



Prepared for

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2022 SEMIANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLANT HAMMOND ASH POND 4 (AP-4)

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CERTIFICATION STATEMENT

This 2022 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 [CFR] 257 Subpart D), specifically § 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).



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February 28, 2023
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SUMMARY

This summary of the 2022 *Semiannual Groundwater Monitoring and Corrective Action Report* provides the status of groundwater monitoring and corrective action program for the reporting period of July 2022 through December 2022 (referred herein as the reporting period) at the Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 4 (AP-4) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, and by reference, Part A, Section 6¹ 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. 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 matter². 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 activities have been performed at AP-4 since August 2016. During the reporting period, Geosyntec conducted one groundwater sampling event in August 2022. Groundwater

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)

samples were submitted to Pace Analytical Services, LLC, for analysis. Per the federal CCR Rule, groundwater data for the August 2022 event were evaluated in accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III³ and Appendix IV⁴ constituents in excess of the groundwater protection standards (GWPS) in select monitoring wells, as summarized in the table below.

<i>Appendix III Constituent</i>	<i>August 2022</i>
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-102, HGWC-103
pH	HGWC-101
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
<i>Appendix IV Constituent⁵</i>	<i>August 2022</i>
Cobalt	HGWC-117

Georgia Power submitted an Alternate Source Demonstration (ASD) to GA EPD on October 28, 2021, to address the SSL of cobalt identified in HGWC-117 following the August 2021 event. Based on review of the Appendix III and Appendix IV statistical results completed for the reporting period, the Site will continue in assessment monitoring. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be posted to Georgia Power’s CCR Rule Compliance website and provided to GA EPD semiannually.

³ Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

⁴ Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228

⁵ A statistically significant level (SSL)-related constituent is determined by comparing the confidence intervals developed to either the constituent’s MCL, if available, where an MCL has not been established, then a CCR-rule specific GWPS; or background concentrations for constituents where the concentration is greater than the MCL or rule specified GWPS.

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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
i	horizontal hydraulic gradient
K_h	horizontal hydraulic conductivity
MCL	Maximum Contaminant Level
mg/L	milligram per liter
n_e	effective porosity
NELAP	National Environmental Laboratory Accreditation Program
NTU	nephelometric turbidity units
ORP	oxidation-reduction potential
Pace Analytical	Pace Analytical Services, LLC.
PE	professional engineer
PL	prediction limit
QA/QC	Quality Assurance/Quality Control
SSI	statistically significant increase
SSL	statistically significant level
s.u.	standard unit
TDS	total dissolved solids
Unified Guidance	Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) [40 Code of Federal Regulations (CFR) Part 257, Subpart D] and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants, Inc. (Geosyntec) has prepared this *2022 Semiannual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 4 (AP-4) for the reporting period of July 2022 through December 2022 (referred to herein as the reporting period).

Groundwater monitoring and reporting for the CCR unit is performed in accordance with the monitoring requirements of the GA EPD Rules for Solid Waste Management 391-3-4-.10(6), but also in accordance with the federal CCR Rule, specifically § 257.90 through § 257.95. To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the federal CCR Rule. For ease of reference, the federal CCR rules are cited within this report, in lieu of citing both sets of regulations. Also, the closure permit issued by GA EPD (i.e., no. 057-025D(CCR)) stipulates that groundwater monitoring is required while CCR waste remains in place at the CCR unit and for no less than 5-years after removal of the material.

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

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

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, Plant Hammond* (HAR Rev 01) submitted to GA EPD under separate cover in support of the AP-4 closure permit application (Geosyntec, 2020).

1.2.1 Regional and Site Geology

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia. The Valley and Ridge is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. Geologic mapping performed at the Site by Petrologic Solutions, Inc. under the direction of Golder (Golder, 2018) indicates that AP-4 is underlain by the lower units of the Cambrian age Conasauga Formation, consisting of mostly calcareous shale. Based on review of subsurface investigations, the bedrock underneath AP-4 was described as predominantly shale. AP-4 is underlain primarily by five lithologic units: (i) terrace alluvium; (ii) colluvium; (iii) residuum; (iv) partially weathered shale bedrock; and (v) unweathered shale bedrock.

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

1.2.2 Hydrogeologic Setting

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

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-4 that consists of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site specific hydrogeologic conditions.

A network of piezometers has been installed at the Site that are used to gauge water levels to define groundwater flow direction and gradients. The locations of the detection monitoring well (formerly known as “compliance monitoring well”) network and

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

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

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

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

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-4 in August 2019. Currently, cobalt is the only Appendix IV constituent identified at an SSL in exceedance of the groundwater protection standard (GWPS); an SSL has been identified in detection monitoring well HGWC-117 since March 2021 (Geosyntec, 2021a). However, Georgia Power submitted an Alternate Source Demonstration (ASD) to GA EPD on October 28, 2021, to address the SSL of cobalt identified in HGWC-117 (Geosyntec, 2021c). Additional details regarding the ASD are provided in Section 5.

For the current reporting period, one semiannual assessment monitoring event was conducted in August 2022. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-4 during this reporting period is summarized in **Table 2**. The laboratory reports associated with the August 2022 groundwater sampling event are provided in **Appendix B**. Details of the event and analytical results are discussed in Section 3, while details of the statistical analyses performed are provided in Section 4 of this report.

2.3 Additional Groundwater Evaluations

Supplemental groundwater samples were collected from the entire AP-4 monitoring well network during the August 2022 monitoring event and were analyzed for major cations (calcium, magnesium, potassium, and sodium) and major anions (chloride, sulfate, and alkalinity (bicarbonate, carbonate, total) as well as iron, manganese, and sulfide. The data were collected in support of evaluating, as necessary, the geochemical composition of the groundwater at the Site. The laboratory reports associated with the data are provided in **Appendix B**.

3.0 SAMPLING METHODOLOGY AND ANALYSES

The following section presents a summary of the field sampling procedures that were implemented, and the groundwater sampling results that were obtained in connection with the assessment monitoring program conducted at AP-4 during the reporting period.

3.1 Groundwater and Surface Water Level Measurement

A synoptic round of depth-to-groundwater-level measurements was recorded from the AP-4 wells and piezometers during the August 2022 assessment monitoring event and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The August 2022 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

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

The groundwater and surface water elevation data presented in **Table 3** were used to prepare a potentiometric surface contour map for the August 2022 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 horizontal groundwater hydraulic gradient within the uppermost aquifer beneath AP-4 was calculated using the groundwater elevation data from the August 2022. The horizontal hydraulic gradient is commonly calculated between two points along the groundwater flow path perpendicular to groundwater elevation contours. Ideally, this flow path originates and concludes with groundwater elevations reported for two wells, but this may not be feasible and still remain perpendicular to the contours. Given the surface area covered by AP-4, horizontal hydraulic gradients were calculated along the eastern, central, and western portions of the unit. The well pairs correlating to these flow areas are, respectively: GWA-14 and HGWC-118; HGWA-113 and HGWC-102; and HGWA-111 and HGWC-107. The supporting calculations are presented in **Table 4**. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figure 3**. The presented hydraulic gradients from the three

portions were averaged for the reporting period to provide a representative gradient of 0.015 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 $\left(\frac{\text{feet}}{\text{day}}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{\text{feet}}{\text{day}}\right)$

i = Horizontal hydraulic gradient $\left(\frac{\text{feet}}{\text{foot}}\right) = \frac{h_1 - h_2}{L}$

h_1 and h_2 = Groundwater elevation at location 1 and 2

L = distance between location 1 and 2

n_e = Effective porosity

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

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

groundwater flow velocity underneath AP-4 was calculated to be 0.17 ft/day for the reporting period.

3.3 Groundwater Sampling Procedures

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

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

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

Following purging, and once stabilization was achieved, unfiltered samples were collected into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC (Pace Analytical) in Peachtree Corners, Georgia following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the August 2022 assessment monitoring event are provided in **Appendix B**.

3.4 Laboratory Analyses

Laboratory analyses were performed by Pace Analytical, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace Analytical maintains a NELAP certification for the Appendix III and Appendix IV constituents and the geochemical parameters analyzed for this project. Analytical methods used for groundwater sample analysis, and the associated results, are listed in the analytical laboratory reports included in **Appendix B**. The groundwater analytical results from the August 2022 sampling event are summarized in **Tables 5** and **6**.

3.5 Quality Assurance and Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring event in accordance with the Site's *Groundwater Monitoring Plan* (Geosyntec, 2021b), 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 B**, along with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established GWPS for the Appendix IV monitoring constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the monitoring period. The data were analyzed by Groundwater Stats Consulting (GSC); the reports generated from the analyses are provided in **Appendix C**.

4.1 Statistical Methods

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

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to determine if concentrations statistically exceeded the established GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix C** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and presented in **Table 7**.

4.1.1 Appendix III Statistical Methods

Based on guidance from GA EPD, statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits (PLs) combined with a 1-of-2 verification resample plan for each of the Appendix III constituents. Interwell PLs pool upgradient well data to establish a background limit for an individual constituent, and the most recent sample from each downgradient well is compared to the same limit for each constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are SSIs. An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient

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

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient detection monitoring well with a minimum of four samples. In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), four independent data are the minimum population size recommended to construct confidence intervals required to assess SSL for Appendix IV constituents.

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

USEPA revised the federal CCR Rule on July 30, 2018, updating GWPS for cobalt, lead, lithium, and molybdenum. As described in § 257.95(h)(1-3), the GWPS is defined by the below criteria. These criteria were adopted into the GA EPD Rules for Solid Waste Management 391-3-4-.10 on February 22, 2022.

- (1) The maximum contaminant level (MCL) established under § 141.62 and § 141.66.
- (2) Where an MCL has not been established:
 - (i) Cobalt 0.006 mg/L;
 - (ii) Lead 0.015 mg/L;
 - (iii) Lithium 0.040 mg/L; and
 - (iv) Molybdenum 0.100 mg/L.
- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

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

4.2 Statistical Analyses Results

Based on review of the Appendix III statistical analyses presented in **Appendix C**, groundwater conditions have not returned to background and assessment monitoring should continue. Based on the statistical analyses of the Appendix IV data from the August 2022 monitoring event, an SSL of cobalt was identified in HGWC-117.

As discussed in Section 5, Georgia Power submitted an ASD to GA EPD in October 2021 that outlined multiple lines of evidence that the SSL at HGWC-117 is not associated with a release from AP-4.

5.0 ALTERNATE SOURCE DEMONSTRATION

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

HGWC-117A has been sampled four times since August 2021, with each of the cobalt concentration results reported as estimated below the reporting limit (i.e., “J” qualified). Statistical determination of the confidence interval for this dataset (**Appendix C**) provides an additional line of evidence supporting the theory that the SSL of cobalt in HGWC-117 is an isolated occurrence unrelated to AP-4, and that groundwater samples collected from HGWC-117 do not accurately represent aquifer conditions proximal to the unit. Therefore, the well should be removed from the detection monitoring well network and replaced with HGWC-117A. Georgia Power is currently preparing a minor permit modification for submittal to GA EPD in 2023.

6.0 MONITORING PROGRAM STATUS

Based on the statistical evaluation results presented for the reporting period, SSIs of Appendix III constituents have not returned to background levels. Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-4 in accordance with the assessment monitoring program regulations of § 257.95. As discussed in Section 5, the SSL of cobalt identified in HGWC-117 has been addressed with an ASD (Geosyntec, 2021c) and installation of replacement well HGWC-117A.

7.0 CONCLUSIONS AND FUTURE ACTIONS

This 2022 *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 an SSL of cobalt in detection monitoring well HGWC-117. However, the SSL has been addressed with a previously submitted ASD (Geosyntec, 2021c) in conjunction with adequate groundwater data to statistically determine that well HGWC-117A more accurately represents aquifer conditions downgradient to AP-4 and should replace HGWC-117 as the detection monitoring well for this portion of the unit's monitoring well network.

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

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)
Detection Monitoring Well										
HGWA-47	Upgradient	8/21/2020	1548990.96	1934171.84	577.39	580.33	546.84	536.84	43.74	10
HGWA-48D	Upgradient	8/20/2020	1548989.39	1934178.15	577.29	580.26	517.54	507.54	72.97	10
HGWA-111	Upgradient	8/21/2012	1548834.26	1935222.81	588.79	591.75	558.48	548.48	43.67	10
HGWA-112	Upgradient	8/21/2012	1548885.63	1935647.00	593.46	596.27	566.52	556.52	40.15	10
HGWA-113	Upgradient	10/2/2012	1548944.62	1935990.09	592.07	594.58	568.87	558.87	36.11	10
HGWC-101	Downgradient	8/7/2012	1547725.50	1936369.58	575.91	578.85	551.31	541.31	37.94	10
HGWC-102	Downgradient	8/7/2012	1547713.50	1936033.33	574.54	577.54	550.51	540.51	37.43	10
HGWC-103	Downgradient	8/8/2012	1547848.88	1935732.96	577.76	580.79	553.51	543.51	37.68	10
HGWC-105	Downgradient	8/8/2012	1547855.56	1935110.36	579.08	582.09	547.72	537.72	44.67	10
HGWC-107	Downgradient	8/8/2012	1547909.99	1934442.24	576.43	579.31	551.51	541.51	38.20	10
HGWC-109	Downgradient	8/15/2012	1548627.41	1934362.77	573.66	576.77	555.81	545.81	31.36	10
HGWC-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	40.31	10
GWC-4	Downgradient	8/8/2012	1547898.31	1935398.70	577.73	580.65	543.47	533.47	47.58	10
GWC-6	Downgradient	8/13/2012	1547843.93	1934800.45	578.55	581.63	553.90	543.90	38.13	10
GWC-8	Downgradient	8/9/2012	1548167.13	1934342.94	577.13	579.99	549.47	539.47	40.92	10
GWA-14	Upgradient	10/2/2012	1548982.59	1936642.58	589.70	592.14	561.40	551.40	41.14	10
GWA-15	Upgradient	8/22/2012	1548766.17	1936808.47	588.37	591.56	571.44	561.44	30.52	10
GWA-16	Upgradient	8/21/2012	1548592.74	1937210.99	579.58	582.55	569.94	559.94	23.01	10
GWC-19	Downgradient	8/14/2012	1547892.89	1936572.97	576.90	579.83	554.04	544.04	36.19	10

Notes:

ft = feet

ft BTOC = feet below top of casing

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 11, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWC-117A).

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 11, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWC-117A).

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

Table 2
Groundwater Sampling Event Summary
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Hydraulic Location	August 2 - 10, 2022
Purpose of Sampling Event:		Assessment
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
HGWC-117A	Downgradient	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 1, 2022	
		Depth to Water (ft BTOC)	Groundwater Elevations (ft)
<i>Detection Monitoring Well</i>			
HGWA-47	580.33	7.63	572.70
HGWA-48D	580.26	7.53	572.73
HGWA-111	591.75	12.12	579.63
HGWA-112	596.27	11.43	584.84
HGWA-113	594.58	10.92	583.66
HGWC-101	578.85	13.18	565.67
HGWC-102	577.54	13.09	564.45
HGWC-103	580.79	13.67	567.12
HGWC-105	582.09	17.97	564.12
HGWC-107	579.31	15.17	564.14
HGWC-109	576.77	8.68	568.09
HGWC-117	581.98	17.01	564.97
HGWC-118	579.02	13.48	565.54
<i>Piezometer</i>			
MW-12	583.27	18.65	564.62
HGWC-117A	581.76	16.77	564.99
GWC-4	580.65	13.43	567.22
GWC-6	581.63	17.33	564.30
GWC-8	579.99	14.13	565.86
GWA-14	592.14	7.50	584.64
GWA-15	591.56	8.23	583.33
GWA-16	582.55	5.52	577.03
GWC-19	579.83	12.98	566.85
<i>Surface Water Level Gauge Point</i>			
Unnamed Creek	580.14	15.75	564.39

Notes:

-- = not applicable

ft = feet

ft BTOC = feet below top of casing

(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 10, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWC-117A).

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

Flow Path Direction ⁽¹⁾	August 1, 2022			
	h ₁ (ft)	h ₂ (ft)	L (ft)	i (ft/ft)
Eastern Flow Path (GWA-14 to HGWC-118)	584.64	565.54	1,075	0.018
Central Flow Path (HGWA-113 to HGWC-102)	583.66	564.45	1,235	0.016
Western Flow Path (HGWA-111 to HGWC-107)	579.63	564.14	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	0.015	0.17
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

h₁ and h₂ = groundwater elevation at location 1 and 2

i = h₁-h₂/L = horizontal hydraulic gradient

K_h = horizontal hydraulic conductivity

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

n_e = effective porosity

V = groundwater flow velocity

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

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

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

Well ID:	HGWA-47	HGWA-48D	HGWA-111	HGWA-112	HGWA-113	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-117	HGWC-118		
Sample Date:	8/2/2022	8/5/2022	8/5/2022	8/5/2022	8/2/2022	8/10/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022	8/5/2022		
Parameter ^(1,2)																
APPENDIX III	Boron	<0.0086	0.011 J	<0.0086	0.012 J	<0.0086	0.17	2.9	3.6	1.3	0.79	0.25	0.34	0.85	0.57	
	Calcium	73.0	59.6	53.0	7.1	8.0	24.6	127	128	121	63.0	50.8	68.6	44.8	88.5	
	Chloride	3.0	2.4	2.7	5.0	1.8	5.5	7.7	7.8	5.0	2.7	3.7	7.4	4.4	3.8	
	Fluoride	0.080 J	0.12	0.10	0.077 J	0.19	0.065 J	0.076 J	0.071 J	0.075 J	0.093 J	0.14	0.12	0.075 J	0.12	
	pH ⁽³⁾	7.34	7.40	6.97	5.43	6.08	5.37	5.69	5.71	6.46	6.07	6.81	6.44	5.46	7.07	
	Sulfate	2.1	3.4	1.4	<0.50	7.5	99.5	358	369	217	120	23.0	76.1	132	69.8	
	TDS	222	224	171	44.0	85.0	232	696	692	514	274	195	270	285	329	
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	0.0012 J	<0.00078	
	Arsenic	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	0.0022 J	<0.0022	<0.0022	<0.0022	
	Barium	0.029	0.11	0.028	0.027	0.030	0.040	0.031	0.037	0.088	0.036	0.085	0.055	0.044	0.039	
	Beryllium	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	0.000064 J	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	0.000078 J	<0.000054
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00011 J	0.00044 J	0.00081	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.0012	<0.00011
	Chromium	<0.0011	<0.0011	<0.0011	0.0045 J	0.0013 J	<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	0.0028 J	0.0010 J	0.0021 J	<0.00039	<0.00039	0.00080 J	0.0011 J	0.023	<0.00039	
	Fluoride	0.080 J	0.12	0.10	0.077 J	0.19	0.065 J	0.076 J	0.071 J	0.075 J	0.093 J	0.14	0.12	0.075 J	0.12	
	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
	Lithium	0.0026 J	0.0036 J	0.0019 J	<0.00073	0.00089 J	<0.00073	0.0013 J	0.0014 J	0.0039 J	0.00082 J	0.00087 J	0.0038 J	0.0017 J	0.0018 J	
	Mercury	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	0.00017 J	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	0.00014 J	<0.00013
	Molybdenum	<0.00074	0.0012 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
	Comb. Radium 226/228	0.491 U	0.599 U	0.573 U	0.665 U	0.791 U	0.601 U	0.618 U	0.205 U	0.139 U	0.917 U	0.220 U	0.000 U	0.605 U	0.206 U	
	Selenium	<0.0014	<0.0014	<0.0014	<0.0014	0.0034 J	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
Thallium	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	

Notes:

< = Indicates the parameter was not detected above the analytical method detection limit (MDL).

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

TDS = Total dissolved solids

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

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

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

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

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

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

Notes:

< = Indicates the parameter was not detected above the analytical method detection limit (MDL).

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

(1) Ions were analyzed by EPA Method 6010D, alkalinity was analyzed by SM2320B-2011, and sulfide was analyzed by SM4500-S2D-2011.

(2) Calcium, chloride, and sulfate are considered major ions, but are reported as Appendix III constituents on Table 5.

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

Analyte	Units	MCL	CCR-Rule Specified ⁽¹⁾	Background ⁽²⁾	GWPS ^(3,4)
Antimony	mg/L	0.006	N/A	0.003	0.006
Arsenic	mg/L	0.01	N/A	0.005	0.01
Barium	mg/L	2	N/A	0.11	2
Beryllium	mg/L	0.004	N/A	0.0019	0.004
Cadmium	mg/L	0.005	N/A	0.0005	0.005
Chromium	mg/L	0.1	N/A	0.0061	0.1
Cobalt	mg/L	N/A	0.006	0.005	0.006
Fluoride	mg/L	4	N/A	0.17	4
Lead	mg/L	N/A	0.015	0.0016	0.015
Lithium	mg/L	N/A	0.04	0.03	0.04
Mercury	mg/L	0.002	N/A	0.0002	0.002
Molybdenum	mg/L	N/A	0.1	0.01	0.1
Selenium	mg/L	0.05	N/A	0.005	0.05
Thallium	mg/L	0.002	N/A	0.001	0.002
Combined Radium-226/228	pCi/L	5	N/A	1.3	5

Notes:

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

MCL = Maximum Contaminant Level

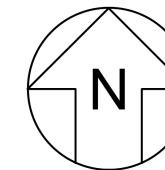
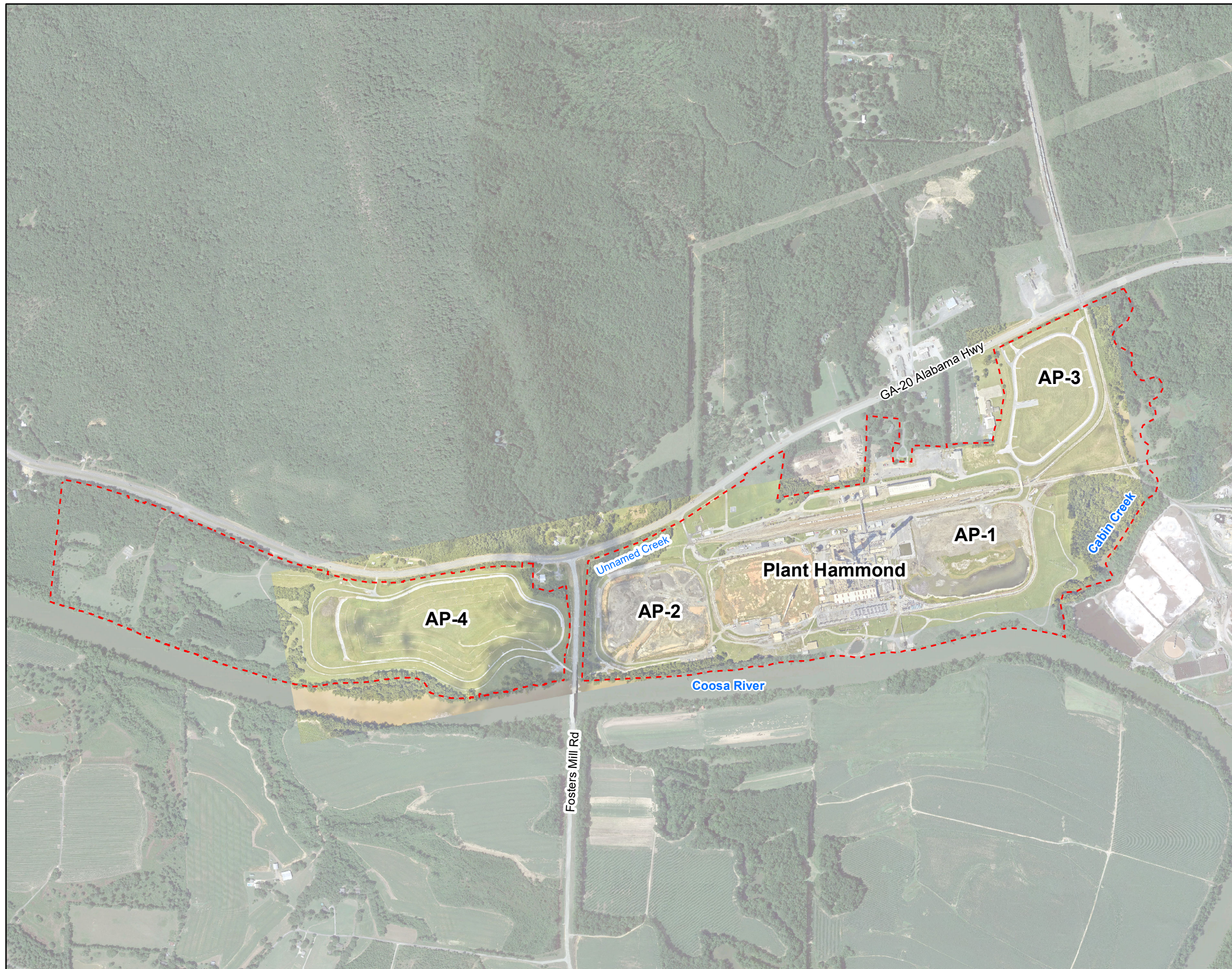
mg/L = milligrams per liter

N/A = Not Applicable

pCi/L = picocuries per liter

- (1) On February 22, 2022, the Georgia Environmental Protection Division (GA EPD) adopted the federally promulgated GWPS for cobalt, lithium, lead, and molybdenum.
- (2) The background limits were used when determining the GWPS under 40 CFR 257.95(h) and GA EPD Rule 391-3-4-.10(6)(a).
- (3) Under 40 CFR 257.95(h)(1-3) the GWPS is: (i) the maximum contaminant level (MCL) established under §§141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS; or (iii) background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.
- (4) The GWPS apply to the August 2022 sampling event.

FIGURES

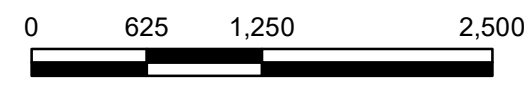


LEGEND

Plant Hammond Property Boundary



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



SCALE IN FEET

SITE LOCATION MAP

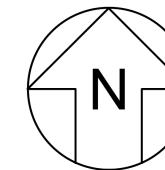
GEORGIA POWER COMPANY
 PLANT HAMMOND AP-4
 ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
 consultants

KENNESAW, GA FEBRUARY 2023

FIGURE
1



LEGEND

- Detection 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 and Georgia Power Company, August 2022.



SCALE IN FEET

MONITORING WELL AND SURFACE WATER GAUGE LOCATION NETWORK MAP

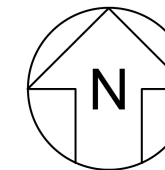
GEORGIA POWER COMPANY
 PLANT HAMMOND AP-4
 FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA FEBRUARY 2023

FIGURE 2



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



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



**POTENTIOMETRIC SURFACE
CONTOUR MAP - AUGUST 2022**

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

Prepared For:	Georgia Power	FIGURE 3
Prepared By:	Geosyntec consultants	
KENNESAW, GA	FEBRUARY 2023	

APPENDIX A

Well Maintenance and Repair Documentation Memorandum

MEMORANDUM

DATE: December 6, 2022

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

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

FROM: Geosyntec Consultants

SUBJECT: Plant Hammond Ash Pond 4 (AP-4) – Well Maintenance and Repair Documentation, Georgia Power Company

Geosyntec Consultants has prepared this memorandum to provide documentation of groundwater monitoring well maintenance and/or repair performed at Plant Hammond AP-4 during the 2022 semiannual reporting period. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells. Documentation of the well inspections are provided as an attachment to this memorandum.

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Hammond/AP-4	8/1/2022	All Wells	Checked and cleared weep holes of debris.

ATTACHMENT

Well Inspection Forms

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .	<u>NA</u>		
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

Date (mm/dd/yyyy) 8/11/22
 Field Conditions Sunny, 80

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>NA</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>NA</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond / AP-4
 Field Technician Kristan O.
 Well ID HG-WA-113

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.	<u>NA</u>		
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

Date (mm/dd/yyyy) 8/11/22
 Field Conditions sunny, 80°

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond / AP-4
 Field Technician Tristan D.
 Well ID HGWIC-102

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>NA</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>NA</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond/AP-4
 Field Technician HGW-103-70
 Well ID Houston E
HGW-103

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond / AP-4
 Field Technician Trenton O.
 Well ID HGWIC-105

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond/AP-4
 Field Technician Justin O.
 Well ID HGW-107

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond/AP-4
 Field Technician Tristan D.
 Well ID H6-WC-109

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>Bladder</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .			<u>Level Troll</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Kemmerd / AP-4
 Field Technician Ruxton O.
 Well ID HOWC-117A

Date (mm/dd/yyyy) 8/11/22
 Field Conditions Sunny, 80°

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>NA</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>NA</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond/ap-4
 Field Technician Tristan O
 Well ID H6WC-118

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with past well logs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>NA</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
f Does the well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
f Does the well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .			<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>N/A</u>
f Does the well recharge adequately when purged?			<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?			<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .			<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>N/A</u>
f Does the well recharge adequately when purged?			<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?			<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Hammond / AP-4
 Field Technician Justin D.
 Well ID Gwa-14

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .			<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>N/A</u>
f Does the well recharge adequately when purged?			<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?			<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
• If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Hammond / AP-4
 Field Technician Instan O.
 Well ID GWA-13

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment , a dedicated water quality sonde , and/or dedicated water level data logger .			<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>N/A</u>
f Does the well recharge adequately when purged?			<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?			<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
• If yes, indicate here:			

Well Inspection Form

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

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

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>N/A</u>
f Does the well recharge adequately when purged?			<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?			<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

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

Date (mm/dd/yyyy) 08/01/2022
 Field Conditions cloudy, 81°

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>N/A</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?			<u>N/A</u>
f Does the well recharge adequately when purged?			<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?			<u>N/A</u>
6 Corrective Actions			
a Are corrective actions needed?		<input checked="" type="checkbox"/>	
If yes, indicate here:			

Well Inspection Form

Plant Name/Unit Name Plant Hammond AP214
 Field Technician Thomas Messler
 Well ID MW-12

Date (mm/dd/yyyy) 08/10/2022
 Field Conditions overcast, 88°

	Yes	No	Comments
1 Location/Identification			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well in a high traffic area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d Are appropriate measures in place to protect the well (e.g., bollards)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2 Protective Casing			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the well locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f If locked, is the well lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g Is the well lid in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3 Surface Pad			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the well pad in complete contact with the ground surface and stable (not undermined by erosion, animal burrows, and does not move when stepped on)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Internal Casing			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5 Sampling and Data Collection Equipment			
a Indicate if the well is equipped with dedicated sampling equipment, a dedicated water quality sonde, and/or dedicated water level data logger.			<u>level troll</u>
b If equipped with dedicated sampling equipment, is it in good operational condition?			<u>N/A</u>
c If equipped with a dedicated water quality sonde, is it in good operational condition?			<u>N/A</u>
d Does the desiccant need to be replaced on the water quality sonde?			<u>N/A</u>
e If equipped with a water level data logger, is it in good operational condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f Does the well recharge adequately when purged?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>N/A</u>
g Does the well require redevelopment (low flow, excess turbidity)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Corrective Actions			
a Are corrective actions needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If yes, indicate here:			

APPENDIX B

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL REPORTS

August 29, 2022

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

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

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 04, 2022 and August 12, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

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

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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SAMPLE SUMMARY

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

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

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92618826001	HGWA-47	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618826002	HGWA-113	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92618826003	HGWA-48D	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826004	HGWA-111	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826005	HGWA-112	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826006	HGWC-102	EPA 6010D	KH	6
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4

Pace Project No.: 92618826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826007	HGWC-103	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826008	HGWC-105	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826009	HGWC-107	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826010	HGWC-109	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	KDF1	3
		SM 4500-S2D-2011	JP1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92618826011	HGWC-117	EPA 6010D	KH	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1

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SAMPLE ANALYTE COUNT

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

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

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

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

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

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

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWA-47		Lab ID: 92618826001		Collected: 08/02/22 16:27	Received: 08/04/22 12:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:39	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.0	mg/L	1.0	0.60	1		08/12/22 17:02	16887-00-6	
Fluoride	0.080J	mg/L	0.10	0.050	1		08/12/22 17:02	16984-48-8	
Sulfate	2.1	mg/L	1.0	0.50	1		08/12/22 17:02	14808-79-8	

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ANALYTICAL RESULTS

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

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

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

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ANALYTICAL RESULTS

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

Sample: HGWA-113		Lab ID: 92618826002		Collected: 08/02/22 16:15	Received: 08/04/22 12:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/06/22 03:40	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	1.8	mg/L	1.0	0.60	1		08/12/22 17:18	16887-00-6	
Fluoride	0.19	mg/L	0.10	0.050	1		08/12/22 17:18	16984-48-8	
Sulfate	7.5	mg/L	1.0	0.50	1		08/12/22 17:18	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWA-48D		Lab ID: 92618826003		Collected: 08/05/22 09:47		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:07		
pH	7.40	Std. Units			1		08/08/22 17:07		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	0.41	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 18:14	7439-89-6	
Manganese	0.018J	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 18:14	7439-96-5	
Potassium	0.49	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 18:14	7440-09-7	
Sodium	11.6	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 18:14	7440-23-5	
Calcium	59.6	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 18:14	7440-70-2	
Magnesium	11.5	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 18:14	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 19:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 19:24	7440-38-2	
Barium	0.11	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 19:24	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/11/22 19:24	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 19:24	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/11/22 19:24	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 19:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 19:24	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/11/22 19:24	7439-92-1	
Lithium	0.0036J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 19:24	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 19:24	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 19:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 19:24	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:18	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	224	mg/L	10.0	10.0	1		08/11/22 10:35		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	198	mg/L	5.0	5.0	1		08/18/22 10:38		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 10:38		
Alkalinity, Total as CaCO ₃	198	mg/L	5.0	5.0	1		08/18/22 10:38		

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ANALYTICAL RESULTS

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

Sample: HGWA-48D		Lab ID: 92618826003		Collected: 08/05/22 09:47	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	0.18	mg/L	0.10	0.050	1		08/12/22 05:05	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	2.4	mg/L	1.0	0.60	1		08/17/22 10:39	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/17/22 10:39	16984-48-8	
Sulfate	3.4	mg/L	1.0	0.50	1		08/17/22 10:39	14808-79-8	

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ANALYTICAL RESULTS

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

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						08/08/22 17:07
pH	6.97	Std. Units					08/08/22 17:07

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:30	08/11/22 18:19	7439-89-6
Manganese	ND	mg/L	0.040	0.0043	1	08/11/22 09:30	08/11/22 18:19	7439-96-5
Potassium	0.75	mg/L	0.20	0.15	1	08/11/22 09:30	08/11/22 18:19	7440-09-7
Sodium	5.5	mg/L	1.0	0.58	1	08/11/22 09:30	08/11/22 18:19	7440-23-5
Calcium	53.0	mg/L	1.0	0.12	1	08/11/22 09:30	08/11/22 18:19	7440-70-2
Magnesium	5.5	mg/L	0.050	0.012	1	08/11/22 09:30	08/11/22 18:19	7439-95-4

6020 MET ICPMS

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

Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/11/22 19:30	7440-36-0
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/11/22 19:30	7440-38-2
Barium	0.028	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/11/22 19:30	7440-39-3
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/11/22 19:30	7440-41-7
Boron	ND	mg/L	0.040	0.0086	1	08/10/22 08:00	08/11/22 19:30	7440-42-8
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/11/22 19:30	7440-43-9
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/11/22 19:30	7440-47-3
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/11/22 19:30	7440-48-4
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/11/22 19:30	7439-92-1
Lithium	0.0019J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/11/22 19:30	7439-93-2
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/11/22 19:30	7439-98-7
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/11/22 19:30	7782-49-2
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/11/22 19:30	7440-28-0

7470 Mercury

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

Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:21	7439-97-6
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	171	mg/L	10.0	10.0	1		08/11/22 10:36
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2320B Alkalinity

Analytical Method: SM 2320B-2011
Pace Analytical Services - Asheville

Alkalinity, Bicarbonate (CaCO ₃)	145	mg/L	5.0	5.0	1		08/18/22 12:09
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 12:09
Alkalinity, Total as CaCO ₃	145	mg/L	5.0	5.0	1		08/18/22 12:09

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWA-111		Lab ID: 92618826004		Collected: 08/05/22 10:10	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:07	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	2.7	mg/L	1.0	0.60	1		08/17/22 10:54	16887-00-6	
Fluoride	0.10	mg/L	0.10	0.050	1		08/17/22 10:54	16984-48-8	
Sulfate	1.4	mg/L	1.0	0.50	1		08/17/22 10:54	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWA-112		Lab ID: 92618826005		Collected: 08/05/22 09:43		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:07		
pH	5.43	Std. Units			1		08/08/22 17:07		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 18:38	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 18:38	7439-96-5	
Potassium	0.87	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 18:38	7440-09-7	
Sodium	3.8	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 18:38	7440-23-5	
Calcium	7.1	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 18:38	7440-70-2	
Magnesium	2.6	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 18:38	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 18:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 18:56	7440-38-2	
Barium	0.027	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 18:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 18:56	7440-41-7	
Boron	0.012J	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 18:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 18:56	7440-43-9	
Chromium	0.0045J	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 18:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 18:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 18:56	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 18:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 18:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 18:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 18:56	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:23	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	44.0	mg/L	10.0	10.0	1		08/11/22 10:36		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	23.4	mg/L	5.0	5.0	1		08/18/22 12:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/18/22 12:34		
Alkalinity, Total as CaCO3	23.4	mg/L	5.0	5.0	1		08/18/22 12:34		

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ANALYTICAL RESULTS

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

Sample: HGWA-112		Lab ID: 92618826005		Collected: 08/05/22 09:43	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:07	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	5.0	mg/L	1.0	0.60	1		08/17/22 11:09	16887-00-6	
Fluoride	0.077J	mg/L	0.10	0.050	1		08/17/22 11:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/17/22 11:09	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWC-102		Lab ID: 92618826006		Collected: 08/05/22 15:02	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:08		
pH	5.69	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	2.0	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:07	7439-89-6	
Manganese	2.0	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:07	7439-96-5	
Potassium	2.8	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:07	7440-09-7	
Sodium	15.6	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:07	7440-23-5	
Calcium	127	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:07	7440-70-2	
Magnesium	33.3	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:07	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:02	7440-38-2	
Barium	0.031	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:02	7440-41-7	
Boron	2.9	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:02	7440-42-8	
Cadmium	0.00044J	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:02	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:02	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:02	7439-92-1	
Lithium	0.0013J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:02	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:02	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:26	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	696	mg/L	20.0	20.0	1		08/11/22 10:36		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	96.6	mg/L	5.0	5.0	1		08/18/22 12:51		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 12:51		
Alkalinity, Total as CaCO ₃	96.6	mg/L	5.0	5.0	1		08/18/22 12:51		

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-102		Lab ID: 92618826006		Collected: 08/05/22 15:02	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:07	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	7.7	mg/L	1.0	0.60	1		08/17/22 11:54	16887-00-6	
Fluoride	0.076J	mg/L	0.10	0.050	1		08/17/22 11:54	16984-48-8	
Sulfate	358	mg/L	6.0	3.0	6		08/17/22 16:53	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWC-103		Lab ID: 92618826007		Collected: 08/05/22 14:21		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:08		
pH	5.71	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	2.0	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:11	7439-89-6	
Manganese	2.0	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:11	7439-96-5	
Potassium	3.4	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:11	7440-09-7	
Sodium	18.8	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:11	7440-23-5	
Calcium	128	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:11	7440-70-2	
Magnesium	33.4	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:11	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:08	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:08	7440-41-7	
Boron	3.6	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:08	7440-42-8	
Cadmium	0.00081	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:08	7440-47-3	
Cobalt	0.0021J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:08	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00017J	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:29	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	692	mg/L	20.0	20.0	1		08/11/22 10:36		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	79.9	mg/L	5.0	5.0	1		08/18/22 13:12		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 13:12		
Alkalinity, Total as CaCO ₃	79.9	mg/L	5.0	5.0	1		08/18/22 13:12		

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-103		Lab ID: 92618826007		Collected: 08/05/22 14:21	Received: 08/08/22 11:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:08	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	7.8	mg/L	1.0	0.60	1		08/17/22 12:09	16887-00-6		
Fluoride	0.071J	mg/L	0.10	0.050	1		08/17/22 12:09	16984-48-8		
Sulfate	369	mg/L	6.0	3.0	6		08/17/22 18:08	14808-79-8		

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ANALYTICAL RESULTS

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

Sample: HGWC-105		Lab ID: 92618826008		Collected: 08/05/22 11:40		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:08		
pH	6.46	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	6.9	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:16	7439-89-6	
Manganese	0.42	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:16	7439-96-5	
Potassium	0.90	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:16	7440-09-7	
Sodium	14.2	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:16	7440-23-5	
Calcium	121	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:16	7440-70-2	
Magnesium	12.3	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:16	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:14	7440-38-2	
Barium	0.088	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:14	7440-41-7	
Boron	1.3	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:14	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:14	7439-92-1	
Lithium	0.0039J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:14	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:14	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:31	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	514	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	141	mg/L	5.0	5.0	1		08/18/22 13:21		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 13:21		
Alkalinity, Total as CaCO ₃	141	mg/L	5.0	5.0	1		08/18/22 13:21		

