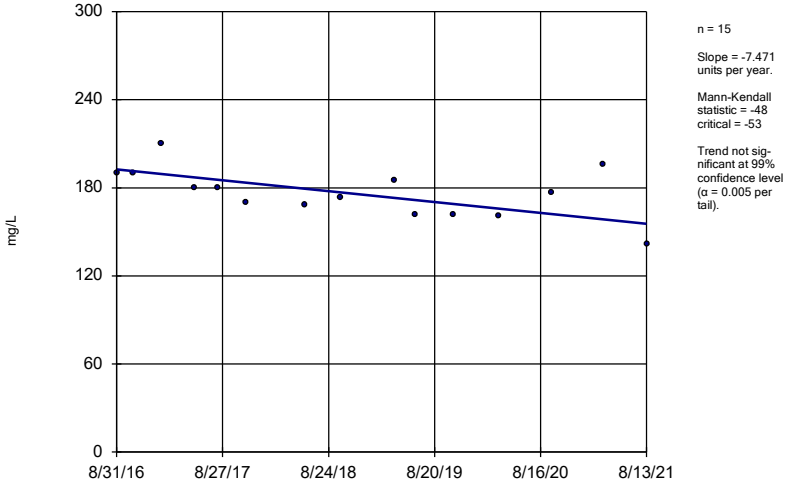
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-105



n = 15

Slope = -7.471 units per year.

Mann-Kendall statistic = -48 critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

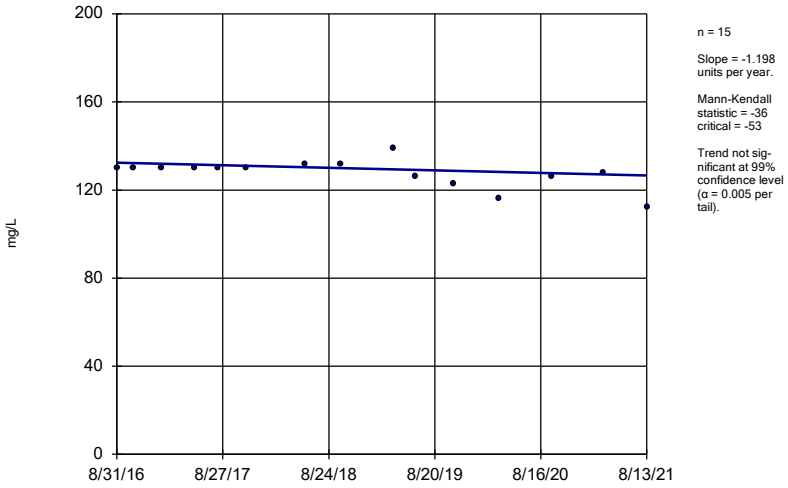
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-107



n = 15

Slope = -1.198 units per year.

Mann-Kendall statistic = -36
critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

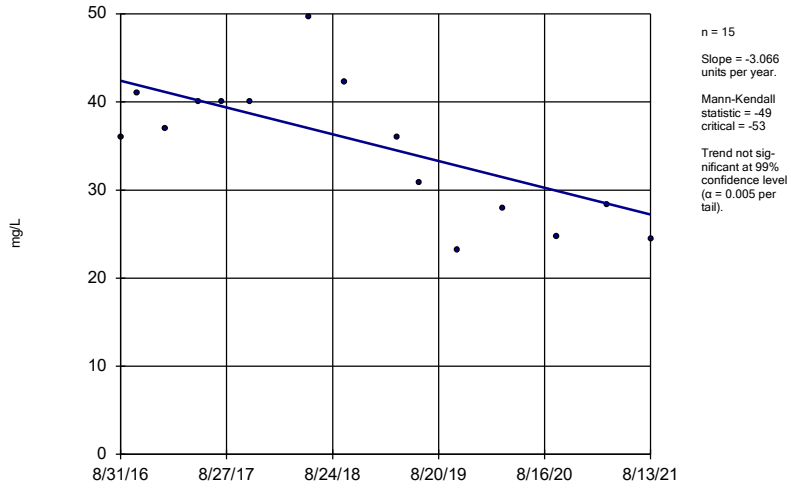
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-109



n = 15

Slope = -3.066 units per year.

Mann-Kendall statistic = -49
critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

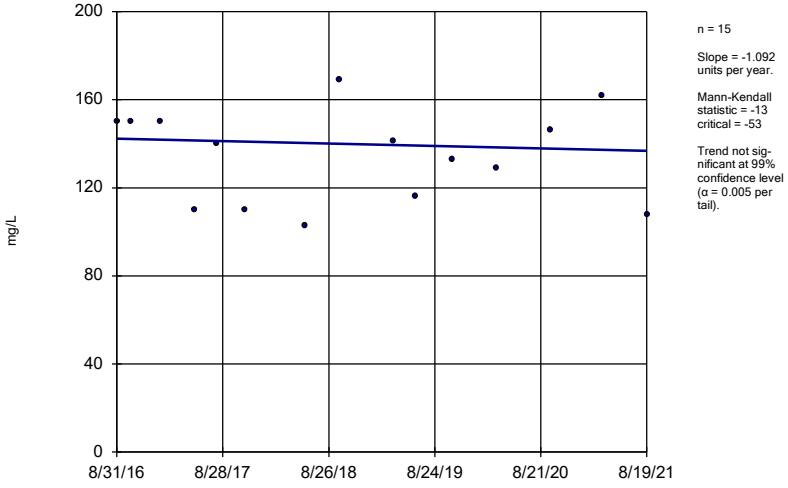
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-117



n = 15

Slope = -1.092 units per year.

Mann-Kendall statistic = -13
critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

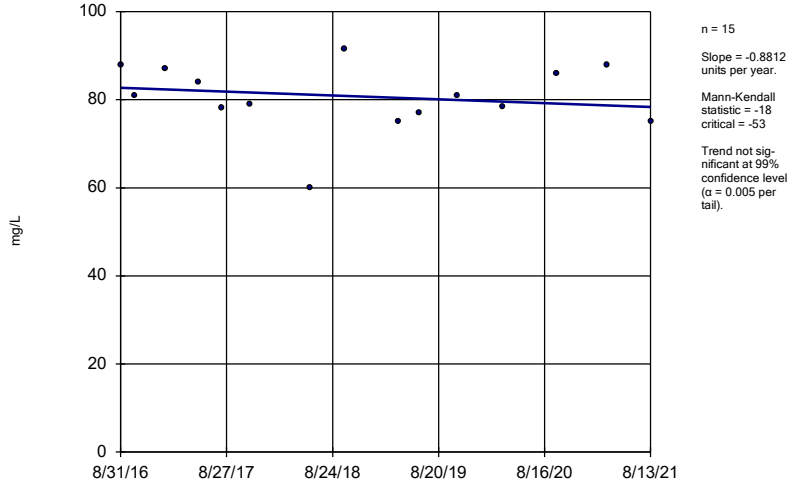
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-118



n = 15

Slope = -0.8812 units per year.

Mann-Kendall statistic = -18
critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

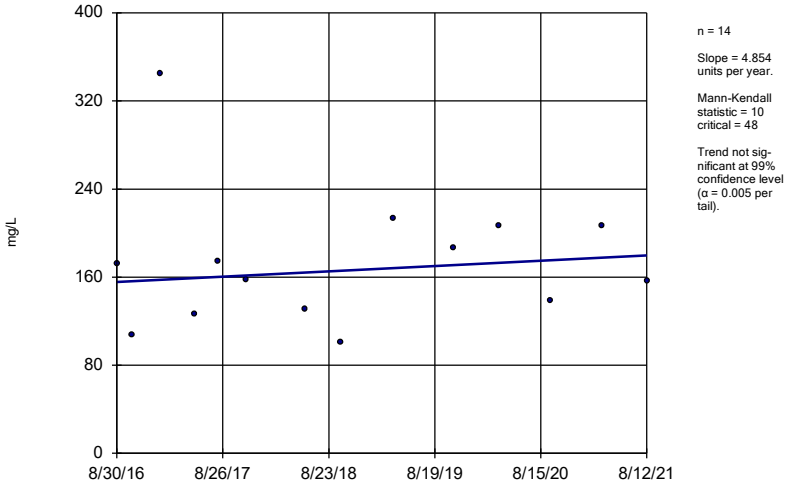
Constituent: Sulfate Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-111 (bg)



n = 14

Slope = 4.854 units per year.

Mann-Kendall statistic = 10 critical = 48

Trend not significant at 99% confidence level (α = 0.005 per tail).

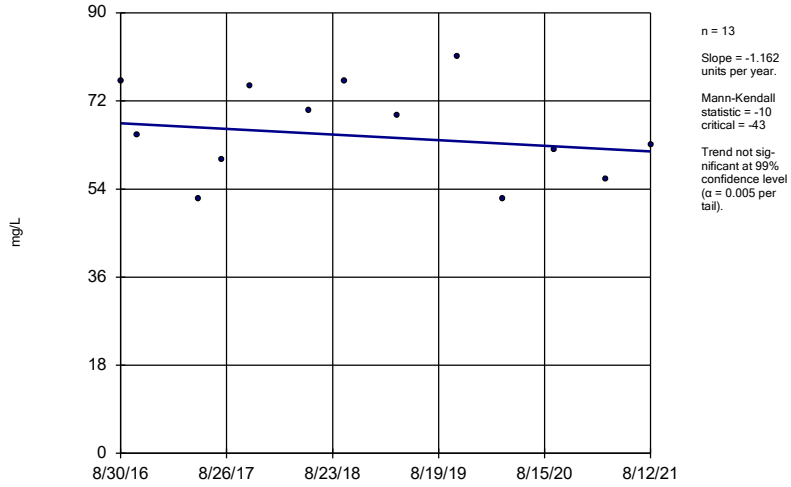
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-112 (bg)



n = 13

Slope = -1.162 units per year.

Mann-Kendall statistic = -10 critical = -43

Trend not significant at 99% confidence level (α = 0.005 per tail).

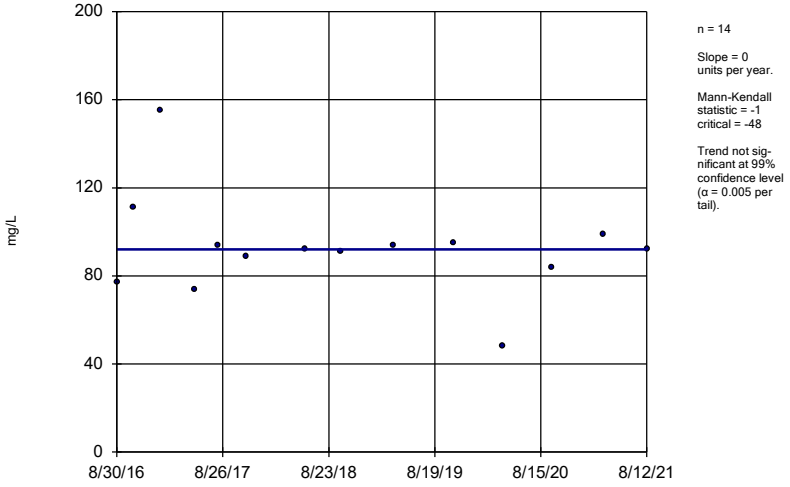
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-113 (bg)



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = -1 critical = -48

Trend not significant at 99% confidence level (α = 0.005 per tail).

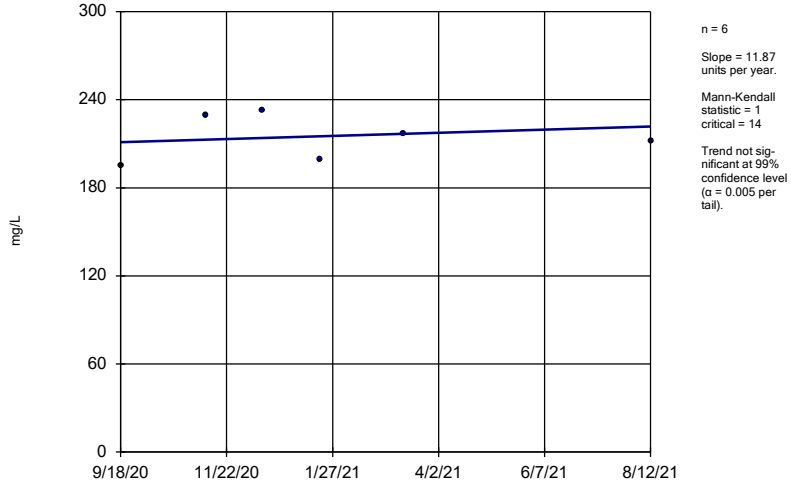
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-47 (bg)



n = 6

Slope = 11.87 units per year.

Mann-Kendall statistic = 1 critical = 14

Trend not significant at 99% confidence level (α = 0.005 per tail).

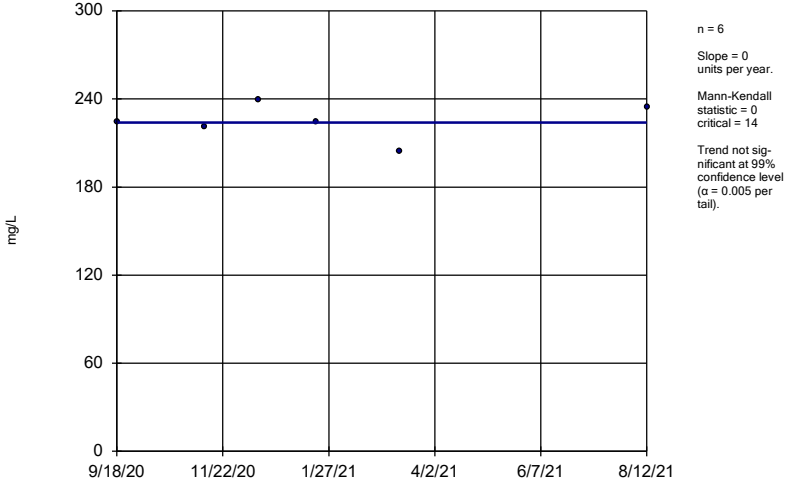
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWA-48D (bg)



n = 6

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 14

Trend not significant at 99% confidence level (α = 0.005 per tail).

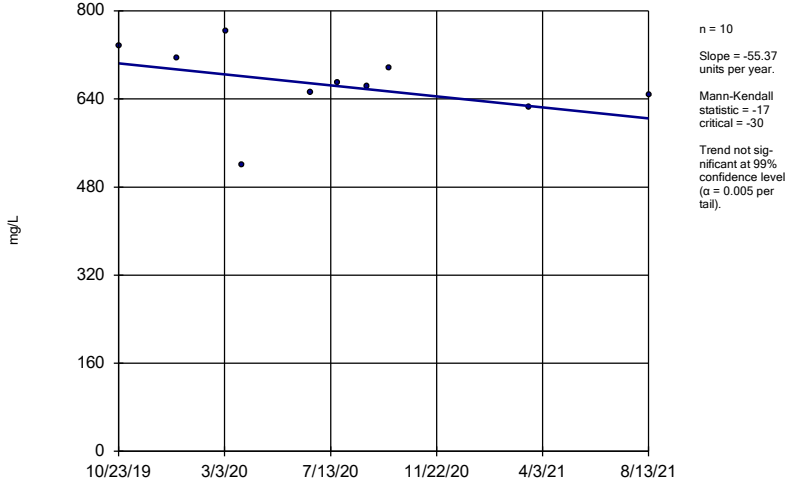
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-102



n = 10

Slope = -55.37 units per year.

Mann-Kendall statistic = -17 critical = -30

Trend not significant at 99% confidence level (α = 0.005 per tail).

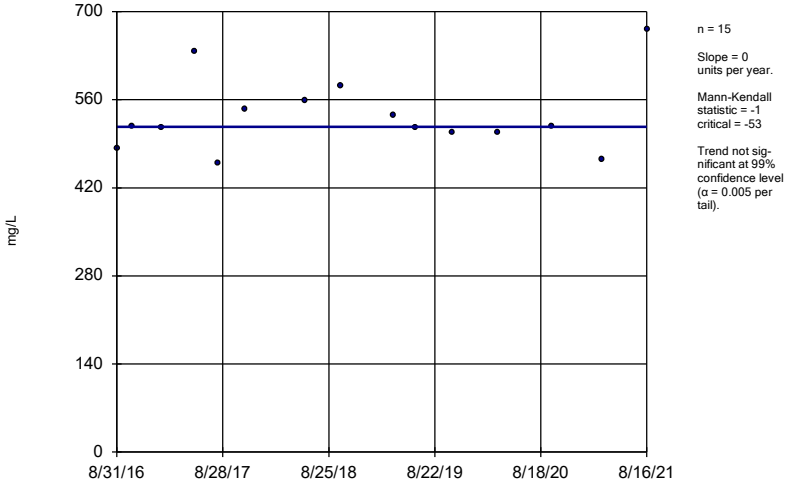
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-103



n = 15

Slope = 0 units per year.

Mann-Kendall statistic = -1 critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

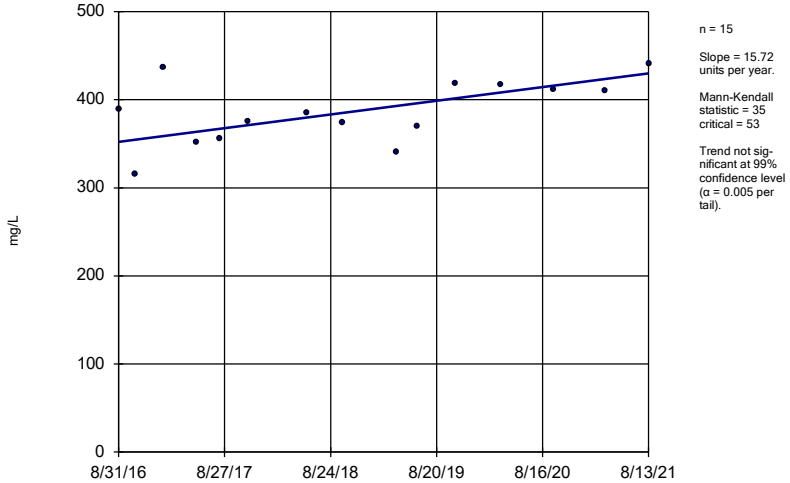
Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Sen's Slope Estimator

HGWC-105



n = 15

Slope = 15.72 units per year.