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ANALYTICAL RESULTS

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

Sample: HGWC-105 Lab ID: 92618826008 Collected: 08/05/22 11:40 Received: 08/08/22 11:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:08	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.0	mg/L	1.0	0.60	1		08/17/22 12:24	16887-00-6	
Fluoride	0.075J	mg/L	0.10	0.050	1		08/17/22 12:24	16984-48-8	
Sulfate	217	mg/L	4.0	2.0	4		08/17/22 18:23	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWC-107		Lab ID: 92618826009		Collected: 08/05/22 15:46		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:09		
pH	6.07	Std. Units			1		08/08/22 17:09		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:21	7439-89-6	
Manganese	0.26	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:21	7439-96-5	
Potassium	2.6	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:21	7440-09-7	
Sodium	8.3	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:21	7440-23-5	
Calcium	63.0	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:21	7440-70-2	
Magnesium	11.0	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:21	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:20	7440-38-2	
Barium	0.036	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:20	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:20	7440-41-7	
Boron	0.79	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:20	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:20	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:20	7439-92-1	
Lithium	0.00082J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:20	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:20	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:34	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	274	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	71.6	mg/L	5.0	5.0	1		08/18/22 13:32		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 13:32		
Alkalinity, Total as CaCO ₃	71.6	mg/L	5.0	5.0	1		08/18/22 13:32		

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ANALYTICAL RESULTS

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

Sample: HGWC-107 Lab ID: 92618826009 Collected: 08/05/22 15:46 Received: 08/08/22 11:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:09	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.7	mg/L	1.0	0.60	1		08/17/22 13:09	16887-00-6	
Fluoride	0.093J	mg/L	0.10	0.050	1		08/17/22 13:09	16984-48-8	
Sulfate	120	mg/L	2.0	1.0	2		08/17/22 19:10	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWC-109 Lab ID: 92618826010 Collected: 08/05/22 13:24 Received: 08/08/22 11:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:09		
pH	6.81	Std. Units			1		08/08/22 17:09		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	7.5	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:26	7439-89-6	
Manganese	0.42	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:26	7439-96-5	
Potassium	0.43	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:26	7440-09-7	
Sodium	9.0	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:26	7440-23-5	
Calcium	50.8	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:26	7440-70-2	
Magnesium	10.9	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:26	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 19:26	7440-36-0	
Arsenic	0.0022J	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 19:26	7440-38-2	
Barium	0.085	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 19:26	7440-39-3	M1
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 19:26	7440-41-7	
Boron	0.25	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 19:26	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 19:26	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 19:26	7440-47-3	
Cobalt	0.00080J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 19:26	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 19:26	7439-92-1	
Lithium	0.00087J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 19:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 19:26	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 19:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 19:26	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 09:00	08/25/22 15:37	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	195	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	156	mg/L	5.0	5.0	1		08/18/22 13:40		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 13:40		
Alkalinity, Total as CaCO ₃	156	mg/L	5.0	5.0	1		08/18/22 13:40		

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-109		Lab ID: 92618826010		Collected: 08/05/22 13:24	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:10	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.7	mg/L	1.0	0.60	1		08/17/22 13:24	16887-00-6	
Fluoride	0.14	mg/L	0.10	0.050	1		08/17/22 13:24	16984-48-8	
Sulfate	23.0	mg/L	1.0	0.50	1		08/17/22 13:24	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWC-117		Lab ID: 92618826011		Collected: 08/05/22 13:21		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:10		
pH	5.46	Std. Units			1		08/08/22 17:10		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:30	7439-89-6	
Manganese	12.5	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:30	7439-96-5	
Potassium	0.61	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:30	7440-09-7	
Sodium	8.1	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:30	7440-23-5	
Calcium	44.8	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:30	7440-70-2	
Magnesium	14.1	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:30	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0012J	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:02	7440-38-2	
Barium	0.044	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:02	7440-39-3	
Beryllium	0.000078J	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:02	7440-41-7	
Boron	0.85	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:02	7440-42-8	
Cadmium	0.0012	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:02	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:02	7440-47-3	
Cobalt	0.023	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:02	7439-92-1	
Lithium	0.0017J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:02	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:02	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00014J	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	285	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	48.0	mg/L	5.0	5.0	1		08/18/22 13:51		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 13:51		
Alkalinity, Total as CaCO ₃	48.0	mg/L	5.0	5.0	1		08/18/22 13:51		

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-117		Lab ID: 92618826011		Collected: 08/05/22 13:21	Received: 08/08/22 11:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:10	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	4.4	mg/L	1.0	0.60	1		08/17/22 13:39	16887-00-6		
Fluoride	0.075J	mg/L	0.10	0.050	1		08/17/22 13:39	16984-48-8		
Sulfate	132	mg/L	2.0	1.0	2		08/17/22 19:26	14808-79-8		

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ANALYTICAL RESULTS

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

Sample: HGWC-117A		Lab ID: 92618826012		Collected: 08/05/22 11:47		Received: 08/08/22 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/08/22 17:10		
pH	6.44	Std. Units			1		08/08/22 17:10		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	0.34	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:35	7439-89-6	
Manganese	0.23	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:35	7439-96-5	
Potassium	0.61	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:35	7440-09-7	
Sodium	9.5	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:35	7440-23-5	
Calcium	68.6	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:35	7440-70-2	
Magnesium	9.1	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:35	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:08	7440-38-2	
Barium	0.055	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:08	7440-41-7	
Boron	0.34	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:08	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:08	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	270	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	128	mg/L	5.0	5.0	1		08/18/22 13:58		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 13:58		
Alkalinity, Total as CaCO ₃	128	mg/L	5.0	5.0	1		08/18/22 13:58		

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-117A		Lab ID: 92618826012		Collected: 08/05/22 11:47	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:10	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	7.4	mg/L	1.0	0.60	1		08/17/22 13:54	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/17/22 13:54	16984-48-8	
Sulfate	76.1	mg/L	1.0	0.50	1		08/17/22 13:54	14808-79-8	

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ANALYTICAL RESULTS

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

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

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

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-118		Lab ID: 92618826013		Collected: 08/05/22 15:58	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:11	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.8	mg/L	1.0	0.60	1		08/17/22 14:09	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/17/22 14:09	16984-48-8	
Sulfate	69.8	mg/L	1.0	0.50	1		08/17/22 14:09	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: DUP-4		Lab ID: 92618826014		Collected: 08/05/22 00:00	Received: 08/08/22 11:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.025	1	08/11/22 09:48	08/11/22 19:45	7439-89-6	
Manganese	0.14	mg/L	0.040	0.0043	1	08/11/22 09:48	08/11/22 19:45	7439-96-5	
Potassium	0.68	mg/L	0.20	0.15	1	08/11/22 09:48	08/11/22 19:45	7440-09-7	
Sodium	8.7	mg/L	1.0	0.58	1	08/11/22 09:48	08/11/22 19:45	7440-23-5	
Calcium	89.4	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:45	7440-70-2	
Magnesium	11.6	mg/L	0.050	0.012	1	08/11/22 09:48	08/11/22 19:45	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:19	7440-38-2	
Barium	0.044	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:19	7440-41-7	
Boron	0.64	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:19	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:19	7440-47-3	
Cobalt	0.00041J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:19	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00073	1	08/10/22 08:00	08/12/22 20:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/10/22 08:00	08/12/22 20:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:19	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:36	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	327	mg/L	10.0	10.0	1		08/11/22 10:39		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	181	mg/L	5.0	5.0	1		08/18/22 10:30		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/18/22 10:30		
Alkalinity, Total as CaCO ₃	181	mg/L	5.0	5.0	1		08/18/22 10:30		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/12/22 05:13	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.9	mg/L	1.0	0.60	1		08/17/22 14:54	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.12	mg/L	0.10	0.050	1		08/17/22 14:54	16984-48-8	
Sulfate	70.6	mg/L	1.0	0.50	1		08/17/22 14:54	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: HGWC-101		Lab ID: 92618826015		Collected: 08/10/22 11:30		Received: 08/12/22 11:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/12/22 15:45		
pH	5.37	Std. Units			1		08/12/22 15:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	6.4	mg/L	0.040	0.025	1	08/19/22 15:31	08/19/22 21:14	7439-89-6	
Manganese	2.5	mg/L	0.040	0.0043	1	08/19/22 15:31	08/19/22 21:14	7439-96-5	
Potassium	0.74	mg/L	0.20	0.15	1	08/19/22 15:31	08/19/22 21:14	7440-09-7	
Sodium	11.4	mg/L	1.0	0.58	1	08/19/22 15:31	08/19/22 21:14	7440-23-5	
Calcium	24.6	mg/L	1.0	0.12	1	08/19/22 15:31	08/19/22 21:14	7440-70-2	
Magnesium	12.9	mg/L	0.050	0.012	1	08/19/22 15:31	08/19/22 21:14	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/22 10:13	08/26/22 18:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/25/22 10:13	08/26/22 18:13	7440-38-2	
Barium	0.040	mg/L	0.0050	0.00067	1	08/25/22 10:13	08/26/22 18:13	7440-39-3	
Beryllium	0.00064J	mg/L	0.00050	0.000054	1	08/25/22 10:13	08/26/22 18:13	7440-41-7	
Boron	0.17	mg/L	0.040	0.0086	1	08/25/22 10:13	08/26/22 18:13	7440-42-8	
Cadmium	0.00011J	mg/L	0.00050	0.00011	1	08/25/22 10:13	08/26/22 18:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/22 10:13	08/26/22 18:13	7440-47-3	
Cobalt	0.0028J	mg/L	0.0050	0.00039	1	08/25/22 10:13	08/26/22 18:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/22 10:13	08/26/22 18:13	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/22 10:13	08/26/22 18:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/22 10:13	08/26/22 18:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/22 10:13	08/26/22 18:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/22 10:13	08/26/22 18:13	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:51	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	232	mg/L	10.0	10.0	1		08/15/22 11:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	21.1	mg/L	5.0	5.0	1		08/20/22 22:06		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/20/22 22:06		
Alkalinity, Total as CaCO ₃	21.1	mg/L	5.0	5.0	1		08/20/22 22:06		

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: HGWC-101		Lab ID: 92618826015		Collected: 08/10/22 11:30	Received: 08/12/22 11:25	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/16/22 05:12	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	5.5	mg/L	1.0	0.60	1		08/22/22 05:08	16887-00-6	
Fluoride	0.065J	mg/L	0.10	0.050	1		08/22/22 05:08	16984-48-8	
Sulfate	99.5	mg/L	2.0	1.0	2		08/22/22 21:28	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: EB-4		Lab ID: 92618826016		Collected: 08/10/22 09:55	Received: 08/12/22 11:25	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.025	1	08/19/22 15:31	08/19/22 21:19	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/19/22 15:31	08/19/22 21:19	7439-96-5	
Potassium	ND	mg/L	0.20	0.15	1	08/19/22 15:31	08/19/22 21:19	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	08/19/22 15:31	08/19/22 21:19	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	08/19/22 15:31	08/19/22 21:19	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	08/19/22 15:31	08/19/22 21:19	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/22 10:13	08/26/22 18:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/25/22 10:13	08/26/22 18:31	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/25/22 10:13	08/26/22 18:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/22 10:13	08/26/22 18:31	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/25/22 10:13	08/26/22 18:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/22 10:13	08/26/22 18:31	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/22 10:13	08/26/22 18:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/22 10:13	08/26/22 18:31	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/22 10:13	08/26/22 18:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/22 10:13	08/26/22 18:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/22 10:13	08/26/22 18:31	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/22 10:13	08/26/22 18:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/22 10:13	08/26/22 18:31	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:54	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/16/22 14:08		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/22/22 12:56		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		08/22/22 12:56		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		08/22/22 12:56		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/16/22 05:12	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 05:23	16887-00-6	

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ANALYTICAL RESULTS

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

Sample: EB-4 Lab ID: 92618826016 Collected: 08/10/22 09:55 Received: 08/12/22 11:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 05:23	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 05:23	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

Sample: FB-4		Lab ID: 92618826017		Collected: 08/10/22 09:50	Received: 08/12/22 11:25	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.025	1	08/19/22 15:31	08/19/22 21:24	7439-89-6	
Manganese	ND	mg/L	0.040	0.0043	1	08/19/22 15:31	08/19/22 21:24	7439-96-5	
Potassium	ND	mg/L	0.20	0.15	1	08/19/22 15:31	08/19/22 21:24	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	08/19/22 15:31	08/19/22 21:24	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	08/19/22 15:31	08/19/22 21:24	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	08/19/22 15:31	08/19/22 21:24	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/22 10:13	08/26/22 18:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/25/22 10:13	08/26/22 18:37	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/25/22 10:13	08/26/22 18:37	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/22 10:13	08/26/22 18:37	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/25/22 10:13	08/26/22 18:37	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/22 10:13	08/26/22 18:37	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/22 10:13	08/26/22 18:37	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/22 10:13	08/26/22 18:37	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/22 10:13	08/26/22 18:37	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/22 10:13	08/26/22 18:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/22 10:13	08/26/22 18:37	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/22 10:13	08/26/22 18:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/22 10:13	08/26/22 18:37	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/25/22 10:45	08/25/22 16:57	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/15/22 11:27		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/22/22 13:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		08/22/22 13:12		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		08/22/22 13:12		
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	ND	mg/L	0.10	0.050	1		08/16/22 05:12	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 05:38	16887-00-6	

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ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 05:38	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 05:38	14808-79-8	

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3732777

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732778 3732779

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92618820002 Result	Spike Conc.	Spike Conc.	Result							
Calcium	mg/L	153	1	1	150	153	-362	-50	75-125	2	20	M1
Iron	mg/L	0.053	1	1	1.1	1.1	107	108	75-125	1	20	
Magnesium	mg/L	21.3	1	1	21.8	22.2	57	96	75-125	2	20	M1
Manganese	mg/L	0.31	1	1	1.4	1.4	105	106	75-125	1	20	
Potassium	mg/L	7.7	1	1	8.6	8.8	92	109	75-125	2	20	
Sodium	mg/L	9.4	1	1	10.2	10.4	79	96	75-125	2	20	

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

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3732818

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732819 3732820

Parameter	Units	92618823006		3732819		3732820		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result							
Calcium	mg/L	170	1	171	1	166	120	-307	75-125	3	20	M1		
Iron	mg/L	0.10	1	1.2	1	1.2	109	107	75-125	2	20			
Magnesium	mg/L	27.3	1	28.6	1	27.7	123	41	75-125	3	20	M1		
Manganese	mg/L	2.3	1	3.4	1	3.3	109	100	75-125	3	20			
Potassium	mg/L	3.4	1	4.6	1	4.4	120	99	75-125	5	20			
Sodium	mg/L	16.2	1	17.5	1	16.8	125	62	75-125	4	20	M1		

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3732859

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732860 3732861

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

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3745233

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745234 3745235

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

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QUALITY CONTROL DATA

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

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

Associated Lab Samples: 92618826001, 92618826002

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

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

LABORATORY CONTROL SAMPLE: 3732043

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732044 3732045

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

Parameter	Units	3732044		3732045		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618820002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.060	0.1	0.1	0.18	0.19	120	126	75-125	3	20	M1	
Beryllium	mg/L	0.000056J	0.1	0.1	0.089	0.087	89	87	75-125	2	20		
Boron	mg/L	1.5	1	1	2.3	2.3	80	82	75-125	1	20		
Cadmium	mg/L	0.00017J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Chromium	mg/L	ND	0.1	0.1	0.098	0.097	97	97	75-125	1	20		
Cobalt	mg/L	0.0024J	0.1	0.1	0.097	0.098	95	95	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.097	0.097	96	97	75-125	1	20		
Lithium	mg/L	0.0026J	0.1	0.1	0.090	0.090	88	87	75-125	0	20		
Molybdenum	mg/L	0.29	0.1	0.1	0.41	0.43	116	138	75-125	5	20	M1	
Selenium	mg/L	ND	0.1	0.1	0.10	0.099	99	98	75-125	0	20		
Thallium	mg/L	0.00018J	0.1	0.1	0.097	0.097	97	97	75-125	0	20		

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QUALITY CONTROL DATA

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

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

Associated Lab Samples: 92618826003, 92618826004

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

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

LABORATORY CONTROL SAMPLE: 3732803

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732804 3732805

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

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QUALITY CONTROL DATA

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

Parameter	Units	3732804		3732805		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92618823003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.048	0.1	0.1	0.15	0.16	105	110	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.086	0.079	86	79	75-125	8	20		
Boron	mg/L	1.0	1	1	2.0	2.0	99	90	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.088	95	88	75-125	7	20		
Chromium	mg/L	ND	0.1	0.1	0.099	0.091	98	90	75-125	9	20		
Cobalt	mg/L	0.0058	0.1	0.1	0.10	0.095	95	89	75-125	6	20		
Lead	mg/L	ND	0.1	0.1	0.096	0.090	96	90	75-125	6	20		
Lithium	mg/L	0.023J	0.1	0.1	0.11	0.10	88	79	75-125	8	20		
Molybdenum	mg/L	0.032	0.1	0.1	0.12	0.13	91	98	75-125	6	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.089	95	89	75-125	7	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.091	96	91	75-125	6	20		

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3732886

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732887 3732888

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

Parameter	Units	3732887		3732888		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618826010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	0.0022J	0.1	0.1	0.098	0.096	96	93	75-125	3	20		
Barium	mg/L	0.085	0.1	0.1	0.22	0.21	134	126	75-125	4	20	M1	
Beryllium	mg/L	ND	0.1	0.1	0.091	0.089	91	89	75-125	3	20		
Boron	mg/L	0.25	1	1	1.2	1.2	93	90	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20		
Cobalt	mg/L	0.00080J	0.1	0.1	0.10	0.098	99	97	75-125	2	20		
Lead	mg/L	ND	0.1	0.1	0.093	0.090	93	90	75-125	4	20		
Lithium	mg/L	0.00087J	0.1	0.1	0.093	0.089	92	88	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.10	108	103	75-125	5	20		
Selenium	mg/L	ND	0.1	0.1	0.090	0.089	90	89	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.091	0.088	91	88	75-125	3	20		

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3750024

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750025 3750026

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

Parameter	Units	3750025		3750026		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Barium	mg/L	0.022J	0.1	0.1	0.12	0.12	99	101	75-125	1	20
Beryllium	mg/L	0.00066J	0.1	0.1	0.095	0.096	94	95	75-125	1	20
Boron	mg/L	9.6	1	1	10.8	11.2	123	162	75-125	4	20 M1
Cadmium	mg/L	0.0013J	0.1	0.1	0.099	0.10	98	101	75-125	3	20
Chromium	mg/L	ND	0.1	0.1	0.098	0.10	98	99	75-125	1	20
Cobalt	mg/L	0.082	0.1	0.1	0.17	0.18	92	96	75-125	2	20
Lead	mg/L	ND	0.1	0.1	0.093	0.091	93	90	75-125	2	20
Lithium	mg/L	ND	0.1	0.1	0.10J	0.10J	98	97	75-125		20
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	1	20
Selenium	mg/L	0.0089J	0.1	0.1	0.11	0.11	101	102	75-125	1	20
Thallium	mg/L	ND	0.1	0.1	0.092	0.091	92	91	75-125	1	20

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3749003

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3749004 3749005

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

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3750067

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750068 3750069

Parameter	Units	3750068		3750069		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618826014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0019	0.0023	77	92	75-125	18	20

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

QC Batch: 715588

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618826001, 92618826002

METHOD BLANK: 3730515

Matrix: Water

Associated Lab Samples: 92618826001, 92618826002

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

LABORATORY CONTROL SAMPLE: 3730516

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

SAMPLE DUPLICATE: 3730517

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

SAMPLE DUPLICATE: 3730518

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

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3734637

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

SAMPLE DUPLICATE: 3735020

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

SAMPLE DUPLICATE: 3735021

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

QC Batch: 717151

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92618826015, 92618826017

METHOD BLANK: 3738466

Matrix: Water

Associated Lab Samples: 92618826015, 92618826017

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

LABORATORY CONTROL SAMPLE: 3738467

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

SAMPLE DUPLICATE: 3738468

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

SAMPLE DUPLICATE: 3738469

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

Associated Lab Samples: 92618826016

METHOD BLANK: 3739844 Matrix: Water

Associated Lab Samples: 92618826016

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

LABORATORY CONTROL SAMPLE: 3739845

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

SAMPLE DUPLICATE: 3739846

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

SAMPLE DUPLICATE: 3739847

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

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QUALITY CONTROL DATA

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

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

Associated Lab Samples: 92618826001

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

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

LABORATORY CONTROL SAMPLE: 3732995

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

LABORATORY CONTROL SAMPLE: 3732996

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732997 3732998

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

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QUALITY CONTROL DATA

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

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

Associated Lab Samples: 92618826002

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

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	08/10/22 10:57	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	08/10/22 10:57	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	08/10/22 10:57	

LABORATORY CONTROL SAMPLE: 3733542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	48.1	96	80-120	

LABORATORY CONTROL SAMPLE: 3733543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	48.5	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3733544 3733545

Parameter	Units	92618829005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	263	50	50	299	296	73	67	80-120	1	25	M1

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QUALITY CONTROL DATA

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

QC Batch: 717930 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92618826003, 92618826014

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

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

LABORATORY CONTROL SAMPLE: 3742741

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

LABORATORY CONTROL SAMPLE: 3742742

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3742743 3742744

Parameter	Units	3742743		3742744		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Alkalinity, Total as CaCO3	mg/L	28.6	50	50	76.7	77.6	96	98	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3742745 3742746

Parameter	Units	3742745		3742746		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Alkalinity, Total as CaCO3	mg/L	179	50	50	222	221	87	85	80-120	0	25	

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3743086

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

LABORATORY CONTROL SAMPLE: 3743087

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743088 3743089

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743090 3743091

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

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QUALITY CONTROL DATA

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

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

Associated Lab Samples: 92618826015

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

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

LABORATORY CONTROL SAMPLE: 3744932

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

LABORATORY CONTROL SAMPLE: 3744933

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744934 3744935

Parameter	Units	3744934		3744935		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92619657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Alkalinity, Total as CaCO3	mg/L	93.8	50	50	145	145	102	103	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744936 3744937

Parameter	Units	3744936		3744937		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92619981006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Alkalinity, Total as CaCO3	mg/L	54.2	50	50	96.7	96.9	85	85	80-120	0	25	

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QUALITY CONTROL DATA

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

QC Batch: 718423 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92618826016, 92618826017

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

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

LABORATORY CONTROL SAMPLE: 3744939

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

LABORATORY CONTROL SAMPLE: 3744940

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744941 3744942

Parameter	Units	92618826016		92618826017		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Alkalinity, Total as CaCO3	mg/L	ND	50	50	51.3	50.6	101	99	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744943 3744944

Parameter	Units	92618822018		92618826017		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Alkalinity, Total as CaCO3	mg/L	ND	50	50	45.8	44.6	92	89	80-120	3	25

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3730180

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730181 3730182

Parameter	Units	92618725005		3730181		3730182		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Sulfide	mg/L	ND	0.5	0.5	0.44	0.48	86	94	80-120	8	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3730183 3730184

Parameter	Units	92618728001		3730183		3730184		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Sulfide	mg/L	ND	0.5	0.5	0.53	0.53	104	105	80-120	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

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

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

LABORATORY CONTROL SAMPLE: 3736454

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736455 3736456

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736457 3736458

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-4

Pace Project No.: 92618826

QC Batch: 717375

Analysis Method: SM 4500-S2D-2011

QC Batch Method: SM 4500-S2D-2011

Analysis Description: 4500S2D Sulfide Water

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92618826015, 92618826016, 92618826017

METHOD BLANK: 3739685

Matrix: Water

Associated Lab Samples: 92618826015, 92618826016, 92618826017

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

LABORATORY CONTROL SAMPLE: 3739686

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3739687 3739688

Parameter	Units	92620253016		3739687		3739688		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	ND	ND	0.5	0.5	0.50	0.52	99	104	80-120	4	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3739689 3739690

Parameter	Units	92620379008		3739689		3739690		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	ND	ND	0.5	0.5	0.49	0.52	99	104	80-120	5	10	

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3736372

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736373 3736374

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3736375 3736376

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

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3740201

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3740202 3740203

Parameter	Units	92619725001		3740203		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	64.1	50	105	105	82	83	90-110	1	10	M1
Fluoride	mg/L	0.38	2.5	2.7	2.8	94	96	90-110	2	10	
Sulfate	mg/L	288	50	337	338	99	100	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3740204 3740205

Parameter	Units	92618826008		3740205		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	5.0	50	59.1	59.0	108	108	90-110	0	10	
Fluoride	mg/L	0.075J	2.5	2.8	2.8	107	108	90-110	1	10	
Sulfate	mg/L	217	50	264	265	95	96	90-110	0	10	

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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3745969

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745970 3745971

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745972 3745973

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

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QUALIFIERS

Project: HAMMOND AP-4

Pace Project No.: 92618826

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4

Pace Project No.: 92618826

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



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

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mech

WO#: 92618826



Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

Courier: Fed Ex UPS USPS Client Commercial Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

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

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer:

TR Gun ID: 230 Type of Ice: Wet Blue None

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

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

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample)

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

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

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
- Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: W			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

Effective Date: 05/12/2022

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

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

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

***Check all unpreserved Nitrates for chlorine

Project #

WO# : 92618826

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

Item#	BP1U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP2U-250 mL Plastic Unpreserved (N/A)	BP3U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WQFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG2U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5F-125 mL Sterile Plastic (N/A - lab)	SP2F-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved (N/A) (Cl-)	VSCU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1																											
2		2	1																											
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts

Section C Invoice Information: Attention: Sduthern Co. Company Name:

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Site Location: STATE: GA

Requested Due Date/TAT: 10 Day

Project Name: Hammond AP-4

Project Number:

Preservatives: H₂SO₄ HNO₃ HCl NaOH Na₂S₂O₆ Methanol Other

Analysis Test: Chloride, Fluoride, Sulfate (N) Full App. III and IV metals (N) RAD 226/228 (N) TDS (N) Major Ions (N) Alkalinity, Bicarbonate (N)

Requested Analysis Filtered (Y/N):

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

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID S OIL O WIRE W AIR AR OTHER OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
				DATE	TIME			DATE	TIME				
1		HQWA-47	WG	G	8/2/2022	16:27							
2		HQWA-113	WG	G	8/2/2022	16:15							
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: Thomas Kessler / Pace Date: 8/14/2022 Time: 12:30

ACCEPTED BY / AFFILIATION: Ryan Williams / Pace Date: 8/14/2022 Time: 12:30

Signature: Thomas Kessler

Signature: Ryan Williams

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



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

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project

WO#: 92618826

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

Courier: Fed Ex UPS USPS Client Commercial Pace FS Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

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

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: 083

Type of Ice: Wet Blue None

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

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 2.6

USDA Regulated Soil (N/A, water sample)

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

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

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Field Data Required? Yes No

COMMENTS/SAMPLE DISCREPANCY

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

Effective Date: 05/12/2022

WO# : 92618826

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

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

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

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

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plast c (N/A - lab)	SP2T-250 mL Sterile Plast c (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9-3-9-7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	2	1																										
2	2	1																										
3	2	1																										
4	2	1																										
5	2	1																										
6	2	1																										
7	2	1																										
8	2	1																										
9	2	1																										
10	2	1																										
11	2	1																										
12	2	1																										

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:
Company: GA Power
Address: Atlanta, GA
Email To: SCS Contacts
Phone: []
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:
Advertiser: Southern Co.
Company Name:
Address:
Pace Quality Reference Manager
Pace Project Manager
Pace File # 10839

REGULATORY AGENCY
 NPDES
 UST
 GROUND WATER
 DRINKING WATER
 RCRA
 OTHER
 Site Location: GA
 STATE: GA

ITEM #	Section D Requested Client Information Valid Matrix Codes MATRIX CODE SAMPLE TYPE (G GRAB C COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Chloride Fluoride Sulfate Full App III and IV metals RAD 226/228 TDS Major Ions Alkalinity Bicarbonate Requested Analysis Filtered (Y/N)	MATRIX CODE	SAMPLE TYPE	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER NAME AND SIGNATURE	Temp in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
				COMPOSITE	COMPOSITE													
1	HGWA-48D	WG	G	09:47	09:47	22	7	3	3	1	X	X	X	X	X	X	X	X
2	HGWA-111	WG	G	10:10	10:10	22	7	3	3	1	X	X	X	X	X	X	X	X
3	HGWA-112	WG	G	09:43	09:43	21	7	3	3	1	X	X	X	X	X	X	X	X
4	HGWC-102	WG	G	15:02	15:02	22	7	3	3	1	X	X	X	X	X	X	X	X
5	HGWC-103	WG	G	14:21	14:21	20	7	3	3	1	X	X	X	X	X	X	X	X
6	HGWC-105	WG	G	11:40	11:40	20	7	3	3	1	X	X	X	X	X	X	X	X
7	HGWC-107	WG	G	15:46	15:46	20	7	3	3	1	X	X	X	X	X	X	X	X
8	HGWC-109	WG	G	13:24	13:24	20	7	3	3	1	X	X	X	X	X	X	X	X
9	HGWC-117	WG	G	13:21	13:21	23	7	3	3	1	X	X	X	X	X	X	X	X
10	HGWC-117A	WG	G	11:47	11:47	22	7	3	3	1	X	X	X	X	X	X	X	X
11	HGWC-118	WG	G	15:58	15:58	22	7	3	3	1	X	X	X	X	X	X	X	X
12	DUP-4	WG	G	00:00	00:00	21	7	3	3	1	X	X	X	X	X	X	X	X

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



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

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project

WO#: 92618826

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

Courier: Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/12/22 [Signature]

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

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

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

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

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

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

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

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	W	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

Effective Date: 05/12/2022

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

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

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

***Check all unpreserved Nitrates for chlorine

Project

WO#: 92618826

PM: NMG

Due Date: 08/18/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3H-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9N-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0L-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	2	1																											
2	2	1																											
3	2	1																											
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

September 22, 2022

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

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

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 04, 2022 and August 12, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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

Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

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

Pace Analytical Services Pennsylvania

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

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

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

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

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SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

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

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

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-113 Lab ID: 92618784002 Collected: 08/02/22 16:15 Received: 08/04/22 12:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.142 ± 0.243 (0.547) C:88% T:NA	pCi/L	09/06/22 08:52	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.649 ± 0.343 (0.590) C:72% T:91%	pCi/L	08/30/22 12:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.791 ± 0.586 (1.14)	pCi/L	09/06/22 15:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-48D Lab ID: 92618784003 Collected: 08/05/22 09:47 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.276 ± 0.274 (0.528) C:93% T:NA	pCi/L	09/12/22 08:37	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.323 ± 0.484 (1.04) C:76% T:97%	pCi/L	08/30/22 15:48	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.599 ± 0.758 (1.57)	pCi/L	09/12/22 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-111 Lab ID: 92618784004 Collected: 08/05/22 10:10 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.155 ± 0.141 (0.260) C:94% T:NA	pCi/L	09/12/22 08:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.418 ± 0.504 (1.07) C:74% T:91%	pCi/L	08/30/22 15:48	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.573 ± 0.645 (1.33)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-112 Lab ID: 92618784005 Collected: 08/05/22 09:43 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.00734 ± 0.0873 (0.239) C:91% T:NA	pCi/L	09/12/22 08:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.658 ± 0.453 (0.876) C:71% T:91%	pCi/L	08/30/22 16:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.665 ± 0.540 (1.12)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-103						
Lab ID: 92618784007						
Collected: 08/05/22 14:21						
Received: 08/08/22 11:10						
Matrix: Water						
PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0246 ± 0.106 (0.275) C:80% T:NA	pCi/L	09/12/22 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.180 ± 0.356 (0.784) C:69% T:97%	pCi/L	08/30/22 16:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.205 ± 0.462 (1.06)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-105						
Lab ID: 92618784008						
Collected: 08/05/22 11:40						
Received: 08/08/22 11:10						
Matrix: Water						
PWS:						
Site ID:						
Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0602 ± 0.147 (0.350) C:84% T:NA	pCi/L	09/12/22 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0785 ± 0.284 (0.652) C:70% T:84%	pCi/L	08/30/22 16:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.139 ± 0.431 (1.00)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-107 Lab ID: 92618784009 Collected: 08/05/22 15:46 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.159 ± 0.132 (0.223) C:91% T:NA	pCi/L	09/12/22 08:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.758 ± 0.492 (0.929) C:69% T:81%	pCi/L	08/30/22 16:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.917 ± 0.624 (1.15)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-109						
Lab ID: 92618784010						
Collected: 08/05/22 13:24						
Received: 08/08/22 11:10						
Matrix: Water						
PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.220 ± 0.168 (0.283) C:88% T:NA	pCi/L	09/12/22 08:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.118 ± 0.321 (0.783) C:70% T:88%	pCi/L	08/30/22 16:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.220 ± 0.489 (1.07)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-117						
Lab ID: 92618784011						
Collected: 08/05/22 13:21						
Received: 08/08/22 11:10						
Matrix: Water						
PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.195 ± 0.151 (0.250) C:91% T:NA	pCi/L	09/12/22 08:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.410 ± 0.496 (1.05) C:66% T:102%	pCi/L	08/30/22 16:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.605 ± 0.647 (1.30)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-117A Lab ID: 92618784012 Collected: 08/05/22 11:47 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.0400 ± 0.0923 (0.298) C:89% T:NA	pCi/L	09/12/22 08:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.270 ± 0.553 (1.31) C:68% T:89%	pCi/L	08/30/22 16:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.000 ± 0.645 (1.61)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-118 Lab ID: 92618784013 Collected: 08/05/22 15:58 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0500 ± 0.0923 (0.210) C:87% T:NA	pCi/L	09/12/22 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.156 ± 0.417 (0.935) C:67% T:90%	pCi/L	08/30/22 17:52	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.206 ± 0.509 (1.15)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DUP-4 Lab ID: 92618784014 Collected: 08/05/22 00:00 Received: 08/08/22 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0383 ± 0.123 (0.306) C:86% T:NA	pCi/L	09/12/22 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0305 ± 0.419 (0.992) C:69% T:83%	pCi/L	08/30/22 17:53	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0383 ± 0.542 (1.30)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-101 Lab ID: 92618784015 Collected: 08/10/22 11:30 Received: 08/12/22 11:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0416 ± 0.111 (0.270) C:87% T:NA	pCi/L	09/12/22 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.559 ± 0.392 (0.764) C:76% T:92%	pCi/L	09/06/22 11:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.601 ± 0.503 (1.03)	pCi/L	09/12/22 15:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

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

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

QC Batch: 525942

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618784001, 92618784002

METHOD BLANK: 2551544

Matrix: Water

Associated Lab Samples: 92618784001, 92618784002

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

QC Batch: 525510

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618784001, 92618784002

METHOD BLANK: 2549236

Matrix: Water

Associated Lab Samples: 92618784001, 92618784002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.171 ± 0.214 (0.439) C:89% T:NA	pCi/L	09/06/22 09:26	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

QC Batch: 530296

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014, 92618784015, 92618784016, 92618784017

METHOD BLANK: 2572288

Matrix: Water

Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014, 92618784015, 92618784016, 92618784017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0685 ± 0.143 (0.332) C:93% T:NA	pCi/L	09/12/22 08:36	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

QC Batch: 527810

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618784015, 92618784016, 92618784017

METHOD BLANK: 2560804

Matrix: Water

Associated Lab Samples: 92618784015, 92618784016, 92618784017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.981 ± 0.360 (0.508) C:81% T:99%	pCi/L	09/06/22 11:54	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

QC Batch: 525976

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014

METHOD BLANK: 2551589

Matrix: Water

Associated Lab Samples: 92618784003, 92618784004, 92618784005, 92618784006, 92618784007, 92618784008, 92618784009, 92618784010, 92618784011, 92618784012, 92618784013, 92618784014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.426 ± 0.331 (0.647) C:75% T:92%	pCi/L	08/30/22 16:38	

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QUALIFIERS

Project: HAMMOND AP-4 RAD

Pace Project No.: 92618784

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618784001	HGWA-47	EPA 9315	525510		
92618784002	HGWA-113	EPA 9315	525510		
92618784003	HGWA-48D	EPA 9315	530296		
92618784004	HGWA-111	EPA 9315	530296		
92618784005	HGWA-112	EPA 9315	530296		
92618784006	HGWC-102	EPA 9315	530296		
92618784007	HGWC-103	EPA 9315	530296		
92618784008	HGWC-105	EPA 9315	530296		
92618784009	HGWC-107	EPA 9315	530296		
92618784010	HGWC-109	EPA 9315	530296		
92618784011	HGWC-117	EPA 9315	530296		
92618784012	HGWC-117A	EPA 9315	530296		
92618784013	HGWC-118	EPA 9315	530296		
92618784014	DUP-4	EPA 9315	530296		
92618784015	HGWC-101	EPA 9315	530296		
92618784016	EB-4	EPA 9315	530296		
92618784017	FB-4	EPA 9315	530296		
92618784001	HGWA-47	EPA 9320	525942		
92618784002	HGWA-113	EPA 9320	525942		
92618784003	HGWA-48D	EPA 9320	525976		
92618784004	HGWA-111	EPA 9320	525976		
92618784005	HGWA-112	EPA 9320	525976		
92618784006	HGWC-102	EPA 9320	525976		
92618784007	HGWC-103	EPA 9320	525976		
92618784008	HGWC-105	EPA 9320	525976		
92618784009	HGWC-107	EPA 9320	525976		
92618784010	HGWC-109	EPA 9320	525976		
92618784011	HGWC-117	EPA 9320	525976		
92618784012	HGWC-117A	EPA 9320	525976		
92618784013	HGWC-118	EPA 9320	525976		
92618784014	DUP-4	EPA 9320	525976		
92618784015	HGWC-101	EPA 9320	527810		
92618784016	EB-4	EPA 9320	527810		
92618784017	FB-4	EPA 9320	527810		
92618784001	HGWA-47	Total Radium Calculation	530889		
92618784002	HGWA-113	Total Radium Calculation	530889		
92618784003	HGWA-48D	Total Radium Calculation	532141		
92618784004	HGWA-111	Total Radium Calculation	532141		
92618784005	HGWA-112	Total Radium Calculation	532141		
92618784006	HGWC-102	Total Radium Calculation	532141		
92618784007	HGWC-103	Total Radium Calculation	532141		
92618784008	HGWC-105	Total Radium Calculation	532141		
92618784009	HGWC-107	Total Radium Calculation	532141		
92618784010	HGWC-109	Total Radium Calculation	532141		
92618784011	HGWC-117	Total Radium Calculation	532141		
92618784012	HGWC-117A	Total Radium Calculation	532141		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92618784013	HGWC-118	Total Radium Calculation	532141		
92618784014	DUP-4	Total Radium Calculation	532141		
92618784015	HGWC-101	Total Radium Calculation	532141		
92618784016	EB-4	Total Radium Calculation	532141		
92618784017	FB-4	Total Radium Calculation	532141		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



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

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO#: 92618784

Courier: Fed Ex UPS USPS Client Commercial Pace Other:



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 5/12/22 [Signature]

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

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

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

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

Effective Date: 05/12/2022

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

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

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

***Check all unpreserved Nitrates for chlorine

WO#: 92618784

PM: NMG

Due Date: 08/25/22

CLIENT: GA-GA Power

Item#	BP1U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP2U-250 mL Plastic Unpreserved (N/A)	BP3U-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)	BP7Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WQFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/G/K (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG1U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1																											
2		2	1																											
3																														
4																														
5																														
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10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company GA Power, Address Atlanta, GA, Email To SCS Contacts, Requested Due Date/TAT 10 Day

Section B Required Project Information: Report To SCS Contacts, Copy To Geosynlec Contacts, Project Name Hammond AP-4, Project Number 10839

Section C Invoice Information: Attention Southern Co, Company Name, Address, Site Location GA

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Request Analysis Filtered (Y/N): Chloride, Fluoride, Sulfate Full App. III and IV metals RAD 226/228 TDS Major Ions Alkalinity, Bicarbonate

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

ITEM #	Matrix Code	Sample Type	COLLECTED		Sample Temp at Collection	# of Containers	Preservatives						Analysis Test	Residual Chlorine (Y/N)	pH	
			DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH				Na ₂ S ₂ O ₆
1	HQWA-47	G	8/2/2022	16:27	TK 8/2/2022	22	7	3	3							
2	HQWA-113	G	8/2/2022	16:15												

SAMPLER NAME AND SIGNATURE: *Thomas Messer, Kristin Orndoff*

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



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

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh M... Vannoyville

WO#: 92618784

PM: NMG Due Date: 08/22/22
CLIENT: GA-GA Power

Sample Condition Upon Receipt

Client Name: GA Power

Project #

Courier: Fed Ex UPS USPS Client
 Commercial Pace FS Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/8/22 [initials]

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

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

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

Cooler Temp Corrected (°C): 2.6

USDA Regulated Soil (N/A, water sample)

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

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

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/iD/Analysis Matrix: W	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

Effective Date: 05/12/2022

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

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

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

***Check all unpreserved Nitrates for chlorine

WO#: 92618784

Due Date: 08/22/22

PM: NMG

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	2	1																										
2	2	1																										
3	2	1																										
4	2	1																										
5	2	1																										
6	2	1																										
7	2	1																										
8	2	1																										
9	2	1																										
10	2	1																										
11	2	1																										
12	2	1																										

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GA Power	Report To: SCS Contacts	Client: Southern Co.
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:
Email To: SCS Contacts	Purchase Order No.:	Address:
Phone:	Project Name: Hammond AP-4	Per-Quality Reference:
Requested Due Date/TAT: 10 Day	Project Number:	Pace Project Manager: Nicole D'Oleo
		Pace Profile #: 10839
		Site Location: GA
		STATE: GA
		REGULATORY AGENCY
		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
		<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> COLL
		Page: 1 of 1

ITEM #	Valid Matrix Codes	Matrix Code	Sample Type (G GRAB C COMP)	COLLECTED		Sample Temp at Collection	# OF CONTAINERS	Preservatives										Analysis Test				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				COMPOSITE	DATE			TIME	DATE	TIME	Unpreserved	H ₂ O ₂	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈	Methanol	Other	Chloride Fluoride Sulfate	Full App III and IV metals	RAD 226/228		
1	HGWA-48D	WG G	G	8/5/2022	09:47	22	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 7.40		
2	HGWA-111	WG G	G	8/5/2022	10:10	22	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 6.97		
3	HGWA-112	WG G	G	8/5/2022	09:43	21	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 5.43		
4	HGWC-102	WG G	G	8/5/2022	15:02	22	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 5.69		
5	HGWC-103	WG G	G	8/5/2022	14:21	20	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 5.71		
6	HGWC-105	WG G	G	8/5/2022	11:40	20	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 6.46		
7	HGWC-107	WG G	G	8/5/2022	15:46	21	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 6.07		
8	HGWC-109	WG G	G	8/5/2022	13:24	20	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 6.81		
9	HGWC-117	WG G	G	8/5/2022	13:21	23	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 5.46		
10	HGWC-117A	WG G	G	8/5/2022	11:47	22	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 6.44		
11	HGWC-118	WG G	G	8/5/2022	15:58	22	7	3	3	3	3	3	3	3	3	3	3	3	3	N	pH = 7.07		
12	DUP-4	WG G	G	8/5/2022	00:00	21	7	3	3	3	3	3	3	3	3	3	3	3	3	N	N/A		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		DATE		TIME		DATE		TIME		SAMPLE CONDITIONS
	Signature	Signature	Signature	Signature	Signature	Signature	Signature	Signature	Signature	Signature	Signature	Signature	
	Thomas Webster / Gies	1110	Kieran Williams / Pace	1110	8/5/2022	11:10							
	Kieran Williams / Pace	1455	Charles Hunt	1455	8/5/2022	14:55							

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

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Thomas Webster, Justin Crandall, Anthony Seiwert	DATE Signed (MM/DD/YYYY): 8/5/2022
SIGNATURE of SAMPLER: <i>[Signatures]</i>	

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

VALIDATION REPORTS

Memorandum

Date: 18 December 2022
To: Christine Hug
From: Ashley Wilson
CC: J. Caprio
Subject: **Stage 2A Data Validations - Level II Data Deliverable – Pace Analytical Project No.: 92618826**

SITE: CCR Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fourteen aqueous samples, one field blank, one equipment blank and one field duplicate, collected 2, 5 & 10 August 2022, as part of the Plant Hammond sampling event.