Mann-Kendall statistic = 35 critical = 53

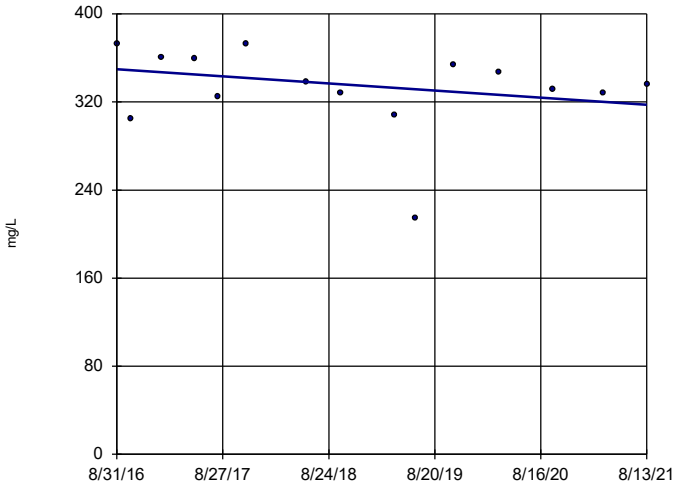
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-118



n = 15

Slope = -6.518 units per year.

Mann-Kendall statistic = -23
critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 10/13/2021 3:59 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/15/2021, 3:36 PM

Constituent	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	43	93.02	n/a	0.1102	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	57	91.23	n/a	0.05373	NP Inter(NDs)
Barium (mg/L)	0.1	n/a	n/a	n/a	n/a	57	0	n/a	0.05373	NP Inter(normality)
Beryllium (mg/L)	0.0019	n/a	n/a	n/a	n/a	57	87.72	n/a	0.05373	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	57	100	n/a	0.05373	NP Inter(NDs)
Chromium (mg/L)	0.0061	n/a	n/a	n/a	n/a	57	31.58	n/a	0.05373	NP Inter(normality)
Cobalt (mg/L)	0.005	n/a	n/a	n/a	n/a	57	85.96	n/a	0.05373	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	1.362	n/a	n/a	n/a	n/a	57	0	No	0.05	Inter
Fluoride (mg/L)	0.1688	n/a	n/a	n/a	n/a	60	26.67	No	0.05	Inter
Lead (mg/L)	0.0016	n/a	n/a	n/a	n/a	57	63.16	n/a	0.05373	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	n/a	n/a	57	42.11	n/a	0.05373	NP Inter(normality)
Mercury (mg/L)	0.0002	n/a	n/a	n/a	n/a	43	72.09	n/a	0.1102	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	43	86.05	n/a	0.1102	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	43	79.07	n/a	0.1102	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	43	100	n/a	0.1102	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-4 GWPS			
Constituent Name	**MCL**	**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	0.1	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	0.005	0.005
Combined Radium, Total (pCi/L)	5	1.36	5
Fluoride, Total (mg/L)	4	0.17	4
Lead, Total (mg/L)	n/a	0.0016	0.0016
Lithium, Total (mg/L)	n/a	0.03	0.03
Mercury, Total (mg/L)	0.002	0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.005	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

**MCL = Maximum Contaminant Level*

**GWPS = Groundwater Protection Standard*

FIGURE H.

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/21/2021, 3:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-117**	**0.01056**	**0.005291**	**0.005**	**Yes**	**15**	**0.00389**	**0**	**No**	**0.01**	**Param.**
Mercury (mg/L)	**HGWC-103**	**0.0005**	**0.00027**	**0.0002**	**Yes**	**11**	**0.0001382**	**81.82**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-105**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.00008442**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-107**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.0001254**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-117**	**0.0005**	**0.0003**	**0.0002**	**Yes**	**11**	**0.0001374**	**81.82**	**No**	**0.006**	**NP (NDs)**

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/21/2021, 3:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.00076	0.006	No	9	0.0007467	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.003	0.006	No	11	0.0002412	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.003	0.006	No	11	0.0005729	90.91	No	0.006	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	15	0.00119	93.33	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	10	0.00223	60	No	0.011	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002628	0.001457	0.01	No	15	0.0009493	0	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	15	0.001195	93.33	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	15	0.001033	93.33	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04648	0.04023	2	No	15	0.004608	0	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03383	0.02637	2	No	10	0.004175	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04095	0.0354	2	No	15	0.004409	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.0745	0.066	2	No	15	0.0049	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03954	0.03685	2	No	15	0.002162	0	x^4	0.01	Param.
Barium (mg/L)	HGWC-109	0.08824	0.08183	2	No	15	0.004732	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.05093	0.04098	2	No	15	0.007342	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.06321	0.05287	2	No	15	0.007629	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	15	0.0002263	53.33	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	15	0.0001797	80	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.0005	0.000066	0.004	No	15	0.00022	60	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	15	0.0001051	93.33	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0002208	0.0001439	0.005	No	15	0.00005678	13.33	No	0.01	Param.
Cadmium (mg/L)	HGWC-102	0.0007379	0.0002681	0.005	No	10	0.0002633	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007934	0.0006692	0.005	No	15	0.00009164	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.00025	0.00009	0.005	No	15	0.00007792	53.33	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117	0.0008752	0.0005888	0.005	No	15	0.0002113	0	No	0.01	Param.
Chromium (mg/L)	HGWC-101	0.005	0.00075	0.1	No	15	0.00195	73.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	10	0.001868	80	No	0.011	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00069	0.1	No	15	0.002021	60	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.00064	0.1	No	15	0.001963	73.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	15	0.0011	93.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	15	0.001412	86.67	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.001	0.1	No	15	0.0019	73.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.00098	0.1	No	15	0.00186	66.67	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002799	0.002028	0.005	No	15	0.0005693	6.667	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002228	0.0009205	0.005	No	10	0.000888	0	x^(1/3)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.002324	0.001782	0.005	No	15	0.0003998	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00045	0.005	No	15	0.0008864	26.67	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002163	0.001246	0.005	No	15	0.000677	0	No	0.01	Param.
Cobalt (mg/L)	**HGWC-117**	**0.01056**	**0.005291**	**0.005**	**Yes**	**15**	**0.00389**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	HGWC-118	0.0025	0.0004	0.005	No	15	0.001028	46.67	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.9272	0.4325	5	No	15	0.365	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.353	0.5045	5	No	9	0.4397	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.9516	0.4448	5	No	15	0.3739	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.9251	0.5184	5	No	15	0.3001	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.136	0.5262	5	No	15	0.4499	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8434	0.5213	5	No	15	0.2376	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.8698	0.3744	5	No	15	0.3655	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.186	0.4655	5	No	14	0.5089	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.05	4	No	16	0.02082	87.5	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.1	0.1	4	No	10	0.03795	90	No	0.011	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.06	4	No	16	0.02358	75	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-105	0.13	0.07	4	No	16	0.03042	56.25	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-107	0.16	0.057	4	No	16	0.03732	56.25	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-109	0.1208	0.07397	4	No	16	0.03597	12.5	No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.09	4	No	16	0.05844	56.25	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-118	0.3	0.075	4	No	17	0.2024	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.0016	No	15	0.00002582	93.33	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.001	0.0016	No	10	0.0002814	90	No	0.011	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00024	0.0016	No	15	0.0003768	66.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.001	0.000068	0.0016	No	15	0.000428	73.33	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00021	0.0016	No	15	0.0003796	73.33	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.0016	No	15	0.0003322	86.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-117	0.001	0.00019	0.0016	No	15	0.0003822	66.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.001	0.00025	0.0016	No	15	0.0003512	66.67	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.00128	0.001028	0.03	No	10	0.0001408	0	No	0.01	Param.
Lithium (mg/L)	HGWC-103	0.03	0.0015	0.03	No	15	0.01175	20	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.004166	0.003821	0.03	No	15	0.0002549	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.03	No	15	0.015	53.33	No	0.01	NP (NDs)

Confidence Intervals - All Results

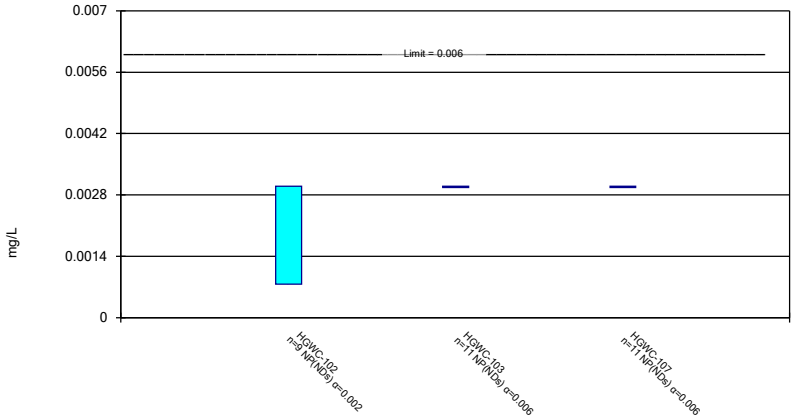
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/21/2021, 3:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Lithium (mg/L)	HGWC-109	0.03	0.001	0.03	No	15	0.01493	53.33	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-117	0.03	0.0017	0.03	No	15	0.01147	20	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.03	No	15	0.01418	40	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0005	0.000099	0.0002	No	11	0.0001634	81.82	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0005	0.0001	0.0002	No	9	0.0001333	88.89	No	0.002	NP (NDs)
Mercury (mg/L)	**HGWC-103**	**0.0005**	**0.00027**	**0.0002**	**Yes**	**11**	**0.0001382**	**81.82**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-105**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.00008442**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	**HGWC-107**	**0.0005**	**0.0005**	**0.0002**	**Yes**	**11**	**0.0001254**	**90.91**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	HGWC-109	0.0005	0.00008	0.0002	No	11	0.0001699	81.82	No	0.006	NP (NDs)
Mercury (mg/L)	**HGWC-117**	**0.0005**	**0.0003**	**0.0002**	**Yes**	**11**	**0.0001374**	**81.82**	**No**	**0.006**	**NP (NDs)**
Mercury (mg/L)	HGWC-118	0.0005	0.00009	0.0002	No	11	0.0001677	81.82	No	0.006	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.0015	0.05	No	9	0.001167	88.89	No	0.002	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.00008	0.002	No	9	0.0003067	88.89	No	0.002	NP (NDs)

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

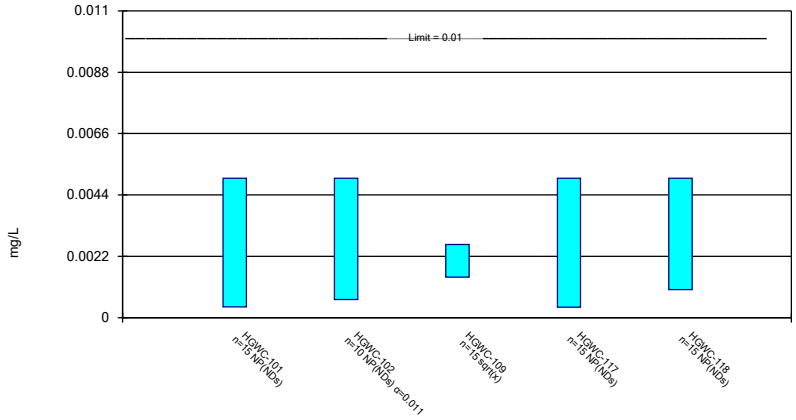


Constituent: Antimony Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

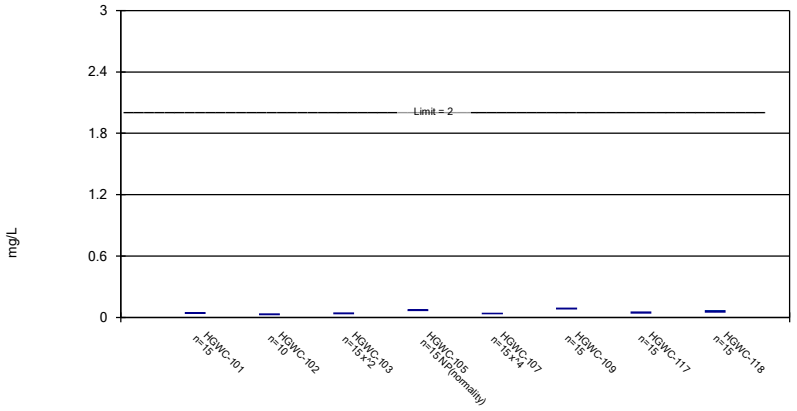


Constituent: Arsenic Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . 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.

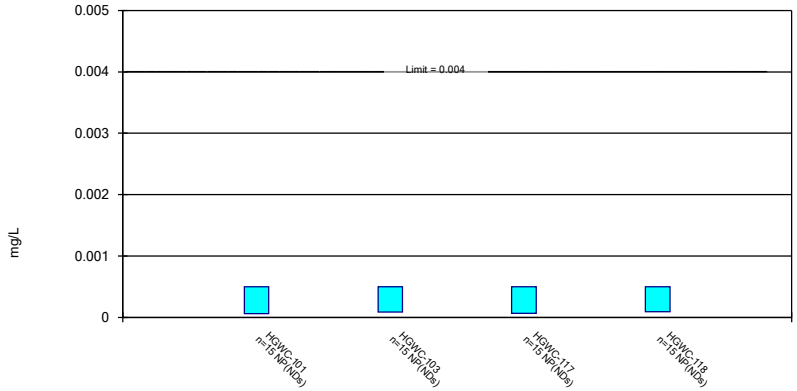


Constituent: Barium Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

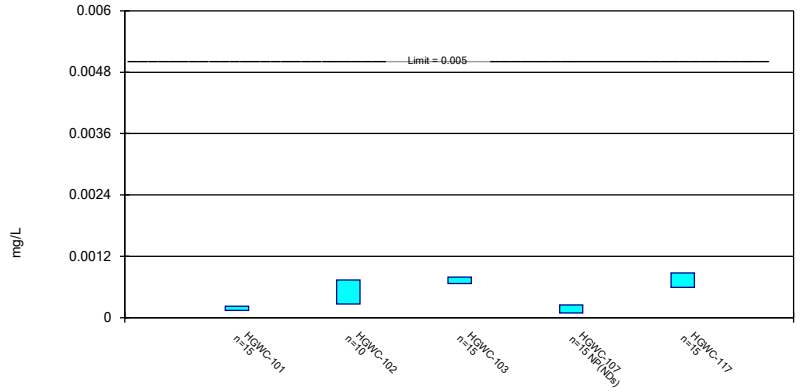


Constituent: Beryllium Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . 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.

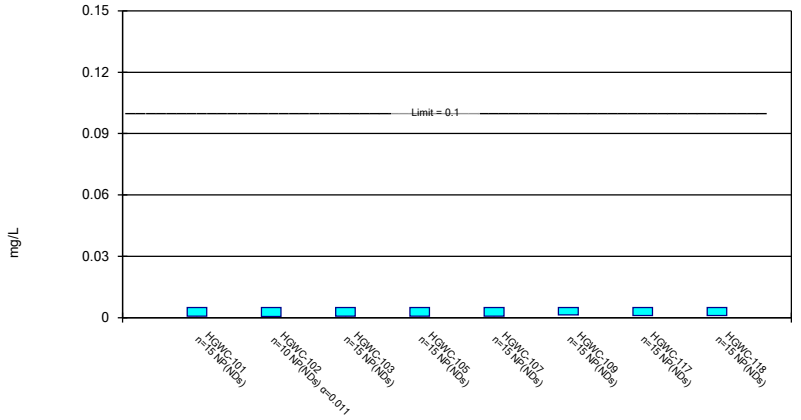


Constituent: Cadmium Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

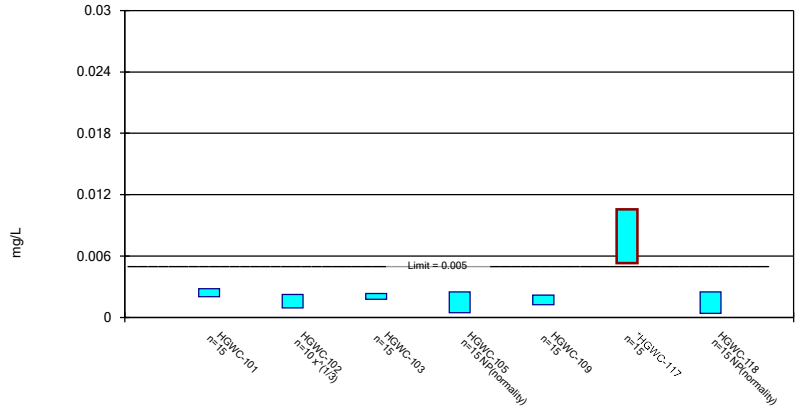


Constituent: Chromium Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

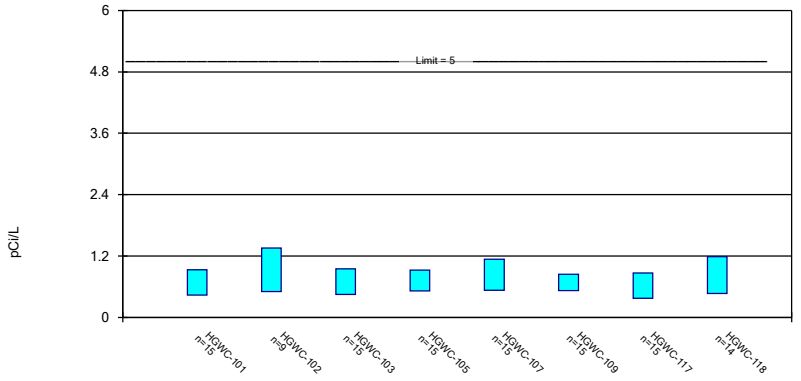


Constituent: Cobalt Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

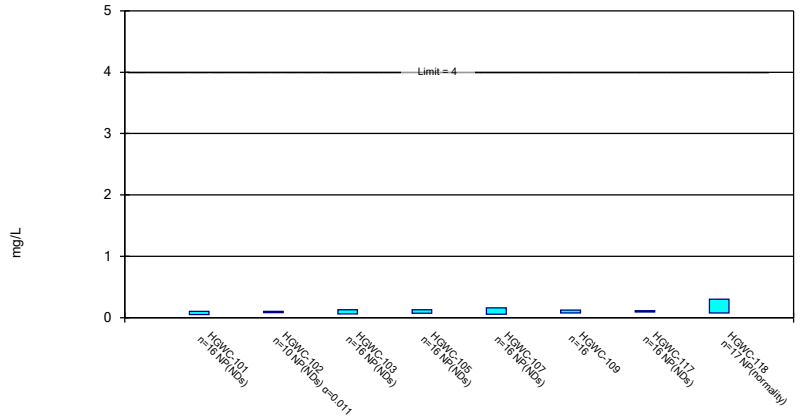


Constituent: Combined Radium 226 & 228 Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