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

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

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

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

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for supporting project objectives. Qualified data should be used within the limitation of the qualification.

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

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

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

Laboratory IDs	Client IDs
92618826001	HGWA-47
92618826002	HGWA-113
92618826003	HGWA-48D
92618826004	HGWA-111
92618826005	HGWA-112
92618826006	HGWC-102
92618826007	HGWC-103
92618826008	HGWC-105
92618826009	HGWC-107

Laboratory IDs	Client IDs
92618826010	HGWC-109
92618826011	HGWC-117
92618826012	HGWC-117A
92618826013	HGWC-118
92618826014	DUP-4
92618826015	HGWC-101
92618826016	EB-4
92618826017	FB-4

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

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

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

1.0 METALS

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

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

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank

- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

1.1 Overall Assessment

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

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for metals by US EPA method 6020B (batches 715918, 716035, 716046 and 719529), and four method blanks for metals by US EPA Method 6010D (batches 716032, 716036, 716042 and 718461). Metals were not detected in the method blanks at or above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Sample set specific MS/MSD pairs were reported for metals by US EPA methods 6020B and 6010D, using samples HGWC-109 and HGWA-112, respectively. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of barium in the MS/MSD pair using sample HGWC-109 were high and outside of laboratory specified acceptance criteria. Therefore, the concentration of barium in sample HGWC-109 was J+ qualified as estimated with high bias.

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

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWC-109	Barium	0.085	M1	0.085	J+	4

mg/L- milligram per liter

M1-Matrix spike recovery exceeded QC limits

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

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

1.7 Field Blank

One field blank was collected with the sample set, FB-4. Metals were not detected in the field blank at or above the MDLs.

1.8 Field Duplicate

One field duplicate was collected with the sample set, DUP-4. Acceptable precision ($RPD \leq 30\%$) was demonstrated between the field duplicate and the original sample, HGWC-118, with the following exceptions.

Cobalt was not detected in sample HGWC-118 and detected at an estimated concentration in DUP-4, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the cobalt concentration in DUP-4 was J qualified as estimated and the non-detect result in HGWC-118 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/l)	Laboratory Flag	RPD	Validation Result (mg/l)	Validation Qualifier	Reason Code
HGWC-118	Cobalt	0.00039	U	NC	0.00039	UJ	7
DUP-4	Cobalt	0.00041	J		0.00041	J	7

mg/L- milligram per liter

NC-noncalculable

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

U-not detected at or above the MDL

1.9 Sensitivity

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

1.10 Electronic Data Deliverable (EDD) Review

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

2.0 MERCURY

The samples were analyzed for mercury by US EPA method 7470A.

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

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

2.1 Overall Assessment

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

2.2 Holding Time

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

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 719270 and 719540). Mercury was not detected in the method blanks at or above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using DUP-4. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-4. Mercury was not detected in the equipment blank at or above the MDL.

2.7 Field Blank

One field blank was collected with the sample set, FB-4. Mercury was not detected in the field blank at or above the MDL.

2.8 Field Duplicate

One field duplicate was collected with the sample set, DUP-4. Acceptable precision ($RPD \leq 30\%$) was demonstrated between the field duplicate and the original sample, HGWC-118.

2.9 Sensitivity

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

2.10 Electronic Data Deliverable Review

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

3.0 WET CHEMISTRY

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

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

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

3.1 Overall Assessment

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

3.2 Holding Times

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

Analysis	Holding Time
Anions (fluoride, chloride and sulfate)	28 days from collection to analysis
TDS	7 days from collection to analysis
Alkalinity	14 days from collection to analysis
Sulfide	28 days from collection to analysis

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for TDS (batches 715588, 716396, 717151 and 717424). Three method blanks were reported for chloride, fluoride and sulfate (batches 716707, 717492 and 718643). Six method blanks were reported for alkalinity (batches 716055, 716212, 717930, 718058, 718422 and 718423). Three method blanks were reported for sulfide (batches 715461, 716745 and 717375). The wet chemistry parameters were not detected in the method blanks at or above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for chloride, fluoride and sulfate using sample HGWC-105. Three sample set specific MS/MSD pairs were reported for alkalinity using samples HGWA-112, HGWA-111 and EB-4. Two sample set specific MS/MSD pairs were reported for sulfide using samples HGWA-48D and HGWC-118. The recovery and RPD results were within the laboratory specified acceptance criteria.

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

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

Three laboratory duplicates were reported for TDS using samples HGWA-48D, HGWC-117 and EB-4. The RPD results were within the laboratory specified acceptance criteria.

Five batch laboratory duplicates were also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Equipment Blank

One equipment blank was collected with the sample set, EB-4. The wet chemistry parameters were not detected in the equipment blank at or above the MDLs.

3.8 Field Blank

One field blank was collected with the sample set, FB-4. The wet chemistry parameters were not detected in the field blank at or above the MDLs.

3.9 Field Duplicate

One field duplicate was collected with the sample set, DUP-4. Acceptable precision ($RPD \leq 30\%$) was demonstrated between the field duplicate and the original sample, HGWC-118.

3.10 Sensitivity

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

3.11 Electronic Data Deliverable Review

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

* * * * *

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

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected at or above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits and RPD outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

Memorandum

Date: January 10, 2023
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92618784**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fourteen aqueous samples, one field duplicate, one equipment blank and one field blank, collected 1-3 February 2022, as part of the Plant Hammond AP on-site sampling event.

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

- Radium-226 by US EPA Method 9315
- Radium-228 by US EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

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

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

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

Laboratory ID	Client ID
92618784001	HGWA-47
92618784002	HGWA-113
92618784003	HGWA-48D
92618784004	HGWA-111
92618784005	HGWA-112
92618784006	HGWC-102
92618784007	HGWC-103
92618784008	HGWC-105
92618784009	HGWC-107

Laboratory ID	Client ID
92618784010	HGWC-109
92618784011	HGWC-117
92618784012	HGWC-117A
92618784013	HGWC-118
92618784014	DUP-4
92618784015	HGWC-101
92618784016	EB-4
92618784017	FB-4

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

1.0 RADIOCHEMISTRY

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

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

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

1.1 Overall Assessment

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

estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Times

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-226 data (batches 525510 and 530296). Three method blanks were reported for the radium-228 data (batches 525942, 527810 and 525976). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-228 (0.981 pCi/L) were detected in the method blank in batch 527810 at a concentration greater than the MDC. Therefore, the radium-228 concentration in FB-4 was J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
FB-4	Radium-228	1.08	NA	1.08	J+	3
FB-4	Total Radium	1.08	NA	1.08	J+	3

pCi/L-picocuries per liter

NA-not applicable

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

MS/MSD pairs were not reported with the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

1.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HGWC-105. The RER result was within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.7 Tracers and Carriers

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

1.8 Field Blank

One field blank was collected with the sample set, FB-4. Radium-226 was not detected in the field blank above the MDCs. However, radium-228 (1.08 pCi/L) was detected at a concentration greater than the MDC. Since the radium-228 and total radium concentrations in FB-4 were J+ qualified as estimated with a high bias due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.9 Equipment Blank

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

1.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, HGWC-118.

1.11 Sensitivity

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

1.12 Electronic Data Deliverable (EDD) Review

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

* * * * *

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

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

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

FIELD SAMPLING REPORTS

Low-Flow Test Report:

Test Date / Time: 8/2/2022 3:52:20 PM

Project: GP-Plant Hammond

Operator Name: Tristan Orndorff

Location Name: HGWA-47 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.74 ft Total Depth: 43.19 ft Initial Depth to Water: 7.54 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 39 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883546
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Test Notes:

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

Weather Conditions:

Sunny, 91 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 3:52 PM	00:00	7.34 pH	23.23 °C	389.10 µS/cm	0.17 mg/L	2.39 NTU	34.4 mV	7.54 ft	200.00 ml/min
8/2/2022 3:57 PM	05:00	7.33 pH	22.93 °C	392.65 µS/cm	0.11 mg/L	1.54 NTU	43.2 mV	7.60 ft	200.00 ml/min
8/2/2022 4:02 PM	10:00	7.34 pH	22.72 °C	391.97 µS/cm	0.10 mg/L	2.50 NTU	51.6 mV	7.60 ft	200.00 ml/min
8/2/2022 4:07 PM	15:00	7.34 pH	22.51 °C	391.86 µS/cm	0.09 mg/L	1.19 NTU	57.2 mV	7.61 ft	200.00 ml/min
8/2/2022 4:12 PM	20:00	7.34 pH	22.33 °C	391.19 µS/cm	0.08 mg/L	1.04 NTU	62.7 mV	7.61 ft	200.00 ml/min
8/2/2022 4:17 PM	25:00	7.34 pH	22.25 °C	391.51 µS/cm	0.08 mg/L	1.30 NTU	67.0 mV	7.61 ft	200.00 ml/min
8/2/2022 4:22 PM	30:00	7.34 pH	22.27 °C	392.47 µS/cm	0.07 mg/L	1.21 NTU	70.9 mV	7.62 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-47	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:12:03 AM

Project: GP-Plant Hammond

Operator Name: Tristan Orndorff

Location Name: HGWA-48D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.97 ft Total Depth: 72.90 ft Initial Depth to Water: 7.75 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 67.97 ft Estimated Total Volume Pumped: 5.2 liter Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 2.85 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883546
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Test Notes:

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

Weather Conditions:

Sunny, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 9:12 AM	00:00	7.37 pH	20.81 °C	415.72 µS/cm	0.09 mg/L	1.78 NTU	-57.2 mV	9.32 ft	200.00 ml/min
8/5/2022 9:17 AM	05:00	7.38 pH	20.36 °C	418.40 µS/cm	0.07 mg/L	1.66 NTU	-106.5 mV	10.18 ft	200.00 ml/min
8/5/2022 9:22 AM	10:00	7.38 pH	20.63 °C	421.48 µS/cm	0.08 mg/L	0.96 NTU	-124.3 mV	10.61 ft	160.00 ml/min
8/5/2022 9:27 AM	15:00	7.38 pH	21.27 °C	420.70 µS/cm	0.10 mg/L	0.85 NTU	-131.8 mV	10.67 ft	120.00 ml/min
8/5/2022 9:32 AM	20:00	7.39 pH	21.48 °C	418.89 µS/cm	0.11 mg/L	1.25 NTU	-123.4 mV	10.67 ft	120.00 ml/min
8/5/2022 9:37 AM	25:00	7.40 pH	21.57 °C	417.55 µS/cm	0.11 mg/L	0.82 NTU	-112.5 mV	10.64 ft	120.00 ml/min
8/5/2022 9:42 AM	30:00	7.40 pH	21.59 °C	415.63 µS/cm	0.11 mg/L	0.53 NTU	-105.0 mV	10.60 ft	120.00 ml/min

Samples

Sample ID:	Description:
HGWA-48D	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:18:59 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-111 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.67 ft Total Depth: 43.22 ft Initial Depth to Water: 12.33 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 38.67 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884186
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Test Notes:

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

Weather Conditions:

Sunny, 85 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 9:18 AM	00:00	6.36 pH	22.76 °C	160.56 µS/cm	3.62 mg/L	1.10 NTU	86.7 mV	13.05 ft	200.00 ml/min
8/5/2022 9:23 AM	05:00	6.62 pH	22.54 °C	205.45 µS/cm	3.41 mg/L	1.25 NTU	83.6 mV	13.15 ft	200.00 ml/min
8/5/2022 9:28 AM	10:00	6.69 pH	22.18 °C	217.98 µS/cm	3.37 mg/L	1.50 NTU	86.5 mV	13.20 ft	200.00 ml/min
8/5/2022 9:33 AM	15:00	6.74 pH	22.00 °C	227.88 µS/cm	3.34 mg/L	1.62 NTU	107.5 mV	13.30 ft	200.00 ml/min
8/5/2022 9:38 AM	20:00	6.78 pH	21.96 °C	242.95 µS/cm	3.45 mg/L	1.43 NTU	109.5 mV	13.35 ft	200.00 ml/min
8/5/2022 9:43 AM	25:00	6.83 pH	21.99 °C	256.44 µS/cm	3.30 mg/L	1.24 NTU	105.8 mV	13.35 ft	200.00 ml/min
8/5/2022 9:48 AM	30:00	6.88 pH	22.09 °C	262.74 µS/cm	3.23 mg/L	1.37 NTU	82.4 mV	13.35 ft	200.00 ml/min
8/5/2022 9:53 AM	35:00	6.91 pH	22.18 °C	270.96 µS/cm	3.26 mg/L	1.30 NTU	102.7 mV	13.35 ft	200.00 ml/min
8/5/2022 9:58 AM	40:00	6.95 pH	22.08 °C	278.64 µS/cm	3.21 mg/L	1.26 NTU	80.8 mV	13.35 ft	200.00 ml/min
8/5/2022 10:03 AM	45:00	6.97 pH	22.13 °C	282.93 µS/cm	3.23 mg/L	1.49 NTU	101.1 mV	13.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
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HGWA-111

Grab.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:08:18 AM

Project: GP-Plant Hammond

Operator Name: Anthony Szwast

Location Name: HGWA-112 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.15 ft Total Depth: 39.80 ft Initial Depth to Water: 12.05 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 35.15 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.54 ft	Instrument Used: Aqua TROLL 400 Serial Number: 843593
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Test Notes:

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

Weather Conditions:

Sunny, 80 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 9:08 AM	00:00	5.61 pH	22.36 °C	77.50 µS/cm	1.45 mg/L	5.37 NTU	165.2 mV	12.92 ft	200.00 ml/min
8/5/2022 9:13 AM	05:00	5.53 pH	21.24 °C	77.65 µS/cm	1.12 mg/L	4.67 NTU	200.4 mV	13.15 ft	200.00 ml/min
8/5/2022 9:18 AM	10:00	5.49 pH	21.11 °C	77.25 µS/cm	1.02 mg/L	3.55 NTU	170.4 mV	13.38 ft	200.00 ml/min
8/5/2022 9:23 AM	15:00	5.47 pH	21.06 °C	77.03 µS/cm	0.95 mg/L	2.11 NTU	168.8 mV	13.49 ft	200.00 ml/min
8/5/2022 9:28 AM	20:00	5.44 pH	21.14 °C	77.09 µS/cm	0.88 mg/L	2.93 NTU	169.0 mV	13.51 ft	200.00 ml/min
8/5/2022 9:33 AM	25:00	5.43 pH	21.10 °C	76.67 µS/cm	0.87 mg/L	2.30 NTU	167.5 mV	13.51 ft	200.00 ml/min
8/5/2022 9:38 AM	30:00	5.43 pH	21.10 °C	76.46 µS/cm	0.85 mg/L	2.37 NTU	167.3 mV	13.59 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-112	Grab.

Low-Flow Test Report:

Test Date / Time: 8/2/2022 2:19:24 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-113 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 26.11 ft Total Depth: 36.13 ft Initial Depth to Water: 10.82 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 31.11 ft Estimated Total Volume Pumped: 11.5 L Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 10.22 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884186
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Test Notes:

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

Weather Conditions:

Sunny, 88 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/2/2022 2:19 PM	00:00	6.06 pH	25.51 °C	106.93 µS/cm	0.88 mg/L	1.63 NTU	61.0 mV	12.30 ft	100.00 ml/min
8/2/2022 2:24 PM	05:00	6.06 pH	25.15 °C	106.69 µS/cm	0.78 mg/L	9.49 NTU	68.2 mV	12.90 ft	100.00 ml/min
8/2/2022 2:29 PM	10:00	6.05 pH	24.88 °C	107.20 µS/cm	0.73 mg/L	4.18 NTU	69.8 mV	13.40 ft	100.00 ml/min
8/2/2022 2:34 PM	15:00	6.05 pH	24.96 °C	106.24 µS/cm	0.72 mg/L	2.25 NTU	70.7 mV	13.90 ft	100.00 ml/min
8/2/2022 2:39 PM	20:00	6.05 pH	24.87 °C	105.86 µS/cm	0.72 mg/L	2.31 NTU	70.9 mV	14.48 ft	100.00 ml/min
8/2/2022 2:44 PM	25:00	6.05 pH	24.87 °C	106.53 µS/cm	0.73 mg/L	1.79 NTU	70.6 mV	15.00 ft	100.00 ml/min
8/2/2022 2:49 PM	30:00	6.06 pH	24.68 °C	106.87 µS/cm	0.74 mg/L	1.42 NTU	69.8 mV	15.60 ft	100.00 ml/min
8/2/2022 2:54 PM	35:00	6.04 pH	24.74 °C	107.78 µS/cm	0.76 mg/L	1.44 NTU	70.3 mV	16.05 ft	100.00 ml/min
8/2/2022 2:59 PM	40:00	6.06 pH	24.73 °C	108.57 µS/cm	0.74 mg/L	1.23 NTU	68.7 mV	16.50 ft	100.00 ml/min
8/2/2022 3:04 PM	45:00	6.07 pH	24.71 °C	109.13 µS/cm	0.74 mg/L	1.10 NTU	67.7 mV	16.90 ft	100.00 ml/min
8/2/2022 3:09 PM	50:00	6.07 pH	24.58 °C	109.40 µS/cm	0.73 mg/L	1.14 NTU	67.2 mV	17.45 ft	100.00 ml/min
8/2/2022 3:14 PM	55:00	6.07 pH	24.61 °C	110.45 µS/cm	0.73 mg/L	1.71 NTU	66.8 mV	17.75 ft	100.00 ml/min
8/2/2022 3:19 PM	01:00:00	6.06 pH	24.87 °C	109.48 µS/cm	0.72 mg/L	2.10 NTU	66.8 mV	18.10 ft	100.00 ml/min

8/2/2022 3:24 PM	01:05:00	6.06 pH	24.74 °C	109.74 µS/cm	0.71 mg/L	1.64 NTU	67.0 mV	18.55 ft	100.00 ml/min
8/2/2022 3:29 PM	01:10:00	6.06 pH	24.78 °C	112.12 µS/cm	0.71 mg/L	1.68 NTU	67.0 mV	18.90 ft	100.00 ml/min
8/2/2022 3:34 PM	01:15:00	6.05 pH	24.79 °C	112.61 µS/cm	0.71 mg/L	1.15 NTU	78.1 mV	19.25 ft	100.00 ml/min
8/2/2022 3:39 PM	01:20:00	6.06 pH	24.84 °C	111.31 µS/cm	0.71 mg/L	1.43 NTU	67.0 mV	19.60 ft	100.00 ml/min
8/2/2022 3:44 PM	01:25:00	6.06 pH	24.85 °C	111.13 µS/cm	0.70 mg/L	1.35 NTU	67.6 mV	19.90 ft	100.00 ml/min
8/2/2022 3:49 PM	01:30:00	6.07 pH	24.78 °C	111.19 µS/cm	0.71 mg/L	0.99 NTU	67.2 mV	20.32 ft	100.00 ml/min
8/2/2022 3:54 PM	01:35:00	6.06 pH	25.46 °C	112.15 µS/cm	0.70 mg/L	1.13 NTU	67.8 mV	20.65 ft	100.00 ml/min
8/2/2022 3:59 PM	01:40:00	6.08 pH	26.02 °C	112.15 µS/cm	0.72 mg/L	1.29 NTU	67.2 mV	20.75 ft	100.00 ml/min
8/2/2022 4:04 PM	01:45:00	6.07 pH	25.98 °C	111.33 µS/cm	0.75 mg/L	2.17 NTU	68.2 mV	20.96 ft	100.00 ml/min
8/2/2022 4:09 PM	01:50:00	6.08 pH	25.51 °C	110.83 µS/cm	0.76 mg/L	1.26 NTU	68.0 mV	21.04 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-113	Grab.

Low-Flow Test Report:

Test Date / Time: 8/10/2022 10:54:48 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-101 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.94 ft Total Depth: 37.99 ft Initial Depth to Water: 13.22 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 32.94 ft Estimated Total Volume Pumped: 4 L Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.53 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884186
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Test Notes:

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

Weather Conditions:

Overcast, 75 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/10/2022 10:54 AM	00:00	5.41 pH	19.59 °C	264.36 µS/cm	1.06 mg/L	--	142.6 mV	15.70 ft	200.00 ml/min
8/10/2022 10:59 AM	05:00	5.34 pH	19.57 °C	266.74 µS/cm	0.94 mg/L	--	142.5 mV	15.80 ft	200.00 ml/min
8/10/2022 11:04 AM	10:00	5.34 pH	20.75 °C	270.83 µS/cm	0.98 mg/L	--	163.2 mV	15.75 ft	200.00 ml/min
8/10/2022 11:09 AM	15:00	5.31 pH	21.12 °C	318.40 µS/cm	0.70 mg/L	1.91 NTU	127.7 mV	15.75 ft	200.00 ml/min
8/10/2022 11:14 AM	20:00	5.33 pH	21.54 °C	330.29 µS/cm	0.75 mg/L	1.08 NTU	110.9 mV	15.75 ft	200.00 ml/min
8/10/2022 11:19 AM	25:00	5.33 pH	21.76 °C	339.22 µS/cm	0.72 mg/L	0.87 NTU	123.9 mV	15.75 ft	200.00 ml/min
8/10/2022 11:24 AM	30:00	5.37 pH	21.73 °C	346.46 µS/cm	0.73 mg/L	0.95 NTU	111.9 mV	15.75 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-101	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 2:26:55 PM

Project: GP-Plant Hammond

Operator Name: Tristan Orndorff

Location Name: HGWC-102 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.43 ft Total Depth: 36.87 ft Initial Depth to Water: 12.94 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 32.43 ft Estimated Total Volume Pumped: 7 L Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.28 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883546
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Test Notes:

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

Weather Conditions:

Sunny, hot, 91 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 2:26 PM	00:00	5.70 pH	24.30 °C	849.13 µS/cm	0.27 mg/L	2.20 NTU	89.9 mV	13.20 ft	200.00 ml/min
8/5/2022 2:31 PM	05:00	5.72 pH	22.71 °C	873.85 µS/cm	0.14 mg/L	1.86 NTU	90.1 mV	13.21 ft	200.00 ml/min
8/5/2022 2:36 PM	10:00	5.69 pH	22.54 °C	880.79 µS/cm	0.11 mg/L	2.76 NTU	103.9 mV	13.22 ft	200.00 ml/min
8/5/2022 2:41 PM	15:00	5.71 pH	22.11 °C	879.26 µS/cm	0.09 mg/L	2.20 NTU	105.6 mV	13.22 ft	200.00 ml/min
8/5/2022 2:46 PM	20:00	5.69 pH	21.86 °C	881.13 µS/cm	0.09 mg/L	1.91 NTU	90.6 mV	13.22 ft	200.00 ml/min
8/5/2022 2:51 PM	25:00	5.69 pH	21.75 °C	885.65 µS/cm	0.08 mg/L	2.98 NTU	107.7 mV	13.22 ft	200.00 ml/min
8/5/2022 2:56 PM	30:00	5.69 pH	21.66 °C	884.61 µS/cm	0.08 mg/L	2.06 NTU	105.6 mV	13.22 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-102	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 12:21:57 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-103 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.68 ft Total Depth: 37.61 ft Initial Depth to Water: 13.69 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 32.68 ft Estimated Total Volume Pumped: 23 L Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884186
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Test Notes:

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

Weather Conditions:

Sunny, 85 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 12:21 PM	00:00	5.74 pH	21.76 °C	844.69 µS/cm	0.95 mg/L	92.90 NTU	49.7 mV	13.84 ft	200.00 ml/min
8/5/2022 12:26 PM	05:00	5.72 pH	20.61 °C	878.86 µS/cm	0.56 mg/L	68.20 NTU	81.9 mV	13.84 ft	200.00 ml/min
8/5/2022 12:31 PM	10:00	5.71 pH	20.57 °C	872.94 µS/cm	0.29 mg/L	65.40 NTU	107.7 mV	13.84 ft	200.00 ml/min
8/5/2022 12:36 PM	15:00	5.71 pH	20.62 °C	866.79 µS/cm	0.26 mg/L	64.30 NTU	109.6 mV	13.84 ft	200.00 ml/min
8/5/2022 12:41 PM	20:00	5.71 pH	20.78 °C	867.22 µS/cm	0.21 mg/L	38.00 NTU	111.4 mV	13.84 ft	200.00 ml/min
8/5/2022 12:46 PM	25:00	5.71 pH	20.55 °C	865.42 µS/cm	0.19 mg/L	27.00 NTU	112.3 mV	13.84 ft	200.00 ml/min
8/5/2022 12:51 PM	30:00	5.71 pH	20.48 °C	870.48 µS/cm	0.16 mg/L	23.50 NTU	113.5 mV	13.84 ft	200.00 ml/min
8/5/2022 12:56 PM	35:00	5.71 pH	20.53 °C	870.59 µS/cm	0.18 mg/L	18.10 NTU	111.9 mV	13.84 ft	200.00 ml/min
8/5/2022 1:01 PM	40:00	5.71 pH	20.68 °C	867.97 µS/cm	0.13 mg/L	17.20 NTU	111.5 mV	13.84 ft	200.00 ml/min
8/5/2022 1:06 PM	45:00	5.71 pH	20.66 °C	868.04 µS/cm	0.12 mg/L	14.60 NTU	112.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:11 PM	50:00	5.71 pH	20.62 °C	867.31 µS/cm	0.12 mg/L	12.80 NTU	112.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:16 PM	55:00	5.71 pH	20.32 °C	867.47 µS/cm	0.11 mg/L	10.69 NTU	112.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:21 PM	01:00:00	5.71 pH	20.15 °C	869.79 µS/cm	0.10 mg/L	9.47 NTU	112.2 mV	13.84 ft	200.00 ml/min

8/5/2022 1:26 PM	01:05:00	5.71 pH	20.05 °C	869.87 µS/cm	0.10 mg/L	8.39 NTU	112.6 mV	13.84 ft	200.00 ml/min
8/5/2022 1:31 PM	01:10:00	5.71 pH	20.14 °C	870.25 µS/cm	0.10 mg/L	7.38 NTU	113.0 mV	13.84 ft	200.00 ml/min
8/5/2022 1:36 PM	01:15:00	5.71 pH	20.17 °C	868.44 µS/cm	0.10 mg/L	7.54 NTU	111.8 mV	13.84 ft	200.00 ml/min
8/5/2022 1:41 PM	01:20:00	5.71 pH	19.90 °C	873.37 µS/cm	0.09 mg/L	6.71 NTU	92.0 mV	13.84 ft	200.00 ml/min
8/5/2022 1:46 PM	01:25:00	5.71 pH	19.83 °C	867.19 µS/cm	0.11 mg/L	6.19 NTU	111.5 mV	13.84 ft	200.00 ml/min
8/5/2022 1:51 PM	01:30:00	5.71 pH	19.78 °C	868.73 µS/cm	0.10 mg/L	5.46 NTU	111.9 mV	13.84 ft	200.00 ml/min
8/5/2022 1:56 PM	01:35:00	5.71 pH	19.95 °C	870.00 µS/cm	0.10 mg/L	5.62 NTU	111.3 mV	13.84 ft	200.00 ml/min
8/5/2022 2:01 PM	01:40:00	5.71 pH	20.11 °C	874.26 µS/cm	0.10 mg/L	5.32 NTU	90.0 mV	13.84 ft	200.00 ml/min
8/5/2022 2:06 PM	01:45:00	5.71 pH	19.97 °C	869.79 µS/cm	0.09 mg/L	5.11 NTU	109.1 mV	13.84 ft	200.00 ml/min
8/5/2022 2:11 PM	01:50:00	5.71 pH	19.91 °C	867.78 µS/cm	0.09 mg/L	5.55 NTU	109.5 mV	13.84 ft	200.00 ml/min
8/5/2022 2:16 PM	01:55:00	5.71 pH	19.77 °C	871.59 µS/cm	0.10 mg/L	4.98 NTU	89.1 mV	13.84 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-103	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 11:03:42 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-105 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.67 ft Total Depth: 44.89 ft Initial Depth to Water: 17.79 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 39.67 ft Estimated Total Volume Pumped: 7 L Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.26 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884186
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Test Notes:

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

Weather Conditions:

Sunny, 85 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 11:03 AM	00:00	6.45 pH	20.82 °C	660.62 µS/cm	1.01 mg/L	21.00 NTU	0.9 mV	18.05 ft	200.00 ml/min
8/5/2022 11:08 AM	05:00	6.52 pH	19.77 °C	762.46 µS/cm	0.39 mg/L	13.20 NTU	18.0 mV	18.05 ft	200.00 ml/min
8/5/2022 11:13 AM	10:00	6.50 pH	19.64 °C	742.52 µS/cm	0.39 mg/L	7.52 NTU	10.3 mV	18.05 ft	200.00 ml/min
8/5/2022 11:18 AM	15:00	6.48 pH	19.50 °C	732.60 µS/cm	0.25 mg/L	5.66 NTU	5.3 mV	18.05 ft	200.00 ml/min
8/5/2022 11:23 AM	20:00	6.48 pH	19.46 °C	727.10 µS/cm	0.23 mg/L	4.29 NTU	4.1 mV	18.05 ft	200.00 ml/min
8/5/2022 11:28 AM	25:00	6.47 pH	19.51 °C	721.78 µS/cm	0.19 mg/L	3.46 NTU	3.3 mV	18.05 ft	200.00 ml/min
8/5/2022 11:33 AM	30:00	6.46 pH	19.52 °C	714.73 µS/cm	0.17 mg/L	2.83 NTU	1.3 mV	18.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-105	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 3:06:23 PM

Project: GP-Plant Hammond

Operator Name: Anthony Szwast

Location Name: HGWC-107 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.2 ft Total Depth: 38.03 ft Initial Depth to Water: 15.01 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 33.2 ft Estimated Total Volume Pumped: 8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 843593
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Test Notes:

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

Weather Conditions:

Sunny, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 3:06 PM	00:00	5.60 pH	22.85 °C	396.45 µS/cm	0.84 mg/L	2.19 NTU	112.1 mV	15.04 ft	200.00 ml/min
8/5/2022 3:11 PM	05:00	5.53 pH	21.69 °C	402.33 µS/cm	0.46 mg/L	2.15 NTU	153.8 mV	15.05 ft	200.00 ml/min
8/5/2022 3:16 PM	10:00	5.35 pH	21.51 °C	402.91 µS/cm	0.25 mg/L	2.08 NTU	171.6 mV	15.07 ft	200.00 ml/min
8/5/2022 3:21 PM	15:00	5.54 pH	21.37 °C	398.87 µS/cm	0.18 mg/L	2.12 NTU	166.1 mV	15.08 ft	200.00 ml/min
8/5/2022 3:26 PM	20:00	5.80 pH	22.27 °C	397.77 µS/cm	0.17 mg/L	1.68 NTU	163.9 mV	15.08 ft	200.00 ml/min
8/5/2022 3:31 PM	25:00	5.98 pH	21.68 °C	404.22 µS/cm	0.16 mg/L	1.80 NTU	168.4 mV	15.08 ft	200.00 ml/min
8/5/2022 3:36 PM	30:00	6.03 pH	21.28 °C	404.41 µS/cm	0.13 mg/L	1.14 NTU	169.6 mV	15.08 ft	200.00 ml/min
8/5/2022 3:41 PM	35:00	6.07 pH	21.23 °C	404.40 µS/cm	0.12 mg/L	1.08 NTU	204.5 mV	15.08 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-107	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 10:55:45 AM

Project: GP-Plant Hammond

Operator Name: Tristan Orndorff

Location Name: HGWC-109 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.36 ft Total Depth: 30.96 ft Initial Depth to Water: 8.75 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 26.36 ft Estimated Total Volume Pumped: 29.8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883546
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Test Notes:

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

Weather Conditions:

Sunny, humid, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 10:55 AM	00:00	6.80 pH	20.39 °C	377.50 µS/cm	1.27 mg/L	732.00 AU	-33.0 mV	8.78 ft	200.00 ml/min
8/5/2022 11:00 AM	05:00	6.83 pH	19.74 °C	381.37 µS/cm	0.68 mg/L	159.00 NTU	-29.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:05 AM	10:00	6.83 pH	19.53 °C	382.48 µS/cm	0.51 mg/L	106.90 NTU	-32.4 mV	8.78 ft	200.00 ml/min
8/5/2022 11:06 AM	10:56	6.83 pH	19.52 °C	382.14 µS/cm	0.48 mg/L	106.90 NTU	-32.9 mV	8.78 ft	200.00 ml/min
8/5/2022 11:11 AM	15:56	6.84 pH	19.48 °C	381.98 µS/cm	0.33 mg/L	47.50 NTU	-35.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:16 AM	20:56	6.83 pH	19.42 °C	381.47 µS/cm	0.25 mg/L	33.40 NTU	-64.4 mV	8.78 ft	200.00 ml/min
8/5/2022 11:21 AM	25:56	6.83 pH	19.34 °C	380.79 µS/cm	0.20 mg/L	20.30 NTU	-64.1 mV	8.78 ft	200.00 ml/min
8/5/2022 11:26 AM	30:56	6.83 pH	19.39 °C	380.41 µS/cm	0.16 mg/L	15.10 NTU	-64.4 mV	8.78 ft	200.00 ml/min
8/5/2022 11:31 AM	35:56	6.83 pH	19.39 °C	378.88 µS/cm	0.14 mg/L	12.70 NTU	-64.3 mV	8.78 ft	200.00 ml/min
8/5/2022 11:36 AM	40:56	6.83 pH	19.43 °C	379.68 µS/cm	0.13 mg/L	14.20 NTU	-64.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:41 AM	45:56	6.82 pH	19.50 °C	379.05 µS/cm	0.12 mg/L	13.14 NTU	-64.7 mV	8.78 ft	200.00 ml/min
8/5/2022 11:46 AM	50:56	6.82 pH	19.50 °C	380.32 µS/cm	0.26 mg/L	12.06 NTU	-65.1 mV	8.78 ft	200.00 ml/min
8/5/2022 11:51 AM	55:56	6.82 pH	19.61 °C	379.45 µS/cm	0.12 mg/L	9.88 NTU	-38.7 mV	8.78 ft	200.00 ml/min

8/5/2022 11:56 AM	01:00:56	6.82 pH	19.60 °C	379.55 µS/cm	0.13 mg/L	10.11 NTU	-65.3 mV	8.78 ft	200.00 ml/min
8/5/2022 12:01 PM	01:05:56	6.81 pH	19.57 °C	379.37 µS/cm	0.18 mg/L	10.17 NTU	-39.0 mV	8.78 ft	200.00 ml/min
8/5/2022 12:05 PM	01:09:23	6.81 pH	19.54 °C	379.67 µS/cm	0.11 mg/L	8.07 NTU	-40.7 mV	8.78 ft	200.00 ml/min
8/5/2022 12:10 PM	01:14:23	6.81 pH	19.52 °C	378.58 µS/cm	0.12 mg/L	7.94 NTU	-66.1 mV	8.78 ft	200.00 ml/min
8/5/2022 12:15 PM	01:19:23	6.81 pH	19.57 °C	377.75 µS/cm	0.11 mg/L	6.70 NTU	-66.4 mV	8.78 ft	200.00 ml/min
8/5/2022 12:20 PM	01:24:23	6.81 pH	19.57 °C	377.38 µS/cm	0.11 mg/L	6.79 NTU	-40.4 mV	8.78 ft	200.00 ml/min
8/5/2022 12:25 PM	01:29:23	6.81 pH	19.57 °C	378.61 µS/cm	0.11 mg/L	5.93 NTU	-67.0 mV	8.78 ft	200.00 ml/min
8/5/2022 12:30 PM	01:34:23	6.80 pH	19.66 °C	376.39 µS/cm	0.11 mg/L	7.44 NTU	-66.7 mV	8.78 ft	200.00 ml/min
8/5/2022 12:35 PM	01:39:23	6.80 pH	19.70 °C	377.89 µS/cm	0.17 mg/L	5.81 NTU	-41.3 mV	8.78 ft	200.00 ml/min
8/5/2022 12:40 PM	01:44:23	6.80 pH	20.19 °C	377.71 µS/cm	0.15 mg/L	6.71 NTU	-43.9 mV	8.78 ft	200.00 ml/min
8/5/2022 12:45 PM	01:49:23	6.80 pH	20.81 °C	377.19 µS/cm	0.20 mg/L	7.95 NTU	-44.7 mV	8.78 ft	200.00 ml/min
8/5/2022 12:50 PM	01:54:23	6.79 pH	21.02 °C	376.20 µS/cm	0.22 mg/L	6.68 NTU	-46.6 mV	8.78 ft	200.00 ml/min
8/5/2022 12:55 PM	01:59:23	6.79 pH	21.69 °C	374.83 µS/cm	0.24 mg/L	7.43 NTU	-69.9 mV	8.78 ft	200.00 ml/min
8/5/2022 1:00 PM	02:04:23	6.79 pH	21.91 °C	376.03 µS/cm	0.23 mg/L	6.61 NTU	-70.3 mV	8.78 ft	200.00 ml/min
8/5/2022 1:05 PM	02:09:23	6.79 pH	22.08 °C	376.22 µS/cm	0.23 mg/L	6.57 NTU	-70.4 mV	8.78 ft	200.00 ml/min
8/5/2022 1:10 PM	02:14:23	6.79 pH	22.29 °C	376.10 µS/cm	0.24 mg/L	6.85 NTU	-70.9 mV	8.78 ft	200.00 ml/min
8/5/2022 1:15 PM	02:19:23	6.80 pH	21.64 °C	366.97 µS/cm	0.22 mg/L	6.48 NTU	-68.2 mV	8.78 ft	200.00 ml/min
8/5/2022 1:20 PM	02:24:23	6.81 pH	19.77 °C	377.98 µS/cm	0.08 mg/L	4.07 NTU	-68.7 mV	8.78 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-109	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 12:45:55 PM

Project: GP-Plant Hammond

Operator Name: Anthony Szwast

Location Name: HGWC-117 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.26 ft Total Depth: 39.83 ft Initial Depth to Water: 16.90 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 35.26 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 843593
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Test Notes:

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

Weather Conditions:

Sunny, 85 degree F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 12:45 PM	00:00	5.30 pH	24.49 °C	200.76 µS/cm	0.31 mg/L	0.29 NTU	167.4 mV	16.92 ft	200.00 ml/min
8/5/2022 12:50 PM	05:00	5.30 pH	23.08 °C	246.36 µS/cm	0.20 mg/L	0.18 NTU	175.8 mV	16.92 ft	200.00 ml/min
8/5/2022 12:55 PM	10:00	5.40 pH	23.01 °C	330.54 µS/cm	0.16 mg/L	0.16 NTU	222.9 mV	16.92 ft	200.00 ml/min
8/5/2022 1:00 PM	15:00	5.47 pH	22.80 °C	365.45 µS/cm	0.15 mg/L	0.00 NTU	184.1 mV	16.92 ft	200.00 ml/min
8/5/2022 1:05 PM	20:00	5.47 pH	22.89 °C	372.07 µS/cm	0.14 mg/L	0.01 NTU	178.8 mV	16.92 ft	200.00 ml/min
8/5/2022 1:10 PM	25:00	5.46 pH	22.35 °C	378.74 µS/cm	0.16 mg/L	0.00 NTU	187.9 mV	16.92 ft	200.00 ml/min
8/5/2022 1:15 PM	30:00	5.46 pH	22.64 °C	385.80 µS/cm	0.14 mg/L	0.07 NTU	185.4 mV	16.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-117	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 10:57:03 AM

Project: GP-Plant Hammond

Operator Name: Anthony Szwast

Location Name: HGWC-117A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.31 ft Total Depth: 40.29 ft Initial Depth to Water: 16.69 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 35.31 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 843593
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Test Notes:

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

Weather Conditions:

Sunny, 80 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 10:57 AM	00:00	5.49 pH	21.99 °C	259.63 µS/cm	1.15 mg/L	3.31 NTU	135.7 mV	16.72 ft	200.00 ml/min
8/5/2022 11:02 AM	05:00	5.50 pH	21.83 °C	256.65 µS/cm	1.03 mg/L	3.10 NTU	149.0 mV	16.72 ft	200.00 ml/min
8/5/2022 11:07 AM	10:00	5.51 pH	21.77 °C	257.04 µS/cm	0.95 mg/L	1.97 NTU	148.4 mV	16.72 ft	200.00 ml/min
8/5/2022 11:12 AM	15:00	5.66 pH	21.91 °C	266.30 µS/cm	0.89 mg/L	1.39 NTU	134.6 mV	16.72 ft	200.00 ml/min
8/5/2022 11:17 AM	20:00	5.94 pH	21.99 °C	304.70 µS/cm	0.74 mg/L	2.20 NTU	107.3 mV	16.72 ft	200.00 ml/min
8/5/2022 11:22 AM	25:00	6.15 pH	22.09 °C	337.48 µS/cm	0.56 mg/L	1.55 NTU	89.2 mV	16.72 ft	200.00 ml/min
8/5/2022 11:27 AM	30:00	6.29 pH	22.27 °C	362.19 µS/cm	0.48 mg/L	0.90 NTU	77.5 mV	16.72 ft	200.00 ml/min
8/5/2022 11:32 AM	35:00	6.37 pH	22.27 °C	376.82 µS/cm	0.43 mg/L	1.14 NTU	73.8 mV	16.72 ft	200.00 ml/min
8/5/2022 11:37 AM	40:00	6.44 pH	22.22 °C	385.64 µS/cm	0.40 mg/L	1.37 NTU	70.7 mV	16.72 ft	200.00 ml/min
8/5/2022 11:42 AM	45:00	6.44 pH	22.26 °C	387.16 µS/cm	0.38 mg/L	0.97 NTU	72.3 mV	16.72 ft	200.00 ml/min

Samples

Sample ID:	Description:
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HGWC-117A

Grab.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/5/2022 3:19:31 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-118 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.91 ft Total Depth: 40.70 ft Initial Depth to Water: 13.40 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 35.91 ft Estimated Total Volume Pumped: 7.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884186
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Test Notes:

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

Weather Conditions:

Sunny, 90 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/5/2022 3:19 PM	00:00	7.04 pH	25.69 °C	503.24 µS/cm	0.61 mg/L	1.14 NTU	51.6 mV	13.40 ft	200.00 ml/min
8/5/2022 3:24 PM	05:00	7.05 pH	23.25 °C	489.84 µS/cm	0.28 mg/L	1.14 NTU	62.0 mV	13.40 ft	200.00 ml/min
8/5/2022 3:25 PM	05:38	7.05 pH	22.91 °C	505.18 µS/cm	0.24 mg/L	2.00 NTU	60.3 mV	13.40 ft	200.00 ml/min
8/5/2022 3:27 PM	08:13	7.05 pH	22.60 °C	508.67 µS/cm	0.17 mg/L	2.20 NTU	59.5 mV	13.40 ft	200.00 ml/min
8/5/2022 3:32 PM	13:13	7.06 pH	22.44 °C	491.47 µS/cm	0.13 mg/L	1.50 NTU	71.5 mV	13.40 ft	200.00 ml/min
8/5/2022 3:37 PM	18:13	7.06 pH	22.27 °C	491.35 µS/cm	0.11 mg/L	1.42 NTU	73.0 mV	13.40 ft	200.00 ml/min
8/5/2022 3:42 PM	23:13	7.06 pH	22.36 °C	490.60 µS/cm	0.10 mg/L	1.04 NTU	73.0 mV	13.40 ft	200.00 ml/min
8/5/2022 3:47 PM	28:13	7.05 pH	22.31 °C	491.69 µS/cm	0.09 mg/L	1.21 NTU	72.6 mV	13.40 ft	200.00 ml/min
8/5/2022 3:52 PM	33:13	7.07 pH	22.48 °C	488.99 µS/cm	0.09 mg/L	0.98 NTU	70.5 mV	13.40 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-118	Grab.