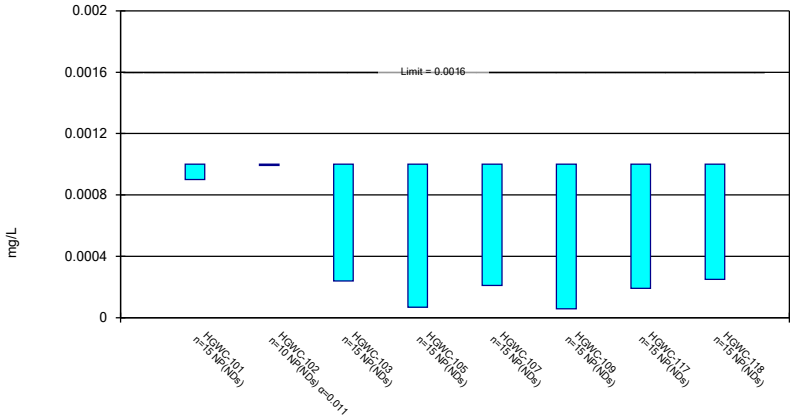


Constituent: Fluoride Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

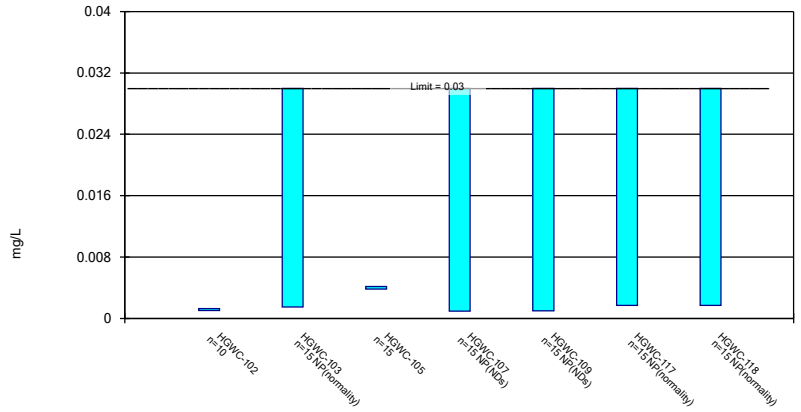


Constituent: Lead Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . 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.

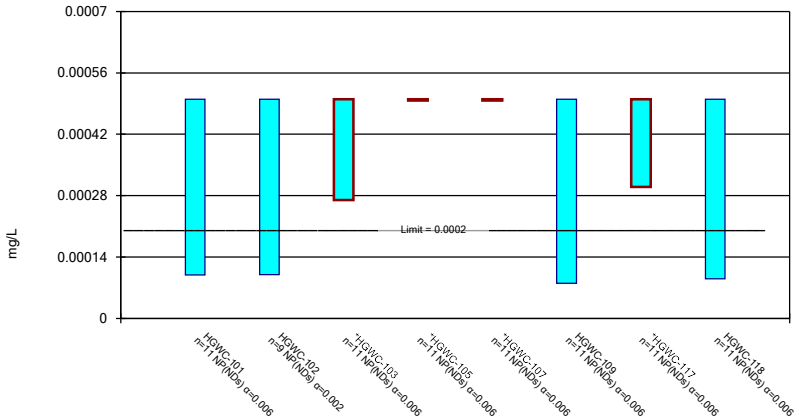


Constituent: Lithium Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance limit is exceeded.*

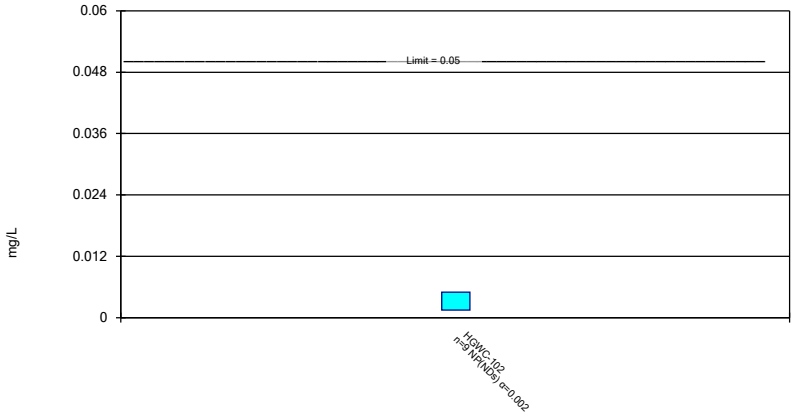


Constituent: Mercury Analysis Run 10/21/2021 3:19 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



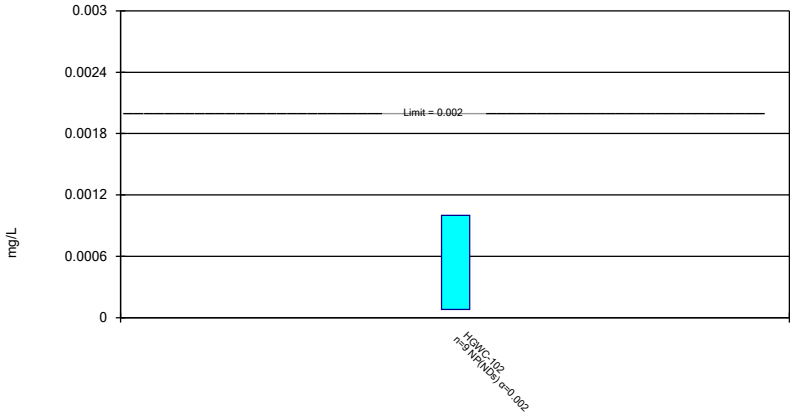
Constituent: Selenium Analysis Run 10/21/2021 3:19 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 10/21/2021 3:19 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	
Mean	0.002751	0.002927	0.002827
Std. Dev.	0.0007467	0.0002412	0.0005729
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00076	0.003	0.003

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	
Mean	0.004693	0.003276	0.002087	0.004691	0.004733
Std. Dev.	0.00119	0.00223	0.0009493	0.001195	0.001033
Upper Lim.	0.005	0.005	0.002628	0.005	0.005
Lower Lim.	0.00039	0.00065	0.001457	0.00037	0.001

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	0.0527		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	
8/13/2021		0.026		0.073	0.033	0.08		0.043
8/16/2021	0.037		0.037					
8/19/2021							0.041	
Mean	0.04335	0.0301	0.03804	0.06967	0.0381	0.08503	0.04595	0.05804
Std. Dev.	0.004608	0.004175	0.004409	0.0049	0.002162	0.004732	0.007342	0.007629
Upper Lim.	0.04648	0.03383	0.04095	0.0745	0.03954	0.08824	0.05093	0.06321
Lower Lim.	0.04023	0.02637	0.0354	0.066	0.03685	0.08183	0.04098	0.05287

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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)	
Mean	0.0002955	0.0004133	0.0003266	0.0004729
Std. Dev.	0.0002263	0.0001797	0.00022	0.0001051
Upper Lim.	0.0005	0.0005	0.0005	0.0005
Lower Lim.	5.9E-05	8.8E-05	6.6E-05	9.3E-05

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-107	HGWC-117
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
8/13/2021		0.00069		<0.0005	
8/16/2021	0.00015 (J)		0.00081		
8/19/2021					0.0012
Mean	0.0001823	0.000503	0.0007313	0.00018	0.000732
Std. Dev.	5.678E-05	0.0002633	9.164E-05	7.792E-05	0.0002113
Upper Lim.	0.0002208	0.0007379	0.0007934	0.00025	0.0008752
Lower Lim.	0.0001439	0.0002681	0.0006692	9E-05	0.0005888

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	
Mean	0.003865	0.004114	0.003472	0.003861	0.004716	0.004468	0.003896	0.00375
Std. Dev.	0.00195	0.001868	0.002021	0.001963	0.0011	0.001412	0.0019	0.00186
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00075	0.00063	0.00069	0.00064	0.00074	0.0014	0.001	0.00098

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-109	HGWC-117	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	
8/13/2021		0.00085 (J)		<0.005	0.0011 (J)		<0.005
8/16/2021	0.0026 (J)		0.0022 (J)				
8/19/2021						0.017	
Mean	0.002413	0.001593	0.002053	0.00116	0.001705	0.007927	0.00146
Std. Dev.	0.0005693	0.000888	0.0003998	0.0008864	0.000677	0.00389	0.001028
Upper Lim.	0.002799	0.002228	0.002324	0.0025	0.002163	0.01056	0.0025
Lower Lim.	0.002028	0.0009205	0.001782	0.00045	0.001246	0.005291	0.0004

Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	0.621 (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)	
8/13/2021		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)	
Mean	0.6799	0.929	0.6982	0.7217	0.8311	0.6823	0.6221	0.826
Std. Dev.	0.365	0.4397	0.3739	0.3001	0.4499	0.2376	0.3655	0.5089
Upper Lim.	0.9272	1.353	0.9516	0.9251	1.136	0.8434	0.8698	1.186
Lower Lim.	0.4325	0.5045	0.4448	0.5184	0.5262	0.5213	0.3744	0.4655

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	0.05 (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	
8/13/2021		<0.1		<0.1	<0.1	0.086 (J)		0.075 (J)
8/16/2021	<0.1		<0.1					
8/19/2021							<0.1	
Mean	0.0925	0.112	0.09888	0.09213	0.09231	0.09738	0.1076	0.1823
Std. Dev.	0.02082	0.03795	0.02358	0.03042	0.03732	0.03597	0.05844	0.2024
Upper Lim.	0.1	0.1	0.13	0.13	0.16	0.1208	0.11	0.3
Lower Lim.	0.05	0.1	0.06	0.07	0.057	0.07397	0.09	0.075

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	
Mean	0.0009933	0.000911	0.0007471	0.0007507	0.0007813	0.0008741	0.0007413	0.0007873
Std. Dev.	2.582E-05	0.0002814	0.0003768	0.000428	0.0003796	0.0003322	0.0003822	0.0003512
Upper Lim.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0009	0.001	0.00024	6.8E-05	0.00021	5.8E-05	0.00019	0.00025

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	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)	
8/13/2021	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)	
Mean	0.001154	0.007293	0.003993	0.01645	0.01651	0.007867	0.01323
Std. Dev.	0.0001408	0.01175	0.0002549	0.015	0.01493	0.01147	0.01418
Upper Lim.	0.00128	0.03	0.004166	0.03	0.03	0.03	0.03
Lower Lim.	0.001028	0.0015	0.003821	0.00092	0.001	0.0017	0.0017

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	7E-05 (J)	<0.0005
10/20/2016	<0.0005						<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	9.3E-05 (J)		8E-05 (J)	<0.0005	<0.0005	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0005		<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	<0.0005
11/14/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2018	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2018							<0.0005	<0.0005
10/2/2018				<0.0005	<0.0005	<0.0005		
10/3/2018	<0.0005		<0.0005				<0.0005	<0.0005
8/22/2019	<0.0005		<0.0005	<0.0005			<0.0005	<0.0005
8/23/2019					<0.0005	<0.0005		
10/23/2019		<0.0005						
1/3/2020		<0.0005						
3/4/2020		<0.0005						
3/24/2020		<0.0005						
6/18/2020		<0.0005						
7/21/2020		<0.0005						
8/26/2020								<0.0005
8/27/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
9/24/2020		<0.0005						
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	
Mean	0.0004265	0.0004556	0.0004409	0.0004745	0.0004622	0.0004236	0.0004427	0.0004246
Std. Dev.	0.0001634	0.0001333	0.0001382	8.442E-05	0.0001254	0.0001699	0.0001374	0.0001677
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Lower Lim.	9.9E-05	0.0001	0.00027	0.0005	0.0005	8E-05	0.0003	9E-05

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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
Mean	0.004611
Std. Dev.	0.001167
Upper Lim.	0.005
Lower Lim.	0.0015

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 10/21/2021 3:22 PM View: Appendix IV

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
Mean	0.0008978
Std. Dev.	0.0003067
Upper Lim.	0.001
Lower Lim.	8E-05

FIGURE I.

Appendix III - Interwell Prediction Limits - Resample Results

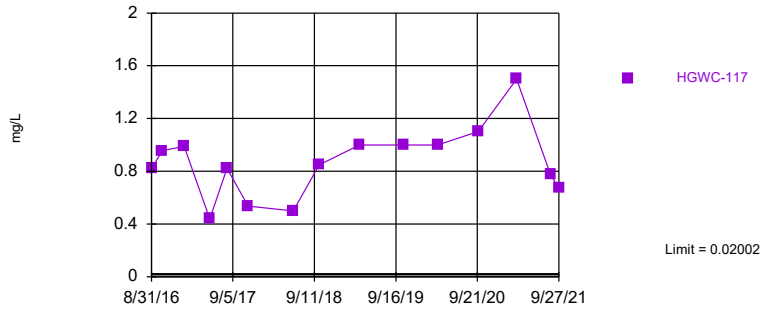
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 11/18/2021, 7:00 PM

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-117**	**0.02002**	**n/a**	**9/27/2021**	**0.67**	**Yes**	**54**	**0.2065**	**0.03296**	**20.37**	**Kaplan-Meier**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-117	73.3	n/a	9/27/2021	37.5	No	54	n/a	n/a	0	n/a	n/a	0.0006486	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	6.743	n/a	9/27/2021	3.4	No	54	1.066	0.4274	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.166	n/a	9/27/2021	0.1ND	No	60	0.07488	0.04656	26.67	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-117	7.54	5.47	9/27/2021	5.66	No	60	n/a	n/a	0	n/a	n/a	0.001038	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-117**	**18.71**	**n/a**	**9/27/2021**	**104**	**Yes**	**54**	**0.7984**	**1.08**	**5.556**	**None**	**ln(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-117	302.5	n/a	9/27/2021	242	No	53	4.997	0.8691	0	None	x^(1/3)	0.0009403	Param Inter 1 of 2

Exceeds Limit: HGWC-117

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.2065, Std. Dev.=0.03296, n=54, 20.37% NDs. Normality test was disabled. Kappa = 1.972 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Assumes 7 future values.

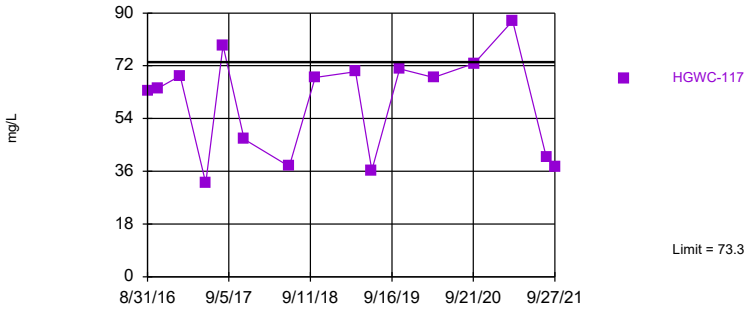
Constituent: Boron Analysis Run 11/18/2021 6:57 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

Within Limit

Prediction Limit

Interwell Non-parametric



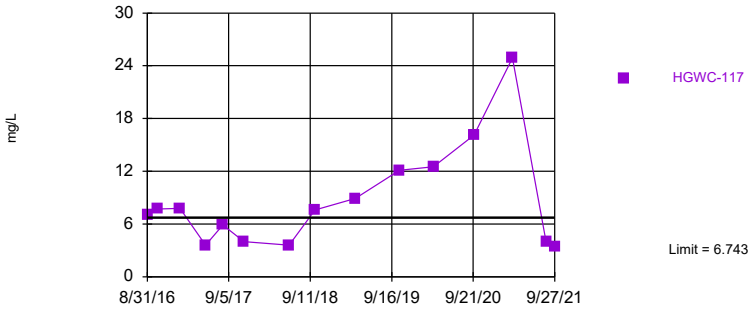
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 54 background values. Annual per-constituent alpha = 0.01033. Individual comparison alpha = 0.0006486 (1 of 2). Assumes 7 future values.

Constituent: Calcium Analysis Run 11/18/2021 6:58 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=1.066, Std. Dev.=0.4274, n=54. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9449, critical = 0.939. Kappa = 1.972 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Assumes 7 future values.

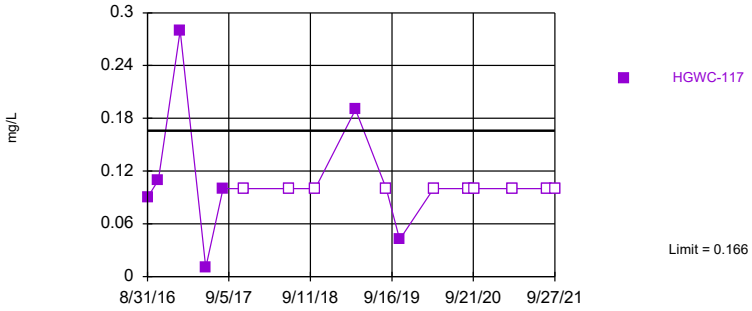
Constituent: Chloride Analysis Run 11/18/2021 6:58 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



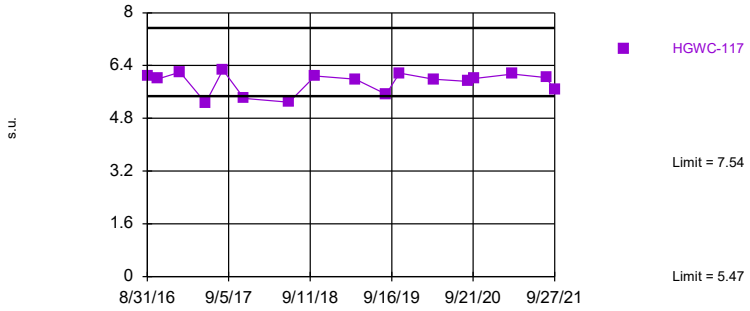
Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.07488, Std. Dev.=0.04656, n=60, 26.67% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9501, critical = 0.945. Kappa = 1.958 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Assumes 7 future values.

Constituent: Fluoride Analysis Run 11/18/2021 6:58 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Within Limits

Prediction Limit

Interwell Non-parametric



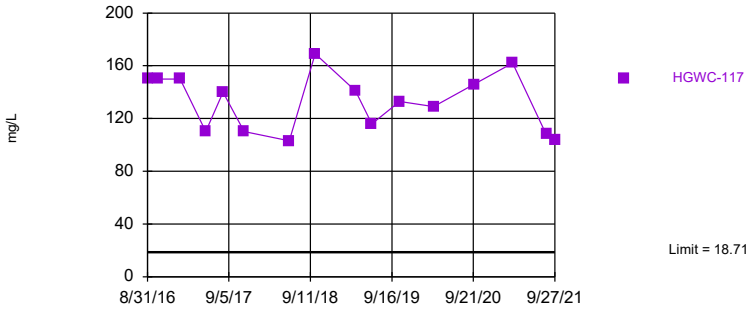
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 60 background values. Annual per-constituent alpha = 0.01655. Individual comparison alpha = 0.001038 (1 of 2). Assumes 7 future values.

Constituent: pH Analysis Run 11/18/2021 6:58 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-117

Prediction Limit

Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=0.7984, Std. Dev.=1.08, n=54, 5.556% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9408, critical = 0.939. Kappa = 1.972 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Assumes 7 future values.

Constituent: Sulfate Analysis Run 11/18/2021 6:58 PM View: Interwell PLs

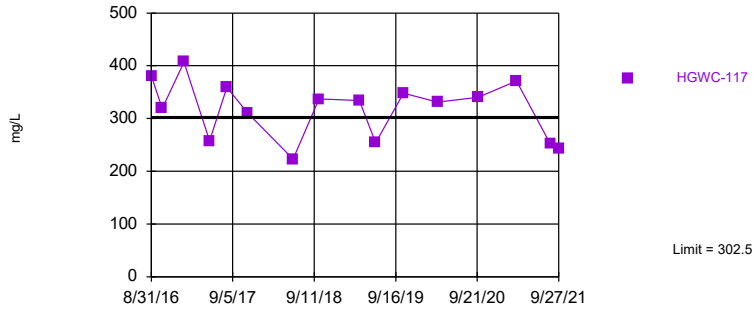
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=4.997, Std. Dev.=0.8691, n=53. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9406, critical = 0.938. Kappa = 1.975 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Assumes 7 future values.

Constituent: Total Dissolved Solids Analysis Run 11/18/2021 6:58 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016	<0.04	<0.04	<0.04			
8/31/2016				0.821		
10/20/2016	0.016 (J)			0.956		
10/24/2016		0.0367 (J)	0.0226 (J)			
1/25/2017	0.0095 (J)	0.0075 (J)	0.009 (J)			
1/27/2017				0.99		
5/23/2017		0.0073 (J)	0.0082 (J)	0.438		
5/24/2017	0.0094 (J)					
8/10/2017	<0.04	<0.04	0.0061 (J)	0.821		
11/13/2017	0.0103 (J)	0.0089 (J)				
11/14/2017			0.012 (J)	0.536		
6/4/2018	0.0065 (J)	0.007 (J)				
6/5/2018			0.0085 (J)			
6/7/2018				0.5		
10/1/2018	0.0054 (J)	<0.04	0.0042 (J)			
10/3/2018				0.85		
4/1/2019	0.0076 (J)					
4/2/2019		0.0043 (J)	0.0059 (J)			
4/5/2019				1 (X)		
10/21/2019	0.0097 (J)					
10/22/2019		0.016 (J)	0.01 (J)	1		
3/24/2020	0.011 (J)	0.012 (J)		1		
4/9/2020			0.012 (J)			
9/18/2020	0.011 (J)	0.008 (J)			0.0082 (J)	0.015 (J)
9/22/2020			0.021 (J)			
9/25/2020				1.1		
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)			
3/19/2021				1.5		
8/12/2021	<0.04	<0.04	<0.04		<0.04	0.012 (J)
8/19/2021				0.78		
9/27/2021				0.67		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016	40.3	6.69	6.72			
8/31/2016				63.4		
10/20/2016	38.7			64.4		
10/24/2016		6.25	6.4			
1/25/2017	44.6	6.58	6.87			
1/27/2017				68.6		
5/23/2017		6.4	7.13	32		
5/24/2017	34.8					
8/10/2017	48.6	6.54	6.71	78.9		
11/13/2017	17.1	6.26				
11/14/2017			7.4	46.9		
6/4/2018	30.1	7.4				
6/5/2018			7.4			
6/7/2018				37.7		
10/1/2018	14.2 (J)	5.8	6.2			
10/3/2018				68		
4/1/2019	58.4					
4/2/2019		6.7	7.4			
4/5/2019				70		
6/18/2019				36.3		
10/21/2019	51					
10/22/2019		6.3	7.2	70.9		
3/24/2020	61.2	7		68		
4/9/2020			8.3			
9/18/2020	32.2	6.5			51.8	62.2
9/22/2020			7.9			
9/25/2020				72.8		
11/10/2020						73.3
11/11/2020					61.3	
12/15/2020					61.3	72.5
1/19/2021					58.9	72.5
3/11/2021	53.2					
3/12/2021		6.9			57.5	69.2
3/16/2021			8.6			
3/19/2021				87.3		
8/12/2021	45.4	6.9	8.4		59.5	71.2
8/19/2021				40.9		
9/27/2021				37.5		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016	3.3	5.4	2			
8/31/2016				7.1		
10/20/2016	3.2			7.7		
10/24/2016		5.2	1.9			
1/25/2017	2.7	5	1.9			
1/27/2017				7.8		
5/23/2017		5.1	1.6	3.6		
5/24/2017	3					
8/10/2017	2.8	5.2	1.7	5.9		
11/13/2017	2.5	5.5				
11/14/2017			2	4		
6/4/2018	2.6	5.3				
6/5/2018			1.7			
6/7/2018				3.6		
10/1/2018	2.2	5.6	1.6			
10/3/2018				7.6		
4/1/2019	4					
4/2/2019		5.7	1.8			
4/5/2019				8.9		
10/21/2019	3.9					
10/22/2019		5.5	1.9	12.1		
3/24/2020	3.6	5.2		12.5		
4/9/2020			1.4			
9/18/2020	2.6	5.2			2.7	2.6
9/22/2020			1.5			
9/25/2020				16.1		
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			
3/19/2021				24.9		
8/12/2021	2.5	4.4	1.5		2.3	2.2
8/19/2021				4		
9/27/2021				3.4		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)			
8/31/2016				0.09 (J)		
10/20/2016	0.07 (J)			0.11 (J)		
10/24/2016		0.05 (J)	0.16 (J)			
1/25/2017	0.14 (J)	<0.1	0.15 (J)			
1/27/2017				0.28 (J)		
5/23/2017		0.004 (J)	0.18 (J)	0.01 (J)		
5/24/2017	0.02 (J)					
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)	0.1 (J)		
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)			
6/7/2018				<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)			
4/5/2019				0.19 (J)		
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)	0.042 (J)		
3/24/2020	0.076 (J)	<0.1		<0.1		
4/9/2020			0.14 (J)			
8/25/2020	0.052 (J)	<0.1	0.17			
8/27/2020				<0.1		
9/18/2020	<0.1	<0.1			0.067 (J)	0.098 (J)
9/22/2020			0.16			
9/25/2020				<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			
3/19/2021				<0.1		
8/12/2021	<0.1	<0.1	0.16		<0.1	0.064 (J)
8/19/2021				<0.1		
9/27/2021				<0.1		

Prediction Limit

Constituent: pH (s.u.) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016	6.89	5.77	5.99			
8/31/2016				6.07		
10/20/2016	6.73			6		
10/24/2016		5.61	5.84			
1/25/2017	7.02	5.68	6.04			
1/27/2017				6.2		
5/23/2017		5.7	6.01	5.27		
5/24/2017	6.44					
8/10/2017	6.79	5.59	5.98	6.27		
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			
6/7/2018				5.29		
10/1/2018	5.92	5.62	5.94			
10/3/2018				6.08		
4/1/2019	7.09					
4/2/2019		5.47	6			
4/5/2019				5.99		
8/21/2019	6.6	5.8	6.05			
8/22/2019				5.53		
10/21/2019	7.02					
10/22/2019		5.7	5.98	6.17		
3/24/2020	7.37	5.64		5.99		
4/9/2020			6.08			
8/25/2020	6.7	5.53	5.95			
8/27/2020				5.92		
9/18/2020	6.46	5.58			7.54	7.5
9/22/2020			6.1			
9/25/2020				6.01		
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			
3/19/2021				6.14		
8/12/2021	6.67	5.5	6.08		7.38	7.44
8/19/2021				6.04		
9/27/2021				5.66		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016	1.6	0.63 (J)	14			
8/31/2016				150		
10/20/2016	1.6			150		
10/24/2016		0.62 (J)	11			
1/25/2017	1.6	0.62 (J)	12			
1/27/2017				150		
5/23/2017		0.55 (J)	12	110		
5/24/2017	1.4					
8/10/2017	1.6	0.66 (J)	11	140		
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			
6/7/2018				103		
10/1/2018	1	0.52 (J)	6.7			
10/3/2018				169		
4/1/2019	1.7					
4/2/2019		0.78 (J)	8.7			
4/5/2019				141		
6/18/2019				116		
10/21/2019	1.8					
10/22/2019		0.6 (J)	6.8	133		
3/24/2020	1.6	<1		129		
4/9/2020			6.6			
9/18/2020	1	<1			9.5	3.5
9/22/2020			5.3			
9/25/2020				146		
11/10/2020						2.3
11/11/2020					4.5	
12/15/2020					4.2	2.4
1/19/2021					3.9	2.6
3/11/2021	1.5					
3/12/2021		0.52 (J)			4.7	1.9
3/16/2021			7.7			
3/19/2021				162		
8/12/2021	1.3	<1	10		4.3	1.4
8/19/2021				108		
9/27/2021				104		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/18/2021 7:00 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-117	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016	172	76	77			
8/31/2016				381		
10/20/2016	108			319		
10/24/2016		65	111			
1/25/2017	345	152 (o)	155			
1/27/2017				407		
5/23/2017		52	74	258		
5/24/2017	126					
8/10/2017	174	60	94	359		
11/13/2017	158	75				
11/14/2017			89	310		
6/4/2018	131	70				
6/5/2018			92			
6/7/2018				223		
10/1/2018	101	76	91			
10/3/2018				337		
4/1/2019	213					
4/2/2019		69	94			
4/5/2019				334		
6/18/2019				254		
10/21/2019	187					
10/22/2019		81	95	348		
3/24/2020	207	52		331		
4/9/2020			48			
9/18/2020	139	62			195	224
9/22/2020			84			
9/25/2020				340		
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			
3/19/2021				371		
8/12/2021	157	63	92		212	234
8/19/2021				253		
9/27/2021				242		

FIGURE J.

Confidence Interval Summary Table - Resample Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 11/18/2021, 2:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-117**	**0.01107**	**0.005667**	**0.005**	**Yes**	**16**	**0.004153**	**0**	**No**	**0.01**	**Param.**

Confidence Interval Summary Table - Resample All Results

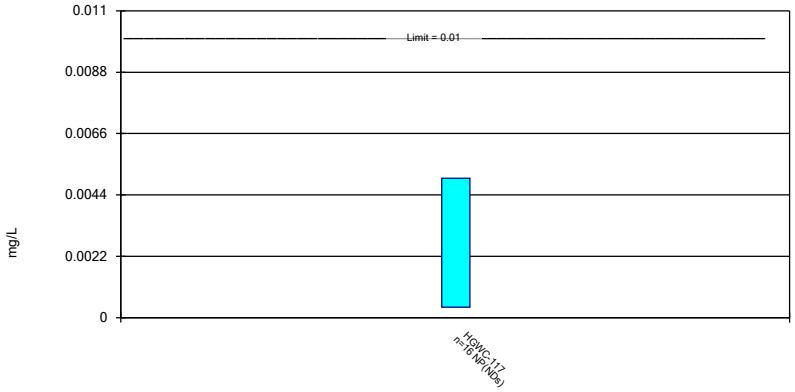
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 11/18/2021, 2:42 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	16	0.001157	93.75	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-117	0.05025	0.04066	2	No	16	0.007366	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-117	0.0005	0.000066	0.004	No	16	0.0002169	62.5	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117	0.0008863	0.0006087	0.005	No	16	0.0002133	0	No	0.01	Param.
Chromium (mg/L)	HGWC-117	0.005	0.001	0.1	No	16	0.001856	75	No	0.01	NP (NDs)
Cobalt (mg/L)	**HGWC-117**	**0.01107**	**0.005667**	**0.005**	**Yes**	**16**	**0.004153**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.9055	0.4918	5	No	16	0.3601	0	x^2	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.1	4	No	17	0.05662	58.82	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-117	0.001	0.00019	0.0016	No	16	0.0003748	68.75	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-117	0.0035	0.0016	0.03	No	16	0.01925	18.75	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-117	0.0003	0.00007	0.002	No	12	0.00004938	83.33	No	0.01	NP (NDs)

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

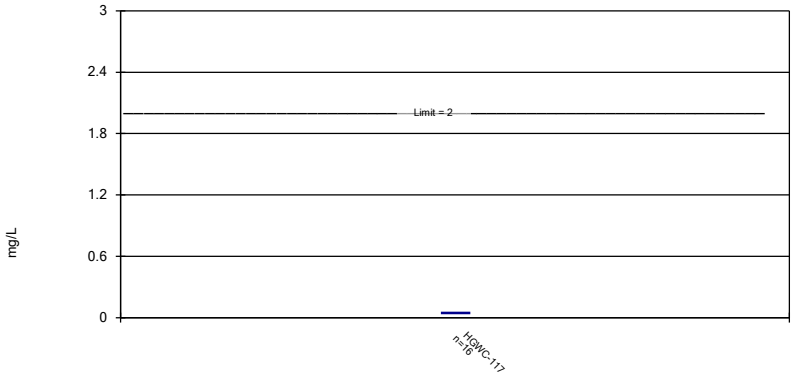


Constituent: Arsenic Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

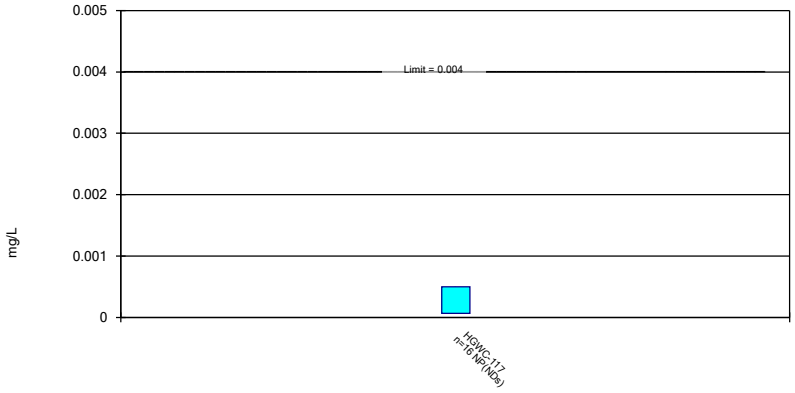


Constituent: Barium Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

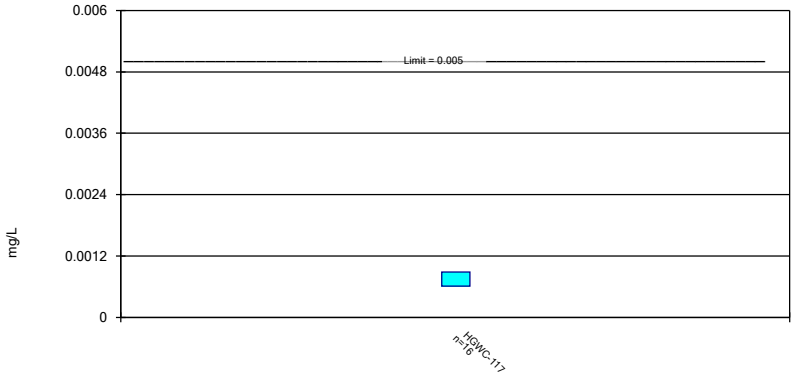


Constituent: Beryllium Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

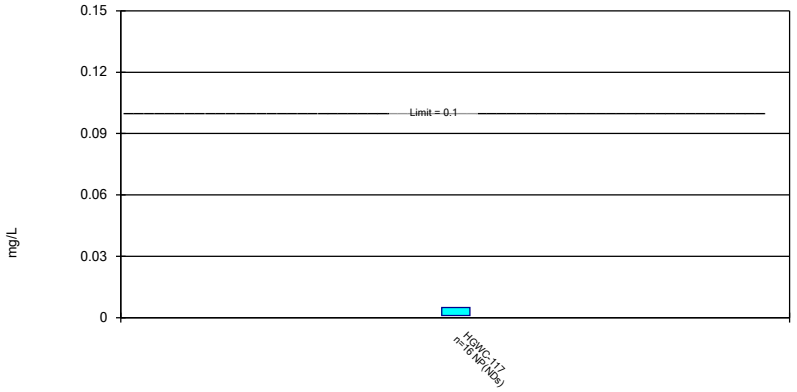


Constituent: Cadmium Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

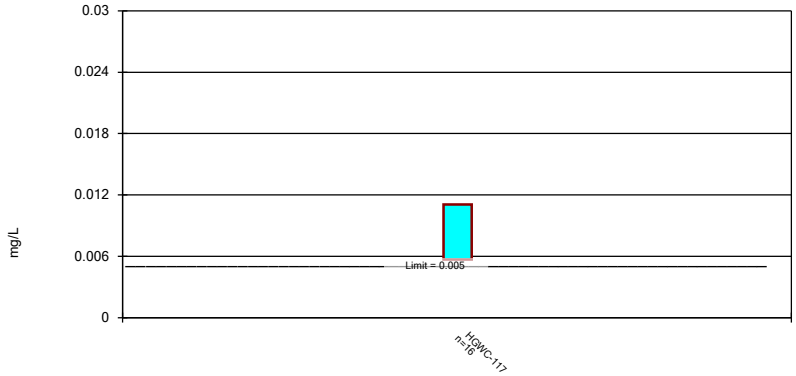


Constituent: Chromium Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric Confidence Interval