Dup-4	Grab.
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CALIBRATION REPORTS

EQUIPMENT CALIBRATION LOG

Field Technician Tristan O

Date 8/2/22

Time (start): 7:18

Time (finish): 7:40

smarTroll SN: 883546

Turbidity Meter Type LaMotte 2020we

SN: 11603

Weather Conditions: Cloudy, 80°

Facility and Unit Plant Hammond

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032 04/2023	25°	4490	4291	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.16	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	/		4.00	4.08	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	21380102 04/23	24.1	7.00	7.14	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check			/		7.00	7.01	7.00	+/- 0.1 SU
pH (10)	26080056 04/23	23.9	10.00	10.47	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check			/		10.00	9.95	10.00	+/- 0.1 SU
ORP (mV)	21140143 04/23	24.2	228	225.1	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	101.54	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.88	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.99	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	10.18	9.99	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date 8/12/2022

Time (start): 0715

Time (finish): 0730

smarTroll SN 884185

Turbidity Meter Type LaMotte 2020we

SN 2289-2672

Weather Conditions Cloudy, 75°

Facility and Unit Plant Hammond

Project No. GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032	25	4490	4837	4490	+/- 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	041123		4.00	4.07	4.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	 	 	4.00	4.05	 	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21880632 041123	23.91	7.00	7.25	7.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	 	 	7.00	7.00	 	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	20080656 41123	24.12	10.00	10.91	10.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	 	24.24	10.00	9.96	 	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	21140143 41123	24.24	228	215	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	104.83	100	+/- 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.94	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.96	0.98	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	0.85	10.01	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Anthony S.

Date: 6/5/2022

Time (start): 8:00

Time (finish): 8:25

smarTroll SN: 843593

Turbidity Meter Type: LaMotte 2020we

SN: 1511-4111

Weather Conditions: Sunny, 75°F

Facility and Unit: Plant Hammond

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21070193 08/2022	25.95	4490	4490.0	4490.0	+/- 5 %	Yes No	
pH (4)		26.72	4.00	4.11	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	21070193 08/2022	35.63	4.00	4.04	—	+/- 0.1 SU	Yes No	
pH (7)	21380102 04/2023	27.37	7.00	7.09	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check		35.17	7.00	6.98	—	+/- 0.1 SU	Yes No	
pH (10)	20080056 04/2023	27.63	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check		34.38	10.00	9.92	—	+/- 0.1 SU	Yes No	
ORP (mV)	21140143 04/2023	27.48	228	221.3	228.0	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	101.28	100.0	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.01	0.0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.88	1.0	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.59	10.0	+/- 0.5 NTU	Yes No	

8/5/2022

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date 8/5/22

Time (start): 0800

Time (finish): 0830

SmartTroll SN 884186

Turbidity Meter Type LaMote 2020we

SN 22E97677

Weather Conditions Clear/overcast, 75°

Facility and Unit Plant Hammonds

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)	<u>21470032</u>	<u>24.52</u>	<u>4490</u>	<u>4592</u>	<u>4490</u>	<u>+/- 5%</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	<u>04123</u>		<u>4.00</u>	<u>6.02</u>	<u>4.0</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	_____	_____	<u>4.00</u>	<u>4.02</u>	_____	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	<u>21386102</u>	<u>26.06</u>	<u>7.00</u>	<u>7.00</u>	<u>7.00</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	<u>04123</u>		_____	<u>7.00</u>	<u>6.98</u>	_____	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No
pH (10)	<u>20080665</u>	<u>26.42</u>	<u>10.00</u>	<u>9.98</u>	<u>10.0</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	<u>4/23</u>		_____	<u>10.00</u>	<u>10.00</u>	_____	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No
ORP (mV)	<u>21140145</u>	<u>26.52</u>	<u>228</u>	<u>225.9</u>	<u>228</u>	<u>+/- 20mV</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)	_____		_____	<u>100</u>	<u>98.49</u>	<u>100</u>	<u>+/- 6% saturation</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No
Turbidity 0 NTU	_____	_____	<u>0</u>	<u>1.5</u>	<u>0.0</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU	_____	_____	<u>1.00</u>	<u>1.5</u>	<u>1.1</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU	_____	_____	<u>10.00</u>	<u>7.71</u>	<u>9.97</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 8/10/2022 Time (start): 0710 Time (finish): 0730
 smarTroll SN: 884180 Turbidity Meter Type: LaMotte 2020we SN: 22892677
 Weather Conditions: Overcast, 75° Facility and Unit: Plant Hammond Project No.: GW6581

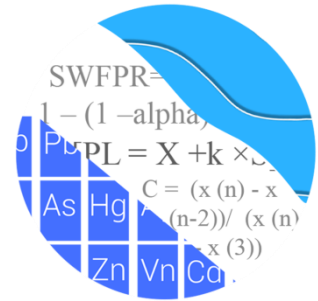
Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	21470032 04/23	23.54	4490	4470.8 4470.8	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.03	4.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00	4.00		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21380102 04/23	23.77	7.00	7.05	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	20050056 04/23		7.00	6.98		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)		23.96	10.00	9.93	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			10.00	10.0		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	2140145 5/21	24.06	228	231.3	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	99.62	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	1.69	0.0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.32	1.21	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	11.3	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

APPENDIX C

Statistical Analysis Report

GROUNDWATER STATS CONSULTING



February 28, 2023

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd. NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 4 (AP-4)
August 2022 Semi-Annual Statistical Analysis

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August 2022 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-4. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for Hammond AP-4 in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells analyzed in this report. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113
- **Downgradient wells:** HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, and HGWC-118
- **Piezometer:** HGWC-117A

Note that downgradient well HGWC-102 was first sampled in October 2019 and upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and

currently have at least 8 samples; therefore, data from this well were evaluated during this statistical analysis. Upgradient well data are included in construction of interwell prediction limits when a minimum of 2 samples are available and downgradient wells are evaluated with prediction limits once they have reached a minimum of 8 samples.

Piezometer HGWC-117A was first sampled in February 2021 and currently has four samples. Therefore, this well is included on the time series graphs and box plots, and also has reached the minimum number of samples for Appendix IV parameters to be evaluated with confidence intervals.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting.

The Coal Combustion Residuals (CCR) program consists of the following constituents listed below. The terms "constituent" and "parameter" are interchangeable.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. This generally gives the most conservative limit in each case. In the case of lithium, historical reporting limits vary among the wells. Therefore, the reporting limit of 0.03 mg/L was substituted across all wells, which is the most recent reporting limit provided by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Data at all wells were initially evaluated during the background screening described below for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the screening and demonstrated that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Statistical Methods – Appendix III Parameters

Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan for all constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit will be shown as the original reporting limit.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, an earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. When this step is required a summary of any adjusted records will be provided. No records were adjusted at this time.

Summary of Background Screening Conducted in April 2019

Outlier Analysis

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey box plot method, a few outliers were identified. Often, when the most recent value is identified as an outlier, values are not flagged in the database at this time as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged as all other values are similar to remaining measurements within a given well or neighboring wells, or were reported non-detects.

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data

pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Tests

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses were included with the screening and showed a few statistically significant decreasing and increasing trends for the Appendix III parameters. Most trends noted were relatively low in magnitude when compared to average concentrations, and the background period is short; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. However, interwell methods are currently implemented in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Evaluation of Appendix III Parameters – August 2022

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

Interwell Prediction Limits

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

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When a resample confirms the initial exceedance, a statistically significant increase is identified and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Several prediction limit exceedances were noted for Appendix III parameters. A summary table of the interwell prediction limits follows this letter.

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient trends, it is an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWC-101

- Calcium: HGWA-113 (upgradient), HGWC-103, and HGWC-105
- Chloride: HGWC-103
- TDS: HGWC-105

Decreasing trends:

- Boron: HGWC-109
- Sulfate: HGWC-109, HGWC-112 (upgradient), and HGWA-113 (upgradient)

Statistical Methods – Appendix IV Parameters

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (Maximum Containment Limits (MCL) or CCR rule-specified limits) or site-specific limits that are based on upgradient background groundwater quality. Site-specific background limits are determined using tolerance limits, and the comparison of downgradient means or medians to GWPS is performed using confidence intervals. The methods are described below.

Statistical Evaluation of Appendix IV Parameters – August 2022

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% non-detects do not require analysis. Data from upgradient wells for Appendix IV parameters are reassessed for outliers during each analysis. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

Interwell Upper Tolerance Limits

First, interwell tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through August 2022 for Appendix IV constituents (Figure F). As mentioned above, a reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

Groundwater Protection Standards

The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, Federal and State CCR Rules specify levels for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

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

Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well (Figure H). As mentioned above, well/constituent pairs with 100% non-detects did not require statistics, which includes all downgradient wells for molybdenum.

The Sanitas software was used to calculate both the tolerance limits and the confidence intervals. Confidence intervals were compared to the GWPS prepared as described above. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. A summary of the confidence intervals follows this letter. A confidence interval exceedance was identified for the following well/constituent pair:

- Cobalt: HGWC-117

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-4. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Tristan Clark
Groundwater Analyst



Andrew T. Collins
Project Manager

100% Non-Detects: Appendix IV Downgradient & Piezometer

Analysis Run 10/7/2022 1:12 PM View: AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Antimony (mg/L)

HGWC-101, HGWC-105, HGWC-109, HGWC-117A, HGWC-118

Arsenic (mg/L)

HGWC-103, HGWC-105, HGWC-107, HGWC-117A

Beryllium (mg/L)

HGWC-102, HGWC-105, HGWC-107, HGWC-109, HGWC-117A

Cadmium (mg/L)

HGWC-105, HGWC-109, HGWC-118

Chromium (mg/L)

HGWC-117A

Cobalt (mg/L)

HGWC-107

Lead (mg/L)

HGWC-117A

Lithium (mg/L)

HGWC-101

Molybdenum (mg/L)

HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-117A, HGWC-118

Selenium (mg/L)

HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-117A, HGWC-118

Thallium (mg/L)

HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-117A, HGWC-118

Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method	
Boron (mg/L)	HGWC-101	0.01907	n/a	8/10/2022	0.17	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.01907	n/a	8/5/2022	2.9	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.01907	n/a	8/5/2022	3.6	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.01907	n/a	8/5/2022	1.3	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.01907	n/a	8/5/2022	0.79	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.01907	n/a	8/5/2022	0.25	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.01907	n/a	8/5/2022	0.85	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.01907	n/a	8/5/2022	0.57	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	8/5/2022	127	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	8/5/2022	128	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	8/5/2022	121	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	8/5/2022	88.5	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	8/5/2022	7.7	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	8/5/2022	7.8	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	8/10/2022	5.37	Yes	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	8/10/2022	99.5	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	8/5/2022	358	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	8/5/2022	369	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	8/5/2022	217	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	8/5/2022	120	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	8/5/2022	23	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	8/5/2022	132	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	8/5/2022	69.8	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	8/5/2022	696	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	8/5/2022	692	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	8/5/2022	514	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method	
Boron (mg/L)	HGWC-101	0.01907	n/a	8/10/2022	0.17	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.01907	n/a	8/5/2022	2.9	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.01907	n/a	8/5/2022	3.6	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.01907	n/a	8/5/2022	1.3	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.01907	n/a	8/5/2022	0.79	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.01907	n/a	8/5/2022	0.25	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.01907	n/a	8/5/2022	0.85	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.01907	n/a	8/5/2022	0.57	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-101	73.8	n/a	8/10/2022	24.6	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	8/5/2022	127	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	8/5/2022	128	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	8/5/2022	121	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-107	73.8	n/a	8/5/2022	63	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.8	n/a	8/5/2022	50.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-117	73.8	n/a	8/5/2022	44.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	8/5/2022	88.5	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-101	5.7	n/a	8/10/2022	5.5	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	8/5/2022	7.7	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	8/5/2022	7.8	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-105	5.7	n/a	8/5/2022	5	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-107	5.7	n/a	8/5/2022	2.7	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109	5.7	n/a	8/5/2022	3.7	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	5.7	n/a	8/5/2022	4.4	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	8/5/2022	3.8	No	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1718	n/a	8/10/2022	0.065J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.1718	n/a	8/5/2022	0.076J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1718	n/a	8/5/2022	0.071J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1718	n/a	8/5/2022	0.075J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1718	n/a	8/5/2022	0.093J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1718	n/a	8/5/2022	0.14	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.1718	n/a	8/5/2022	0.075J	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1718	n/a	8/5/2022	0.12	No	70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	8/10/2022	5.37	Yes	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.43	8/5/2022	5.69	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.43	8/5/2022	5.71	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.43	8/5/2022	6.46	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.43	8/5/2022	6.07	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.43	8/5/2022	6.81	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.43	8/5/2022	5.46	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.43	8/5/2022	7.07	No	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	8/10/2022	99.5	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	8/5/2022	358	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	8/5/2022	369	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	8/5/2022	217	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	8/5/2022	120	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	8/5/2022	23	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	8/5/2022	132	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	8/5/2022	69.8	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-101	345	n/a	8/10/2022	232	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	8/5/2022	696	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	8/5/2022	692	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	8/5/2022	514	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-107	345	n/a	8/5/2022	274	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	345	n/a	8/5/2022	195	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	345	n/a	8/5/2022	285	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	345	n/a	8/5/2022	329	No	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Appendix III Trend Test - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWC-101	0.009687	64	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109	-0.0308	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3418	76	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	5.956	74	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	6.246	106	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.3864	70	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02278	-62	-58	Yes	16	25	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.014	-66	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-3.076	-74	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105	19.84	66	63	Yes	17	0	n/a	n/a	0.01	NP

Appendix III Trend Test - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0.00007638	9	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.0003539	-17	-58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.000724	18	58	No	16	18.75	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.005573	12	21	No	8	50	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.002125	-13	-21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101	0.009687	64	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102	-0.2643	-27	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.1032	56	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.0106	20	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.02644	53	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109	-0.0308	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-117	0.01627	27	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.007608	-12	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.818	36	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.1075	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3418	76	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-47 (bg)	0.78	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	1.284	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-2.773	-9	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	5.956	74	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	6.246	106	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-118	1.33	58	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.04964	-14	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	-0.009605	-13	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.05023	-45	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	-0.1139	-12	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	0	3	38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.3864	70	63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-111 (bg)	0.05655	26	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.0274	-58	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02397	52	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-47 (bg)	-0.02056	-3	-21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-48D (bg)	0	0	21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01429	47	74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	-0.0222	-24	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02278	-62	-58	Yes	16	25	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.014	-66	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-47 (bg)	-0.8098	-14	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-0.7764	-8	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.614	-42	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-11.09	-10	-38	No	12	8.333	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	3.311	21	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-3.257	-21	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.917	-61	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-3.076	-74	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117	-3.182	-33	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-1.699	-45	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	4.343	13	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.537	-19	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	0	1	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	11.65	8	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-38.24	-21	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	9.656	24	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105	19.84	66	63	Yes	17	0	n/a	n/a	0.01	NP

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	53	n/a	n/a	92.45	n/a	n/a	0.06597	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	92.54	n/a	n/a	0.03217	NP Inter(NDs)
Barium (mg/L)	n/a	0.11	n/a	n/a	n/a	67	n/a	n/a	0	n/a	n/a	0.03217	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0019	n/a	n/a	n/a	67	n/a	n/a	89.55	n/a	n/a	0.03217	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	67	n/a	n/a	100	n/a	n/a	0.03217	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0061	n/a	n/a	n/a	67	n/a	n/a	35.82	n/a	n/a	0.03217	NP Inter(normality)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	88.06	n/a	n/a	0.03217	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	n/a	1.303	n/a	n/a	n/a	67	0.606	0.3494	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.1743	n/a	n/a	n/a	70	0.2617	0.07844	24.29	Kaplan-Meier	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.0016	n/a	n/a	n/a	67	n/a	n/a	68.66	n/a	n/a	0.03217	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	67	n/a	n/a	38.81	n/a	n/a	0.03217	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	53	n/a	n/a	77.36	n/a	n/a	0.06597	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	53	n/a	n/a	84.91	n/a	n/a	0.06597	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	53	n/a	n/a	79.25	n/a	n/a	0.06597	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	53	n/a	n/a	100	n/a	n/a	0.06597	NP Inter(NDs)

PLANT HAMMOND AP-4 GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.11	2
Beryllium, Total (mg/L)	0.004		0.0019	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0061	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.005	0.006
Combined Radium, Total (pCi/L)	5		1.3	5
Fluoride, Total (mg/L)	4		0.17	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-117	0.01281	0.006091	0.006	Yes	18	0	sqrt(x)	0.01	Param.

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.003	0.006	No	11	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-117	0.003	0.0012	0.006	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	17	94.12	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	12	66.67	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-109	0.002838	0.001558	0.01	No	17	5.882	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	18	94.44	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	17	94.12	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04568	0.03977	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03307	0.0271	2	No	12	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04044	0.03555	2	No	17	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.075	0.066	2	No	17	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03917	0.0363	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08767	0.08086	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.04931	0.04073	2	No	18	0	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.0907	0.0318	2	No	4	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.0618	0.05074	2	No	17	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	17	47.06	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	17	76.47	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.0005	0.000068	0.004	No	18	55.56	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	17	94.12	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.00011	0.005	No	17	17.65	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006894	0.0003139	0.005	No	12	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007959	0.0006841	0.005	No	17	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.0001	0.005	No	17	58.82	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0009479	0.0006476	0.005	No	18	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	4	75	No	0.0625	NP (normality)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	12	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00081	0.1	No	17	58.82	No	0.01	NP (normality)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	17	94.12	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	17	88.24	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.0012	0.1	No	18	77.78	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0017	0.1	No	17	70.59	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-101	0.002794	0.002112	0.006	No	17	5.882	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002006	0.001008	0.006	No	12	0	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.0023	0.001829	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00047	0.006	No	17	35.29	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002092	0.001246	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-117	0.01281	0.006091	0.006	Yes	18	0	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-117A	0.00314	-0.0006348	0.006	No	4	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.0025	0.00045	0.006	No	17	47.06	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8728	0.4168	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.227	0.5519	5	No	11	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8936	0.4295	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8923	0.4959	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.08	0.5012	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8037	0.49	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.99	0.198	5	No	18	0	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	1.489	-0.6524	5	No	4	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.094	0.4393	5	No	16	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.065	4	No	18	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.22	0.076	4	No	12	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.071	4	No	18	72.22	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-105	0.13	0.074	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-107	0.16	0.064	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-109	0.1205	0.0777	4	No	18	11.11	No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.09	4	No	19	57.89	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-117A	0.1349	0.009082	4	No	4	50	No	0.01	Param.
Fluoride (mg/L)	HGWC-118	0.18	0.072	4	No	19	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	17	94.12	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	12	91.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	17	70.59	No	0.01	NP (normality)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	17	88.24	No	0.01	NP (NDs)

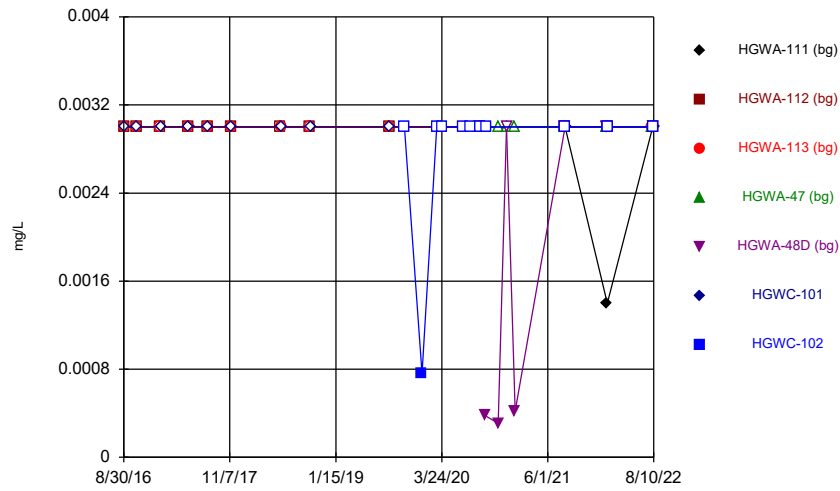
Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lead (mg/L)	HGWC-117	0.001	0.00025	0.015	No	18	72.22	No	0.01	NP (normality)
Lead (mg/L)	HGWC-118	0.001	0.00036	0.015	No	17	70.59	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-102	0.0013	0.00084	0.04	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	17	17.65	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.0042	0.003847	0.04	No	17	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117	0.0035	0.0017	0.04	No	18	16.67	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117A	0.005858	0.002668	0.04	No	4	0	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.04	No	17	35.29	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0002	0.002	No	11	90.91	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00027	0.00017	0.002	No	13	76.92	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117	0.0003	0.00015	0.002	No	14	71.43	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	4	75	No	0.0625	NP (normality)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	13	84.62	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.005	0.05	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.001	0.002	No	11	90.91	No	0.006	NP (NDs)

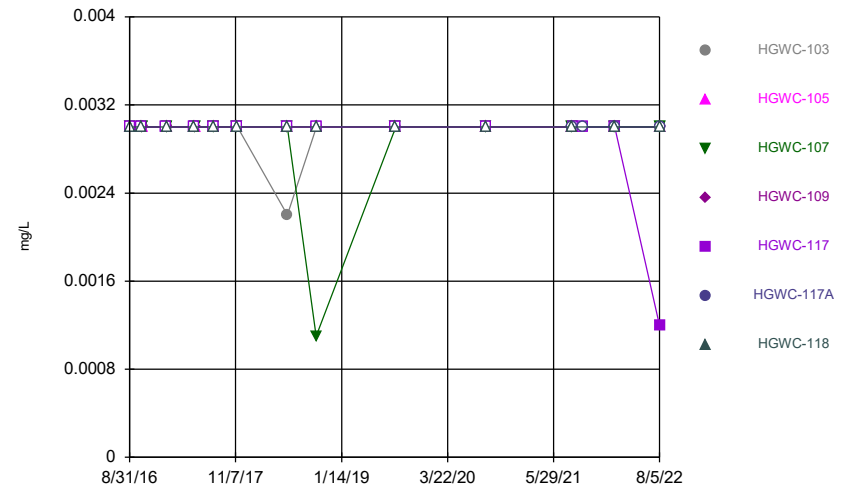
FIGURE A.

Time Series



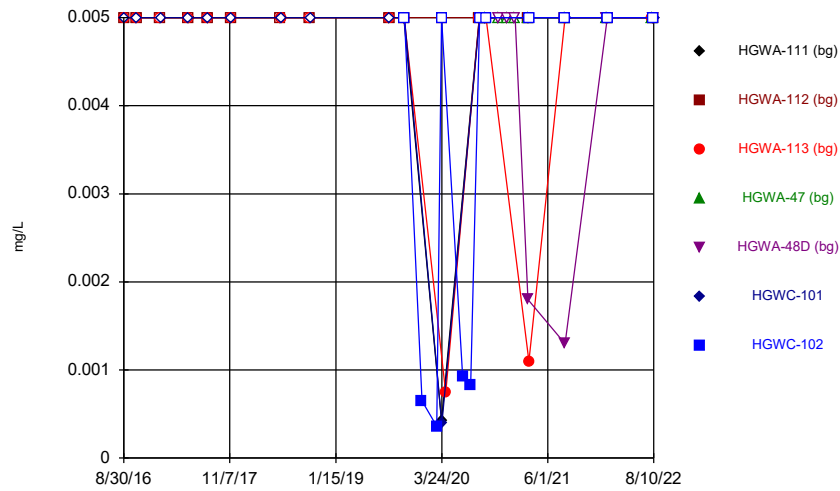
Constituent: Antimony Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



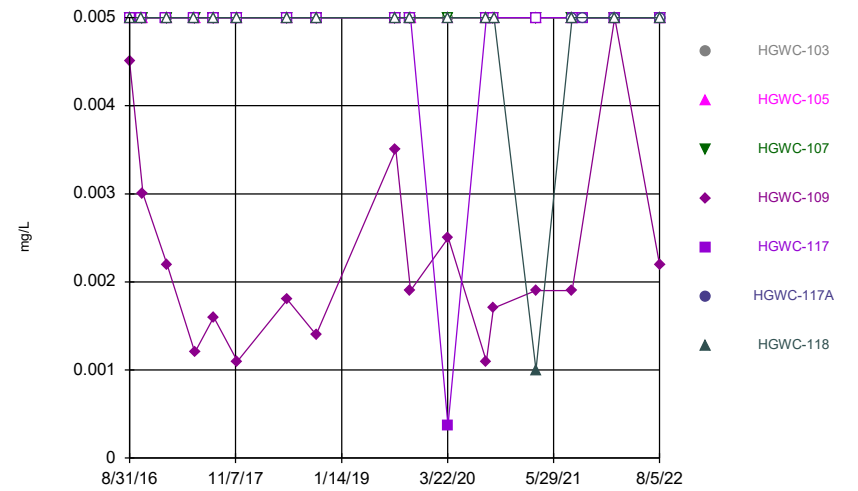
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



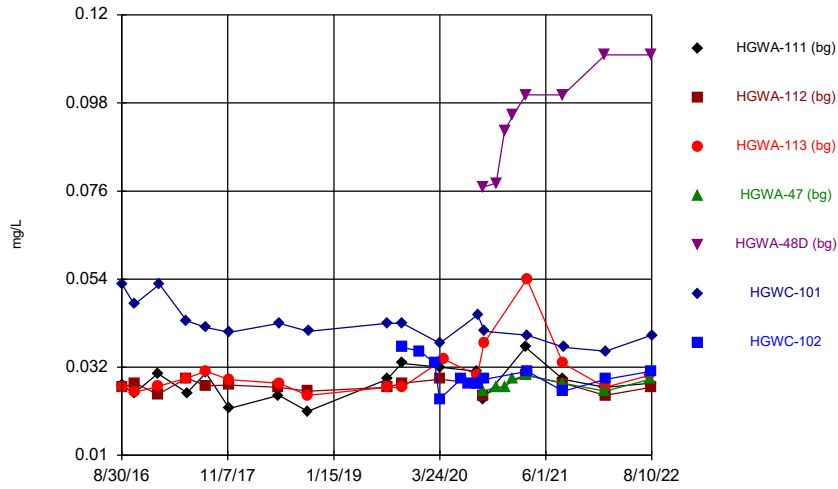
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



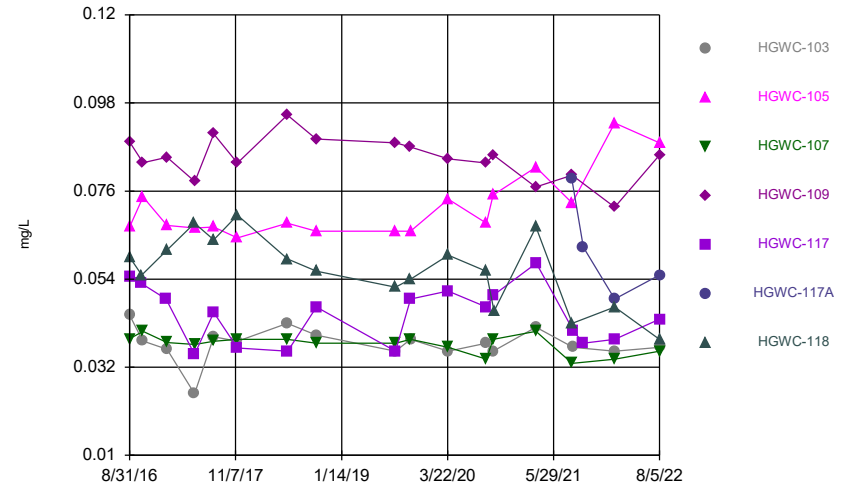
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



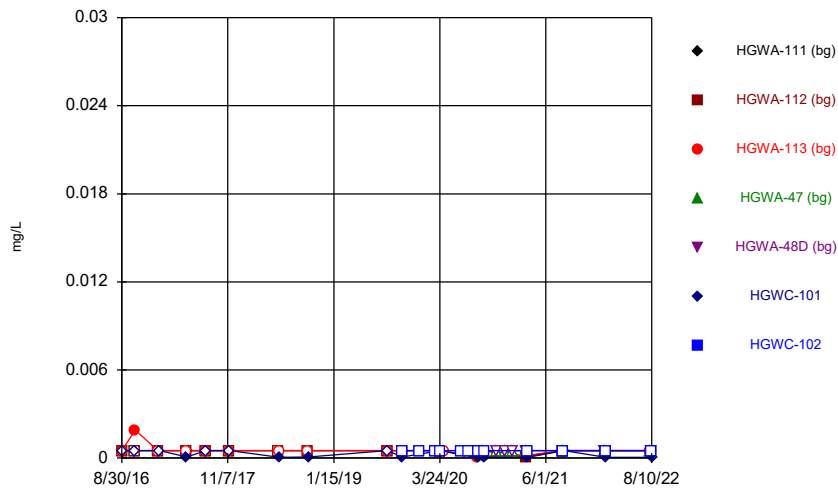
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



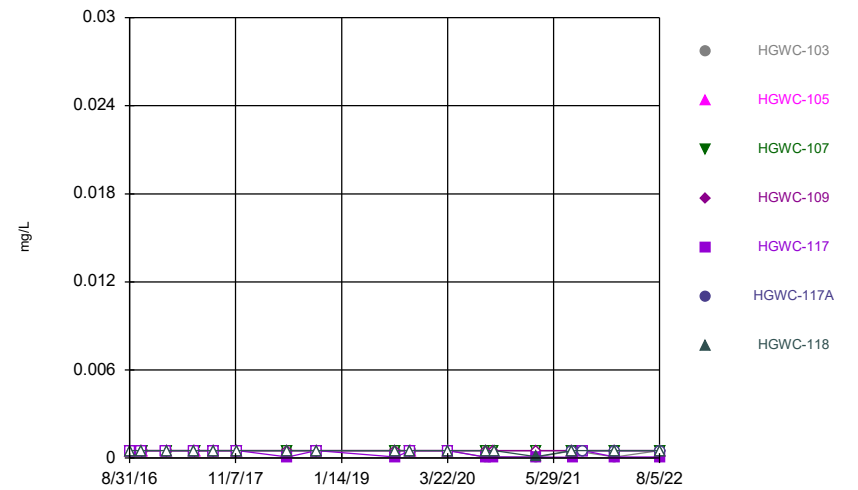
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Time Series



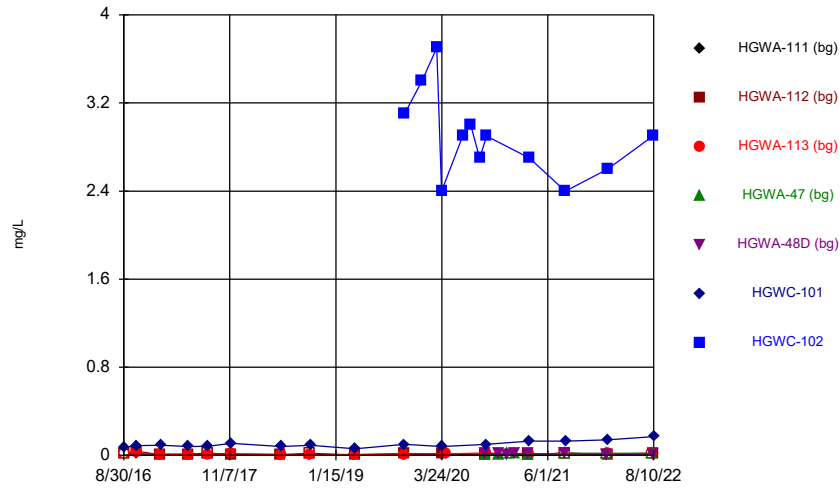
Constituent: Beryllium Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



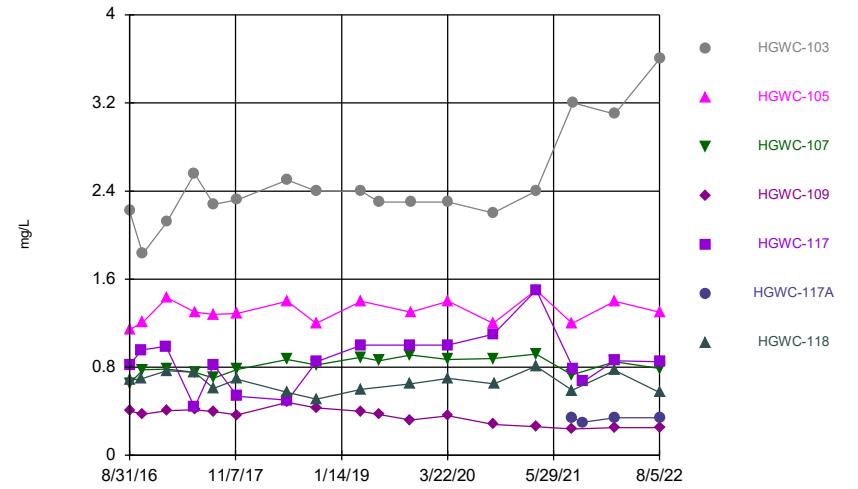
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



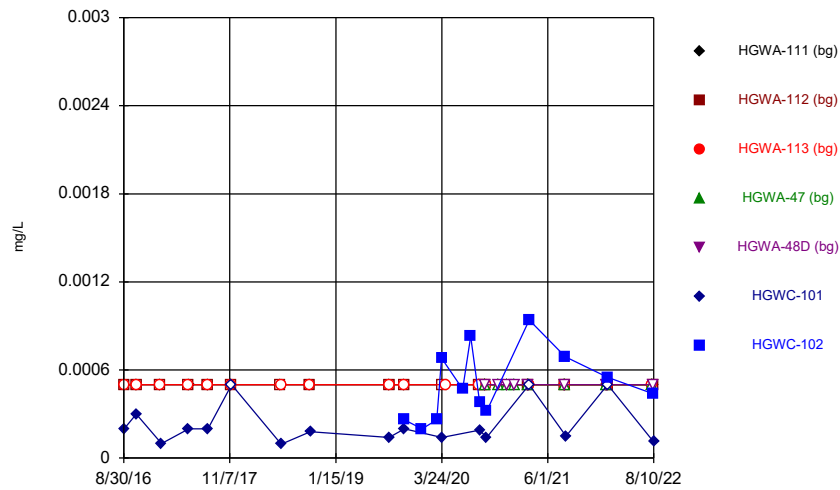
Constituent: Boron Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



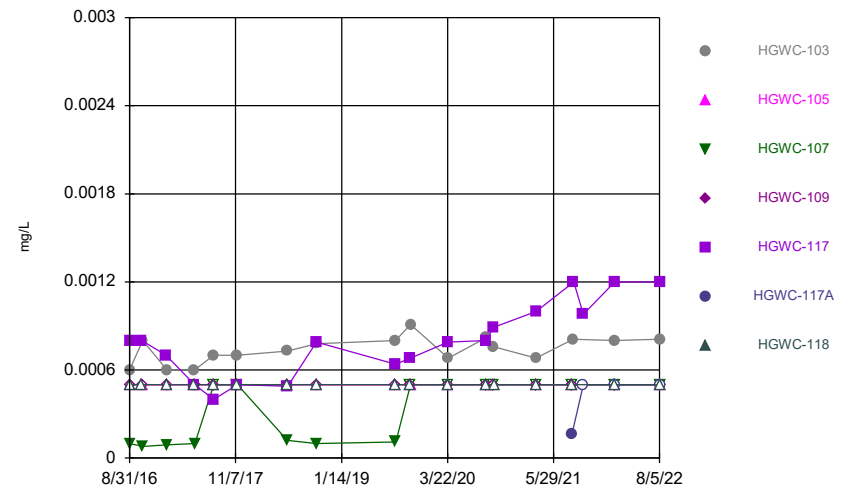
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



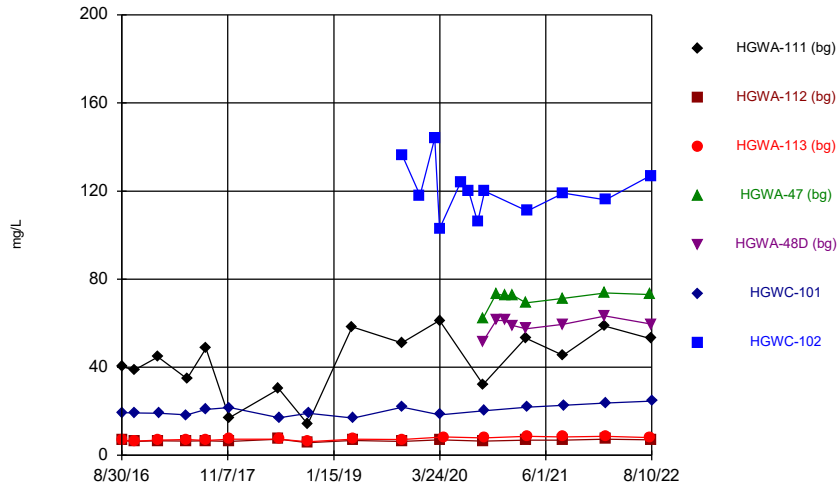
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