Compliance limit is exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Parametric Confidence Interval

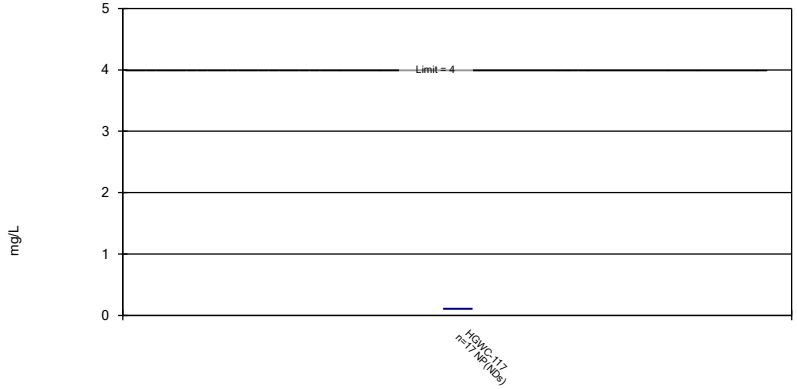
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

Constituent: Combined Radium 226 & 228 Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

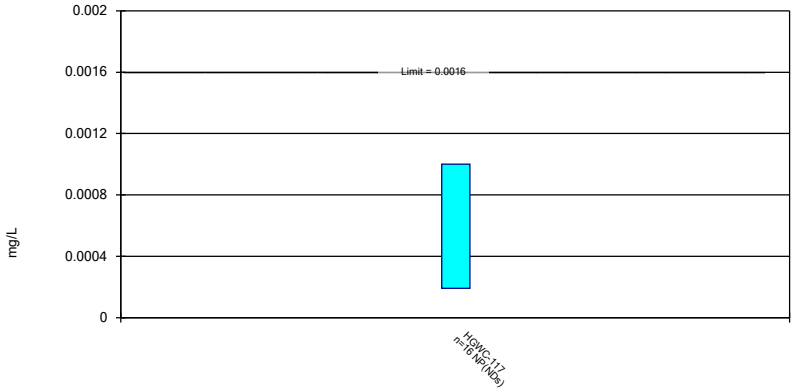


Constituent: Fluoride Analysis Run 11/18/2021 2:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



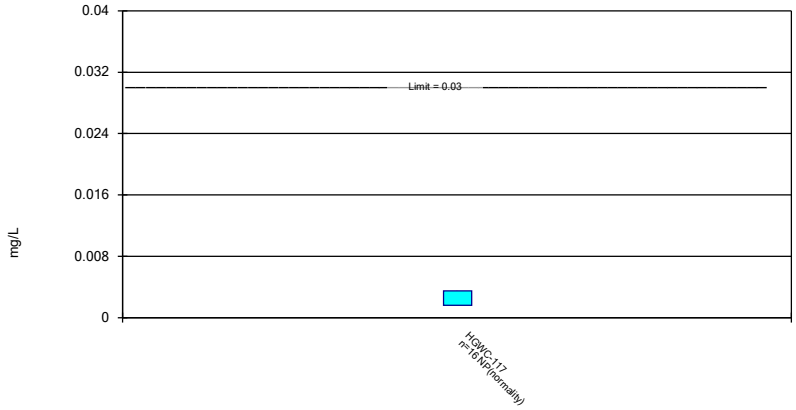
Constituent: Lead Analysis Run 11/18/2021 2:40 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



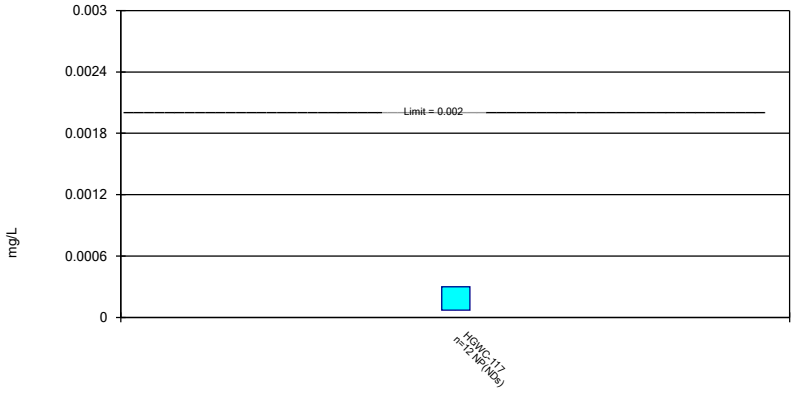
Constituent: Lithium Analysis Run 11/18/2021 2:40 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.31 . UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 11/18/2021 2:40 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	<0.005
10/20/2016	<0.005
1/27/2017	<0.005
5/23/2017	<0.005
8/10/2017	<0.005
11/14/2017	<0.005
6/7/2018	<0.005
10/3/2018	<0.005
8/22/2019	<0.005
10/22/2019	<0.005
3/24/2020	0.00037 (J)
8/27/2020	<0.005
9/25/2020	<0.005
3/19/2021	<0.005
8/19/2021	<0.005
9/27/2021	<0.005
Mean	0.004711
Std. Dev.	0.001157
Upper Lim.	0.005
Lower Lim.	0.00037

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	0.0547
10/20/2016	0.0529
1/27/2017	0.049
5/23/2017	0.0352
8/10/2017	0.0457
11/14/2017	0.0368
6/7/2018	0.036
10/3/2018	0.047
8/22/2019	0.036
10/22/2019	0.049
3/24/2020	0.051
8/27/2020	0.047
9/25/2020	0.05
3/19/2021	0.058
8/19/2021	0.041
9/27/2021	0.038
Mean	0.04546
Std. Dev.	0.007366
Upper Lim.	0.05025
Lower Lim.	0.04066

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	<0.0005
10/20/2016	<0.0005
1/27/2017	<0.0005
5/23/2017	<0.0005
8/10/2017	<0.0005
11/14/2017	<0.0005
6/7/2018	6.8E-05 (J)
10/3/2018	<0.0005
8/22/2019	7.9E-05 (J)
10/22/2019	<0.0005
3/24/2020	<0.0005
8/27/2020	4.9E-05 (J)
9/25/2020	6.6E-05 (J)
3/19/2021	8.1E-05 (J)
8/19/2021	5.6E-05 (J)
9/27/2021	<0.0005
Mean	0.0003374
Std. Dev.	0.0002169
Upper Lim.	0.0005
Lower Lim.	6.6E-05

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	0.0008 (J)
10/20/2016	0.0008 (J)
1/27/2017	0.0007 (J)
5/23/2017	0.0005 (J)
8/10/2017	0.0004 (J)
11/14/2017	0.0005 (J)
6/7/2018	0.00049 (J)
10/3/2018	0.00079 (J)
8/22/2019	0.00064 (J)
10/22/2019	0.00068 (J)
3/24/2020	0.00079 (J)
8/27/2020	0.0008 (J)
9/25/2020	0.00089 (J)
3/19/2021	0.001
8/19/2021	0.0012
9/27/2021	0.00098
Mean	0.0007475
Std. Dev.	0.0002133
Upper Lim.	0.0008863
Lower Lim.	0.0006087

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	<0.005
10/20/2016	<0.005
1/27/2017	<0.005
5/23/2017	<0.005
8/10/2017	<0.005
11/14/2017	<0.005
6/7/2018	<0.005
10/3/2018	<0.005
8/22/2019	<0.005
10/22/2019	<0.005
3/24/2020	0.0012 (J)
8/27/2020	0.00057 (J)
9/25/2020	0.00067 (J)
3/19/2021	0.001 (J)
8/19/2021	<0.005
9/27/2021	<0.005
Mean	0.003965
Std. Dev.	0.001856
Upper Lim.	0.005
Lower Lim.	0.001

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	0.0035 (J)
10/20/2016	0.0045 (J)
1/27/2017	0.0041 (J)
5/23/2017	0.0071 (J)
8/10/2017	0.0031 (J)
11/14/2017	0.0062 (J)
6/7/2018	0.0083 (J)
10/3/2018	0.005 (J)
8/22/2019	0.012
10/22/2019	0.0064
3/24/2020	0.0087
8/27/2020	0.011
9/25/2020	0.011
3/19/2021	0.011
8/19/2021	0.017
9/27/2021	0.015
Mean	0.008369
Std. Dev.	0.004153
Upper Lim.	0.01107
Lower Lim.	0.005667

Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	1.12
10/20/2016	0.803 (U)
1/27/2017	1.08 (U)
5/23/2017	0.624 (U)
8/10/2017	0.695 (U)
11/14/2017	0.99 (U)
6/7/2018	1.04 (U)
10/3/2018	0.198 (U)
8/22/2019	0.333 (U)
10/22/2019	0.827 (U)
3/24/2020	0.815 (U)
8/27/2020	0.193 (U)
9/25/2020	0.155 (U)
3/19/2021	0.303 (U)
8/19/2021	0.155 (U)
9/27/2021	0.905
Mean	0.6398
Std. Dev.	0.3601
Upper Lim.	0.9055
Lower Lim.	0.4918

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	0.09 (J)
10/20/2016	0.11 (J)
1/27/2017	0.28 (J)
5/23/2017	0.01 (J)
8/10/2017	0.1 (J)
11/14/2017	<0.1
6/7/2018	<0.1
10/3/2018	<0.1
4/5/2019	0.19 (J)
8/22/2019	<0.1
10/22/2019	0.042 (J)
3/24/2020	<0.1
8/27/2020	<0.1
9/25/2020	<0.1
3/19/2021	<0.1
8/19/2021	<0.1
9/27/2021	<0.1
Mean	0.1072
Std. Dev.	0.05662
Upper Lim.	0.11
Lower Lim.	0.1

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	<0.001
10/20/2016	<0.001
1/27/2017	<0.001
5/23/2017	<0.001
8/10/2017	<0.001
11/14/2017	<0.001
6/7/2018	<0.001
10/3/2018	<0.001
8/22/2019	<0.001
10/22/2019	0.00016 (J)
3/24/2020	0.00025 (J)
8/27/2020	0.00014 (J)
9/25/2020	0.00019 (J)
3/19/2021	0.00038 (J)
8/19/2021	<0.001
9/27/2021	<0.001
Mean	0.0007575
Std. Dev.	0.0003748
Upper Lim.	0.001
Lower Lim.	0.00019

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	0.0024 (J)
10/20/2016	0.0027 (J)
1/27/2017	<0.05
5/23/2017	<0.05
8/10/2017	0.0021 (J)
11/14/2017	<0.05
6/7/2018	0.0011 (J)
10/3/2018	0.0021 (J)
8/22/2019	0.0012 (J)
10/22/2019	0.0028 (J)
3/24/2020	0.0029 (J)
8/27/2020	0.0024 (J)
9/25/2020	0.0031 (J)
3/19/2021	0.0035 (J)
8/19/2021	0.0017 (J)
9/27/2021	0.0016 (J)
Mean	0.01123
Std. Dev.	0.01925
Upper Lim.	0.0035
Lower Lim.	0.0016

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 11/18/2021 2:42 PM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117
8/31/2016	7E-05 (J)
10/20/2016	<0.0002
1/27/2017	<0.0002
5/23/2017	<0.0002
8/10/2017	<0.0002
11/14/2017	<0.0002
6/7/2018	<0.0002
10/3/2018	<0.0002
8/22/2019	<0.0002
8/27/2020	<0.0002
8/19/2021	0.0003
9/27/2021	<0.0002
Mean	0.0001975
Std. Dev.	4.938E-05
Upper Lim.	0.0003
Lower Lim.	7E-05

APPENDIX E

Alternate Source Demonstration - Cobalt

Prepared for

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

ALTERNATE SOURCE DEMONSTRATION – COBALT

GEORGIA POWER COMPANY
PLANT HAMMOND ASH POND 4

Prepared by

Geosyntec consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
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Project Number GW6581

October 2021

Georgia Power

Plant Hammond
Ash Pond 4 (AP-4)

October 28, 2021

Herwig Goldemund, Ph.D.
Principal

Whitney Law, P.E.
Project Manager

Certification Statement

Alternate Source Demonstration – Cobalt
Plant Hammond
Ash Pond 4
October 28, 2021

I hereby certify that the facts used to prepare this Alternate Source Demonstration for Georgia Power Company – Plant Hammond Ash Pond 4 are accurate pursuant to the requirements stipulated in 40 CFR 257.95(g)(3)(ii) and Georgia regulations stipulated in Rule 391-3-4-.10(6) of the Georgia Administrative Code, which incorporates 40 CFR 257.95(g)(3)(ii) by reference.

Seal and Signature	October 28, 2021 Date

Geosyntec
consultants

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LIST OF ACRONYMS

AP-4	Ash Pond 4
ASD	alternate source demonstration
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
Co	cobalt
GA EPD	Georgia Environmental Protection Division
GCL	geosynthetic clay liner
Georgia Power	Georgia Power Company
GWPS	groundwater protection standard
mg/L	milligrams per liter
RL	reporting limit
SSL	statistically significant level

1. INTRODUCTION

1.1 Purpose

This document presents an alternate source demonstration (ASD) for the statistically significant level (SSL) detected in groundwater compliance monitoring well HGWC-117 above the state groundwater protection standard (GWPS) for cobalt (Co) of 0.005 milligrams per liter (mg/L). HGWC-117 is associated with the coal combustion residual (CCR) unit Ash Pond 4 (AP-4) located at Georgia Power Company (Georgia Power) Plant Hammond (Site). The SSL was identified based on statistical evaluations of the groundwater quality data compiled for samples obtained during assessment monitoring sampling activities conducted through March 2021 and reported to the Georgia Environmental Protection Division (GA EPD) on July 30, 2021. This ASD has been prepared pursuant to Georgia regulations per Rule 391-3-4-.10(6) of the Georgia Administrative Code, which incorporates Title 40 Code of Federal Regulations (CFR) Part 257 Subpart D (the Federal CCR Rule), specifically 40 CFR 257.95(g)(3)(ii) by reference, which allows the owner or operator to "demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality."

1.2 Summary of ASD

Based on review of available AP-4 data, the SSL of Co reported for HGWC-117 is not associated with a release from AP-4. The detection of elevated Co in HGWC-117 is an isolated occurrence relative to the other AP-4 monitoring wells and may have been affected by pump/sampling issues unrelated to the unit. This ASD provides the following lines of evidence in support of this conclusion.

- Detections of Co above the GWPS of 0.005 mg/L are isolated to HGWC-117.
- There are no statistically significant positive correlations between Co concentrations and concentrations of Appendix III constituents, which are considered indicator parameters for CCR; however, there is a statistically significant negative correlation between Co and TDS, suggesting that these constituents are likely from different sources; if Co were to originate from CCR, it should have statistically significant positive correlations with Appendix III constituents to indicate a similar source (i.e., the CCR unit).

- A new piezometer (i.e., HGWC-117A) was recently installed approximately 30 feet side-gradient of HGWC-117 and screened in the same lithology and elevation range as HGWC-117. Initial groundwater sampling results for HGWC-117A, collected in August and September 2021, indicate very low (i.e., estimated) Co concentrations below the 0.005 mg/L GWPS; this observation indicates that there is no Co plume at this location.

- The interim use of dedicated bladder pumps at the Site between September 2019 and June 2021 may have impacted the sampling results at HGWC-117.

1.3 Site Description

1.3.1 Operations

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome. The plant 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. GA EPD issued CCR Permit No. 057-025D(CCR) for AP-4 on January 27, 2021.

1.3.2 Geology and Hydrogeology

1.3.2.1 Geology

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia, which is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. Geologic mapping performed at the Site by Petrologic Solutions, Inc. under the direction of Golder (Golder, 2018) indicates that AP-4 is underlain by the lower units of the Cambrian age Conasauga Formation, consisting of mostly calcareous shale. Based on a 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. HGWC-117 is screened within alluvium material.

Well construction details for the AP-4 compliance monitoring well and piezometer networks are provided in **Table 1**.

1.3.2.2 Hydrogeology

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.

1.4 Groundwater Monitoring and Basis of Statistically Significant Levels

Georgia Power initiated an assessment monitoring program for groundwater at AP-4 in August 2019. Statistical analyses of the compiled AP-4 groundwater data identified an SSL of Co in HGWC-117 following the March 2021 semiannual assessment monitoring event. HGWC-117 was redeveloped and subsequently sampled on June 23, 2021, to evaluate post-redevelopment groundwater concentrations of Co relative to historical data. A Co concentration of 0.016 mg/L was reported for the June 2021 groundwater sample, which is above the 0.005 mg/L GWPS. HGWC-117 was sampled again during the semiannual assessment monitoring event conducted in August 2021 and again in September 2021, and the reported Co concentrations were 0.017 mg/L and 0.015 mg/L, respectively. The remainder of this ASD further discusses the historical Co data at HGWC-117.

2. ALTERNATE SOURCE DEMONSTRATION

The following subsections provide lines of evidence that the SSL of Co in HGWC-117 is not due to a release from AP-4.

2.1 Isolated Detection of Cobalt

The Co exceedance is an isolated occurrence to HGWC-117; Co is either not detected or detected at an estimated concentration (i.e., J qualified) below the analytical reporting limit (RL) and GWPS of 0.005 mg/L in all other sampled AP-4 wells. The chemical characteristics of background and downgradient compliance monitoring wells for groundwater samples collected since the August 2020 assessment monitoring event (i.e., the past year of sampling events) are summarized in **Table 2**[1] with the sampling locations depicted on **Figure 1**. **Figure 2** depicts the potentiometric surface map and Co concentrations for AP-4 groundwater results reported for the August 2021 event.

2.2 No Statistical Positive Correlation between Co and Appendix III Parameters

Statistical analysis of the historical groundwater data for HGWC-117 indicate that, with one exception discussed below, there are no statistically significant correlations between Co concentrations and concentrations of Appendix III constituents, which are considered indicator parameters of a potential CCR release; if Co were to originate from CCR, it should have statistically significant positive correlations to indicate a similar source of solutes.

Pearson correlation coefficients between Co and Appendix III parameters were calculated for groundwater results obtained from HGWC-117 between August 2016 and September 2021. Highly positive correlations (i.e., correlation coefficient "r" near 1.0) may indicate that two parameter sets are from a common influence, while statistically non-significant low correlations or negative r values indicate that the occurrence of two parameters are unrelated or potentially from different sources. The results of this analysis are summarized in **Table 3**. Note that p-values are also depicted for each correlation coefficient in this table to indicate whether any of these correlations (i.e., positive or negative) are statistically significant. A p-value below 0.05 indicates a statistically significant correlation at the 95% level. As can be seen there are no statistically significant positive correlations between Co and any of the Appendix III parameters,

[1] The analytical laboratory reports associated with Table 2 data reported between August 2020 and July 2021 were provided in the *2021 Annual Groundwater Monitoring and Corrective Action Report* submitted to GA EPD on July 30, 2021, in support of the AP-4 assessment monitoring program (Geosyntec, 2021). The laboratory report associated with the August and September 2021 data presented in Table 2 will be submitted in February 2022 with the next semiannual groundwater monitoring report.

suggesting that Co and the indicator parameters are likely from different sources and that Co does not originate from AP-4. Moreover, there is a statistically significant negative correlation between Co and TDS, further demonstrating that these two parameters are likely from different sources.

2.3 Lack of Cobalt Detections Above GWPS in HGWC-117A

A new piezometer (i.e., HGWC-117A) was installed in July 2021 approximately 30 feet side-gradient of HGWC-117 (**Figure 1**). HGWC-117A is screened in the same lithology and elevation interval as HGWC-117; the boring and construction logs for both locations are provided in **Appendix A**. HGWC-117A was installed to evaluate whether elevated Co results in HGWC-117 are attributed to a source other than AP-4.

Available analytical results from sampling HGWC-117A in August and September 2021 are summarized in **Table 2**. The Co results at HGWC-117A are estimated concentrations (i.e., 0.0024 J mg/L [Aug 2021], 0.0011 J mg/L [Sep 2021]) below the RL and the GWPS of 0.005 mg/L. Except for Co concentrations, the results for other Appendix III and IV parameters are similar between HGWC-117 and HGWC-117A. These observations suggest that Co is not attributable to AP-4 and could originate from potential issues with the sampling of HGWC-117 as discussed below in Section 2.4.

2.4 Potential Sampling Issues Related to Use of Dedicated Bladder Pumps

Following the redevelopment of monitoring wells at the Site in March 2019 due to a flooding event that occurred a few weeks earlier, dedicated bladder pumps were installed in wells across the monitoring well network in September 2019, including HGWC-117. The use of the dedicated bladder pump for the sampling events that followed resulted in longer purging times and higher turbidity levels when collecting groundwater samples at HGWC-117. This apparent relationship between using dedicated bladder pumps and turbidity is likely due to an (unexpected) effect of pump compression in alluvial aquifer sediments. This observation can be seen on **Figure 3**, which illustrates turbidity levels recorded at the time of sample collection at HGWC-117.

As of June 2021, most bladder pumps (i.e., except where needed because of groundwater depths) have been removed and AP-4 wells are again sampled using peristaltic pumps where feasible. Turbidity levels correspondingly reduced after June 2021, as indicated on **Figure 3**; the time required to purge the wells prior to collecting a groundwater sample also decreased.

While it is unclear whether the use of bladder pumps might have affected the Co concentrations in HGWC-117, continued monitoring/sampling of this well using peristaltic pumps is recommended. This well will be monitored in conjunction with the adjacent HGWC-117A to obtain sufficient data from HGWC-117A to statistically evaluate groundwater conditions in this area.

3. CONCLUSIONS

The following lines of evidence support the conclusion that the SSL of Co reported for HGWC-117 is attributed to a source other than AP-4 and may have been affected by pump/sampling issues unrelated to the unit.

- Isolated Occurrence
    - The Co exceedance in HGWC-117 is an isolated occurrence; Co is not detected or detected at an estimated concentration (i.e., J qualified) below the analytical RL and GWPS of 0.005 mg/L in all other sampled AP-4 wells.
- Lack of Positive Correlation between Co and Appendix III Parameters
    - Pearson correlation coefficients between Co and Appendix III parameters indicate that there are no statistically significant positive correlations between Co and the Appendix III parameters reported in samples collected from HGWC-117; moreover, there is a statistically significant negative correlation between Co and TDS; this observation suggests different sources for Co and Appendix III parameters.
- Lack of Co Detections Above the GWPS in New Piezometer HGWC-117A
    - A new piezometer (i.e., HGWC-117A) was recently installed 30 feet side-gradient of HGWC-117 and screened in the same lithology and elevation as HGWC-117; results showed estimated Co detections below the GWPS in HGWC-117A; this observation suggests that there is no release of Co from AP-4 in this area.
- Potential Sampling Issues Due to Bladder Pumps
    - The interim use of dedicated bladder pumps at the Site between September 2019 and June 2021 may have impacted the sampling results at HGWC-117. Bladder pumps have been replaced at all wells that do not require them due to groundwater depths, and continued sampling of HGWC-117 in conjunction with HGWC-117A using peristaltic pumps will allow the collection of additional data to evaluate groundwater conditions in this area.

Based on these findings, Georgia Power proposes to continue monitoring HGWC-117A in parallel to HGWC-117 during routine groundwater sampling events to confirm the findings presented herein. Once sufficient data are available for HGWC-117A to statistically evaluate groundwater conditions in this area, HGWC-117A may replace HGWC-117, if appropriate, as the new compliance well, and Georgia Power will submit a minor permit modification to incorporate HGWC-117A into the groundwater monitoring program at AP-4.

4. REFERENCES

Geosyntec Consultants, 2021. *2021 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company Plant Hammond Ash Pond 4 (AP-4)*. July 2021.

Golder Associates, 2018. *Geologic and Hydrogeologic Report – Plant Hammond*. November 2018.

TABLES

Table 1
Well and Piezometer Network Details
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation [2] (ft)	Top of Casing Elevation (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Well Depth [3] (ft BTOC)	Screened Media
Compliance Monitoring Well									
HGWA-111	8/21/2012	1548834.26	1935222.81	588.79	591.75	558.48	548.48	43.67	Alluvium, Residuum
HGWA-112	8/21/2012	1548885.63	1935647.00	593.46	596.27	566.52	556.52	40.15	Alluvium
HGWA-113	10/2/2012	1548944.62	1935990.09	592.07	594.58	568.87	558.87	36.11	Alluvium
HGWA-47	8/21/2020	1548990.96	1934171.84	577.39	580.33	546.84	536.84	43.74	Partially weathered rock
HGWA-48D	8/20/2020	1548989.39	1934178.15	577.29	580.26	517.54	507.54	72.97	Shale
HGWC-101	8/7/2012	1547725.50	1936369.58	575.91	578.85	551.31	541.31	37.94	Alluvium
HGWC-102	8/7/2012	1547713.50	1936033.33	574.54	577.54	550.51	540.51	37.43	Alluvium
HGWC-103	8/8/2012	1547848.88	1935732.96	577.76	580.79	553.51	543.51	37.68	Alluvium
HGWC-105	8/8/2012	1547855.56	1935110.36	579.08	582.09	547.72	537.72	44.67	Alluvium, Residuum
HGWC-107	8/8/2012	1547909.99	1934442.24	576.43	579.31	551.51	541.51	38.20	Alluvium
HGWC-109	8/15/2012	1548627.41	1934362.77	573.66	576.77	555.81	545.81	31.36	Alluvium
HGWC-117	8/14/2012	1548100.77	1937180.43	579.31	581.98	552.12	542.12	40.26	Alluvium
HGWC-118	10/1/2012	1547980.56	1936946.37	576.52	579.02	548.51	538.51	40.91	Alluvium, Residuum
Piezometer									
MW-12	10/21/2014	1547853.78	1937525.46	580.59	583.27	555.84	545.84	37.83	Alluvium, Silty sand, Well-graded sand
GWC-4	8/8/2012	1547898.31	1935398.70	577.73	580.65	543.47	533.47	47.58	Sand, Weathered shale
GWC-6	8/13/2012	1547843.93	1934800.45	578.55	581.63	553.90	543.90	38.13	Alluvium, Silty, fine sand, Sand
GWC-8	8/9/2012	1548167.13	1934342.94	577.13	579.99	549.47	539.47	40.92	Alluvium, Clayey sand, Sand
GWA-14	10/2/2012	1548982.59	1936642.58	589.70	592.14	561.40	551.40	41.14	Alluvium
GWA-15	8/22/2012	1548766.17	1936808.47	588.37	591.56	571.44	561.44	30.52	Alluvium
GWA-16	8/21/2012	1548592.74	1937210.99	579.58	582.55	569.94	559.94	23.01	Alluvium
GWC-19	8/14/2012	1547892.89	1936572.97	576.90	579.83	554.04	544.04	36.19	Sand and gravel
HGWC-117A	7/21/2021	1548082.04	1937157.25	578.85	581.76	551.85	541.85	37.40	Alluvium

Notes:
ft = feet
ft BTOC = feet below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.
(2) Vertical elevations are in North American Vertical Datum (NAVD) 1988.
(3) Total well depth accounts for sump if data provided on well construction logs.

Table 2
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWA-111	HGWA-111	HGWA-111	HGWA-111	HGWA-112	HGWA-112	HGWA-112	HGWA-112	HGWA-113	HGWA-113	HGWA-113	HGWA-113
	Sample Date:	8/25/2020	9/18/2020	3/11/2021	8/12/2021	8/25/2020	9/18/2020	3/12/2021	8/12/2021	8/25/2020	9/22/2020	3/16/2021	8/12/2021
	Parameter [1,2]												
APPENDIX III	Boron	--	0.011 J	0.010 J	<0.0086	--	0.0080 J	0.0061 J	<0.0086	--	0.021 J	0.011 J	<0.0086
	Calcium	--	32.2	53.2	45.4	--	6.5	6.9	6.9	--	7.9	8.6	8.4
	Chloride	--	2.6	3.4	2.5	--	5.2	5.3	4.4	--	1.5	1.6	1.5
	Fluoride	0.052 J	<0.050	0.057 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.17	0.16	0.18	0.16
	pH [3]	6.70	6.46	7.20	6.67	5.53	5.58	5.60	5.50	5.95	6.10	6.14	6.08
	Sulfate	--	1.0	1.5	1.3	--	<0.50	0.52 J	<0.50	--	5.3	7.7	10.0
	TDS	--	139	207	157	--	62.0	56.0	63.0	--	84.0	99.0	92.0
APPENDIX IV	Antimony	<0.00028	--	--	<0.00078	<0.00028	--	--	<0.00078	<0.00028	--	--	<0.00078
	Arsenic	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	0.0011 J	<0.0011
	Barium	0.031	0.024	0.037	0.029	0.028	0.025	0.030	0.028	0.030	0.038	0.054	0.033
	Beryllium	0.000047 J	<0.000046	0.00014 J	<0.000054	<0.000046	<0.000046	0.000054 J	<0.000054	0.000046 J	0.000099 J	0.00018 J	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00011
	Chromium	0.0013 J	0.00077 J	0.0020 J	<0.0011	0.0039 J	0.0037 J	0.0045 J	0.0041 J	0.0031 J	0.0046 J	0.0061	<0.0011
	Cobalt	<0.00038	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	<0.00038	<0.00039	<0.00038	0.00074 J	0.0013 J	<0.00039
	Fluoride	0.052 J	<0.050	0.057 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.17	0.16	0.18	0.16
	Lead	0.00036 J	0.00026 J	0.0011	<0.00089	0.00011 J	0.000065 J	0.00017 J	<0.00089	0.00022 J	0.00096 J	0.0016	<0.00089
	Lithium	0.0033 J	0.0021 J	0.0047 J	0.0020 J	<0.00081	<0.00081	<0.00081	<0.00073	0.0014 J	0.0018 J	0.0026 J	0.00094 J
	Mercury	<0.000078	--	--	<0.000078	<0.000078	--	--	0.00011 J	<0.000078	--	--	<0.000078
	Molybdenum	<0.00069	--	--	<0.00074	<0.00069	--	--	<0.00074	<0.00069	--	--	<0.00074
	Comb. Radium 226/228	0.570 U	0.828 U	0.354 U	0.532 U	0.0182 U	1.15 U	0.164 U	0.223 U	0.587 U	0.551 U	0.559 U	0.312 U
	Selenium	<0.0016	--	--	<0.0014	<0.0016	--	--	<0.0014	<0.0016	--	--	0.0023 J
	Thallium	<0.00014	--	--	<0.00018	<0.00014	--	--	<0.00018	<0.00014	--	--	<0.00018

Notes:
-- = Parameter was not analyzed
J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL)
< = Indicates the parameter was not detected above the analytical MDL
TDS = Total dissolved solids
U = Indicates the parameter was not detected above the 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, mercury was analyzed by EPA method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C-2011.
(3) The pH value presented was recorded at the time of sample collection in the field.
(4) Monitoring wells HGWA-47, HGWA-48D, and HGWC-102 were analyzed for the complete list of Appendix III and Appendix IV constituents to establish groundwater conditions.

Table 2
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWA-47[4]	HGWA-47[4]	HGWA-47[4]	HGWA-47[4]	HGWA-47[4]	HGWA-47	HGWA-48D[4]	HGWA-48D[4]	HGWA-48D[4]	HGWA-48D[4]	HGWA-48D[4]	HGWA-48D
	Sample Date:	9/18/2020	11/10/2020	12/15/2020	1/19/2021	3/12/2021	8/12/2021	9/18/2020	11/11/2020	12/15/2020	1/19/2021	3/12/2021	8/12/2021
	Parameter [1,2]												
APPENDIX III	Boron	0.0082 J	0.0064 J	<0.0052	0.015 J	0.0067 J	<0.0086	0.015 J	0.014 J	0.0083 J	0.015 J	0.012 J	0.012 J
	Calcium	62.2	73.3	72.5	72.5	69.2	71.2	51.8	61.3	61.3	58.9	57.5	59.5
	Chloride	2.7	2.7	2.9	2.8	2.7	2.3	2.6	2.6	2.7	2.7	2.6	2.2
	Fluoride	0.067 J	0.065 J	0.064 J	0.057 J	0.062 J	<0.050	0.098 J	0.083 J	0.081 J	0.079 J	0.085 J	0.064 J
	pH [3]	7.54	7.34	7.27	7.32	7.52	7.38	7.50	7.40	7.39	7.40	7.51	7.44
	Sulfate	3.5	2.3	2.4	2.6	1.9	1.4	9.5	4.5	4.2	3.9	4.7	4.3
	TDS	195	229	233	199	217	212	224	221	239	224	204	234
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00028	<0.00028	--	<0.00078	0.00038 J	0.00031 J	<0.00028	0.00042 J	--	<0.00078
	Arsenic	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.00078	<0.00078	0.0018 J	0.0013 J
	Barium	0.026	0.027	0.027	0.029	0.030	0.028	0.077	0.078	0.091	0.095	0.10	0.10
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011
	Chromium	0.0039 J	<0.00055	<0.00055	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	0.0013 J	0.0015 J	0.00062 J	<0.0011
	Cobalt	0.00049 J	<0.00038	<0.00038	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	0.00039 J	<0.00038	<0.00038	<0.00039
	Fluoride	0.067 J	0.065 J	0.064 J	0.057 J	0.062 J	<0.050	0.098 J	0.083 J	0.081 J	0.079 J	0.085 J	0.064 J
	Lead	<0.000036	<0.000036	<0.000036	0.000038 J	<0.000036	<0.00089	<0.000036	<0.000036	0.00015 J	0.000056 J	0.000048 J	<0.00089
	Lithium	0.0026 J	0.0028 J	0.0026 J	0.0030 J	0.0031 J	0.0029 J	0.0051 J	0.0036 J	0.0045 J	0.0032 J	0.0031 J	0.0037 J
	Mercury	<0.000078	<0.000078	<0.000078	<0.000078	--	0.000081 J	<0.000078	<0.000078	<0.000078	<0.000078	--	0.00018 J
	Molybdenum	0.0015 J	<0.00069	<0.00069	<0.00069	--	<0.00074	0.0026 J	0.0012 J	0.00097 J	0.0018 J	--	0.0019 J
	Comb. Radium 226/228	1.11 U	0.234 U	0.529 U	0.176 U	0.000 U	0.462 U	1.50 U	0.776 U	1.23 U	1.35 U	0.829 U	0.274 U
	Selenium	<0.0016	<0.0016	<0.0016	<0.0016	--	<0.0014	<0.0016	<0.0016	<0.0016	<0.0016	--	<0.0014
	Thallium	<0.00014	<0.00014	<0.00014	<0.00014	--	<0.00018	<0.00014	<0.00014	<0.00014	<0.00014	--	<0.00018