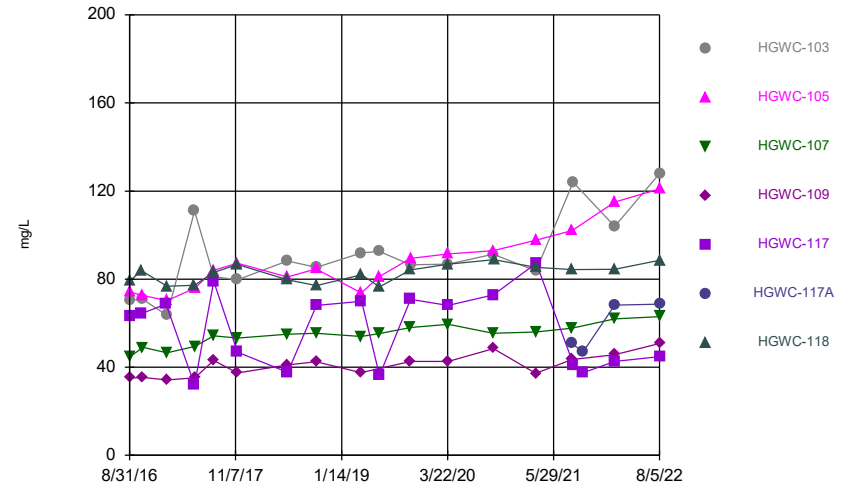
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Time Series



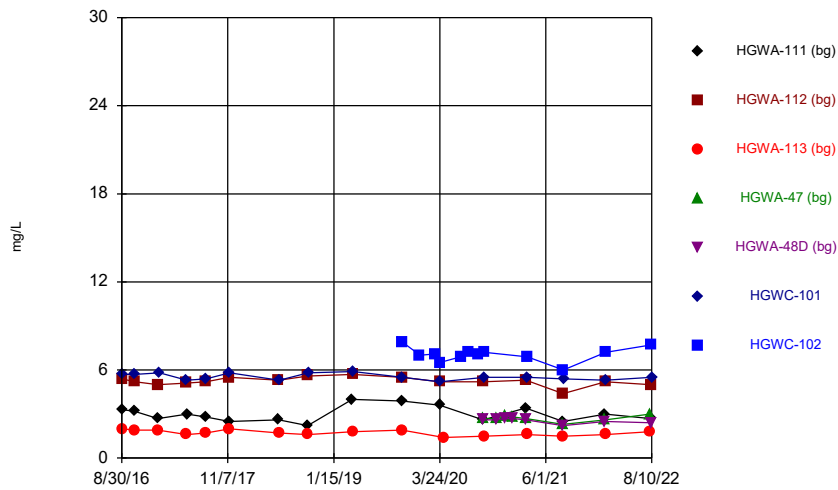
Constituent: Calcium Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



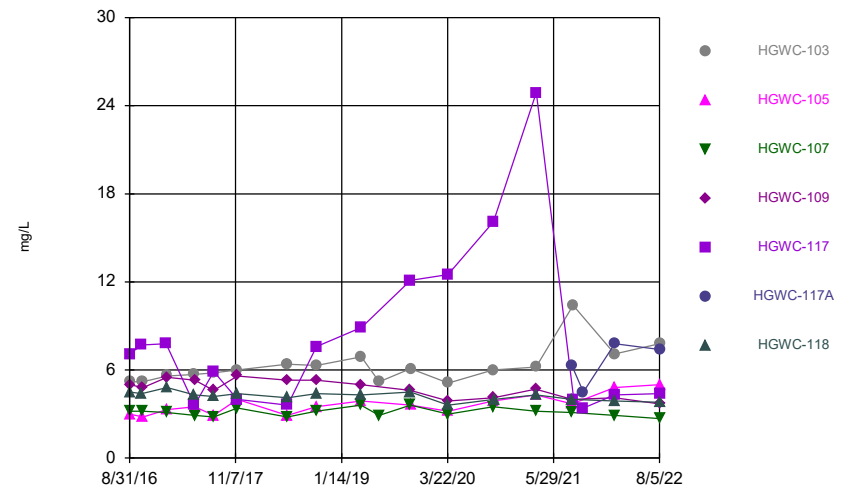
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Time Series



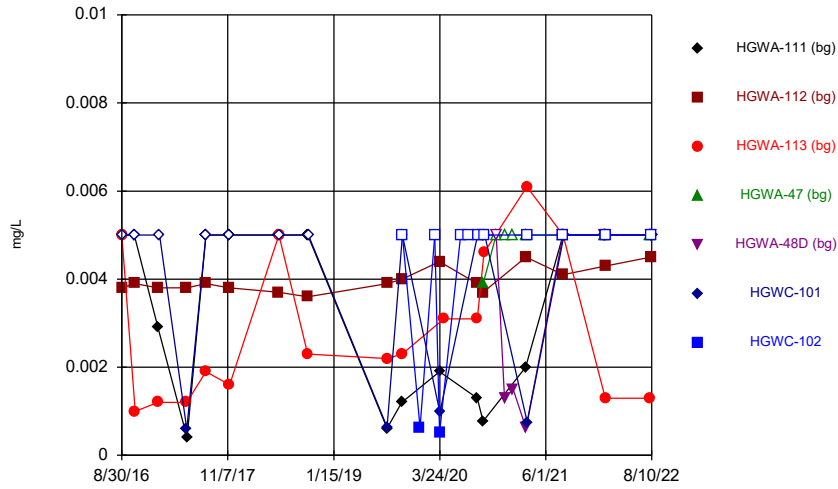
Constituent: Chloride Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



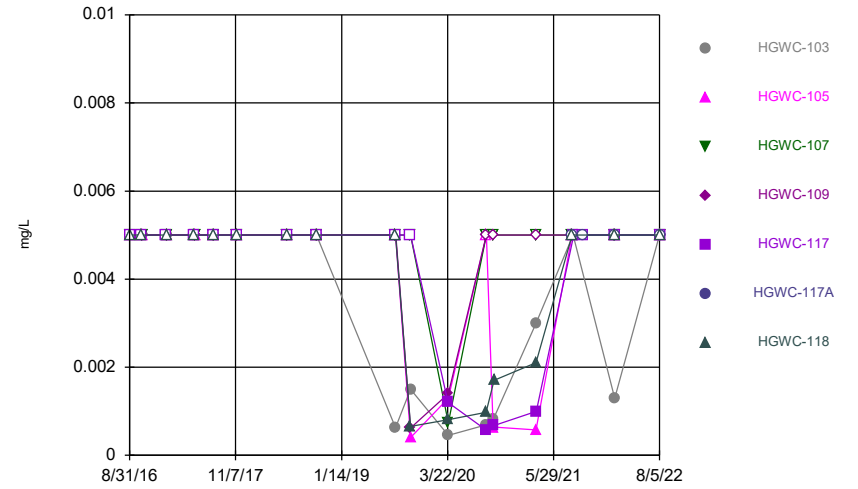
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Time Series



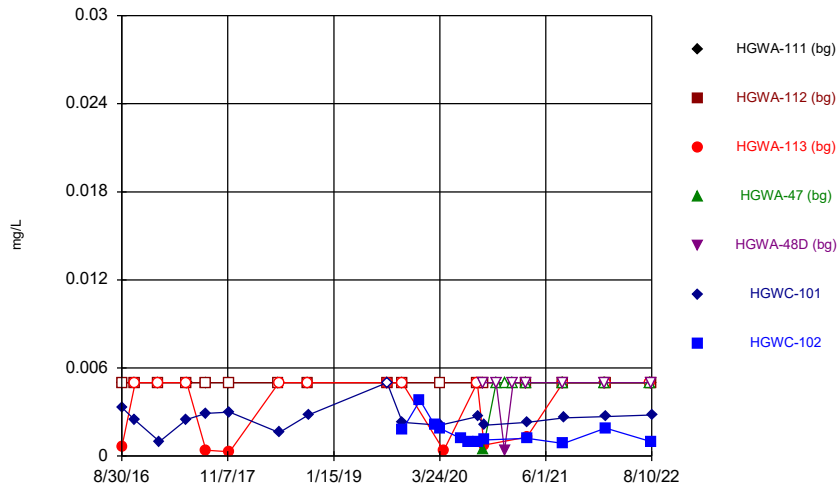
Constituent: Chromium Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



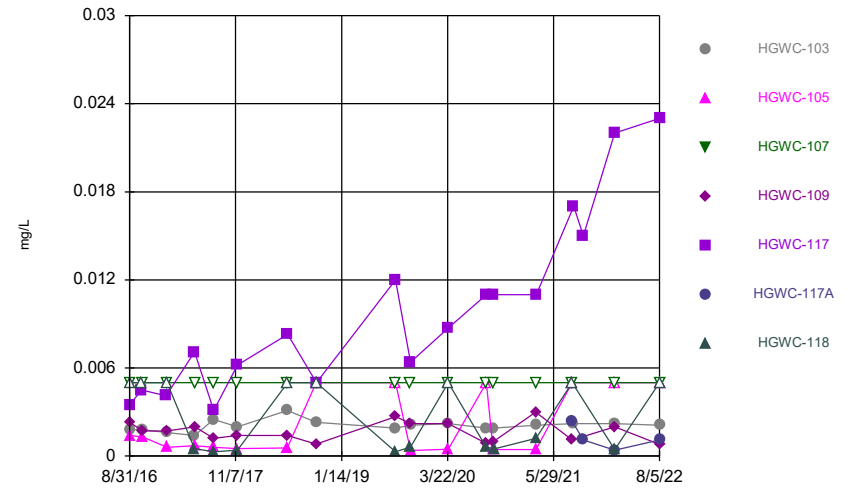
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



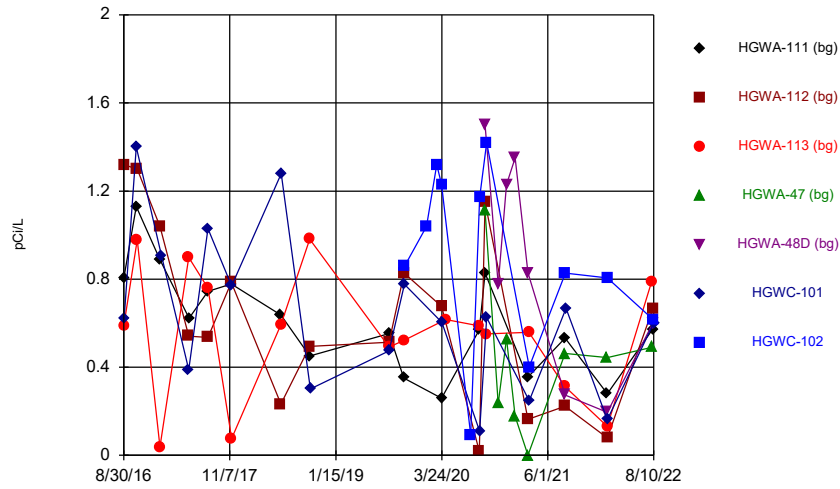
Constituent: Cobalt Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



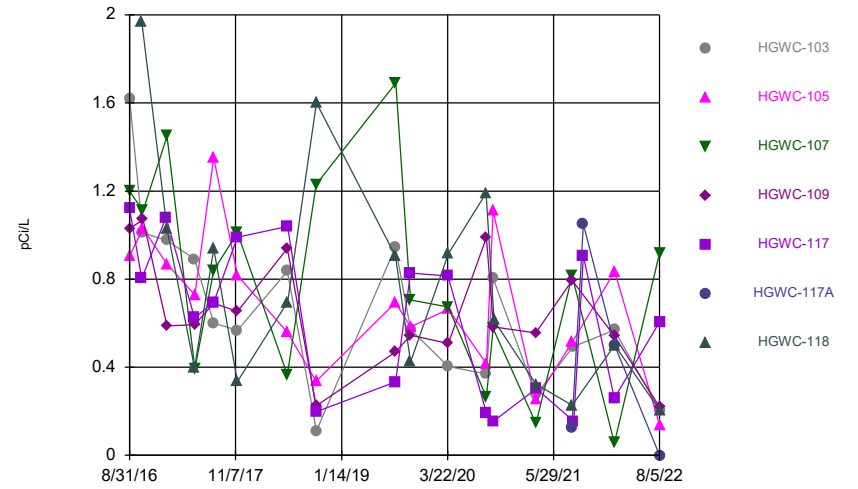
Constituent: Cobalt Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



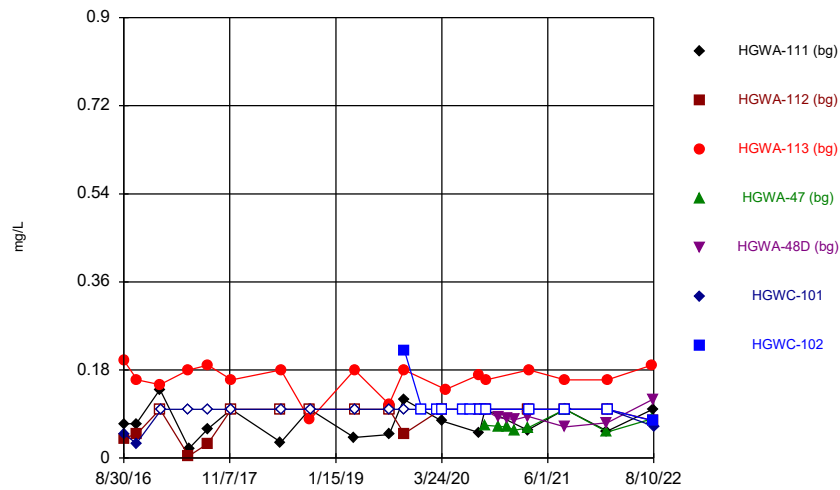
Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:16 PM View: AllI & AllV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



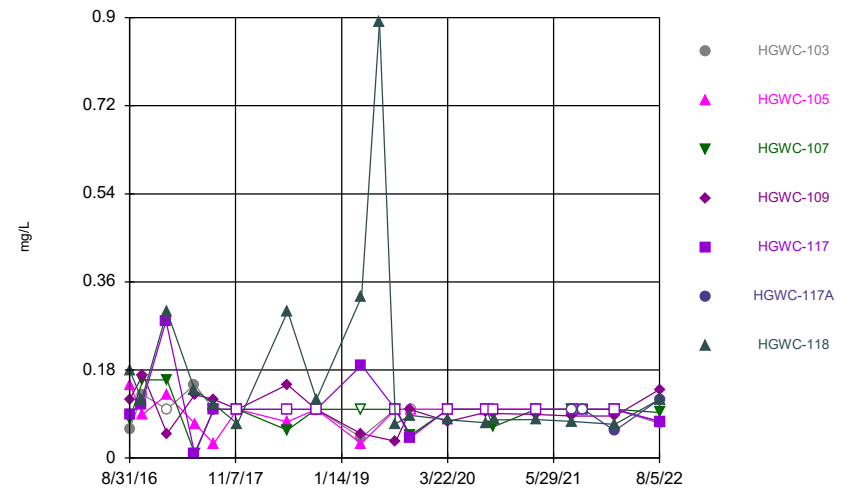
Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:16 PM View: AllI & AllV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



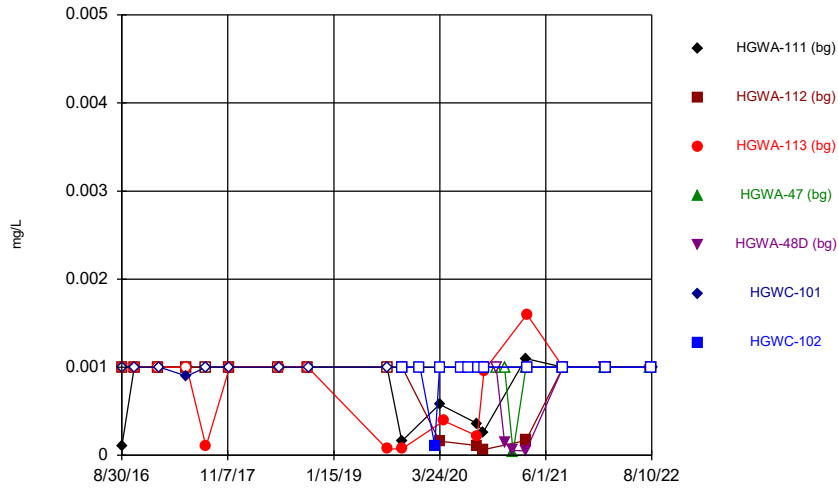
Constituent: Fluoride Analysis Run 10/11/2022 1:16 PM View: AllI & AllV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



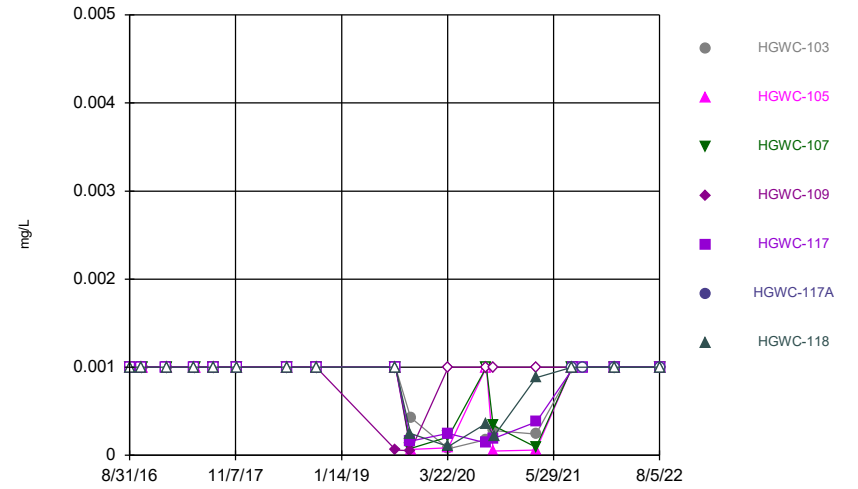
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Time Series



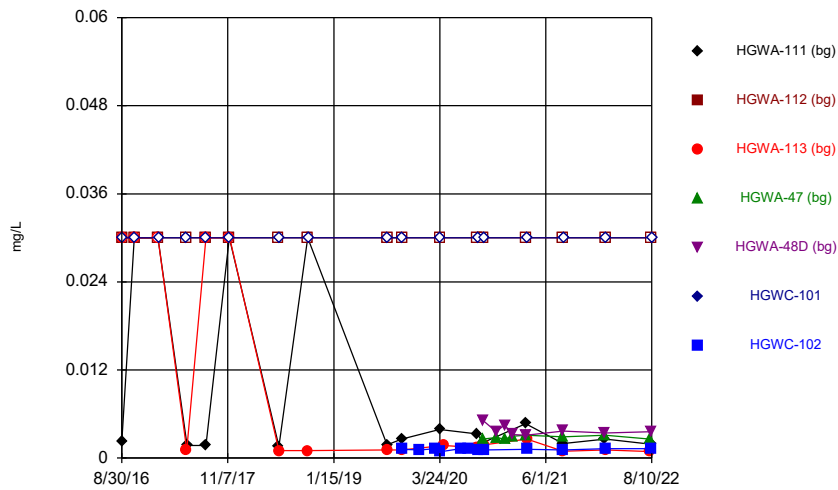
Constituent: Lead Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



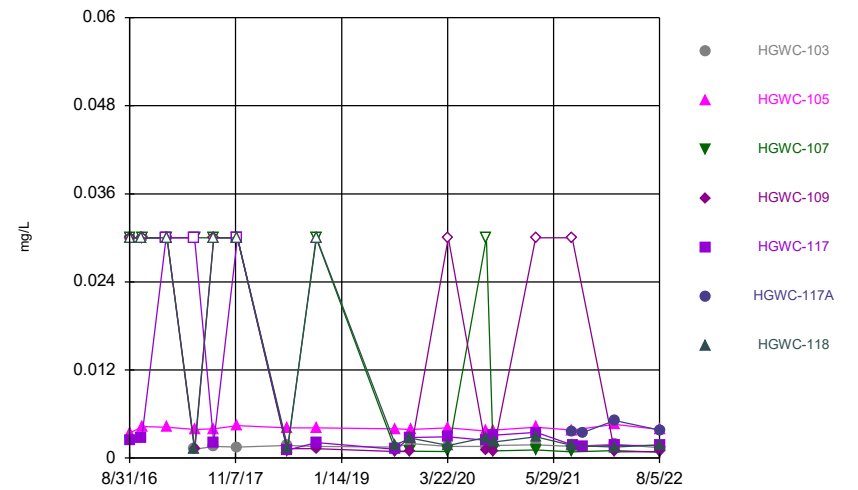
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Time Series



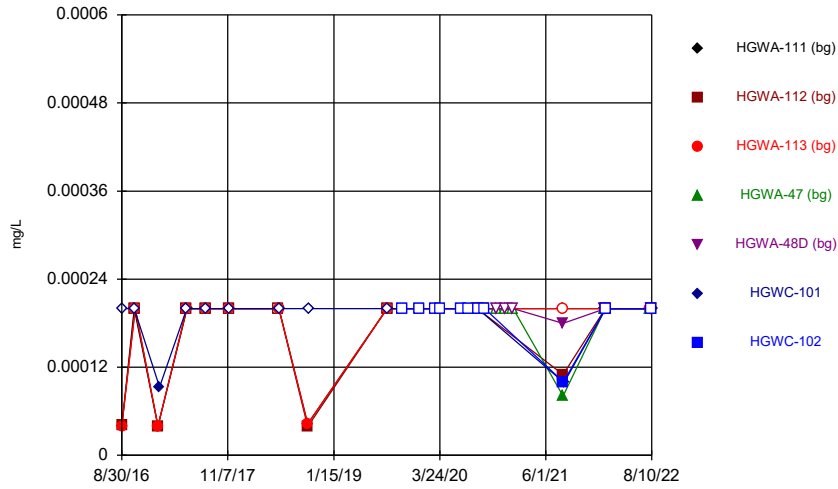
Constituent: Lithium Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



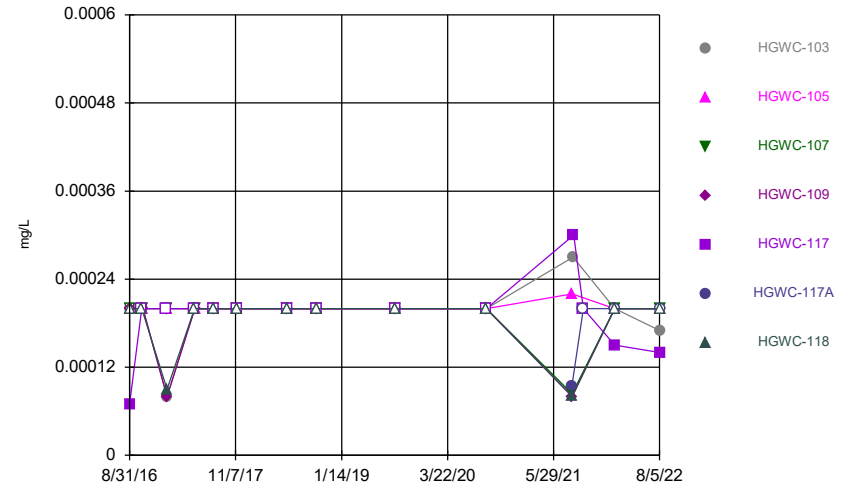
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



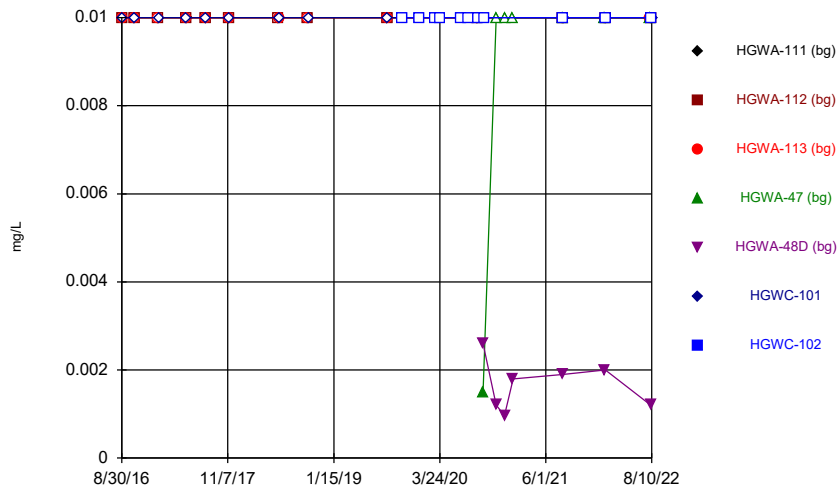
Constituent: Mercury Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



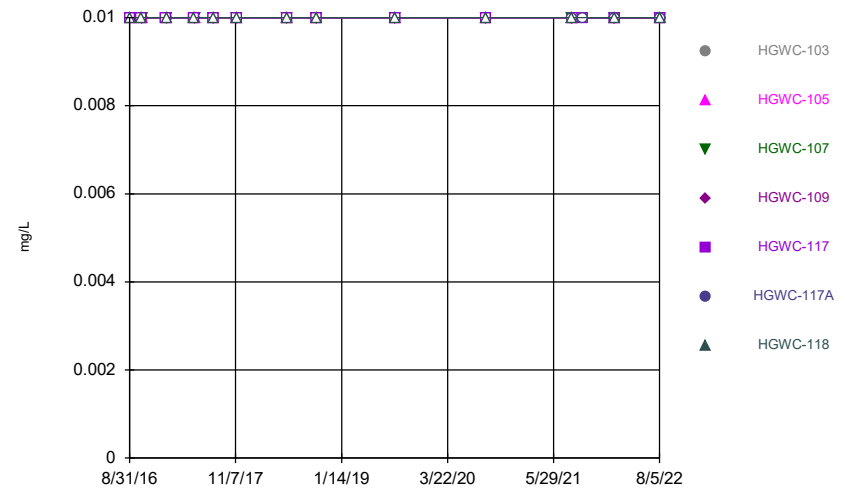
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



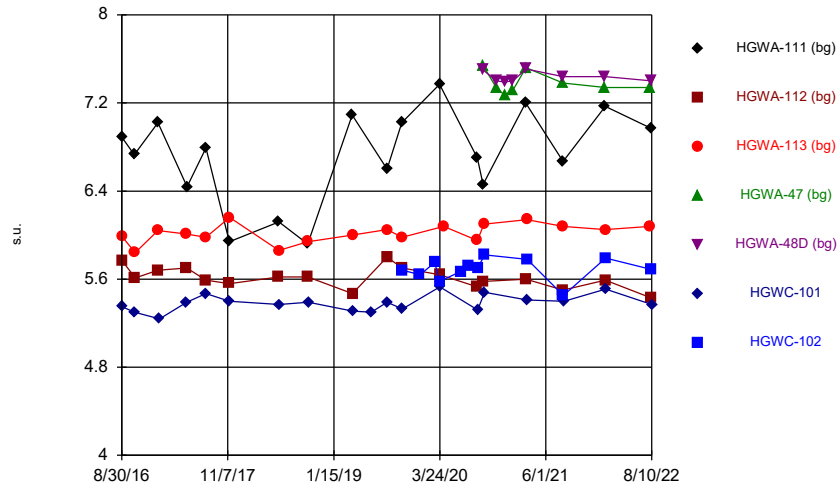
Constituent: Molybdenum Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



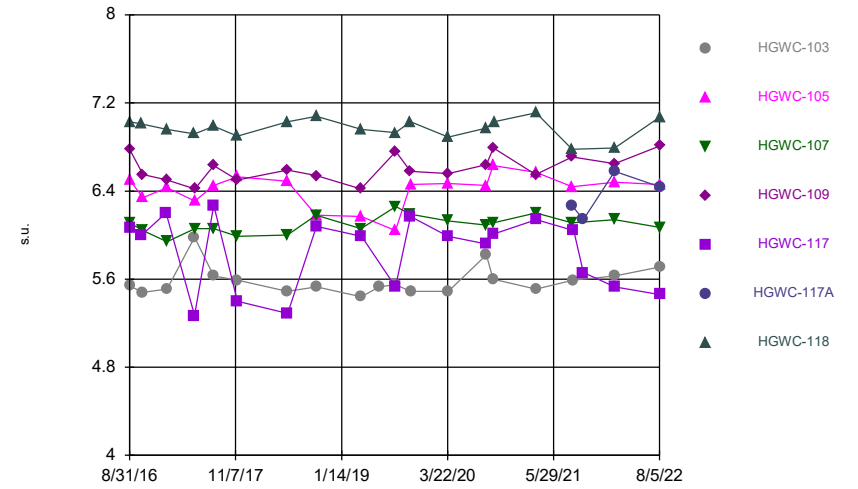
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



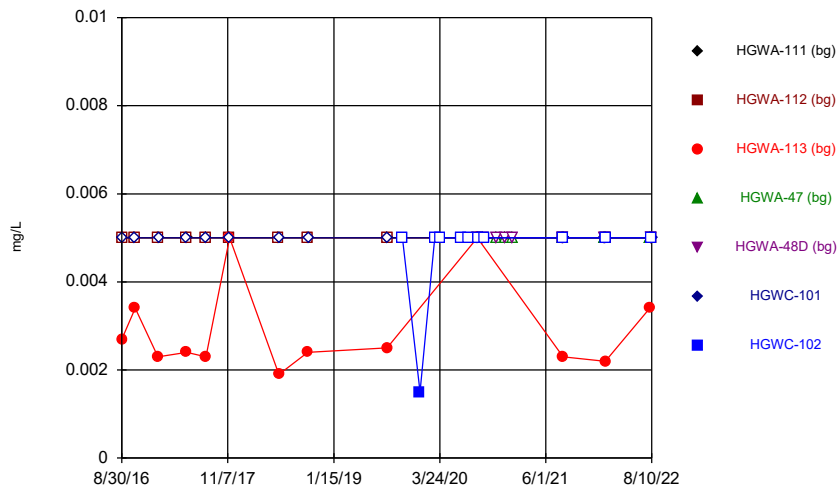
Constituent: pH Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



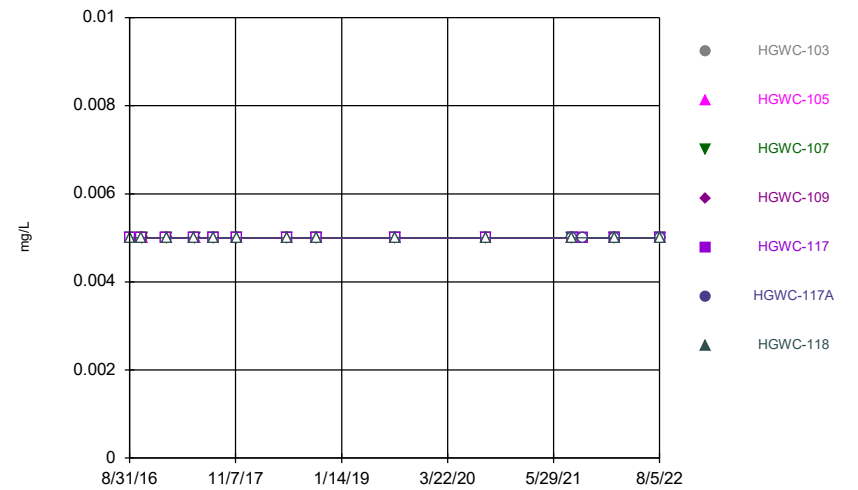
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



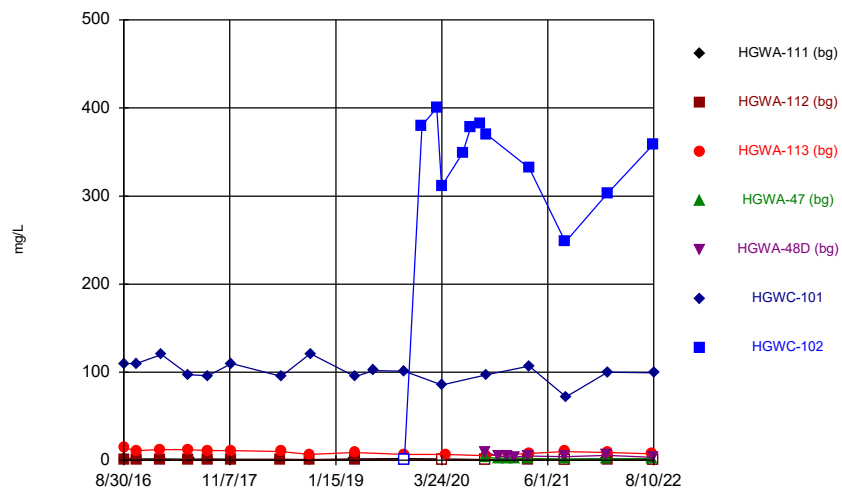
Constituent: Selenium Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



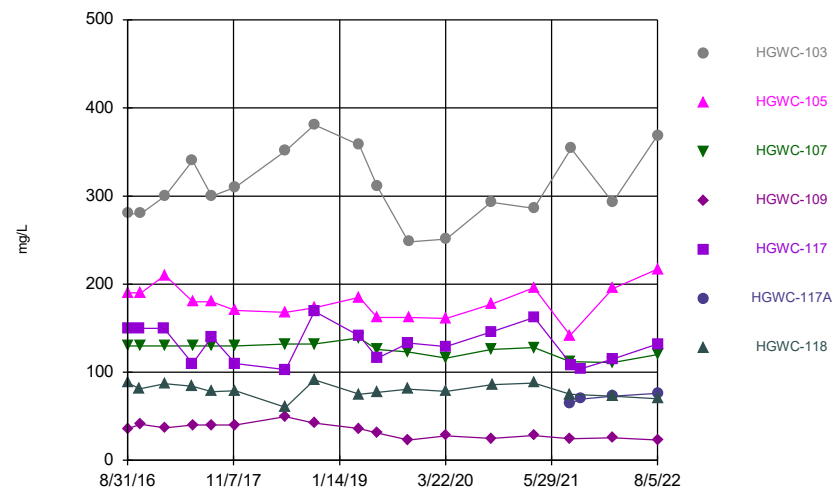
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



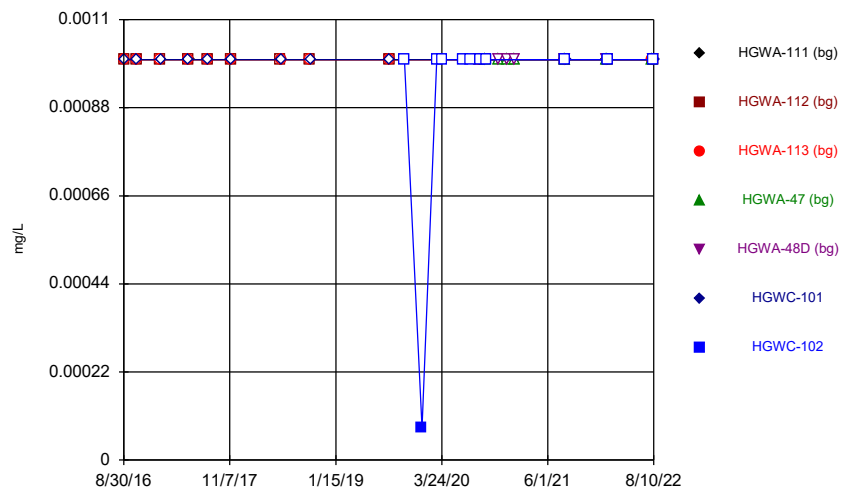
Constituent: Sulfate Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



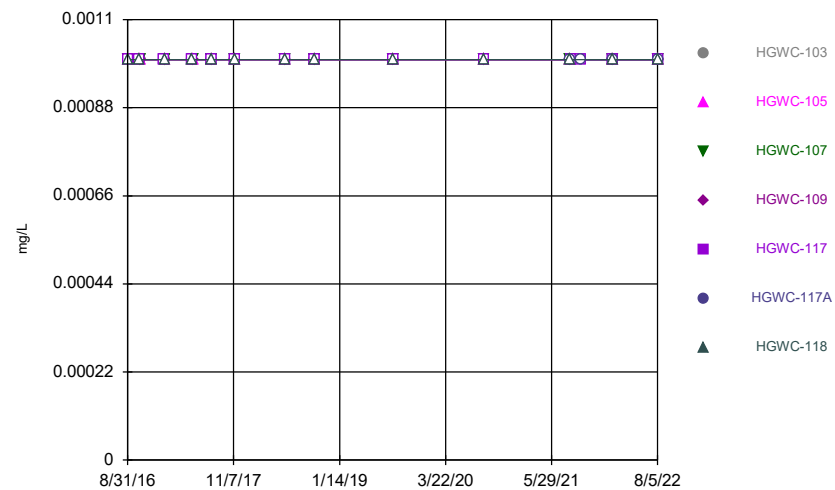
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



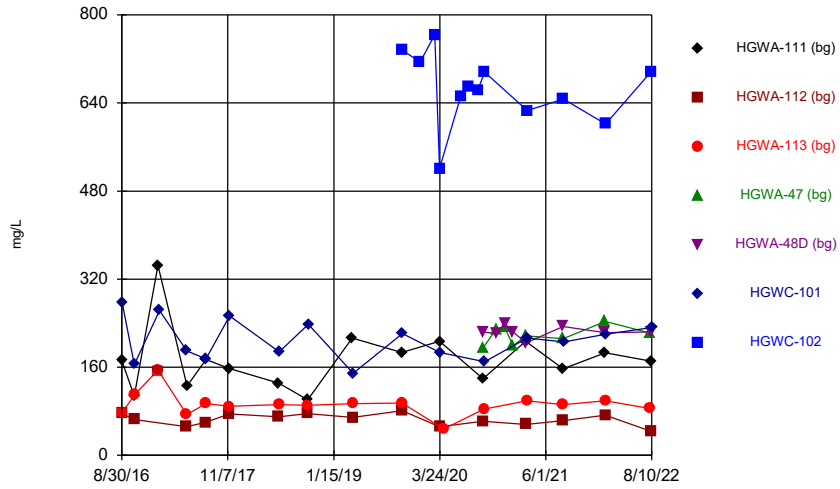
Constituent: Thallium Analysis Run 10/11/2022 1:16 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



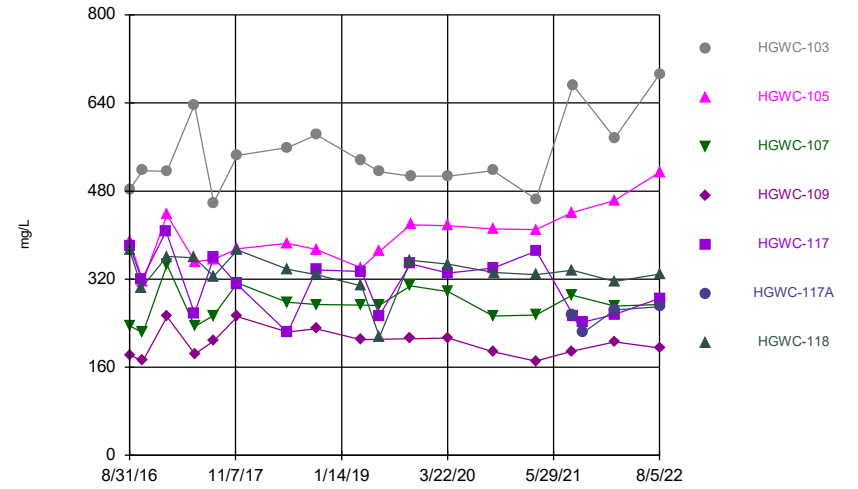
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:16 PM View: All & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:16 PM View: All & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All