Table 2
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWC-101	HGWC-101	HGWC-101	HGWC-101	HGWC-102[4]	HGWC-102[4]	HGWC-102[4]	HGWC-102	HGWC-103	HGWC-103	HGWC-103	HGWC-103	HGWC-105	HGWC-105	HGWC-105	HGWC-105
	Sample Date:	8/27/2020	9/24/2020	3/17/2021	8/16/2021	8/27/2020	9/24/2020	3/17/2021	8/13/2021	8/27/2020	9/24/2020	3/18/2021	8/16/2021	8/27/2020	9/24/2020	3/18/2021	8/13/2021
	Parameter [1,2]																
APPENDIX III	Boron	--	0.10	0.13	0.13	2.7	2.9	2.7	2.4	--	2.2	2.4	3.2	--	1.2	1.5	1.2
	Calcium	--	20.3	21.8	22.8	106	120	111	119	--	91.3	83.7	124	--	92.9	97.7	102
	Chloride	--	5.5	5.5	5.4	7.1	7.2	6.9	6.0	--	6.0	6.2	10.4	--	3.9	4.3	3.7
	Fluoride	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	pH [3]	5.32	5.48	5.41	5.40	5.70	5.82	5.78	5.45	5.82	5.60	5.51	5.59	6.45	6.63	6.57	6.44
	Sulfate	--	97.0	107	72.1	382	370	332	248	--	293	286	354	--	177	196	142
	TDS	--	170	213	206	663	696	626	647	--	517	465	672	--	411	410	441
APPENDIX IV	Antimony	<0.00028	--	--	<0.00078	<0.00028	<0.00028	--	<0.00078	<0.00028	--	--	<0.00078	<0.00028	--	--	<0.00078
	Arsenic	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.00078	<0.0011
	Barium	0.045	0.041	0.040	0.037	0.028	0.029	0.031	0.026	0.038	0.036	0.042	0.037	0.068	0.075	0.082	0.073
	Beryllium	0.000057 J	0.000048 J	0.000059 J	<0.000054	<0.000046	<0.000046	<0.000046	<0.000054	0.000050 J	0.000088 J	0.000061 J	<0.000054	<0.000046	<0.000046	<0.000046	<0.000054
	Cadmium	0.00019 J	0.00014 J	<0.00012	0.00015 J	0.00038 J	0.00032 J	0.00094	0.00069	0.00082 J	0.00076 J	0.00068	0.00081	<0.00012	<0.00012	<0.00012	<0.00011
	Chromium	<0.00055	<0.00055	0.00075 J	<0.0011	<0.00055	<0.00055	<0.00055	<0.0011	0.00069 J	0.00081 J	0.0030 J	<0.0011	<0.00055	0.00064 J	0.00058 J	<0.0011
	Cobalt	0.0027 J	0.0021 J	0.0023 J	0.0026 J	0.0010 J	0.0011 J	0.0012 J	0.00085 J	0.0019 J	0.0019 J	0.0021 J	0.0022 J	<0.00038	0.00044 J	0.00045 J	<0.00039
	Fluoride	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lead	<0.000036	<0.000036	<0.000036	<0.00089	<0.000036	<0.000036	<0.000036	<0.00089	0.00018 J	0.00028 J	0.00024 J	<0.00089	<0.000036	0.000049 J	0.000058 J	<0.00089
	Lithium	<0.00081	<0.00081	<0.00081	<0.00073	0.0011 J	0.0011 J	0.0012 J	0.0011 J	0.0016 J	0.0017 J	0.0018 J	0.0016 J	0.0037 J	0.0038 J	0.0042 J	0.0038 J
	Mercury	<0.000078	--	--	0.000099 J	<0.000078	<0.000078	--	0.00010 J	<0.000078	--	--	0.00027	<0.000078	--	--	0.00022
	Molybdenum	<0.00069	--	--	<0.00074	<0.00069	<0.00069	--	<0.00074	<0.00069	--	--	<0.00074	<0.00069	--	--	<0.00074
	Comb. Radium 226/228	0.109 U	0.625 U	0.248 U	0.667 U	1.17 U	1.42	0.401 U	0.828 U	0.370 U	0.804 U	0.274	0.493 U	0.416 U	1.11 U	0.252 U	0.513 U
	Selenium	<0.0016	--	--	<0.0014	<0.0016	<0.0016	--	<0.0014	<0.0016	--	--	<0.0014	<0.0016	--	--	<0.0014
	Thallium	<0.00014	--	--	<0.00018	<0.00014	<0.00014	--	<0.00018	<0.00014	--	--	<0.00018	<0.00014	--	--	<0.00018

Table 2
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWC-107	HGWC-107	HGWC-107	HGWC-107	HGWC-109	HGWC-109	HGWC-109	HGWC-109	HGWC-117	HGWC-117	HGWC-117	HGWC-117	HGWC-117	HGWC-117	HGWC-117A	HGWC-117A
	Sample Date:	8/27/2020	9/24/2020	3/18/2021	8/13/2021	8/27/2020	9/25/2020	3/17/2021	8/13/2021	8/27/2020	9/25/2020	3/19/2021	6/23/2021	8/19/2021	9/27/2021	8/12/2021	9/27/2021
	Parameter [1,2]																
APPENDIX III	Boron	--	0.88	0.92	0.73	--	0.28	0.26	0.24	--	1.1	1.5	1.0	0.78	0.67	0.34	0.30
	Calcium	--	55.4	56.0	57.8	--	48.5	37.3	43.5	--	72.8	87.3	56.5	40.9	37.5	50.7	47.2
	Chloride	--	3.5	3.2	3.1	--	4.1	4.7	4.0	--	16.1	24.9	8.8	4.0	3.4	6.3	4.5
	Fluoride	<0.050	0.064 J	<0.050	<0.050	0.094 J	0.091 J	0.089 J	0.086 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	pH [3]	6.09	6.11	6.20	6.11	6.64	6.79	6.55	6.71	5.92	6.01	6.14	5.72	6.04	5.66	6.27	6.14
	Sulfate	--	126	128	112	--	24.7	28.3	24.4	--	146	162	125	108	104	64.6	69.7
	TDS	--	253	255	291	--	188	171	189	--	340	371	325	253	242	256	223
APPENDIX IV	Antimony	<0.00028	--	--	<0.00078	<0.00028	--	--	<0.00078	<0.00028	--	--	--	<0.00078	<0.00078	<0.00078	<0.00078
	Arsenic	<0.00078	<0.00078	<0.00078	<0.0011	0.0011 J	0.0017 J	0.0019 J	0.0019 J	<0.00078	<0.00078	<0.00078	--	<0.0011	<0.0011	<0.0011	<0.0011
	Barium	0.034	0.039	0.041	0.033	0.083	0.085	0.077	0.080	0.047	0.050	0.058	--	0.041	0.038	0.079	0.062
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000046	<0.000054	0.000049 J	0.000066 J	0.000081 J	--	0.000056 J	<0.000054	<0.000054	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00011	0.00080 J	0.00089 J	0.0010	--	0.0012	0.00098	0.00016 J	<0.00011
	Chromium	<0.00055	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.00055	<0.0011	0.00057 J	0.00067 J	0.0010 J	--	<0.0011	<0.0011	<0.0011	<0.0011
	Cobalt	<0.00038	<0.00038	<0.00038	<0.00039	0.00086 J	0.0010 J	0.0030 J	0.0011 J	0.011	0.011	0.011	0.016	0.017	0.015	0.0024 J	0.0011 J
	Fluoride	<0.050	0.064 J	<0.050	<0.050	0.094 J	0.091 J	0.089 J	0.086 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lead	<0.000036	0.00034 J	0.000091 J	<0.00089	<0.000036	<0.000036	<0.000036	<0.00089	0.00014 J	0.00019 J	0.00038 J	--	<0.00089	<0.00089	<0.00089	<0.00089
	Lithium	<0.00081	0.00098 J	0.0011 J	0.00084 J	0.0011 J	0.0010 J	<0.00081	<0.00073	0.0024 J	0.0031 J	0.0035 J	--	0.0017 J	0.0016 J	0.0036 J	0.0035 J
	Mercury	<0.000078	--	--	0.000084 J	<0.000078	--	--	0.000080 J	<0.000078	--	--	--	0.0003	<0.000078	0.000094 J	<0.000078
	Molybdenum	<0.00069	--	--	<0.00074	<0.00069	--	--	<0.00074	<0.00069	--	--	--	<0.00074	<0.00074	<0.00074	<0.00074
	Comb. Radium 226/228	0.264 U	0.576 U	0.145 U	0.815 U	0.989 U	0.584 U	0.556 U	0.794 U	0.193 U	0.155 U	0.0846 U	--	0.155 U	(pending data)	0.124 U	(pending data)
	Selenium	<0.0016	--	--	<0.0014	<0.0016	--	--	<0.0014	<0.0016	--	--	--	<0.0014	<0.0014	<0.0014	<0.0014
	Thallium	<0.00014	--	--	<0.00018	<0.00014	--	--	<0.00018	<0.00014	--	--	--	<0.00018	<0.00018	<0.00018	<0.00018

Table 2
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWC-118	HGWC-118	HGWC-118	HGWC-118
	Sample Date:	8/26/2020	9/28/2020	3/18/2021	8/13/2021
	Parameter [1,2]				
APPENDIX III	Boron	--	0.65	0.81	0.59
	Calcium	--	88.9	85.4	84.3
	Chloride	--	4.0	4.3	4.0
	Fluoride	0.072 J	0.078 J	0.079 J	0.075 J
	pH [3]	6.97	7.03	7.11	6.78
	Sulfate	--	86.0	87.8	75.1
	TDS	--	332	328	336
APPENDIX IV	Antimony	<0.00028	--	--	<0.00078
	Arsenic	<0.00078	<0.00078	0.0010 J	<0.0011
	Barium	0.056	0.046	0.067	0.043
	Beryllium	<0.000046	<0.000046	0.000093 J	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00011
	Chromium	0.00098 J	0.0017 J	0.0021 J	<0.0011
	Cobalt	0.00061 J	0.00048 J	0.0012 J	<0.00039
	Fluoride	0.072 J	0.078 J	0.079 J	0.075 J
	Lead	0.00036 J	0.00022 J	0.00088 J	<0.00089
	Lithium	0.0028 J	0.0022 J	0.0029 J	0.0017 J
	Mercury	<0.000078	--	--	0.000081 J
	Molybdenum	<0.00069	--	--	<0.00074
	Comb. Radium 226/228	1.19	0.613 U	0.778 U	0.228 U
	Selenium	<0.0016	--	--	<0.0014
	Thallium	<0.00014	--	--	<0.00018

Table 3

Pearson's Correlation Coefficients between Cobalt and Appendix III Concentrations Reported in HGWC-117
Plant Hammond AP-4, Floyd County, Georgia

Sample Date [1]	Cobalt[2]	Boron	Calcium	Chloride	Fluoride	Sulfate	TDS	pH
8/31/2016	0.0035	0.821	63.4	7.1	0.09	150	381	6.07
10/20/2016	0.0045	0.956	64.4	7.7	0.11	150	319	6.00
1/27/2017	0.0041	0.99	68.6	7.8	0.28	150	407	6.20
5/23/2017	0.0071	0.438	32	3.6	0.01	110	258	5.27
8/10/2017	0.0031	0.821	78.9	5.9	0.1	140	359	6.27
11/14/2017	0.0062	0.536	46.9	4	0.3	110	310	5.40
6/7/2018	0.0083	0.5	37.7	3.6	0.029	103	223	5.29
10/3/2018	0.005	0.85	68	7.6	0.029	169	337	6.08
10/22/2019	0.0064	1	70.9	12.1	0.042	133	348	6.17
3/24/2020	0.0087	1	68	12.5	0.05	129	331	5.99
9/25/2020	0.011	1.1	72.8	16.1	0.05	146	340	6.01
3/19/2021	0.011	1.5	87.3	24.9	0.05	162	371	6.14
8/19/2021	0.017	0.78	40.9	4	0.05	108	253	6.04
9/27/2021	0.015	0.67	37.5	3.4	0.05	104	242	5.66
Pearson Correlation (r) [3]		0.057	-0.373	0.093	-0.405	-0.476	**-0.573**	-0.210
p-value [4]		0.847	0.189	0.752	0.120	0.086	**0.032**	0.434

Notes:

TDS = Total dissolved solids

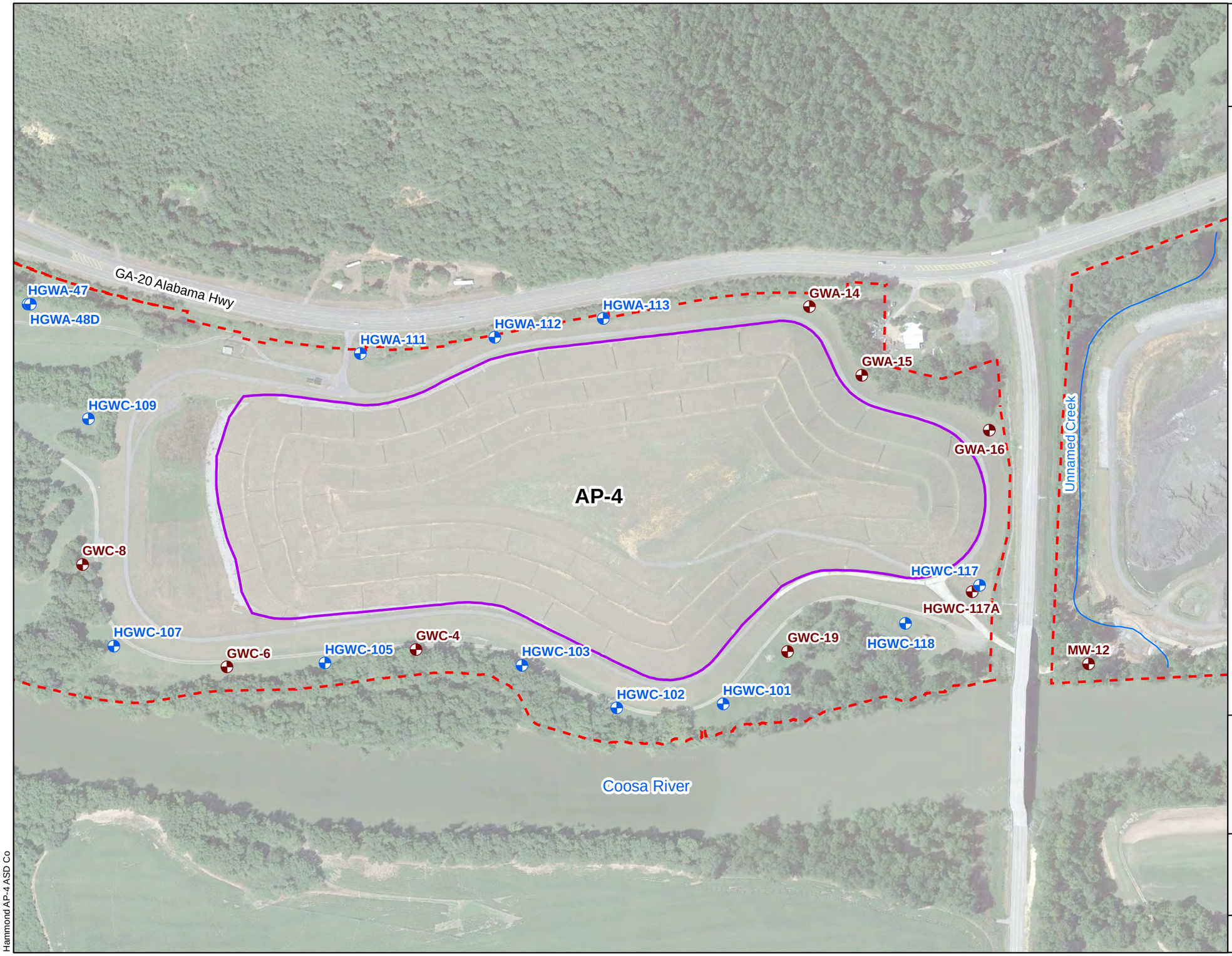
(1) Cobalt was not analyzed for during the detection monitoring events conducted in April and June 2019; Appendix III parameters were not analyzed for during the initial annual assessment monitoring events conducted August 2019 and August 2020. The table presents data for events in which a complete dataset of Co and Appendix III parameters was available.

(2) Results reported in milligrams per liter (mg/L), except for pH which is reported in standard units (s.u.).

(3) A r value near 1.0 indicates a highly positive correlation, and may indicate the two parameter sets are from a common influence, while statistically a lower or negative r value may indicate that the occurrence of two parameter sets are unrelated.

(4) Statistically significant correlations are bold. p-value ≤ 0.05 indicate the correlation is statistically significant.

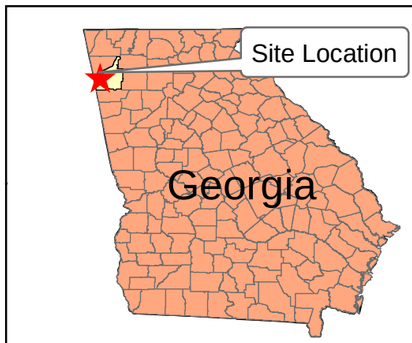
FIGURES



N

LEGEND

- Compliance Monitoring Well
- Piezometer
- Unnamed Creek
- Approximate AP-4 Boundary
- Plant Hammond Property Boundary



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

0 150 300 600

SCALE IN FEET

GROUNDWATER MONITORING NETWORK MAP

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

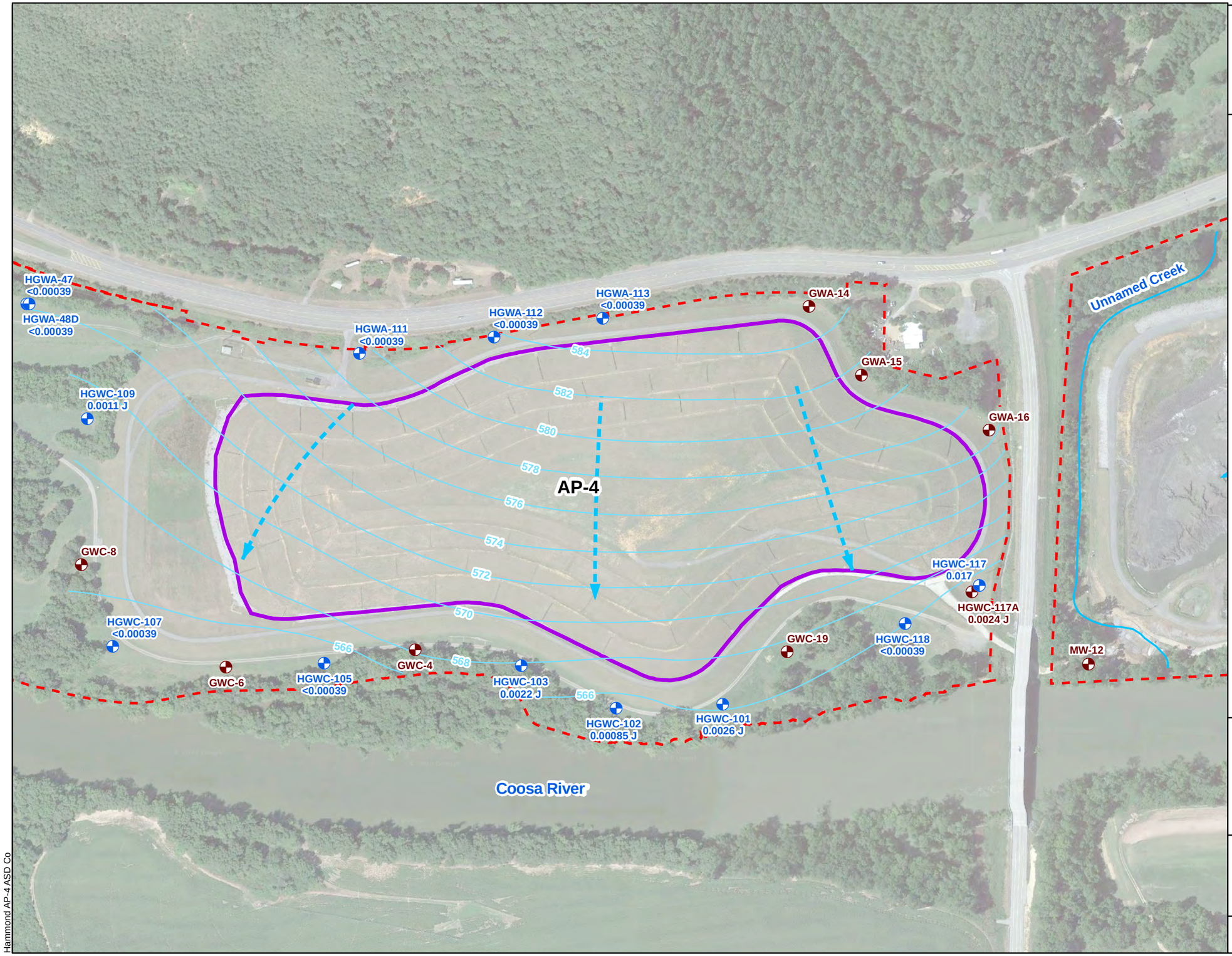
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | OCTOBER 2021

FIGURE 1

Hammond AP-4 ASD Co



N

LEGEND

- Compliance Monitoring Well
- Piezometer
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow
- Approximate AP-4 Boundary
- Plant Hammond Property Boundary

Notes:
1. Concentration data from groundwater samples collected during the August 2021 semiannual monitoring event. Concentrations are reported in milligrams per liter (mg/L).
2. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. The state Groundwater Protection Standard (GWPS) for cobalt is 0.005 mg/L.
4. Aerial photograph source: Google Earth Pro, August 2019.

0 150 300 600

SCALE IN FEET

POTENTIOMETRIC SURFACE MAP AND CO CONCENTRATIONS - AUGUST 2021

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

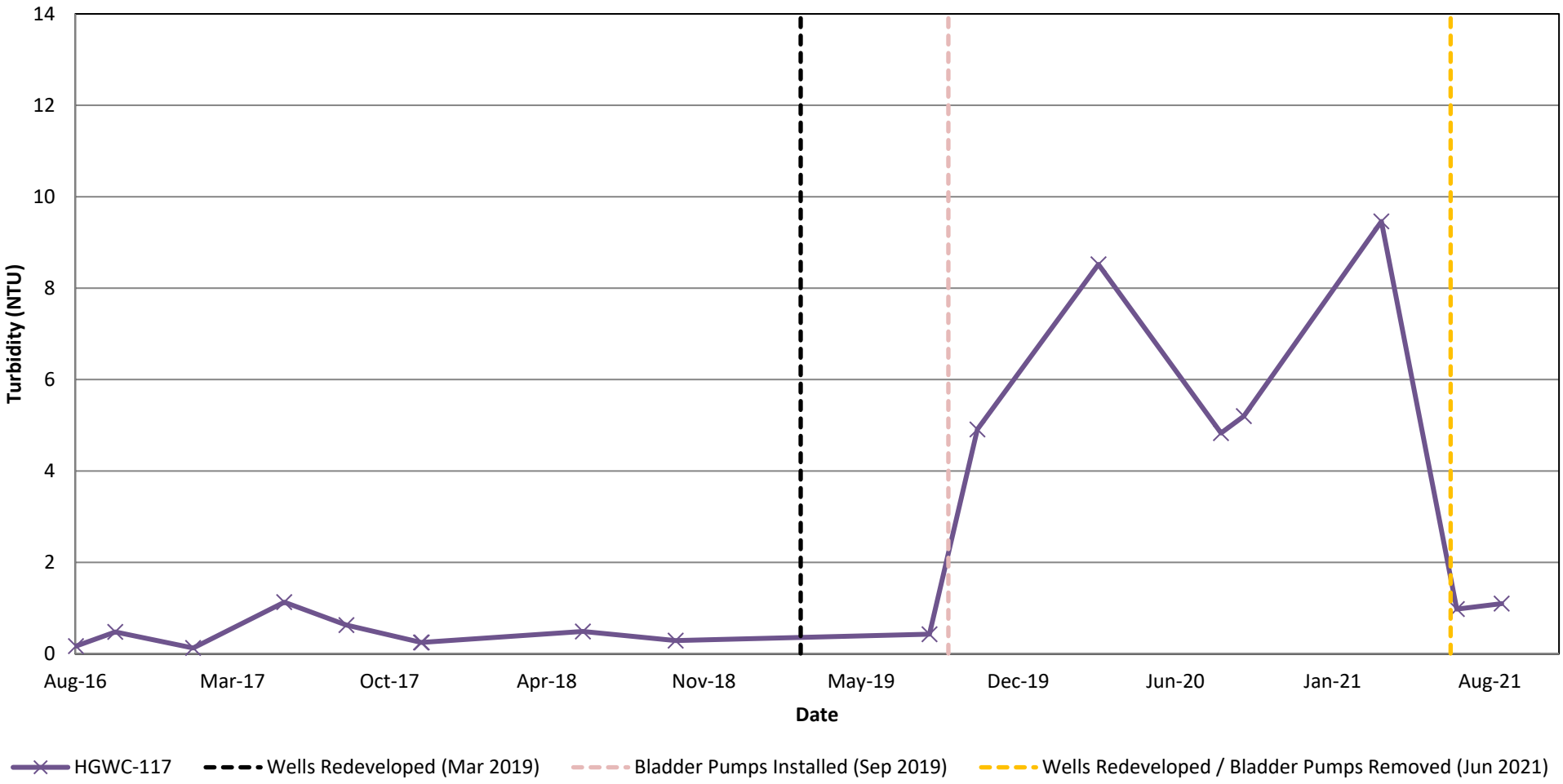
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | OCTOBER 2021

FIGURE 2

Hammond AP-4 ASD Co



Turbidity Levels Recorded During Sample Collection in HGWC-117

Georgia Power Company
Plant Hammond AP-4
Floyd County, Georgia

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

Kennesaw, GA | October 2021

Figure 3

APPENDIX A
Boring and Well Construction Logs for HGWC-117 and HGWC-117A

Log updated with revised survey certified 5/11/2020.

BORING NO.: HGWC-117

TEST BORING RECORD

PROJECT: Plant Hammond Ash Pond #4 Well Installation		JOB NO: 1811-12-153	SHEET 1 OF 1
PROJECT LOCATION: Rome, Georgia			
ELEVATION: 579.31 feet	BORING STARTED: 8/14/2012	RIG TYPE: CME-55	AUGER DIA. (IN): 6.75
DRILLING METHOD: Hollow-Stem Augers	BORING COMPLETED: 8/14/2012	HAMMER: Automatic	

GROUNDWATER:
- 18.5 feet ATD
- 13.70 feet on 8/20/12

Remarks: Monitoring well set at 37.3 feet below ground surface

Elevation in NAVD 88.

G	ELEV. (FT.)	DEPTH (FT.)	MATERIAL DESCRIPTION	L	S	R	M	PI	STANDARD PENETRATION RESISTANCE (N) BLOWS/6"
	579.3	0	0.3' TOPSOIL, grass, roots CLAYEY SILT (ML) yellow-brown, gray, and brown, damp, stiff	ALLUVIUM					5 - 7 - 8 **(15)**
	572.3	5	7' SANDY SILT (ML) with trace mica, yellow-brown, damp to moist, firm						2 - 3 - 3 **(6)**
▼	563.7	10	15' CLAYEY FINE SAND (SC) with trace mica, yellow-brown to light brown, moist to wet, loose to very loose, visible layering from 29.5-35.5						2 - 2 - 2 **(4)**
▽		15							2 - 3 - 4 **(7)**
		20							0 - 0 - 2 **(2)**
		25							1 - 2 - 1 **(3)**
	543.2	30	35.5' SAND AND GRAVEL (SP-GP) medium to coarse angular to rounded, brown to yellow-brown, wet, very firm						13 - 13 - 17 **(30)**
	538.6	35	40.7' CLAYEY SILT (ML)/WEATHERED SHALE, dark brown, wet, very stiff	RESIDUUM					4 - 17 - 4 **(21)**
	538.3	40	*Boring terminated at 41 feet*						
		45							
		50							

BORING RECORD S&ME 12-153.GPJ S&ME 1-18-2012.GDT 10/22/12

Borehole ID: 17

Project Manager: J. Heywood, PE

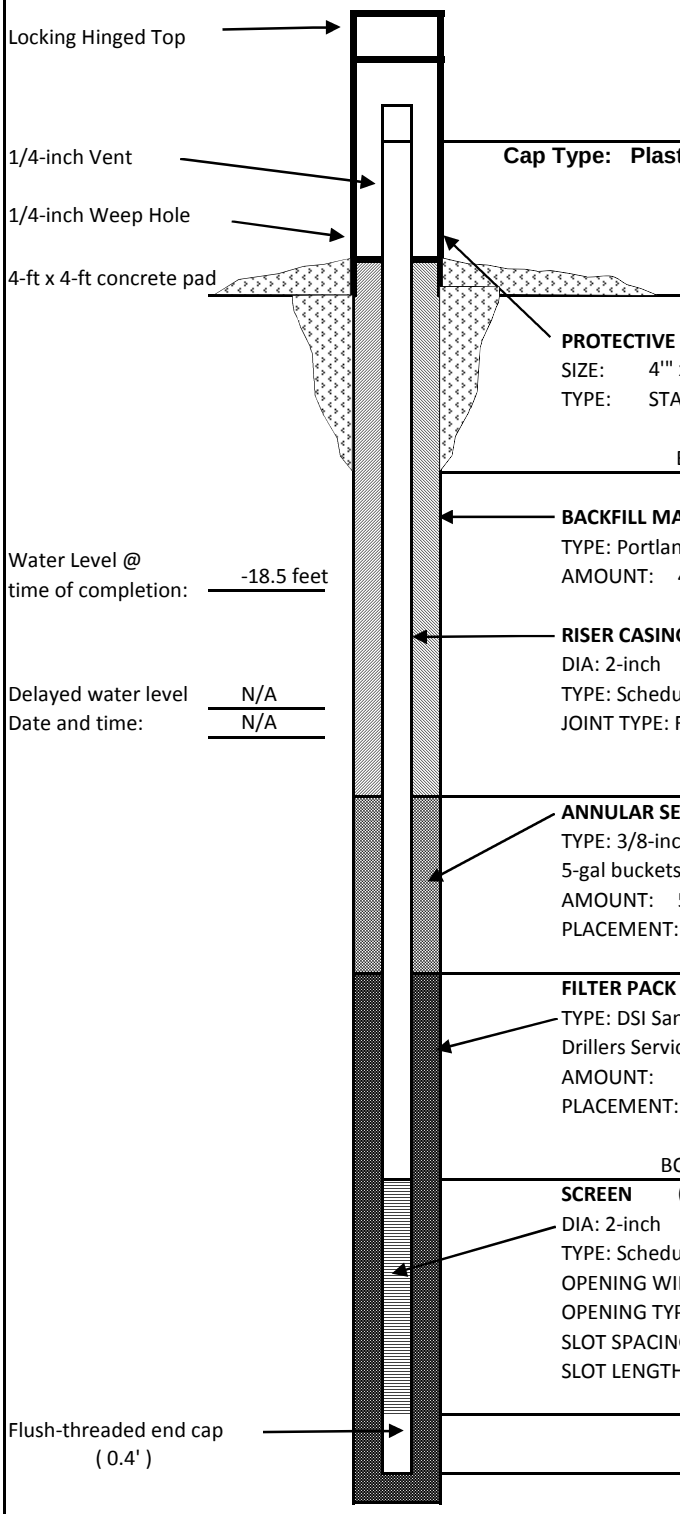
Logged by: P. Gribben, PG

Log updated with revised survey certified 5/11/2020.

GEORGIA POWER PLANT HAMMOND ASH POND #4
ROME, GEORGIA

WELL CONSTRUCTION LOG

CLIENT: SOUTHERN COMPANY		WELL ID:
DRILLED BY: Chad Odom (S&ME)	LOGGED BY: PAT GRIBBEN (S&ME)	**HGWC-117**
RIG TYPE: CME-55	DRILLING METHOD: 4.25" HOLLOW STEM AUGERS	
DATE CONSTRUCTED: August 14, 2012		



	DEPTH FEET	ELEVATION FEET
TOP OF RISER	2.96	581.98
Cap Type: Plastic Locking		
GROUND SURFACE	0.29	579.31
GROUND SURFACE	0.0	579.02
PROTECTIVE CASING SIZE: 4'" x 4" x 5' TYPE: STAINLESS STEEL LOCKING		
BOTTOM OF PROTECTIVE CASING	-1.5	577.52
BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 41 gallons		
RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC JOINT TYPE: Flush Threaded		
TOP OF SEAL	-21.7	557.32
ANNULAR SEAL TYPE: 3/8-inch coated bentonite pellets 5-gal buckets AMOUNT: 50 lbs PLACEMENT: 3.2 feet		
TOP OF FILTER PACK	-24.9	554.12
FILTER PACK TYPE: DSI Sand - 1A (20/30) Drillers Services, Inc. AMOUNT: 6 bags PLACEMENT: 12.4 feet		
BOTTOM OF RISER/TOP OF SCREEN	-26.9	552.12
SCREEN (10.0') DIA: 2-inch TYPE: Schedule 40 PVC Prepack OPENING WIDTH: 0.01-inch OPENING TYPE: Slotted SLOT SPACING: 0.25-inch SLOT LENGTH: 1.5-inch		
BOTTOM OF SCREEN	-36.9	542.12
BOTTOM OF CASING	-37.3	541.72

Elevation in NAVD 88.

Geosyntec consultants
engineers | scientists | innovators
Geosyntec Consultants
1255 Roberts Boulevard
Kennesaw, GA 30144

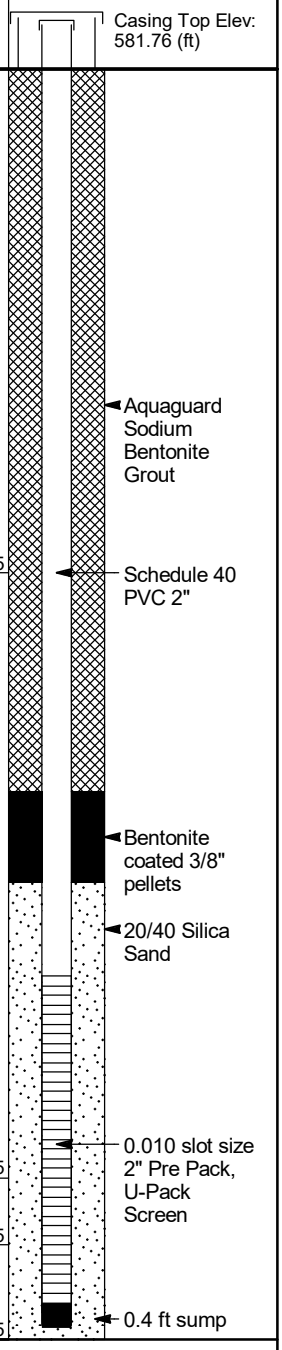
HGWC-117A

CLIENT Southern Company Services
PROJECT NAME Plant Hammond Well Installation
PROJECT NUMBER GW6581B
PROJECT LOCATION Plant Hammond
DATE STARTED 7/20/21 **COMPLETED** 7/21/21
NORTHING 1548082.04 ft **EASTING** 1937157.25 ft
DRILLER Sean Denty, Civil Field Services
GROUND ELEVATION 578.85 ft **BORING DIAMETER** 6 in
DRILLING METHOD Hollow Stem Auger
TOP OF CASING ELEVATION 581.76 ft
SAMPLING METHOD Split spoon
GEOPHYSICAL CONTRACTOR ---
RIG TYPE Geoprobe 7822DT
LOGGED BY T. Kessler **CHECKED BY** J. Ivanowski

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION
0		0 to 10 ft: Air Knife.		Air knife (0 to 10 ft) NO SAMPLE
	575			
5				
	570	10 to 15 ft: Hollow stem auger, no sample.		
10				
	565			
				563.85
15		From 15 ft bgs: Continuous split spoon samples were used solely for sample collection.		SILTY CLAY, Strong brown, medium plasticity, trace sands and mica, very soft, moist to wet.
	560			
20				20 ft: Abundant sands, trace mica, very soft, wet.
	555			
25				25 ft: Red and black mottling throughout, very soft, wet. 27 ft: Yellowish brown, abundant fine sands, trace mica, red and black mottling thorughout, very soft, wet.
	550			
30				29ft: Dark yellowish brown with black mottling throughout, low plasticity, fine sands throughout, trace mica, very soft, wet. 31 ft: Light yellowish brown, shale and chert fragments (subangular and subrounded) very soft, wet.
				545.85
	545			SAND, Yellowish brown, subangular and subrounded chert and shale fragments, trace quartz fragments, trace mica, very loose, wet.
35				543.85 SANDY GRAVEL, Yellowish brown, medium to coarse grained, subangular and subrounded chert, calcite and shale fragments, red, brown, and white mottling, very dense, moist.
				541.05

Bottom of borehole at 37.8 feet.

CONSTRUCTION DIAGRAM



SCS MONITORING WELLS MW-51 AND HGWC-117A.GPJ ACP GINT LIBRARY CH.GLB 9/9/21