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
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8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	<0.003				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			<0.003	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						<0.003	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						<0.003	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/23/2019							<0.003
1/3/2020							0.00076 (J)
3/4/2020							<0.003
3/24/2020							<0.003
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	<0.003	<0.003	<0.003				
8/27/2020						<0.003	<0.003
9/18/2020				<0.003	0.00038 (J)		
9/24/2020							<0.003
11/10/2020				<0.003			
11/11/2020					0.00031 (J)		
12/15/2020				<0.003	<0.003		
1/19/2021				<0.003	0.00042 (J)		
8/12/2021	<0.003	<0.003	<0.003	<0.003	<0.003		
8/13/2021							<0.003
8/16/2021						<0.003	
1/31/2022	0.0014 (J)			<0.003	<0.003		
2/1/2022		<0.003	<0.003				
2/2/2022						<0.003	<0.003
8/2/2022			<0.003	<0.003			
8/5/2022	<0.003	<0.003			<0.003		<0.003
8/10/2022						<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
10/20/2016					<0.003		<0.003
10/24/2016	<0.003						
10/25/2016		<0.003	<0.003	<0.003			
1/27/2017					<0.003		
1/31/2017	<0.003	<0.003	<0.003	<0.003			<0.003
5/23/2017	<0.003				<0.003		<0.003
5/24/2017		<0.003	<0.003	<0.003			
8/10/2017	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
11/14/2017	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
6/6/2018	0.0022 (J)	<0.003	<0.003	<0.003			
6/7/2018					<0.003		<0.003
10/2/2018		<0.003	0.0011 (J)	<0.003			
10/3/2018	<0.003				<0.003		<0.003
8/22/2019	<0.003	<0.003			<0.003		<0.003
8/23/2019			<0.003	<0.003			
8/26/2020							<0.003
8/27/2020	<0.003	<0.003	<0.003	<0.003	<0.003		
8/12/2021						<0.003	
8/13/2021		<0.003	<0.003	<0.003			<0.003
8/16/2021	<0.003						
8/19/2021					<0.003		
9/27/2021					<0.003	<0.003	
2/2/2022	<0.003		<0.003	<0.003	<0.003		
2/3/2022		<0.003				<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003	<0.003	0.0012 (J)	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						<0.005	
5/23/2017		<0.005	<0.005			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	<0.005			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						<0.005	<0.005
1/3/2020							0.00065 (J)
3/4/2020							0.00036 (J)
3/24/2020	0.00042 (J)	<0.005					<0.005
3/25/2020						0.00039 (J)	
4/9/2020			0.00074 (J)				
6/18/2020							0.00092 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020	<0.005	<0.005		<0.005	<0.005		
9/22/2020			<0.005				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	0.0018 (J)		
3/16/2021			0.0011 (J)				
3/17/2021						<0.005	<0.005
8/12/2021	<0.005	<0.005	<0.005	<0.005	0.0013 (J)		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						<0.005	<0.005
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	0.0045 (J)	<0.005		<0.005
10/20/2016					<0.005		<0.005
10/24/2016	<0.005						
10/25/2016		<0.005	<0.005	0.003 (J)			
1/27/2017					<0.005		
1/31/2017	<0.005	<0.005	<0.005	0.0022 (J)			<0.005
5/23/2017	<0.005				<0.005		<0.005
5/24/2017		<0.005	<0.005	0.0012 (J)			
8/10/2017	<0.005	<0.005	<0.005	0.0016 (J)	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	0.0011 (J)	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	0.0018 (J)			
6/7/2018					<0.005		<0.005
10/2/2018		<0.005	<0.005	0.0014 (J)			
10/3/2018	<0.005				<0.005		<0.005
8/22/2019	<0.005	<0.005			<0.005		<0.005
8/23/2019			<0.005	0.0035 (J)			
10/22/2019			<0.005	0.0019 (J)	<0.005		<0.005
10/23/2019	<0.005	<0.005					
3/24/2020					0.00037 (J)		
3/25/2020	<0.005	<0.005	<0.005	0.0025 (J)			<0.005
8/26/2020							<0.005
8/27/2020	<0.005	<0.005	<0.005	0.0011 (J)	<0.005		
9/24/2020	<0.005	<0.005	<0.005				
9/25/2020				0.0017 (J)	<0.005		
9/28/2020							<0.005
3/17/2021				0.0019 (J)			
3/18/2021	<0.005	<0.005	<0.005				0.001 (J)
3/19/2021					<0.005		
8/12/2021						<0.005	
8/13/2021		<0.005	<0.005	0.0019 (J)			<0.005
8/16/2021	<0.005						
8/19/2021					<0.005		
9/27/2021					<0.005	<0.005	
2/2/2022	<0.005		<0.005	<0.005	<0.005		
2/3/2022		<0.005				<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	0.0022 (J)	<0.005	<0.005	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.045	0.067	0.0391	0.0883	0.0547		0.0595
10/20/2016					0.0529		0.055
10/24/2016	0.0386						
10/25/2016		0.0745	0.041	0.0831			
1/27/2017					0.049		
1/31/2017	0.0365	0.0674	0.0382	0.0844			0.0613
5/23/2017	0.0254				0.0352		0.068
5/24/2017		0.0668	0.0377	0.0784			
8/10/2017	0.0396	0.067	0.0385	0.0903	0.0457		0.0638
11/14/2017	0.0385	0.0643	0.039	0.083	0.0368		0.07
6/6/2018	0.043	0.068	0.039	0.095			
6/7/2018					0.036		0.059
10/2/2018		0.066	0.038	0.089			
10/3/2018	0.04				0.047		0.056
8/22/2019	0.036	0.066			0.036		0.052
8/23/2019			0.038	0.088			
10/22/2019			0.039	0.087	0.049		0.054
10/23/2019	0.039	0.066					
3/24/2020					0.051		
3/25/2020	0.036	0.074	0.037	0.084			0.06
8/26/2020							0.056
8/27/2020	0.038	0.068	0.034	0.083	0.047		
9/24/2020	0.036	0.075	0.039				
9/25/2020				0.085	0.05		
9/28/2020							0.046
3/17/2021				0.077			
3/18/2021	0.042	0.082	0.041				0.067
3/19/2021					0.058		
8/12/2021						0.079	
8/13/2021		0.073	0.033	0.08			0.043
8/16/2021	0.037						
8/19/2021					0.041		
9/27/2021					0.038	0.062	
2/2/2022	0.036		0.034	0.072	0.039		
2/3/2022		0.093				0.049	0.047
8/5/2022	0.037	0.088	0.036	0.085	0.044	0.055	0.039

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	0.0019 (J)				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						<0.0005	
5/23/2017		<0.0005	<0.0005			7E-05 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						5.9E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						6.5E-05 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						7.5E-05 (J)	<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020	<0.0005	<0.0005					<0.0005
3/25/2020						<0.0005	
4/9/2020			<0.0005				
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	4.7E-05 (J)	<0.0005	4.6E-05 (J)				
8/27/2020						5.7E-05 (J)	<0.0005
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			9.9E-05 (J)				
9/24/2020						4.8E-05 (J)	<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	0.00014 (J)						
3/12/2021		5.4E-05 (J)		<0.0005	<0.0005		
3/16/2021			0.00018 (J)				
3/17/2021						5.9E-05 (J)	<0.0005
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							<0.0005
8/16/2021						<0.0005	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						6.2E-05 (J)	<0.0005
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		<0.0005
8/10/2022						6.4E-05 (J)	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
10/20/2016					<0.0005		<0.0005
10/24/2016	<0.0005						
10/25/2016		<0.0005	<0.0005	<0.0005			
1/27/2017					<0.0005		
1/31/2017	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005
5/23/2017	<0.0005				<0.0005		<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005			
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005			
6/7/2018					6.8E-05 (J)		<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005			
10/3/2018	<0.0005				<0.0005		<0.0005
8/22/2019	<0.0005	<0.0005			7.9E-05 (J)		<0.0005
8/23/2019			<0.0005	<0.0005			
10/22/2019			<0.0005	<0.0005	<0.0005		<0.0005
10/23/2019	<0.0005	<0.0005					
3/24/2020					<0.0005		
3/25/2020	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005
8/26/2020							<0.0005
8/27/2020	5E-05 (J)	<0.0005	<0.0005	<0.0005	4.9E-05 (J)		
9/24/2020	8.8E-05 (J)	<0.0005	<0.0005				
9/25/2020				<0.0005	6.6E-05 (J)		
9/28/2020							<0.0005
3/17/2021				<0.0005			
3/18/2021	6.1E-05 (J)	<0.0005	<0.0005				9.3E-05 (J)
3/19/2021					8.1E-05 (J)		
8/12/2021						<0.0005	
8/13/2021		<0.0005	<0.0005	<0.0005			<0.0005
8/16/2021	<0.0005						
8/19/2021					5.6E-05 (J)		
9/27/2021					<0.0005	<0.0005	
2/2/2022	7.7E-05 (J)		<0.0005	<0.0005	8.3E-05 (J)		
2/3/2022		<0.0005				<0.0005	<0.0005
8/5/2022	<0.0005	<0.0005	<0.0005	<0.0005	7.8E-05 (J)	<0.0005	<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	2.22	1.14	0.651	0.402	0.821		0.681
10/20/2016					0.956		0.697
10/24/2016	1.83						
10/25/2016		1.21	0.778	0.372			
1/27/2017					0.99		
1/31/2017	2.12	1.43	0.782	0.404			0.768
5/23/2017	2.56				0.438		0.754
5/24/2017		1.3	0.753	0.415			
8/10/2017	2.28	1.28	0.702	0.397	0.821		0.608
11/14/2017	2.32	1.29	0.78	0.366	0.536		0.691
6/6/2018	2.5	1.4	0.87	0.48			
6/7/2018					0.5		0.57
10/2/2018		1.2	0.82	0.43			
10/3/2018	2.4				0.85		0.51
4/3/2019			0.89	0.4			
4/4/2019	2.4	1.4 (X)					
4/5/2019					1 (X)		0.6 (X)
6/17/2019	2.3		0.86	0.37			
10/22/2019			0.91	0.32	1		0.65
10/23/2019	2.3	1.3					
3/24/2020					1		
3/25/2020	2.3	1.4	0.87	0.36			0.7
9/24/2020	2.2	1.2	0.88				
9/25/2020				0.28	1.1		
9/28/2020							0.65
3/17/2021				0.26			
3/18/2021	2.4	1.5	0.92				0.81
3/19/2021					1.5		
8/12/2021						0.34	
8/13/2021		1.2	0.73	0.24			0.59
8/16/2021	3.2						
8/19/2021					0.78		
9/27/2021					0.67	0.3	
2/2/2022	3.1		0.85	0.25	0.86		
2/3/2022		1.4				0.34	0.77
8/5/2022	3.6	1.3	0.79	0.25	0.85	0.34	0.57

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						0.0002 (J)	
10/20/2016	<0.0005					0.0003 (J)	
10/24/2016		<0.0005	<0.0005				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						0.0001 (J)	
5/23/2017		<0.0005	<0.0005			0.0002 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			0.0002 (J)	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						9.5E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						0.00018 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						0.00014 (J)	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						0.0002 (J)	0.00026 (J)
1/3/2020							0.0002 (J)
3/4/2020							0.00026 (J)
3/24/2020	<0.0005	<0.0005					0.00068 (J)
3/25/2020						0.00014 (J)	
4/9/2020			<0.0005				
6/18/2020							0.00047 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						0.00019 (J)	0.00038 (J)
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			<0.0005				
9/24/2020						0.00014 (J)	0.00032 (J)
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	<0.0005						
3/12/2021		<0.0005		<0.0005	<0.0005		
3/16/2021			<0.0005				
3/17/2021						<0.0005	0.00094
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							0.00069
8/16/2021						0.00015 (J)	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						<0.0005	0.00055
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		0.00044 (J)
8/10/2022						0.00011 (J)	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0006 (J)	<0.0005	0.0001 (J)	<0.0005	0.0008 (J)		<0.0005
10/20/2016					0.0008 (J)		<0.0005
10/24/2016	0.0008 (J)						
10/25/2016		<0.0005	8E-05 (J)	<0.0005			
1/27/2017					0.0007 (J)		
1/31/2017	0.0006 (J)	<0.0005	9E-05 (J)	<0.0005			<0.0005
5/23/2017	0.0006 (J)				0.0005 (J)		<0.0005
5/24/2017		<0.0005	0.0001 (J)	<0.0005			
8/10/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005	0.0004 (J)		<0.0005
11/14/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005	0.0005 (J)		<0.0005
6/6/2018	0.00073 (J)	<0.0005	0.00012 (J)	<0.0005			
6/7/2018					0.00049 (J)		<0.0005
10/2/2018		<0.0005	0.0001 (J)	<0.0005			
10/3/2018	0.00078 (J)				0.00079 (J)		<0.0005
8/22/2019	0.0008 (J)	<0.0005			0.00064 (J)		<0.0005
8/23/2019			0.00011 (J)	<0.0005			
10/22/2019			<0.0005	<0.0005	0.00068 (J)		<0.0005
10/23/2019	0.00091 (J)	<0.0005					
3/24/2020					0.00079 (J)		
3/25/2020	0.00068 (J)	<0.0005	<0.0005	<0.0005			<0.0005
8/26/2020							<0.0005
8/27/2020	0.00082 (J)	<0.0005	<0.0005	<0.0005	0.0008 (J)		
9/24/2020	0.00076 (J)	<0.0005	<0.0005				
9/25/2020				<0.0005	0.00089 (J)		
9/28/2020							<0.0005
3/17/2021				<0.0005			
3/18/2021	0.00068	<0.0005	<0.0005				<0.0005
3/19/2021					0.001		
8/12/2021						0.00016 (J)	
8/13/2021		<0.0005	<0.0005	<0.0005			<0.0005
8/16/2021	0.00081						
8/19/2021					0.0012		
9/27/2021					0.00098	<0.0005	
2/2/2022	0.0008		<0.0005	<0.0005	0.0012		
2/3/2022		<0.0005				<0.0005	<0.0005
8/5/2022	0.00081	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	70.4	74.2	44.7	35.1	63.4		79.3
10/20/2016					64.4		83.7
10/24/2016	70.9						
10/25/2016		72.5	49	35.4			
1/27/2017					68.6		
1/31/2017	63.6	70.3	46.6	34.2			76.8
5/23/2017	111				32		77.2
5/24/2017		75.9	49.5	35.3			
8/10/2017	81.2	84	54.2	43.1	78.9		83.1
11/14/2017	79.7	87.2	53.2	37.4	46.9		86.7
6/6/2018	88.3	81	55	41.1			
6/7/2018					37.7		79.7
10/2/2018		84.7	55.4	42.5			
10/3/2018	85.3				68		77.1
4/3/2019			54	37.5			
4/4/2019	91.9	73.8					
4/5/2019					70		82
6/17/2019	92.6	81.2	55.3				
6/18/2019					36.3		76.5
10/22/2019			58.1	42.6	70.9		84.2
10/23/2019	86.5	89.4					
3/24/2020					68		
3/25/2020	86.8	91.4	59.5	42.6			86.8
9/24/2020	91.3	92.9	55.4				
9/25/2020				48.5	72.8		
9/28/2020							88.9
3/17/2021				37.3			
3/18/2021	83.7	97.7	56				85.4
3/19/2021					87.3		
8/12/2021						50.7	
8/13/2021		102	57.8	43.5			84.3
8/16/2021	124						
8/19/2021					40.9		
9/27/2021					37.5	47.2	
2/2/2022	104		62	45.7	42.6		
2/3/2022		115				68.2	84.5
8/5/2022	128	121	63	50.8	44.8	68.6	88.5

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	3.3	5.4	2				
8/31/2016						5.7	
10/20/2016	3.2					5.7	
10/24/2016		5.2	1.9				
1/25/2017	2.7	5	1.9				
1/31/2017						5.8	
5/23/2017		5.1	1.6			5.3	
5/24/2017	3						
8/10/2017	2.8	5.2	1.7			5.4	
11/13/2017	2.5	5.5					
11/14/2017			2			5.8	
6/4/2018	2.6	5.3					
6/5/2018			1.7				
6/6/2018						5.3	
10/1/2018	2.2	5.6	1.6				
10/3/2018						5.8	
4/1/2019	4						
4/2/2019		5.7	1.8				
4/4/2019						5.9	
10/21/2019	3.9						
10/22/2019		5.5	1.9				
10/23/2019						5.5	7.9
1/3/2020							7
3/4/2020							7.1
3/24/2020	3.6	5.2					6.5
3/25/2020						5.2	
4/9/2020			1.4				
6/18/2020							6.9
7/21/2020							7.2
8/27/2020							7.1
9/18/2020	2.6	5.2		2.7	2.6		
9/22/2020			1.5				
9/24/2020						5.5	7.2
11/10/2020				2.7			
11/11/2020					2.6		
12/15/2020				2.9	2.7		
1/19/2021				2.8	2.7		
3/11/2021	3.4						
3/12/2021		5.3		2.7	2.6		
3/16/2021			1.6				
3/17/2021						5.5	6.9
8/12/2021	2.5	4.4	1.5	2.3	2.2		
8/13/2021							6
8/16/2021						5.4	
1/31/2022	3			2.6	2.5		
2/1/2022		5.2	1.6				
2/2/2022						5.3	7.2
8/2/2022			1.8	3			
8/5/2022	2.7	5			2.4		7.7
8/10/2022						5.5	

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	5.2	3	3.2	5	7.1		4.5
10/20/2016					7.7		4.4
10/24/2016	5.2						
10/25/2016		2.8	3.2	4.8			
1/27/2017					7.8		
1/31/2017	5.6	3.3	3.1	5.5			4.8
5/23/2017	5.7				3.6		4.3
5/24/2017		3.5	2.9	5.3			
8/10/2017	5.8	2.9	2.8	4.6	5.9		4.2
11/14/2017	6	4	3.4	5.6	4		4.4
6/6/2018	6.4	2.9	2.8	5.3			
6/7/2018					3.6		4.1
10/2/2018		3.5	3.2	5.3			
10/3/2018	6.3				7.6		4.4
4/3/2019			3.6	5			
4/4/2019	6.9	3.9					
4/5/2019					8.9		4.3
6/17/2019	5.2		2.9				
10/22/2019			3.6	4.6	12.1		4.5
10/23/2019	6.1	3.6					
3/24/2020					12.5		
3/25/2020	5.1	3.2	3	3.9			3.6
9/24/2020	6	3.9	3.5				
9/25/2020				4.1	16.1		
9/28/2020							4
3/17/2021				4.7			
3/18/2021	6.2	4.3	3.2				4.3
3/19/2021					24.9		
8/12/2021						6.3	
8/13/2021		3.7	3.1	4			4
8/16/2021	10.4						
8/19/2021					4		
9/27/2021					3.4	4.5	
2/2/2022	7.1		2.9	4.1	4.3		
2/3/2022		4.8				7.8	3.9
8/5/2022	7.8	5	2.7	3.7	4.4	7.4	3.8

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	0.0038 (J)	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		0.0039 (J)	0.001 (J)				
1/25/2017	0.0029 (J)	0.0038 (J)	0.0012 (J)				
1/31/2017						<0.005	
5/23/2017		0.0038 (J)	0.0012 (J)			0.0006 (J)	
5/24/2017	0.0004 (J)						
8/10/2017	<0.005	0.0039 (J)	0.0019 (J)			<0.005	
11/13/2017	<0.005	0.0038 (J)					
11/14/2017			0.0016 (J)			<0.005	
6/4/2018	<0.005	0.0037 (J)					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	0.0036 (J)	0.0023 (J)				
10/3/2018						<0.005	
8/21/2019	0.00061 (J)	0.0039 (J)	0.0022 (J)				
8/22/2019						0.00064 (J)	
10/21/2019	0.0012 (J)						
10/22/2019		0.004 (J)	0.0023 (J)				
10/23/2019						<0.005	<0.005
1/3/2020							0.00063 (J)
3/4/2020							<0.005
3/24/2020	0.0019 (J)	0.0044 (J)					0.00051 (J)
3/25/2020						0.00098 (J)	
4/9/2020			0.0031 (J)				
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	0.0013 (J)	0.0039 (J)	0.0031 (J)				
8/27/2020						<0.005	<0.005
9/18/2020	0.00077 (J)	0.0037 (J)		0.0039 (J)	<0.005		
9/22/2020			0.0046 (J)				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.0013 (J)		
1/19/2021				<0.005	0.0015 (J)		
3/11/2021	0.002 (J)						
3/12/2021		0.0045 (J)		<0.005	0.00062 (J)		
3/16/2021			0.0061				
3/17/2021						0.00075 (J)	<0.005
8/12/2021	<0.005	0.0041 (J)	<0.005	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		0.0043 (J)	0.0013 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0013 (J)	<0.005			
8/5/2022	<0.005	0.0045 (J)			<0.005		<0.005
8/10/2022						<0.005	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0006 (J)				
8/31/2016						0.0033 (J)	
10/20/2016	<0.005					0.0025 (J)	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						0.001 (J)	
5/23/2017		<0.005	<0.005			0.0025 (J)	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0004 (J)			0.0029 (J)	
11/13/2017	<0.005	<0.005					
11/14/2017			0.0003 (J)			0.003 (J)	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						0.0016 (J)	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						0.0028 (J)	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						0.0023 (J)	0.0018 (J)
1/3/2020							0.0038 (J)
3/4/2020							0.0021 (J)
3/24/2020	<0.005	<0.005					0.0019 (J)
3/25/2020						0.0021 (J)	
4/9/2020			0.00037 (J)				
6/18/2020							0.0012 (J)
7/21/2020							0.00098 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						0.0027 (J)	0.001 (J)
9/18/2020	<0.005	<0.005		0.00049 (J)	<0.005		
9/22/2020			0.00074 (J)				
9/24/2020						0.0021 (J)	0.0011 (J)
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.00039 (J)		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	<0.005		
3/16/2021			0.0013 (J)				
3/17/2021						0.0023 (J)	0.0012 (J)
8/12/2021	<0.005	<0.005	<0.005	<0.005	<0.005		
8/13/2021							0.00085 (J)
8/16/2021						0.0026 (J)	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						0.0027 (J)	0.0019 (J)
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		0.001 (J)
8/10/2022						0.0028 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023 (J)	0.0035 (J)		<0.005
10/20/2016					0.0045 (J)		<0.005
10/24/2016	0.0018 (J)						
10/25/2016		0.0013 (J)	<0.005	0.0017 (J)			
1/27/2017					0.0041 (J)		
1/31/2017	0.0016 (J)	0.0006 (J)	<0.005	0.0017 (J)			<0.005
5/23/2017	0.0014 (J)				0.0071 (J)		0.0005 (J)
5/24/2017		0.0007 (J)	<0.005	0.002 (J)			
8/10/2017	0.0025 (J)	0.0006 (J)	<0.005	0.0012 (J)	0.0031 (J)		0.0003 (J)
11/14/2017	0.002 (J)	0.0005 (J)	<0.005	0.0014 (J)	0.0062 (J)		0.0004 (J)
6/6/2018	0.0031 (J)	0.00056 (J)	<0.005	0.0014 (J)			
6/7/2018					0.0083 (J)		<0.005
10/2/2018		<0.005	<0.005	0.00081 (J)			
10/3/2018	0.0023 (J)				0.005 (J)		<0.005
8/22/2019	0.0019 (J)	<0.005			0.012		0.0003 (J)
8/23/2019			<0.005	0.0027 (J)			
10/22/2019			<0.005	0.0022 (J)	0.0064		0.00061 (J)
10/23/2019	0.0021 (J)	0.00038 (J)					
3/24/2020					0.0087		
3/25/2020	0.0022 (J)	0.00047 (J)	<0.005	0.0022 (J)			<0.005
8/26/2020							0.00061 (J)
8/27/2020	0.0019 (J)	<0.005	<0.005	0.00086 (J)	0.011		
9/24/2020	0.0019 (J)	0.00044 (J)	<0.005				
9/25/2020				0.001 (J)	0.011		
9/28/2020							0.00048 (J)
3/17/2021				0.003 (J)			
3/18/2021	0.0021 (J)	0.00045 (J)	<0.005				0.0012 (J)
3/19/2021					0.011		
8/12/2021						0.0024 (J)	
8/13/2021		<0.005	<0.005	0.0011 (J)			<0.005
8/16/2021	0.0022 (J)						
8/19/2021					0.017		
9/27/2021					0.015	0.0011 (J)	
2/2/2022	0.0022 (J)		<0.005	0.002 (J)	0.022		
2/3/2022		<0.005				0.00041 (J)	0.00045 (J)
8/5/2022	0.0021 (J)	<0.005	<0.005	0.0008 (J)	0.023	0.0011 (J)	<0.005

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.804 (U)	1.32 (U)	0.587 (U)				
8/31/2016						0.621 (U)	
10/20/2016	1.13 (U)					1.4	
10/24/2016		1.3 (U)	0.979 (U)				
1/25/2017	0.888 (U)	1.04 (U)	0.038 (U)				
1/31/2017						0.906 (U)	
5/23/2017		0.541 (U)	0.898 (U)			0.388 (U)	
5/24/2017	0.622 (U)						
8/10/2017	0.745 (U)	0.536 (U)	0.759 (U)			1.03 (U)	
11/13/2017	0.778 (U)	0.786 (U)					
11/14/2017			0.0762 (U)			0.769 (U)	
6/4/2018	0.637 (U)	0.233 (U)					
6/5/2018			0.594 (U)				
6/6/2018						1.28 (U)	
10/1/2018	0.451 (U)	0.494 (U)	0.982				
10/3/2018						0.302 (U)	
8/21/2019	0.553 (U)	0.514 (U)	0.492 (U)				
8/22/2019						0.474 (U)	
10/21/2019	0.351 (U)						
10/22/2019		0.828 (U)	0.523 (U)				
10/23/2019						0.776 (U)	0.858 (U)
1/22/2020							1.04 (U)
3/4/2020							1.32
3/24/2020	0.26 (U)	0.677 (U)					1.23 (U)
3/25/2020						0.603 (U)	
4/9/2020			0.617 (U)				
7/21/2020							0.0938 (U)
8/25/2020	0.57 (U)	0.0182 (U)	0.587 (U)				
8/27/2020						0.109 (U)	1.17 (U)
9/18/2020	0.828 (U)	1.15 (U)		1.11 (U)	1.5 (U)		
9/22/2020			0.551 (U)				
9/24/2020						0.625 (U)	1.42
11/10/2020				0.234 (U)			
11/11/2020					0.776 (U)		
12/15/2020				0.529 (U)	1.23 (U)		
1/19/2021				0.176 (U)	1.35 (U)		
3/11/2021	0.354 (U)						
3/12/2021		0.164 (U)		0 (U)	0.829 (U)		
3/16/2021			0.559 (U)				
3/17/2021						0.248 (U)	0.401 (U)
8/12/2021	0.532 (U)	0.223 (U)	0.312 (U)	0.462 (U)	0.274 (U)		
8/13/2021							0.828 (U)
8/16/2021						0.667 (U)	
1/31/2022	0.279 (U)			0.444 (U)	0.196 (U)		
2/1/2022		0.0793 (U)	0.132 (U)			0.162 (U)	0.806 (U)
8/2/2022			0.791 (U)	0.491 (U)			
8/5/2022	0.573 (U)	0.665 (U)			0.599 (U)		0.618 (U)
8/10/2022						0.601 (U)	

Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	1.62	0.906 (U)	1.2	1.03	1.12		
10/20/2016					0.803 (U)		1.97
10/24/2016	1.01 (U)						
10/25/2016		1.03	1.11 (U)	1.07			
1/27/2017					1.08 (U)		
1/31/2017	0.976 (U)	0.868 (U)	1.45	0.588 (U)			1.03
5/23/2017	0.891 (U)				0.624 (U)		0.398 (U)
5/24/2017		0.728 (U)	0.393 (U)	0.593 (U)			
8/10/2017	0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.695 (U)		0.938 (U)
11/14/2017	0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.99 (U)		0.335 (U)
6/6/2018	0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)			
6/7/2018					1.04 (U)		0.696 (U)
10/2/2018		0.336 (U)	1.23	0.225 (U)			
10/3/2018	0.111 (U)				0.198 (U)		1.6 (U)
8/22/2019	0.946 (U)	0.694 (U)			0.333 (U)		0.904 (U)
8/23/2019			1.69	0.47 (U)			
10/22/2019			0.705 (U)	0.545 (U)	0.827 (U)		0.424 (U)
10/23/2019	0.571 (U)	0.584 (U)					
3/24/2020					0.815 (U)		
3/25/2020	0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)			0.915 (U)
8/26/2020							1.19
8/27/2020	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	0.193 (U)		
9/24/2020	0.804 (U)	1.11 (U)	0.576 (U)				
9/25/2020				0.584 (U)	0.155 (U)		
9/28/2020							0.613 (U)
3/17/2021				0.556 (U)			
3/18/2021	0.274 (U)	0.252 (U)	0.145 (U)				0.323 (U)
3/19/2021					0.303 (U)		
8/12/2021						0.124 (U)	
8/13/2021		0.513 (U)	0.815 (U)	0.794 (U)			0.228 (U)
8/16/2021	0.493 (U)						
8/19/2021					0.155 (U)		
9/27/2021					0.905	1.05 (U)	
2/1/2022	0.569 (U)		0.0564 (U)	0.542 (U)	0.26 (U)		
2/3/2022		0.835				0.499 (U)	0.5 (U)
8/5/2022	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0.605 (U)	0 (U)	0.206 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)				
8/31/2016						0.05 (J)	
10/20/2016	0.07 (J)					0.03 (J)	
10/24/2016		0.05 (J)	0.16 (J)				
1/25/2017	0.14 (J)	<0.1	0.15 (J)				
1/31/2017						<0.1	
5/23/2017		0.004 (J)	0.18 (J)			<0.1	
5/24/2017	0.02 (J)						
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)			<0.1	
11/13/2017	<0.1	<0.1					
11/14/2017			0.16 (J)			<0.1	
6/4/2018	0.032 (J)	<0.1					
6/5/2018			0.18 (J)				
6/6/2018						<0.1	
10/1/2018	<0.1	<0.1	0.078 (J)				
10/3/2018						<0.1	
4/1/2019	0.042 (J)						
4/2/2019		<0.1	0.18 (J)				
4/4/2019						<0.1	
8/21/2019	0.048 (J)	<0.1	0.11 (J)				
8/22/2019						<0.1	
10/21/2019	0.12 (J)						
10/22/2019		0.05 (J)	0.18 (J)				
10/23/2019						<0.1	0.22 (J)
1/3/2020							<0.1
3/4/2020							<0.1
3/24/2020	0.076 (J)	<0.1					<0.1
3/25/2020						<0.1	
4/9/2020			0.14 (J)				
6/18/2020							<0.1
7/21/2020							<0.1
8/25/2020	0.052 (J)	<0.1	0.17				
8/27/2020						<0.1	<0.1
9/18/2020	<0.1	<0.1		0.067 (J)	0.098 (J)		
9/22/2020			0.16				
9/24/2020						<0.1	<0.1
11/10/2020				0.065 (J)			
11/11/2020					0.083 (J)		
12/15/2020				0.064 (J)	0.081 (J)		
1/19/2021				0.057 (J)	0.079 (J)		
3/11/2021	0.057 (J)						
3/12/2021		<0.1		0.062 (J)	0.085 (J)		
3/16/2021			0.18				
3/17/2021						<0.1	<0.1
8/12/2021	<0.1	<0.1	0.16	<0.1	0.064 (J)		
8/13/2021							<0.1
8/16/2021						<0.1	
1/31/2022	0.055 (J)			0.053 (J)	0.072 (J)		
2/1/2022		<0.1	0.16				
2/2/2022						<0.1	<0.1
8/2/2022			0.19	0.08 (J)			
8/5/2022	0.1	0.077 (J)			0.12		0.076 (J)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

8/10/2022	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101 0.065 (J)	HGWC-102
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Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)		0.18 (J)
10/20/2016					0.11 (J)		0.12 (J)
10/24/2016	0.13 (J)						
10/25/2016		0.09 (J)	0.16 (J)	0.17 (J)			
1/27/2017					0.28 (J)		
1/31/2017	<0.1	0.13 (J)	0.16 (J)	0.05 (J)			0.3
5/23/2017	0.15 (J)				0.01 (J)		0.14 (J)
5/24/2017		0.07 (J)	0.009 (J)	0.13 (J)			
8/10/2017	<0.1	0.03 (J)	<0.1	0.12 (J)	0.1 (J)		0.11 (J)
11/14/2017	<0.1	<0.1	<0.1	<0.1	<0.1		0.07 (J)
6/6/2018	<0.1	0.074 (J)	0.057 (J)	0.15 (J)			
6/7/2018					<0.1		0.3
10/2/2018		<0.1	<0.1	<0.1			
10/3/2018	<0.1				<0.1		0.12 (J)
4/3/2019			<0.1	0.05 (J)			
4/4/2019	0.042 (J)	0.03 (J)					
4/5/2019					0.19 (J)		0.33
6/18/2019							0.89
8/22/2019	<0.1	<0.1			<0.1		0.07 (J)
8/23/2019			<0.1	0.034 (J)			
10/22/2019			0.047 (J)	0.099 (J)	0.042 (J)		0.087 (J)
10/23/2019	<0.1	<0.1					
3/24/2020					<0.1		
3/25/2020	<0.1	<0.1	<0.1	0.075 (J)			0.078 (J)
8/26/2020							0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	0.094 (J)	<0.1		
9/24/2020	<0.1	<0.1	0.064 (J)				
9/25/2020				0.091 (J)	<0.1		
9/28/2020							0.078 (J)
3/17/2021				0.089 (J)			
3/18/2021	<0.1	<0.1	<0.1				0.079 (J)
3/19/2021					<0.1		
8/12/2021						<0.1	
8/13/2021		<0.1	<0.1	0.086 (J)			0.075 (J)
8/16/2021	<0.1						
8/19/2021					<0.1		
9/27/2021					<0.1	<0.1	
2/2/2022	<0.1		<0.1	0.086 (J)	<0.1		
2/3/2022		<0.1				0.056 (J)	0.069 (J)
8/5/2022	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.075 (J)	0.12	0.12

Time Series

Constituent: Lead (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0001 (J)	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			0.0009 (J)	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	0.0001 (J)			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	7.1E-05 (J)				
8/22/2019						<0.001	
10/21/2019	0.00016 (J)						
10/22/2019		<0.001	7.3E-05 (J)				
10/23/2019						<0.001	<0.001
1/3/2020							<0.001
3/4/2020							0.00011 (J)
3/24/2020	0.00058 (J)	0.00016 (J)					<0.001
3/25/2020						<0.001	
4/9/2020			0.00039 (J)				
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	0.00036 (J)	0.00011 (J)	0.00022 (J)				
8/27/2020						<0.001	<0.001
9/18/2020	0.00026 (J)	6.5E-05 (J)		<0.001	<0.001		
9/22/2020			0.00096 (J)				
9/24/2020						<0.001	<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	0.00015 (J)		
1/19/2021				3.8E-05 (J)	5.6E-05 (J)		
3/11/2021	0.0011						
3/12/2021		0.00017 (J)		<0.001	4.8E-05 (J)		
3/16/2021			0.0016				
3/17/2021						<0.001	<0.001
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0022 (J)	<0.03	<0.03				
8/31/2016						<0.03	
10/20/2016	<0.03					<0.03	
10/24/2016		<0.03	<0.03				
1/25/2017	<0.03	<0.03	<0.03				
1/31/2017						<0.03	
5/23/2017		<0.03	0.0011 (J)			<0.03	
5/24/2017	0.0017 (J)						
8/10/2017	0.0017 (J)	<0.03	<0.03			<0.03	
11/13/2017	<0.03	<0.03					
11/14/2017			<0.03			<0.03	
6/4/2018	0.0016 (J)	<0.03					
6/5/2018			0.001 (J)				
6/6/2018						<0.03	
10/1/2018	<0.03	<0.03	0.001 (J)				
10/3/2018						<0.03	
8/21/2019	0.0018 (J)	<0.03	0.0011 (J)				
8/22/2019						<0.03	
10/21/2019	0.0026 (J)						
10/22/2019		<0.03	0.0011 (J)				
10/23/2019						<0.03	0.0012 (J)
1/3/2020							0.0011 (J)
3/4/2020							0.0013 (J)
3/24/2020	0.0039 (J)	<0.03					0.00084 (J)
3/25/2020						<0.03	
4/9/2020			0.0017 (J)				
6/18/2020							0.0013 (J)
7/21/2020							0.0013 (J)
8/25/2020	0.0033 (J)	<0.03	0.0014 (J)				
8/27/2020						<0.03	0.0011 (J)
9/18/2020	0.0021 (J)	<0.03		0.0026 (J)	0.0051 (J)		
9/22/2020			0.0018 (J)				
9/24/2020						<0.03	0.0011 (J)
11/10/2020				0.0028 (J)			
11/11/2020					0.0036 (J)		
12/15/2020				0.0026 (J)	0.0045 (J)		
1/19/2021				0.003 (J)	0.0032 (J)		
3/11/2021	0.0047 (J)						
3/12/2021		<0.03		0.0031 (J)	0.0031 (J)		
3/16/2021			0.0026 (J)				
3/17/2021						<0.03	0.0012 (J)
8/12/2021	0.002 (J)	<0.03	0.00094 (J)	0.0029 (J)	0.0037 (J)		
8/13/2021							0.0011 (J)
8/16/2021						<0.03	
1/31/2022	0.0026 (J)			0.0031 (J)	0.0034 (J)		
2/1/2022		<0.03	0.0011 (J)				
2/2/2022						<0.03	0.0013 (J)
8/2/2022			0.00089 (J)	0.0026 (J)			
8/5/2022	0.0019 (J)	<0.03			0.0036 (J)		0.0013 (J)
8/10/2022						<0.03	

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.03	0.0034 (J)	<0.03	<0.03	0.0024 (J)		<0.03
10/20/2016					0.0027 (J)		<0.03
10/24/2016	<0.03						
10/25/2016		0.0043 (J)	<0.03	<0.03			
1/27/2017					<0.03		
1/31/2017	<0.03	0.0042 (J)	<0.03	<0.03			<0.03
5/23/2017	0.0012 (J)				<0.03		0.0012 (J)
5/24/2017		0.0039 (J)	<0.03	0.0012 (J)			
8/10/2017	0.0016 (J)	0.004 (J)	<0.03	<0.03	0.0021 (J)		<0.03
11/14/2017	0.0015 (J)	0.0044 (J)	<0.03	<0.03	<0.03		<0.03
6/6/2018	0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)			
6/7/2018					0.0011 (J)		0.0015 (J)
10/2/2018		0.0041 (J)	<0.03	0.0013 (J)			
10/3/2018	0.0016 (J)				0.0021 (J)		<0.03
8/22/2019	0.0015 (J)	0.004 (J)			0.0012 (J)		0.0018 (J)
8/23/2019			0.00092 (J)	0.0009 (J)			
10/22/2019			0.00094 (J)	0.00088 (J)	0.0028 (J)		0.0027 (J)
10/23/2019	0.002 (J)	0.0039 (J)					
3/24/2020					0.0029 (J)		
3/25/2020	0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03			0.0017 (J)
8/26/2020							0.0028 (J)
8/27/2020	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)	0.0024 (J)		
9/24/2020	0.0017 (J)	0.0038 (J)	0.00098 (J)				
9/25/2020				0.001 (J)	0.0031 (J)		
9/28/2020							0.0022 (J)
3/17/2021				<0.03			
3/18/2021	0.0018 (J)	0.0042 (J)	0.0011 (J)				0.0029 (J)
3/19/2021					0.0035 (J)		
8/12/2021						0.0036 (J)	
8/13/2021		0.0038 (J)	0.00084 (J)	<0.03			0.0017 (J)
8/16/2021	0.0016 (J)						
8/19/2021					0.0017 (J)		
9/27/2021					0.0016 (J)	0.0035 (J)	
2/2/2022	0.0019 (J)		0.001 (J)	0.00084 (J)	0.0017 (J)		
2/3/2022		0.0046 (J)				0.0051 (J)	0.0015 (J)
8/5/2022	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0017 (J)	0.0038 (J)	0.0018 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	4E-05 (J)	4.1E-05 (J)	4E-05 (J)				
8/31/2016						<0.0002	
10/20/2016	<0.0002					<0.0002	
10/24/2016		<0.0002	<0.0002				
1/25/2017	4E-05 (J)	4E-05 (J)	4E-05 (J)				
1/31/2017						9.3E-05 (J)	
5/23/2017		<0.0002	<0.0002			<0.0002	
5/24/2017	<0.0002						
8/10/2017	<0.0002	<0.0002	<0.0002			<0.0002	
11/13/2017	<0.0002	<0.0002					
11/14/2017			<0.0002			<0.0002	
6/4/2018	<0.0002	<0.0002					
6/5/2018			<0.0002				
6/6/2018						<0.0002	
10/1/2018	4.3E-05 (J)	3.9E-05 (J)	4.3E-05 (J)				
10/3/2018						<0.0002	
8/21/2019	<0.0002	<0.0002	<0.0002				
8/22/2019						<0.0002	
10/23/2019							<0.0002
1/3/2020							<0.0002
3/4/2020							<0.0002
3/24/2020							<0.0002
6/18/2020							<0.0002
7/21/2020							<0.0002
8/25/2020	<0.0002	<0.0002	<0.0002				
8/27/2020						<0.0002	<0.0002
9/18/2020				<0.0002	<0.0002		
9/24/2020							<0.0002
11/10/2020				<0.0002			
11/11/2020					<0.0002		
12/15/2020				<0.0002	<0.0002		
1/19/2021				<0.0002	<0.0002		
8/12/2021	<0.0002 (ND)	0.00011 (J)	<0.0002	8.1E-05 (J)	0.00018 (J)		
8/13/2021							0.0001 (J)
8/16/2021						9.9E-05 (J)	
1/31/2022	<0.0002			<0.0002	<0.0002		
2/1/2022		<0.0002	<0.0002				
2/2/2022						<0.0002	<0.0002
8/2/2022			<0.0002	<0.0002			
8/5/2022	<0.0002	<0.0002			<0.0002		<0.0002
8/10/2022						<0.0002	

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.0002	<0.0002	<0.0002	<0.0002	7E-05 (J)		<0.0002
10/20/2016					<0.0002		<0.0002
10/24/2016	<0.0002						
10/25/2016		<0.0002	<0.0002	<0.0002			
1/27/2017					<0.0002		
1/31/2017	8E-05 (J)	<0.0002	<0.0002	8E-05 (J)			9E-05 (J)
5/23/2017	<0.0002				<0.0002		<0.0002
5/24/2017		<0.0002	<0.0002	<0.0002			
8/10/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002	<0.0002	<0.0002	<0.0002			
6/7/2018					<0.0002		<0.0002
10/2/2018		<0.0002	<0.0002	<0.0002			
10/3/2018	<0.0002				<0.0002		<0.0002
8/22/2019	<0.0002	<0.0002			<0.0002		<0.0002
8/23/2019			<0.0002	<0.0002			
8/26/2020							<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
8/12/2021						9.4E-05 (J)	
8/13/2021		0.00022	8.4E-05 (J)	8E-05 (J)			8.1E-05 (J)
8/16/2021	0.00027						
8/19/2021					0.0003		
9/27/2021					<0.0002	<0.0002	
2/2/2022	<0.0002		<0.0002	<0.0002	0.00015 (J)		
2/3/2022		<0.0002				<0.0002	<0.0002
8/5/2022	0.00017 (J)	<0.0002	<0.0002	<0.0002	0.00014 (J)	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	<0.01				
1/25/2017	<0.01	<0.01	<0.01				
1/31/2017						<0.01	
5/23/2017		<0.01	<0.01			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	<0.01			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	<0.01				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	<0.01				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							<0.01
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				0.0015 (J)	0.0026 (J)		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					0.0012 (J)		
12/15/2020				<0.01	0.00097 (J)		
1/19/2021				<0.01	0.0018 (J)		
8/12/2021	<0.01	<0.01	<0.01	<0.01	0.0019 (J)		
8/13/2021							<0.01
8/16/2021						<0.01	
1/31/2022	<0.01			<0.01	0.002 (J)		
2/1/2022		<0.01	<0.01				
2/2/2022						<0.01	<0.01
8/2/2022			<0.01	<0.01			
8/5/2022	<0.01	<0.01			0.0012 (J)		<0.01
8/10/2022						<0.01	

Time Series

Constituent: pH (s.u.) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	6.89	5.77	5.99				
8/31/2016						5.35	
10/20/2016	6.73					5.3	
10/24/2016		5.61	5.84				
1/25/2017	7.02	5.68	6.04				
1/31/2017						5.24	
5/23/2017		5.7	6.01			5.39	
5/24/2017	6.44						
8/10/2017	6.79	5.59	5.98			5.47	
11/13/2017	5.94	5.56					
11/14/2017			6.16			5.4	
6/4/2018	6.12	5.62					
6/5/2018			5.86				
6/6/2018						5.37	
10/1/2018	5.92	5.62	5.94				
10/3/2018						5.39	
4/1/2019	7.09						
4/2/2019		5.47	6				
4/4/2019						5.31	
6/18/2019						5.3	
8/21/2019	6.6	5.8	6.05				
8/22/2019						5.39	
10/21/2019	7.02						
10/22/2019		5.7	5.98				
10/23/2019						5.33	5.68
1/3/2020							5.64
3/4/2020							5.75
3/24/2020	7.37	5.64					5.58
3/25/2020						5.53	
4/9/2020			6.08				
6/18/2020							5.67
7/21/2020							5.72
8/25/2020	6.7	5.53	5.95				
8/27/2020						5.32	5.7
9/18/2020	6.46	5.58		7.54	7.5		
9/22/2020			6.1				
9/24/2020						5.48	5.82
11/10/2020				7.34			
11/11/2020					7.4		
12/15/2020				7.27	7.39		
1/19/2021				7.32	7.4		
3/11/2021	7.2						
3/12/2021		5.6		7.52	7.51		
3/16/2021			6.14				
3/17/2021						5.41	5.78
8/12/2021	6.67	5.5	6.08	7.38	7.44		
8/13/2021							5.45
8/16/2021						5.4	
1/31/2022	7.17			7.34	7.44		
2/1/2022		5.59	6.05				
2/2/2022						5.51	5.79
8/2/2022			6.08	7.34			

Time Series

Constituent: pH (s.u.) Analysis Run 10/11/2022 1:17 PM View: All & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/5/2022	6.97	5.43			7.4		5.69
8/10/2022						5.37	

Time Series

Constituent: pH (s.u.) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	5.54	6.5	6.11	6.78	6.07		7.03
10/20/2016					6		7.01
10/24/2016	5.48						
10/25/2016		6.34	6.04	6.55			
1/27/2017					6.2		
1/31/2017	5.51	6.43	5.94	6.5			6.96
5/23/2017	5.98				5.27		6.92
5/24/2017		6.31	6.06	6.42			
8/10/2017	5.63	6.45	6.06	6.63	6.27		6.99
11/14/2017	5.59	6.53	5.99	6.5	5.4		6.9
6/6/2018	5.49	6.49	6	6.59			
6/7/2018					5.29		7.03
10/2/2018		6.18	6.18	6.54			
10/3/2018	5.53				6.08		7.08
4/3/2019			6.06	6.42			
4/4/2019	5.44	6.17					
4/5/2019					5.99		6.96
6/17/2019	5.53						
8/22/2019	5.55	6.04			5.53		6.93
8/23/2019			6.26	6.76			
10/22/2019			6.19	6.58	6.17		7.03
10/23/2019	5.49	6.46					
3/24/2020					5.99		
3/25/2020	5.49	6.47	6.13	6.56			6.89
8/26/2020							6.97
8/27/2020	5.82	6.45	6.09	6.64	5.92		
9/24/2020	5.6	6.63	6.11				
9/25/2020				6.79	6.01		
9/28/2020							7.03
3/17/2021				6.55			
3/18/2021	5.51	6.57	6.2				7.11
3/19/2021					6.14		
8/12/2021						6.27	
8/13/2021		6.44	6.11	6.71			6.78
8/16/2021	5.59						
8/19/2021					6.04		
9/27/2021					5.66	6.14	
2/2/2022	5.63		6.14	6.65	5.53		
2/3/2022		6.48				6.58	6.79
8/5/2022	5.71	6.46	6.07	6.81	5.46	6.44	7.07

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0027 (J)				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	0.0034 (J)				
1/25/2017	<0.005	<0.005	0.0023 (J)				
1/31/2017						<0.005	
5/23/2017		<0.005	0.0024 (J)			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0023 (J)			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			0.0019 (J)				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	0.0024 (J)				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	0.0025 (J)				
8/22/2019						<0.005	
10/23/2019							<0.005
1/3/2020							0.0015 (J)
3/4/2020							<0.005
3/24/2020							<0.005
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020				<0.005	<0.005		
9/24/2020							<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
8/12/2021	<0.005	<0.005	0.0023 (J)	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	0.0022 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0034 (J)	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	280	190	130	36	150		88
10/20/2016					150		81
10/24/2016	280						
10/25/2016		190	130	41			
1/27/2017					150		
1/31/2017	300	210	130	37			87
5/23/2017	340				110		84
5/24/2017		180	130	40			
8/10/2017	300	180	130	40	140		78
11/14/2017	310	170	130	40	110		79
6/6/2018	351	168	132	49.7			
6/7/2018					103		60.1
10/2/2018		173	132	42.3			
10/3/2018	381				169		91.5
4/3/2019			139	36			
4/4/2019	358	185					
4/5/2019					141		75.1
6/17/2019	311	162	126	30.9			
6/18/2019					116		77
10/22/2019			123	23.2	133		80.9
10/23/2019	248	162					
3/24/2020					129		
3/25/2020	251	161	116	27.9			78.4
9/24/2020	293	177	126				
9/25/2020				24.7	146		
9/28/2020							86
3/17/2021				28.3			
3/18/2021	286	196	128				87.8
3/19/2021					162		
8/12/2021						64.6	
8/13/2021		142	112	24.4			75.1
8/16/2021	354						
8/19/2021					108		
9/27/2021					104	69.7	
2/2/2022	293		111	25.5	115		
2/3/2022		195				72.9	72.7
8/5/2022	369	217	120	23	132	76.1	69.8

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & AIV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	172	76	77				
8/31/2016						278	
10/20/2016	108					165	
10/24/2016		65	111				
1/25/2017	345	152 (o)	155				
1/31/2017						263	
5/23/2017		52	74			190	
5/24/2017	126						
8/10/2017	174	60	94			175	
11/13/2017	158	75					
11/14/2017			89			253	
6/4/2018	131	70					
6/5/2018			92				
6/6/2018						188	
10/1/2018	101	76	91				
10/3/2018						238	
4/1/2019	213						
4/2/2019		69	94				
4/4/2019						149	
10/21/2019	187						
10/22/2019		81	95				
10/23/2019						221	736
1/3/2020							714
3/4/2020							764
3/24/2020	207	52					521
3/25/2020						187	
4/9/2020			48				
6/18/2020							652
7/21/2020							669
8/27/2020							663
9/18/2020	139	62		195	224		
9/22/2020			84				
9/24/2020						170	696
11/10/2020				229			
11/11/2020					221		
12/15/2020				233	239		
1/19/2021				199	224		
3/11/2021	207						
3/12/2021		56		217	204		
3/16/2021			99				
3/17/2021						213	626
8/12/2021	157	63	92	212	234		
8/13/2021							647
8/16/2021						206	
1/31/2022	186			243	223		
2/1/2022		73	99				
2/2/2022						220	602
8/2/2022			85	222			
8/5/2022	171	44			224		696
8/10/2022						232	

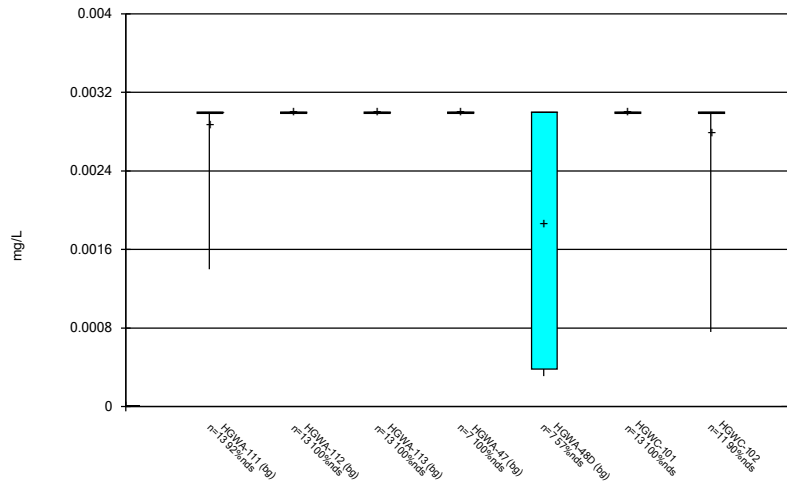
Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 1:17 PM View: All & All
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	483	389	235	182	381		373
10/20/2016					319		305
10/24/2016	517						
10/25/2016		316	223	172			
1/27/2017					407		
1/31/2017	516	437	346	252			361
5/23/2017	637				258		359
5/24/2017		352	234	184			
8/10/2017	459	356	254	208	359		325
11/14/2017	545	375	313	252	310		373
6/6/2018	559	385	278	224			
6/7/2018					223		338
10/2/2018		374	274	230			
10/3/2018	582				337		328
4/3/2019			273	210			
4/4/2019	535	340					
4/5/2019					334		308
6/17/2019	515	370	272				
6/18/2019					254		215
10/22/2019			308	212	348		354
10/23/2019	507	419					
3/24/2020					331		
3/25/2020	507	417	297	213			347
9/24/2020	517	411	253				
9/25/2020				188	340		
9/28/2020							332
3/17/2021				171			
3/18/2021	465	410	255				328
3/19/2021					371		
8/12/2021						256	
8/13/2021		441	291	189			336
8/16/2021	672						
8/19/2021					253		
9/27/2021					242	223	
2/2/2022	576		271	206	256		
2/3/2022		463				264	316
8/5/2022	692	514	274	195	285	270	329

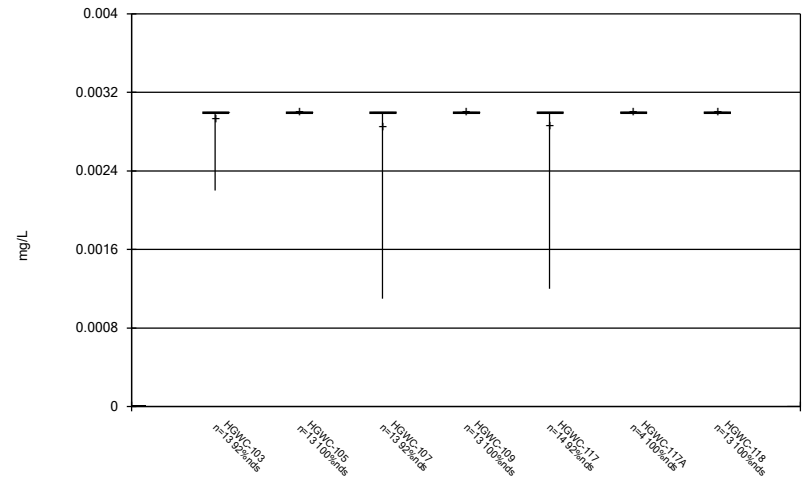
FIGURE B.

Box & Whiskers Plot



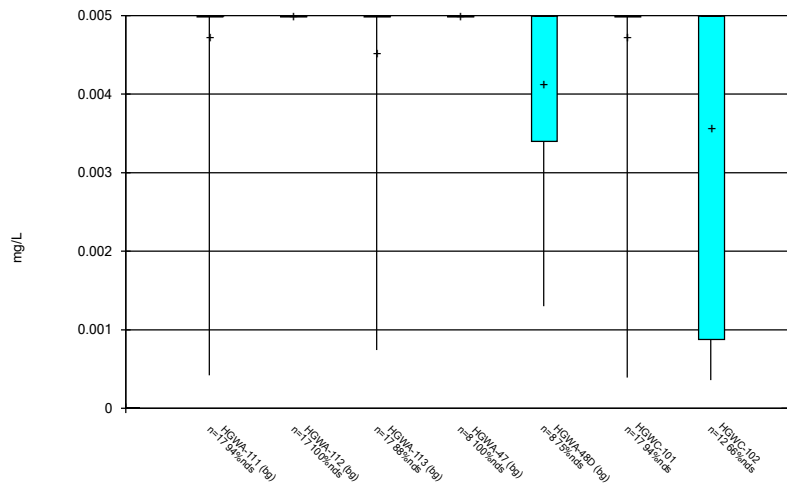
Constituent: Antimony Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



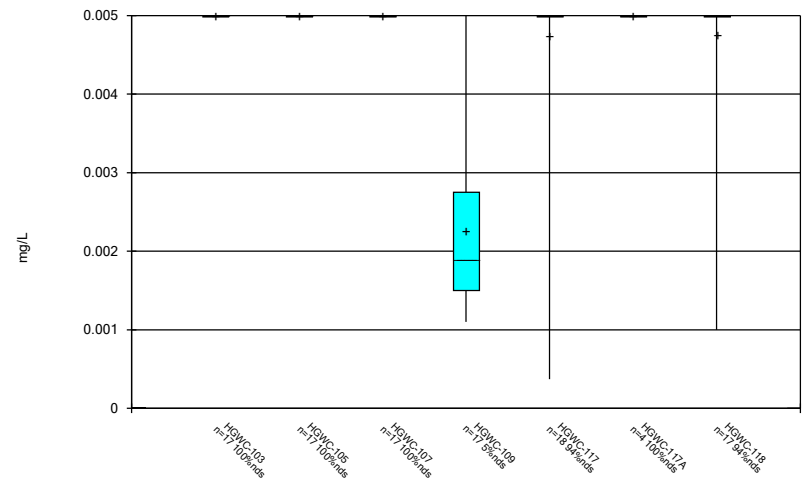
Constituent: Antimony Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



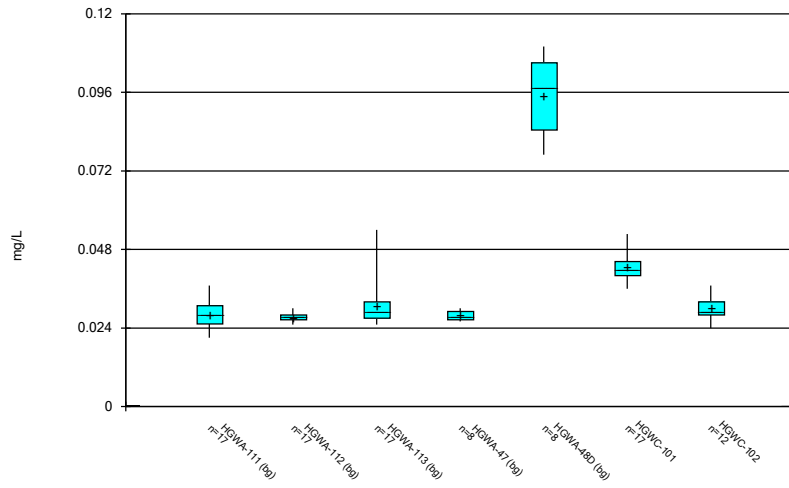
Constituent: Arsenic Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



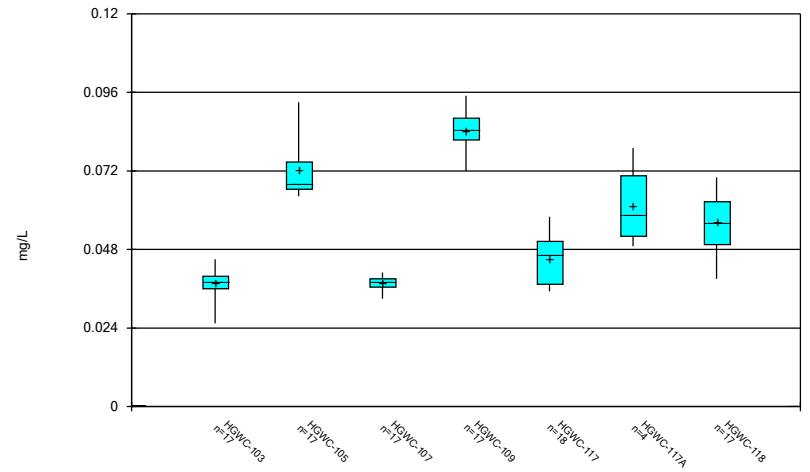
Constituent: Arsenic Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



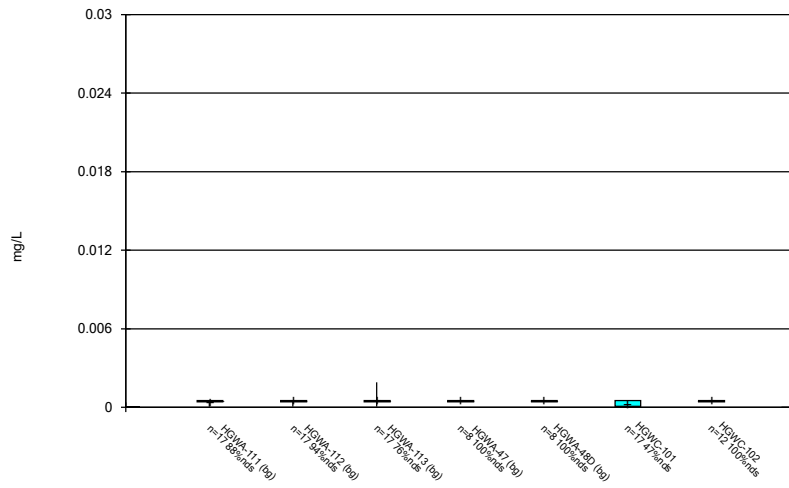
Constituent: Barium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



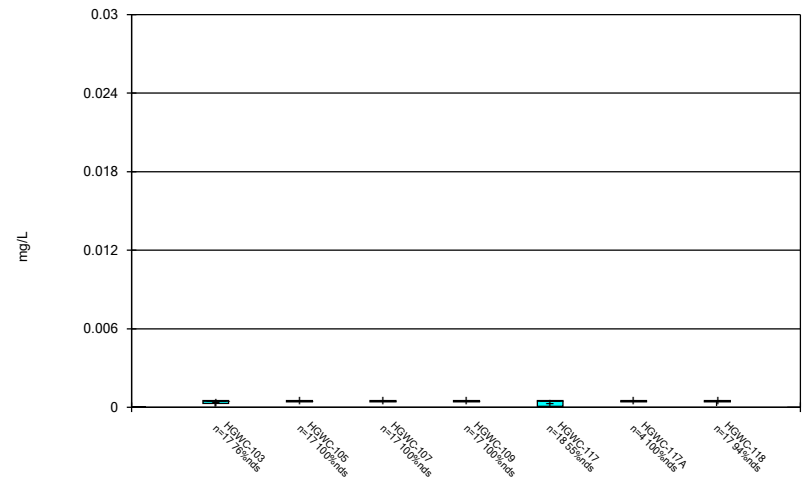
Constituent: Barium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



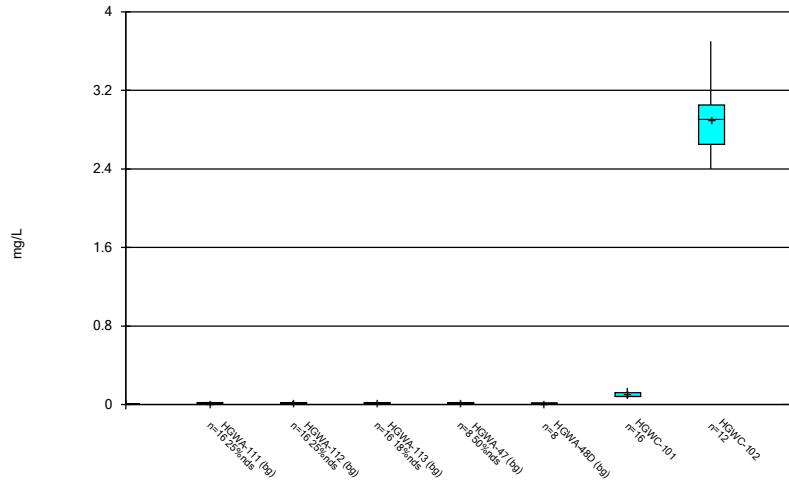
Constituent: Beryllium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



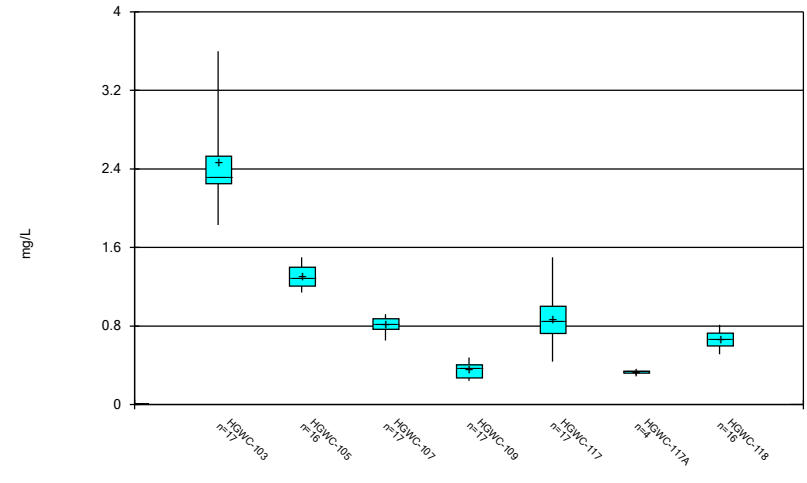
Constituent: Beryllium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



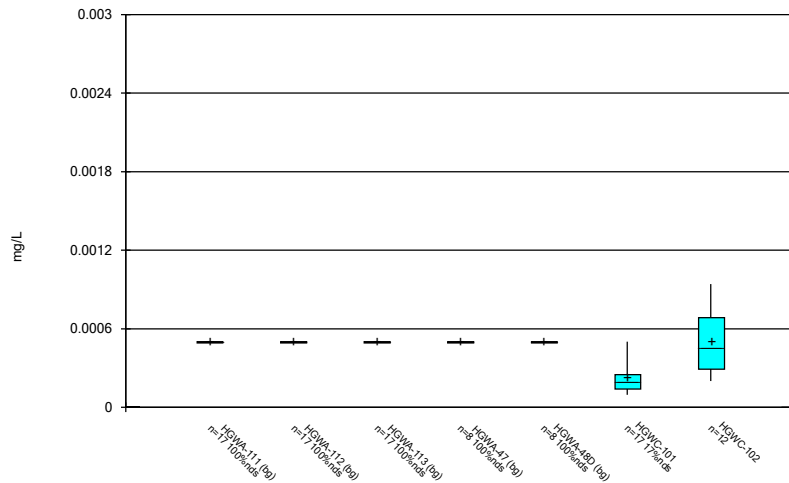
Constituent: Boron Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



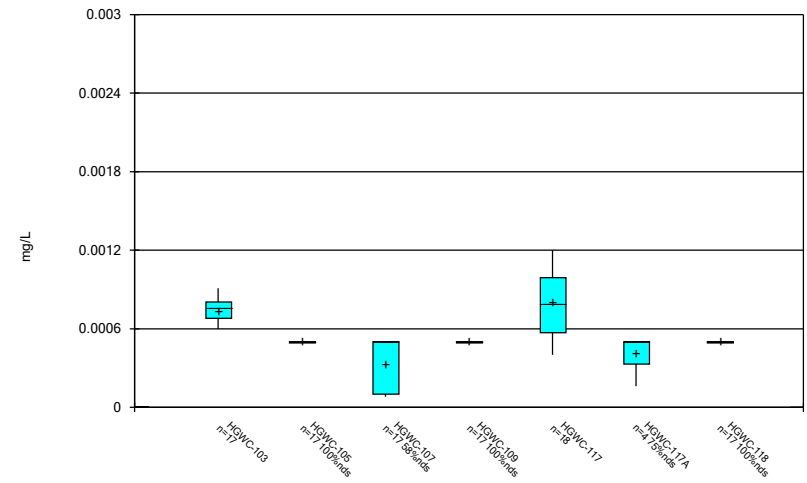
Constituent: Boron Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



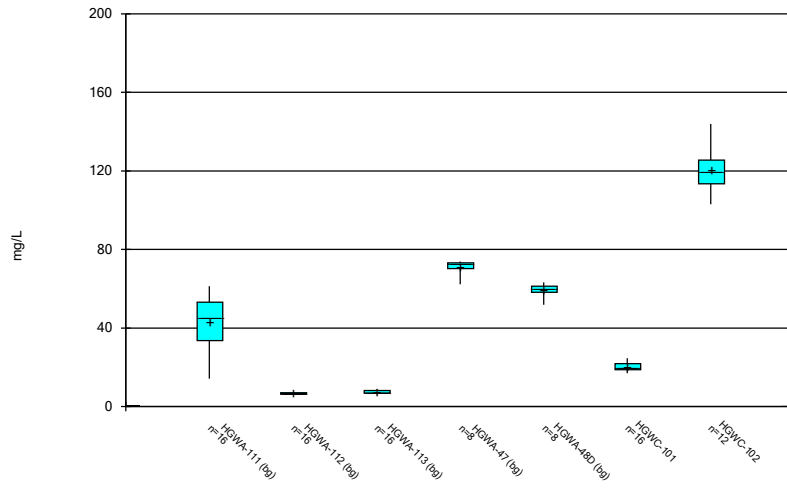
Constituent: Cadmium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



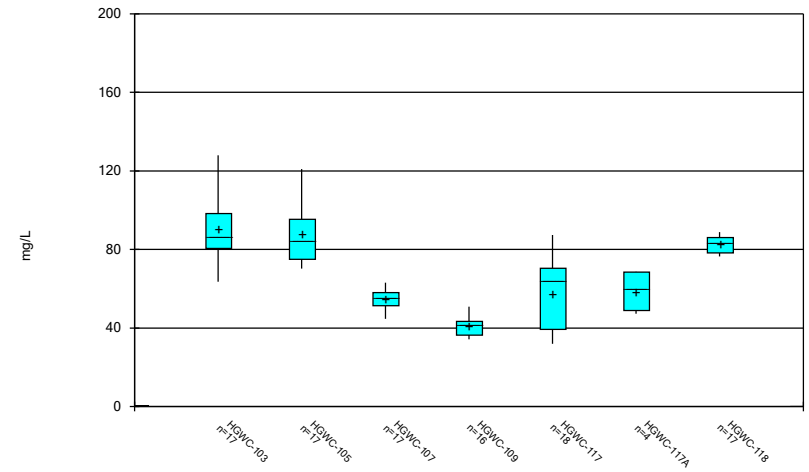
Constituent: Cadmium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



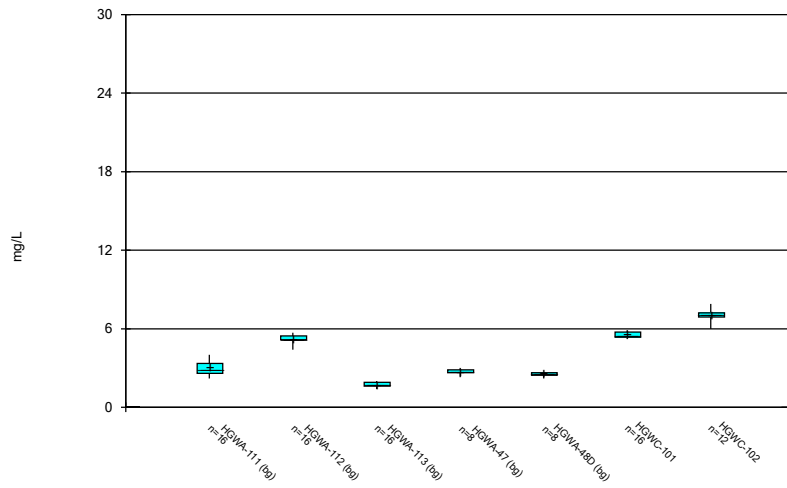
Constituent: Calcium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



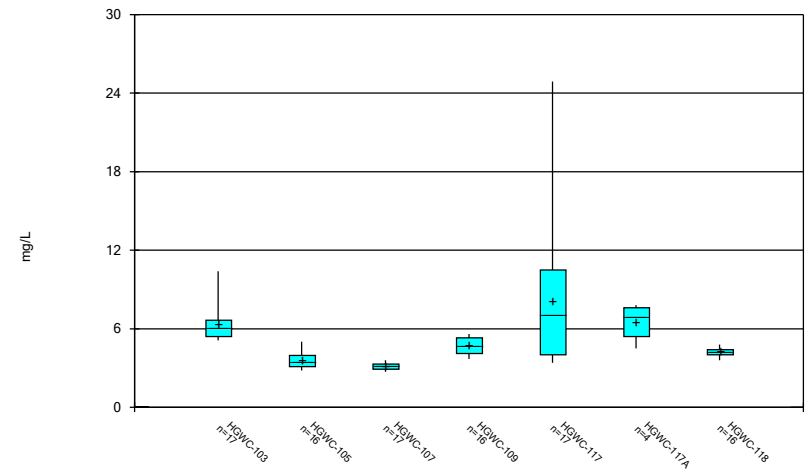
Constituent: Calcium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



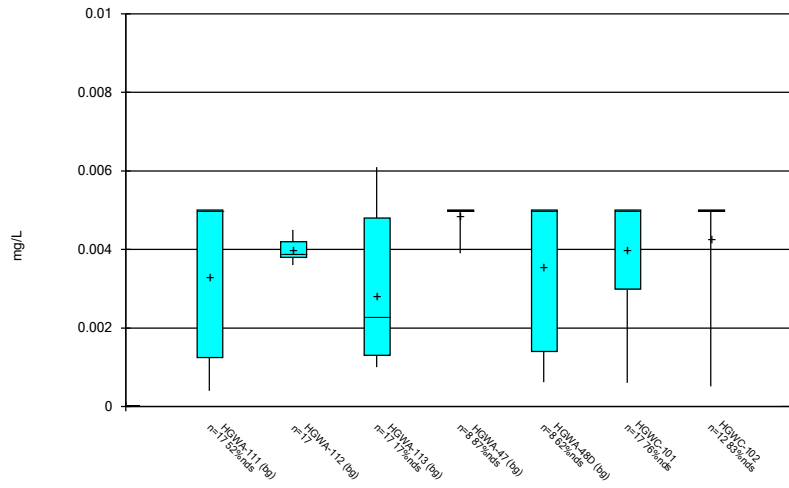
Constituent: Chloride Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



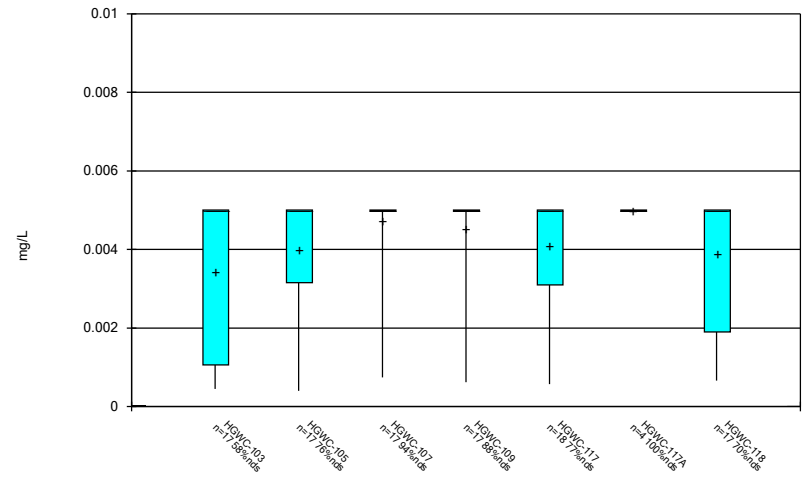
Constituent: Chloride Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



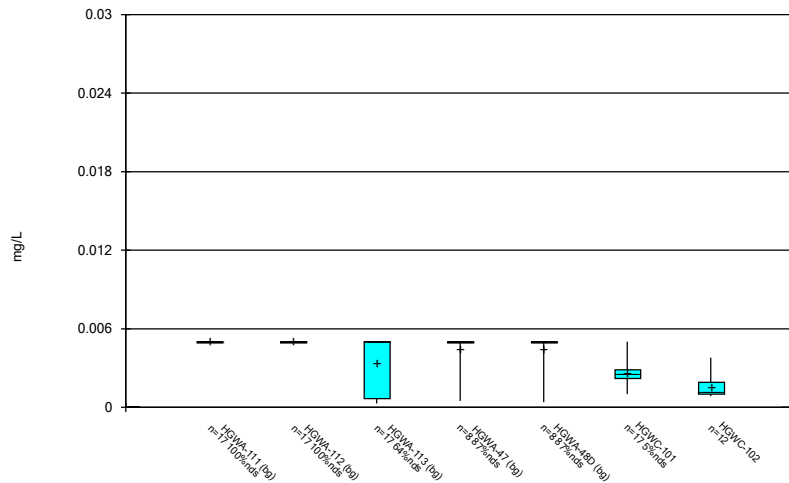
Constituent: Chromium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



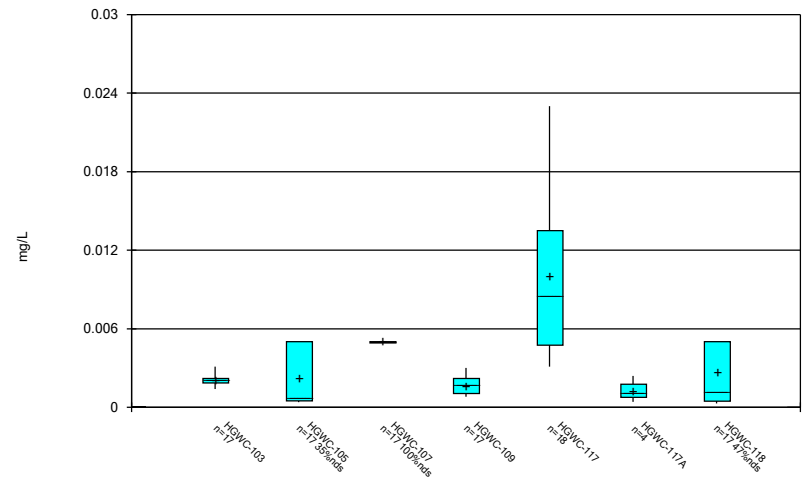
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



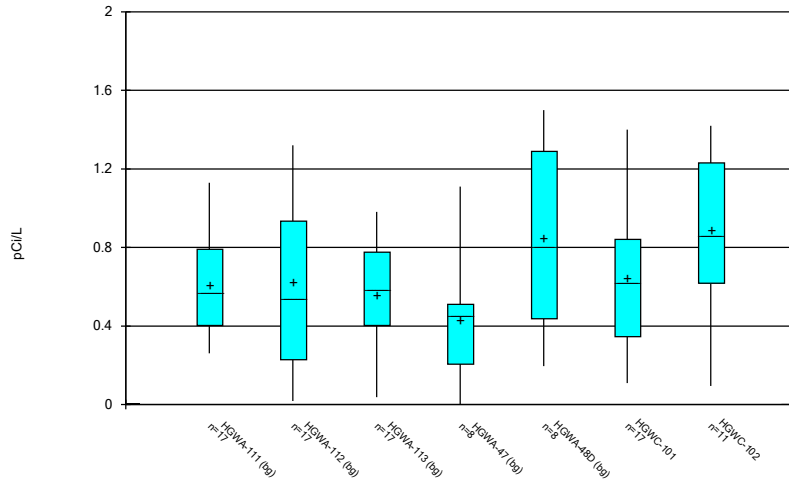
Constituent: Cobalt Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



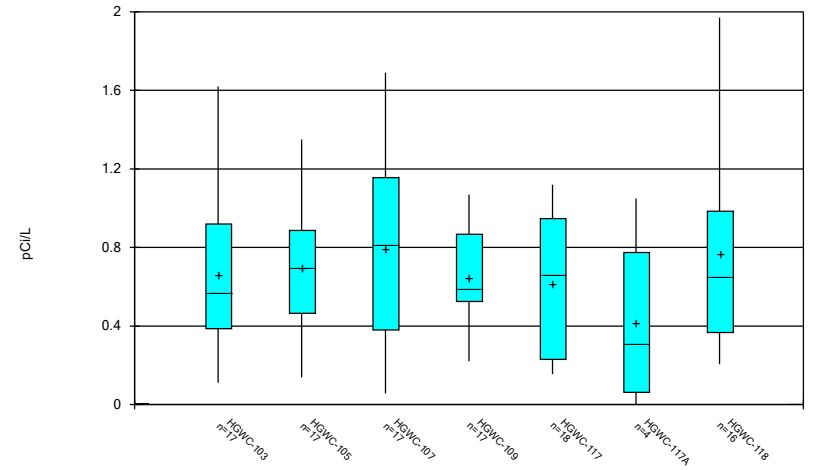
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



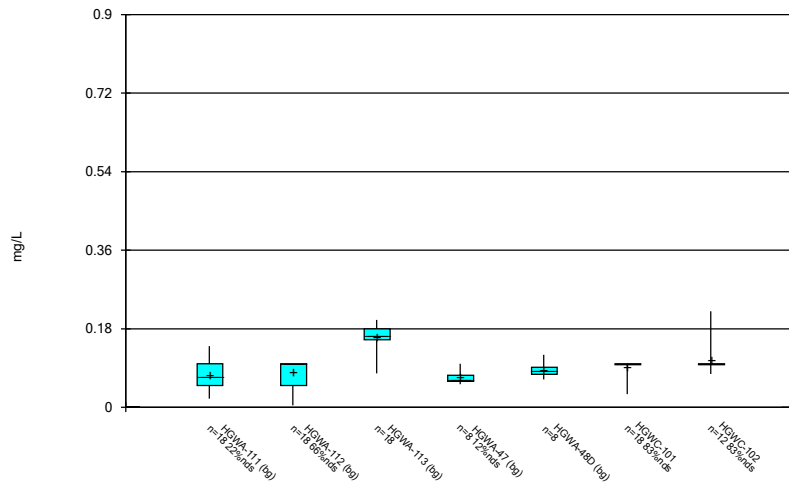
Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



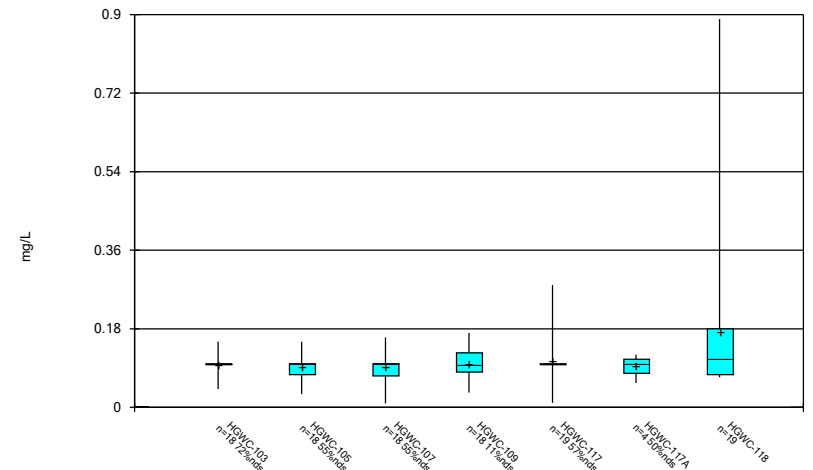
Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



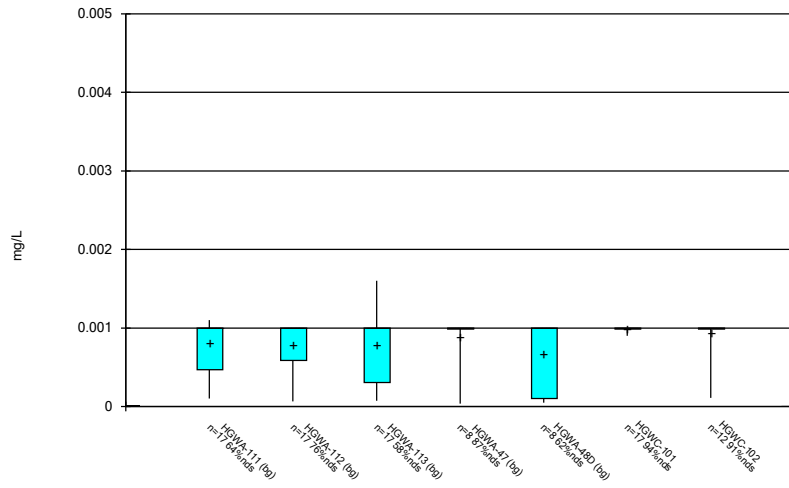
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



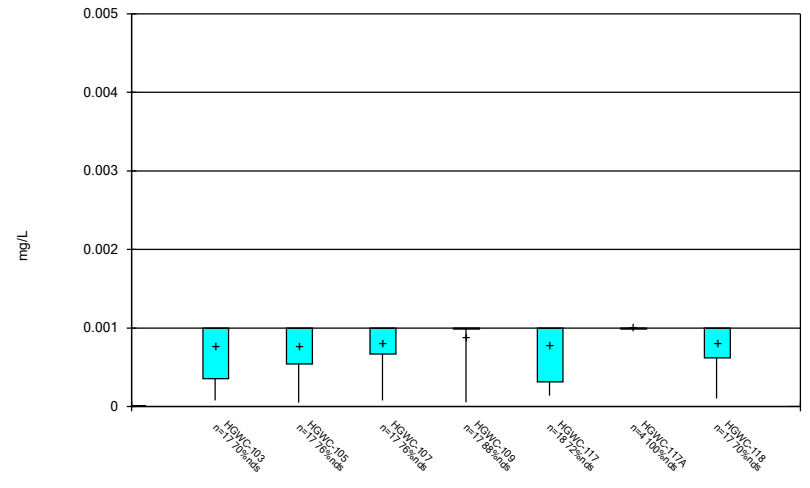
Constituent: Fluoride Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



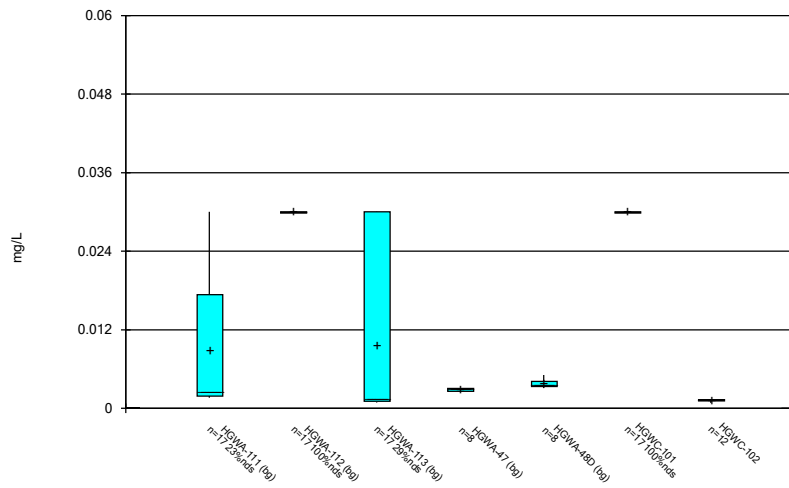
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



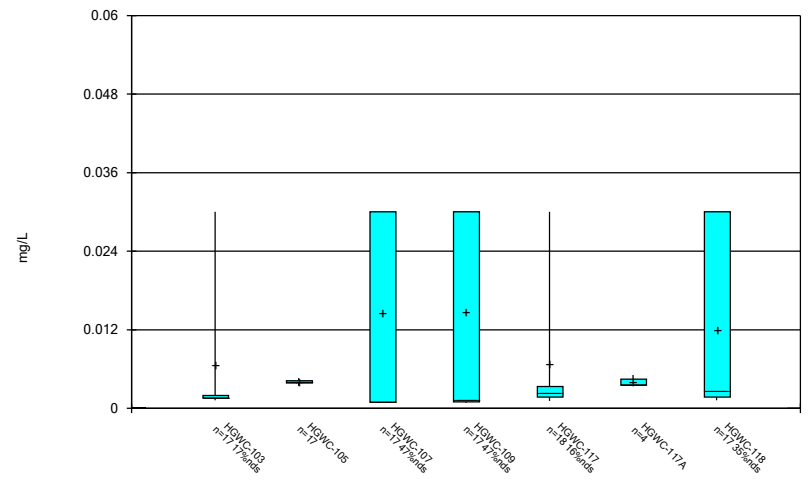
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



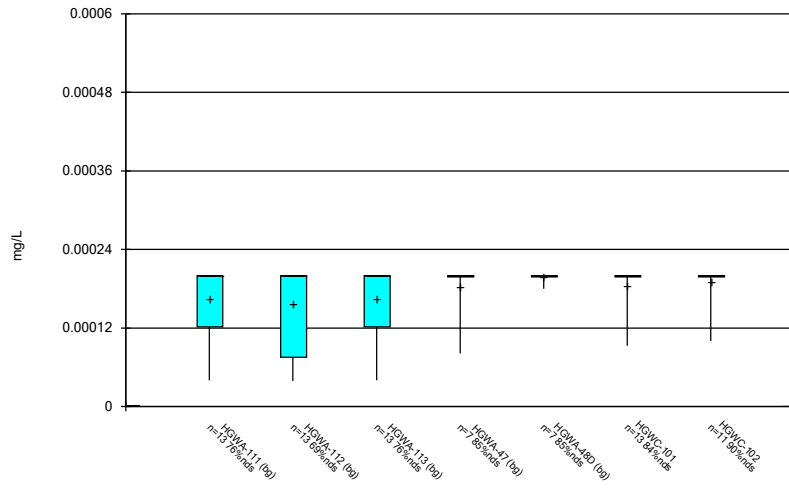
Constituent: Lithium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



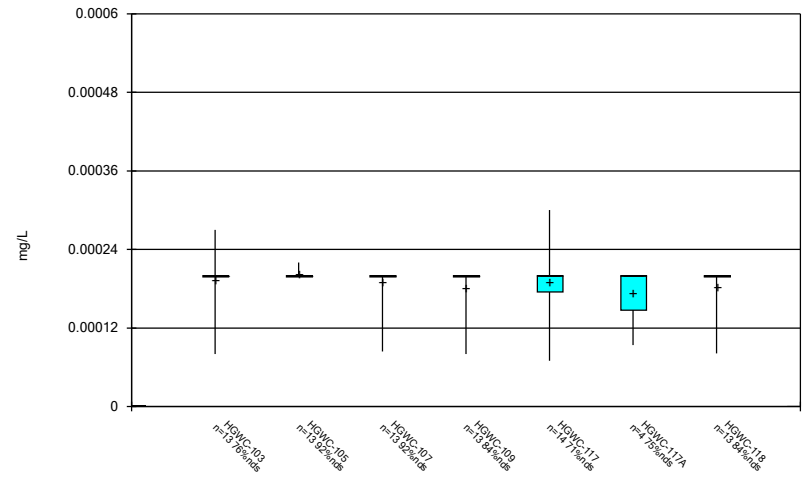
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



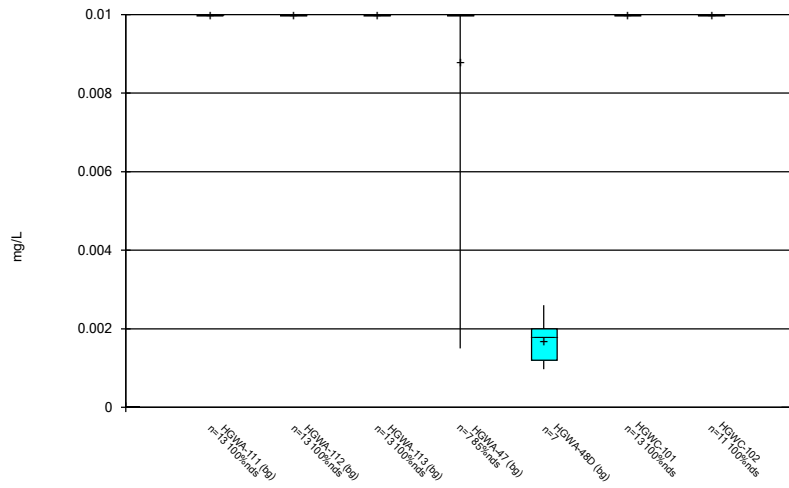
Constituent: Mercury Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



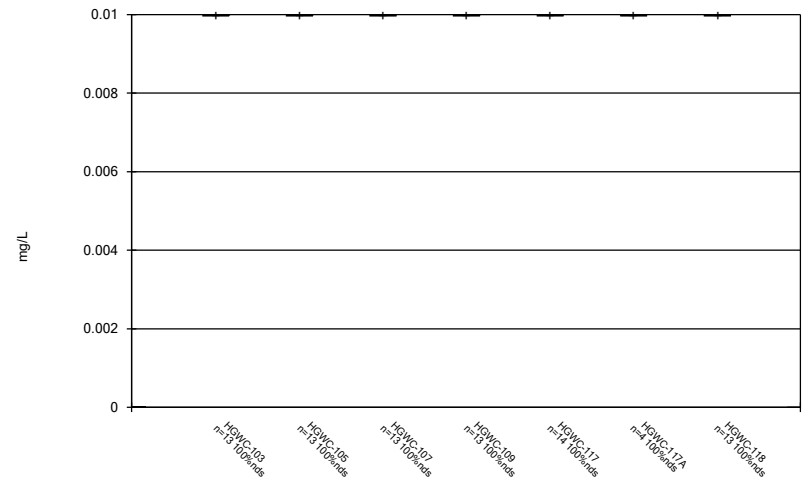
Constituent: Mercury Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



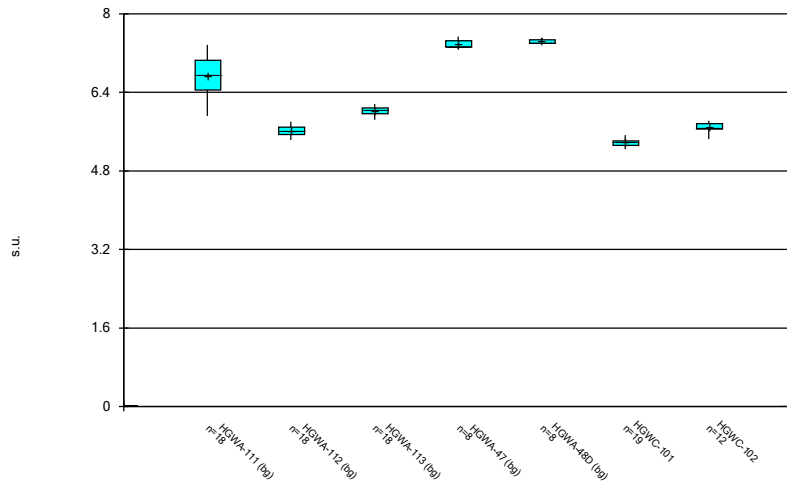
Constituent: Molybdenum Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



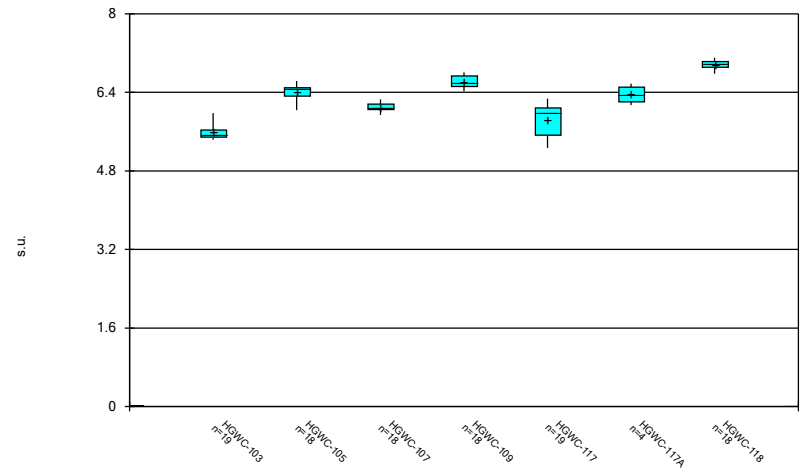
Constituent: Molybdenum Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



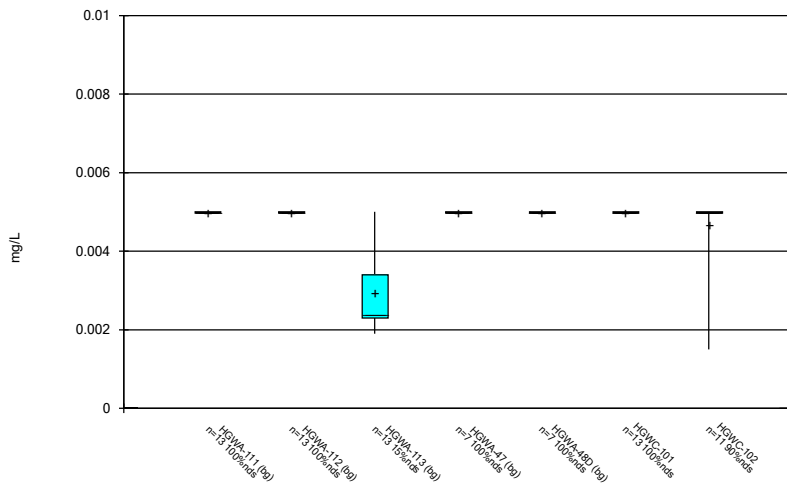
Constituent: pH Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



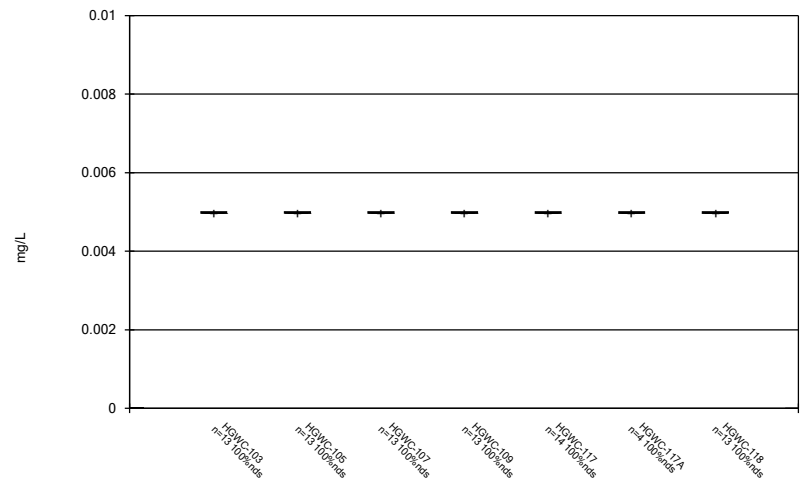
Constituent: pH Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



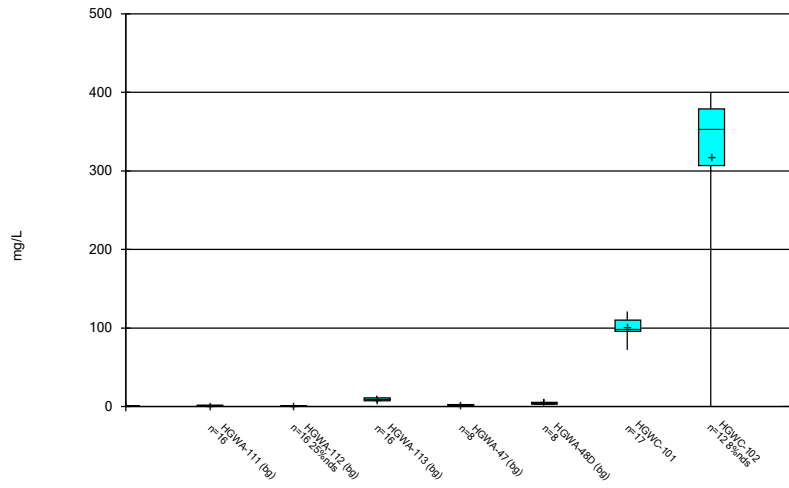
Constituent: Selenium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



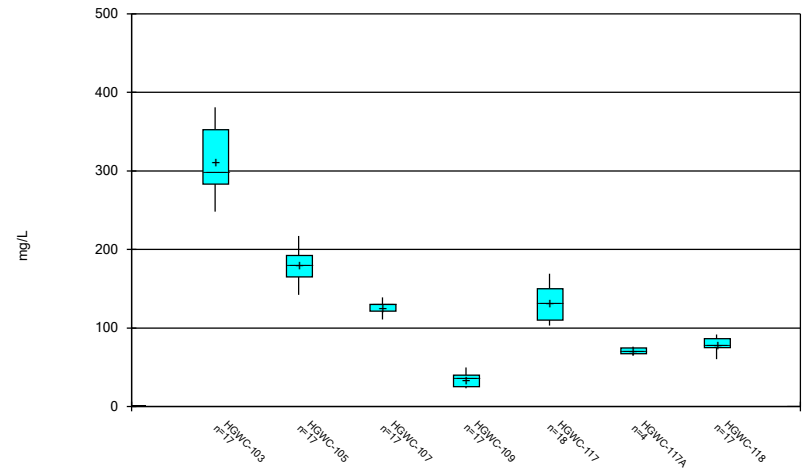
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 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



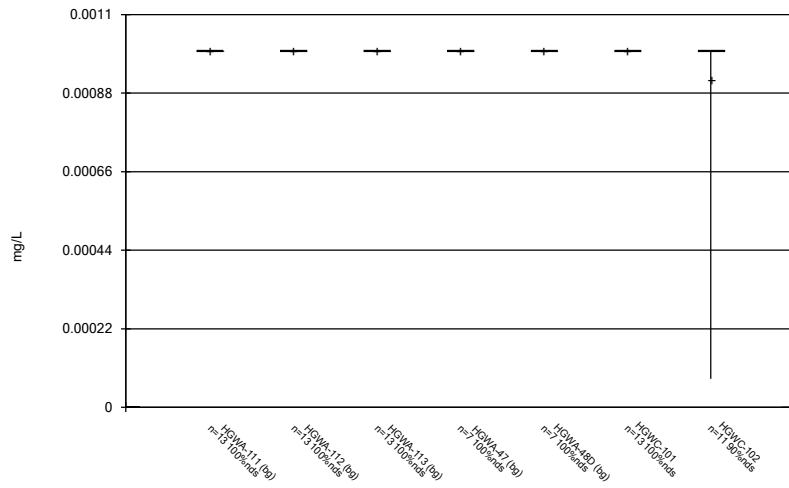
Constituent: Sulfate Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



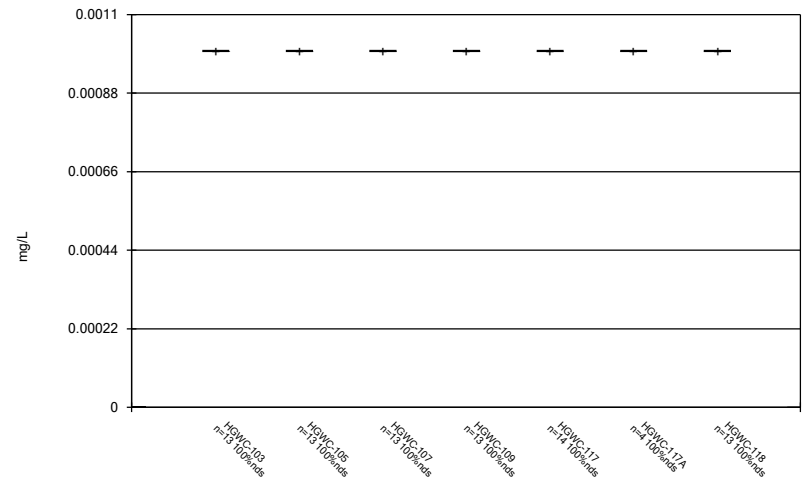
Constituent: Sulfate Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



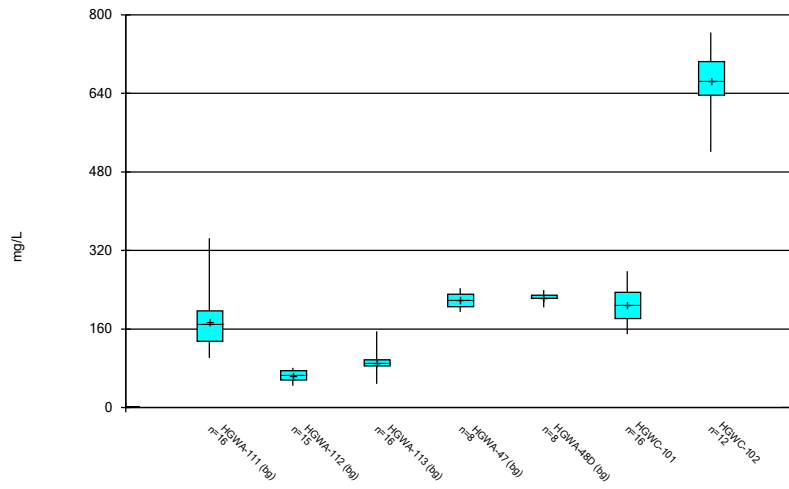
Constituent: Thallium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



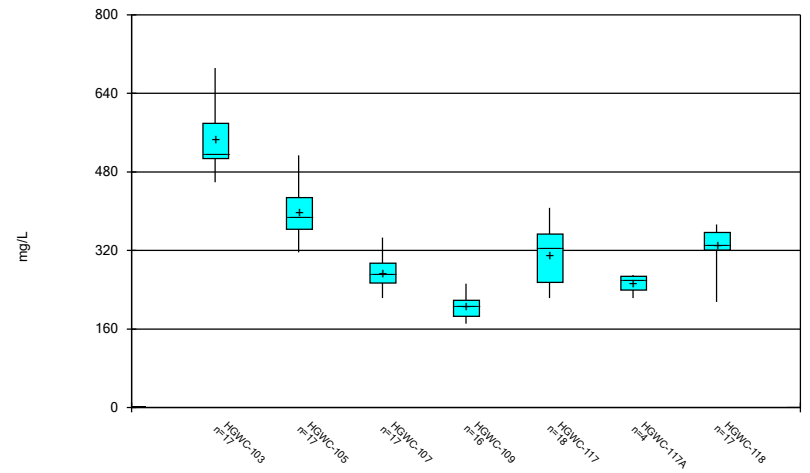
Constituent: Thallium Analysis Run 10/11/2022 1:18 PM View: AllI & AIV
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:18 PM View: All & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/11/2022 1:18 PM View: All & AIV
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 11:51 AM

HGWA-112 Total Dissolved Solids (mg/L)

1/25/2017

152 (o)

FIGURE D.

Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method	
Boron (mg/L)	HGWC-101	0.01907	n/a	8/10/2022	0.17	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.01907	n/a	8/5/2022	2.9	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.01907	n/a	8/5/2022	3.6	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.01907	n/a	8/5/2022	1.3	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.01907	n/a	8/5/2022	0.79	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.01907	n/a	8/5/2022	0.25	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.01907	n/a	8/5/2022	0.85	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.01907	n/a	8/5/2022	0.57	Yes	64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	8/5/2022	127	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	8/5/2022	128	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	8/5/2022	121	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	8/5/2022	88.5	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	8/5/2022	7.7	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	8/5/2022	7.8	Yes	64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	8/10/2022	5.37	Yes	70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	8/10/2022	99.5	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	8/5/2022	358	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	8/5/2022	369	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	8/5/2022	217	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	8/5/2022	120	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	8/5/2022	23	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	8/5/2022	132	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	8/5/2022	69.8	Yes	64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	8/5/2022	696	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	8/5/2022	692	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	8/5/2022	514	Yes	63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

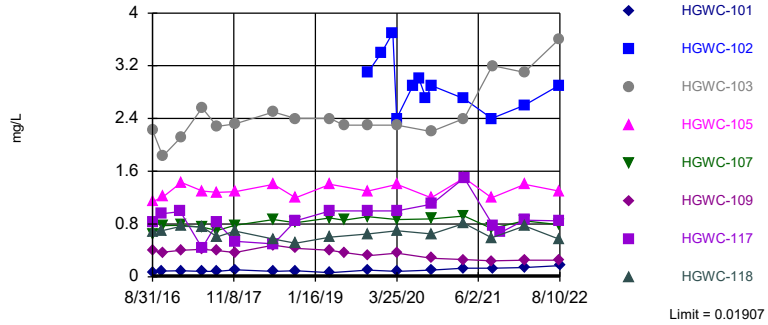
Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 12:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-101	0.01907	n/a	8/10/2022	0.17	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-102	0.01907	n/a	8/5/2022	2.9	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-103	0.01907	n/a	8/5/2022	3.6	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-105	0.01907	n/a	8/5/2022	1.3	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-107	0.01907	n/a	8/5/2022	0.79	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-109	0.01907	n/a	8/5/2022	0.25	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-117	0.01907	n/a	8/5/2022	0.85	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Boron (mg/L)	HGWC-118	0.01907	n/a	8/5/2022	0.57	Yes 64	23.44	Kaplan-Meier	x^(1/3)	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	HGWC-101	73.8	n/a	8/10/2022	24.6	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.8	n/a	8/5/2022	127	Yes 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-103	73.8	n/a	8/5/2022	128	Yes 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-105	73.8	n/a	8/5/2022	121	Yes 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-107	73.8	n/a	8/5/2022	63	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109	73.8	n/a	8/5/2022	50.8	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-117	73.8	n/a	8/5/2022	44.8	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.8	n/a	8/5/2022	88.5	Yes 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-101	5.7	n/a	8/10/2022	5.5	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	8/5/2022	7.7	Yes 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	8/5/2022	7.8	Yes 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-105	5.7	n/a	8/5/2022	5	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-107	5.7	n/a	8/5/2022	2.7	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109	5.7	n/a	8/5/2022	3.7	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	5.7	n/a	8/5/2022	4.4	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	8/5/2022	3.8	No 64	0	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1718	n/a	8/10/2022	0.065J	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102	0.1718	n/a	8/5/2022	0.076J	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1718	n/a	8/5/2022	0.071J	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1718	n/a	8/5/2022	0.075J	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1718	n/a	8/5/2022	0.093J	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1718	n/a	8/5/2022	0.14	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.1718	n/a	8/5/2022	0.075J	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1718	n/a	8/5/2022	0.12	No 70	24.29	Kaplan-Meier	sqrt(x)	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.43	8/10/2022	5.37	Yes 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.43	8/5/2022	5.69	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.43	8/5/2022	5.71	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.43	8/5/2022	6.46	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.43	8/5/2022	6.07	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.43	8/5/2022	6.81	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.43	8/5/2022	5.46	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.43	8/5/2022	7.07	No 70	0	n/a	n/a	0.0007718	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	8/10/2022	99.5	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	8/5/2022	358	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	8/5/2022	369	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	8/5/2022	217	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	8/5/2022	120	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	8/5/2022	23	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	8/5/2022	132	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	8/5/2022	69.8	Yes 64	6.25	n/a	n/a	0.0004659	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-101	345	n/a	8/10/2022	232	No 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	345	n/a	8/5/2022	696	Yes 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	345	n/a	8/5/2022	692	Yes 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	345	n/a	8/5/2022	514	Yes 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-107	345	n/a	8/5/2022	274	No 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	345	n/a	8/5/2022	195	No 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	345	n/a	8/5/2022	285	No 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	345	n/a	8/5/2022	329	No 63	0	n/a	n/a	0.0004792	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit
Interwell Parametric

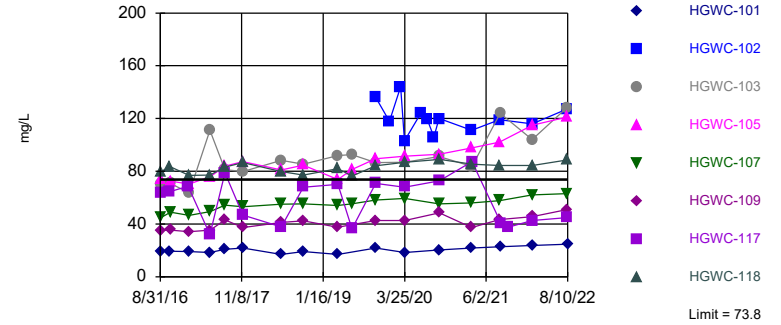


Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.2056, Std. Dev.=0.03149, n=64, 23.44% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9489, critical = 0.947. Kappa = 1.954 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Boron Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105, HGWC-118

Prediction Limit
Interwell Non-parametric

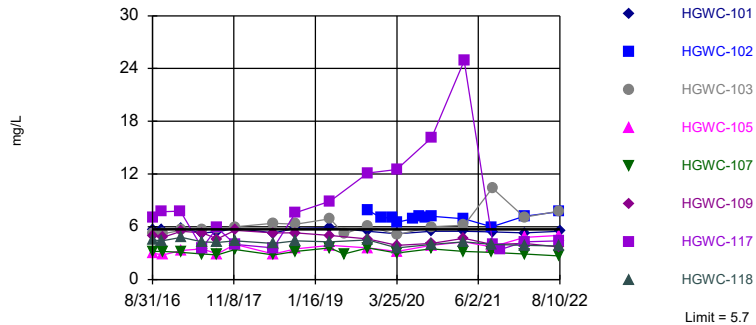


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. Annual per-constituent alpha = 0.007428. Individual comparison alpha = 0.0004659 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103

Prediction Limit
Interwell Non-parametric

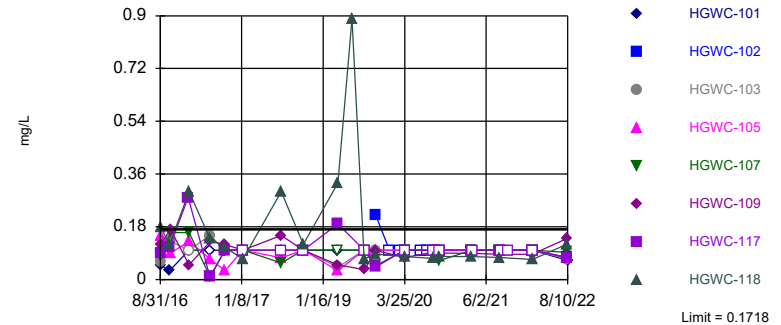


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. Annual per-constituent alpha = 0.007428. Individual comparison alpha = 0.0004659 (1 of 2). Comparing 8 points to limit.

Constituent: Chloride Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Within Limit

Prediction Limit
Interwell Parametric

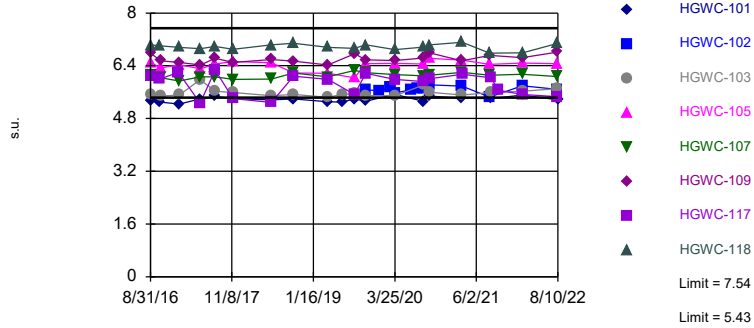


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2617, Std. Dev.=0.07844, n=70, 24.29% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9602, critical = 0.952. Kappa = 1.948 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Fluoride Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limits: HGWC-101

Prediction Limit
Interwell Non-parametric



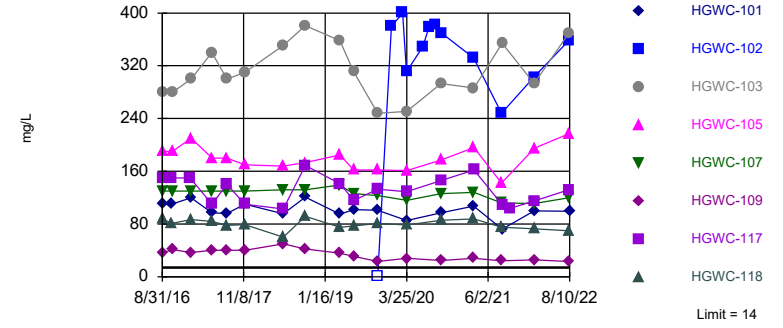
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 70 background values. Annual per-constituent alpha = 0.01231. Individual comparison alpha = 0.0007718 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit
Interwell Non-parametric

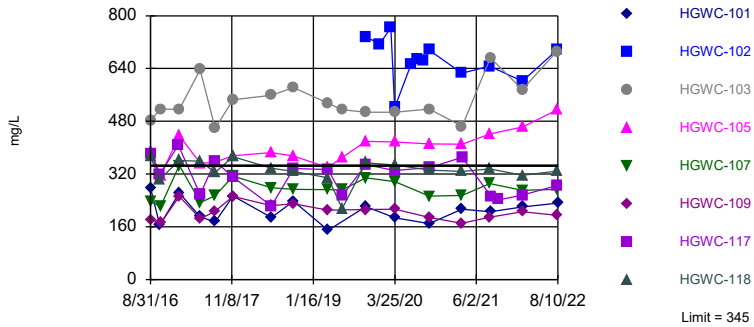


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. 6.25% NDs. Annual per-constituent alpha = 0.007428. Individual comparison alpha = 0.0004659 (1 of 2). Comparing 8 points to limit.

Constituent: Sulfate Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 63 background values. Annual per-constituent alpha = 0.00764. Individual comparison alpha = 0.0004792 (1 of 2). Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/11/2022 12:37 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-118	HGWC-101	HGWC-117	HGWC-107
8/12/2021	<0.04	<0.04	<0.04						
8/13/2021					1.2	0.59			0.73
8/16/2021				3.2			0.13		
8/19/2021								0.78	
9/27/2021								0.67	
1/31/2022	0.0099 (J)								
2/1/2022		0.012 (J)	0.011 (J)						
2/2/2022				3.1			0.14	0.86	0.85
2/3/2022					1.4	0.77			
8/2/2022		<0.04							
8/5/2022	<0.04		0.012 (J)	3.6	1.3	0.57		0.85	0.79
8/10/2022							0.17		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	0.402			
10/20/2016				
10/24/2016				
10/25/2016	0.372			
1/25/2017				
1/27/2017				
1/31/2017	0.404			
5/23/2017				
5/24/2017	0.415			
8/10/2017	0.397			
11/13/2017				
11/14/2017	0.366			
6/4/2018				
6/5/2018				
6/6/2018	0.48			
6/7/2018				
10/1/2018				
10/2/2018	0.43			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019	0.4			
4/4/2019				
4/5/2019				
6/17/2019	0.37			
10/21/2019				
10/22/2019	0.32			
10/23/2019		3.1		
1/3/2020		3.4		
3/4/2020		3.7		
3/24/2020		2.4		
3/25/2020	0.36			
4/9/2020				
6/18/2020		2.9		
7/21/2020		3		
8/27/2020		2.7		
9/18/2020			0.015 (J)	0.0082 (J)
9/22/2020				
9/24/2020		2.9		
9/25/2020	0.28			
9/28/2020				
11/10/2020				0.0064 (J)
11/11/2020			0.014 (J)	
12/15/2020			0.0083 (J)	<0.04
1/19/2021			0.015 (J)	0.015 (J)
3/11/2021				
3/12/2021			0.012 (J)	0.0067 (J)
3/16/2021				
3/17/2021	0.26	2.7		
3/18/2021				
3/19/2021				

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/12/2021			0.012 (J)	<0.04
8/13/2021	0.24	2.4		
8/16/2021				
8/19/2021				
9/27/2021				
1/31/2022			0.011 (J)	<0.04
2/1/2022				
2/2/2022	0.25	2.6		
2/3/2022				
8/2/2022				<0.04
8/5/2022	0.25	2.9	0.011 (J)	
8/10/2022				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	40.3	6.72	6.69						
8/31/2016				70.4	74.2	44.7	63.4	79.3	35.1
10/20/2016	38.7						64.4	83.7	
10/24/2016		6.4	6.25	70.9					
10/25/2016					72.5	49			35.4
1/25/2017	44.6	6.87	6.58						
1/27/2017							68.6		
1/31/2017				63.6	70.3	46.6		76.8	34.2
5/23/2017		7.13	6.4	111			32	77.2	
5/24/2017	34.8				75.9	49.5			35.3
8/10/2017	48.6	6.71	6.54	81.2	84	54.2	78.9	83.1	43.1
11/13/2017	17.1		6.26						
11/14/2017		7.4		79.7	87.2	53.2	46.9	86.7	37.4
6/4/2018	30.1		7.4						
6/5/2018		7.4							
6/6/2018				88.3	81	55			41.1
6/7/2018							37.7	79.7	
10/1/2018	14.2 (J)	6.2	5.8						
10/2/2018					84.7	55.4			42.5
10/3/2018				85.3			68	77.1	
4/1/2019	58.4								
4/2/2019		7.4	6.7						
4/3/2019						54			37.5
4/4/2019				91.9	73.8				
4/5/2019							70	82	
6/17/2019				92.6	81.2	55.3			
6/18/2019							36.3	76.5	
10/21/2019	51								
10/22/2019		7.2	6.3			58.1	70.9	84.2	42.6
10/23/2019				86.5	89.4				
1/3/2020									
3/4/2020									
3/24/2020	61.2		7				68		
3/25/2020				86.8	91.4	59.5		86.8	42.6
4/9/2020		8.3							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	32.2		6.5						
9/22/2020		7.9							
9/24/2020				91.3	92.9	55.4			
9/25/2020							72.8		48.5
9/28/2020								88.9	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	53.2								
3/12/2021			6.9						
3/16/2021		8.6							
3/17/2021									37.3
3/18/2021				83.7	97.7	56		85.4	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	19.4			
10/20/2016	19.3			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	19.1			
5/23/2017	18.3			
5/24/2017				
8/10/2017	20.9			
11/13/2017				
11/14/2017	21.7			
6/4/2018				
6/5/2018				
6/6/2018	17			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	19.1 (J)			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	16.9			
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	21.9	136		
1/3/2020		118		
3/4/2020		144		
3/24/2020		103		
3/25/2020	18.4			
4/9/2020				
6/18/2020		124		
7/21/2020		120		
8/27/2020		106		
9/18/2020			62.2	51.8
9/22/2020				
9/24/2020	20.3	120		
9/25/2020				
9/28/2020				
11/10/2020			73.3	
11/11/2020				61.3
12/15/2020			72.5	61.3
1/19/2021			72.5	58.9
3/11/2021				
3/12/2021			69.2	57.5
3/16/2021				
3/17/2021	21.8	111		
3/18/2021				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/19/2021				
8/12/2021			71.2	59.5
8/13/2021		119		
8/16/2021	22.8			
8/19/2021				
9/27/2021				
1/31/2022			73.8	63.2
2/1/2022				
2/2/2022	23.8	116		
2/3/2022				
8/2/2022			73	
8/5/2022		127		59.6
8/10/2022	24.6			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-118	HGWC-101	HGWC-117	HGWC-107
8/12/2021	2.5	1.5	4.4						
8/13/2021					3.7	4			3.1
8/16/2021				10.4			5.4		
8/19/2021								4	
9/27/2021								3.4	
1/31/2022	3								
2/1/2022		1.6	5.2						
2/2/2022				7.1			5.3	4.3	2.9
2/3/2022					4.8	3.9			
8/2/2022		1.8							
8/5/2022	2.7		5	7.8	5	3.8		4.4	2.7
8/10/2022							5.5		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	5			
10/20/2016				
10/24/2016				
10/25/2016	4.8			
1/25/2017				
1/27/2017				
1/31/2017	5.5			
5/23/2017				
5/24/2017	5.3			
8/10/2017	4.6			
11/13/2017				
11/14/2017	5.6			
6/4/2018				
6/5/2018				
6/6/2018	5.3			
6/7/2018				
10/1/2018				
10/2/2018	5.3			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019	5			
4/4/2019				
4/5/2019				
6/17/2019				
10/21/2019				
10/22/2019	4.6			
10/23/2019		7.9		
1/3/2020		7		
3/4/2020		7.1		
3/24/2020		6.5		
3/25/2020	3.9			
4/9/2020				
6/18/2020		6.9		
7/21/2020		7.2		
8/27/2020		7.1		
9/18/2020			2.6	2.7
9/22/2020				
9/24/2020		7.2		
9/25/2020	4.1			
9/28/2020				
11/10/2020				2.7
11/11/2020			2.6	
12/15/2020			2.7	2.9
1/19/2021			2.7	2.8
3/11/2021				
3/12/2021			2.6	2.7
3/16/2021				
3/17/2021	4.7	6.9		
3/18/2021				
3/19/2021				

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-109	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/12/2021			2.2	2.3
8/13/2021	4	6		
8/16/2021				
8/19/2021				
9/27/2021				
1/31/2022			2.5	2.6
2/1/2022				
2/2/2022	4.1	7.2		
2/3/2022				
8/2/2022				3
8/5/2022	3.7	7.7	2.4	
8/10/2022				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	0.05 (J)			
10/20/2016	0.03 (J)			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	<0.1			
5/23/2017	<0.1			
5/24/2017				
8/10/2017	<0.1			
11/13/2017				
11/14/2017	<0.1			
6/4/2018				
6/5/2018				
6/6/2018	<0.1			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	<0.1			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	<0.1			
4/5/2019				
6/18/2019				
8/21/2019				
8/22/2019	<0.1			
8/23/2019				
10/21/2019				
10/22/2019				
10/23/2019	<0.1	0.22 (J)		
1/3/2020		<0.1		
3/4/2020		<0.1		
3/24/2020		<0.1		
3/25/2020	<0.1			
4/9/2020				
6/18/2020		<0.1		
7/21/2020		<0.1		
8/25/2020				
8/26/2020				
8/27/2020	<0.1	<0.1		
9/18/2020			0.067 (J)	0.098 (J)
9/22/2020				
9/24/2020	<0.1	<0.1		
9/25/2020				
9/28/2020				
11/10/2020			0.065 (J)	
11/11/2020				0.083 (J)
12/15/2020			0.064 (J)	0.081 (J)
1/19/2021			0.057 (J)	0.079 (J)
3/11/2021				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/12/2021			0.062 (J)	0.085 (J)
3/16/2021				
3/17/2021	<0.1	<0.1		
3/18/2021				
3/19/2021				
8/12/2021			<0.1	0.064 (J)
8/13/2021		<0.1		
8/16/2021	<0.1			
8/19/2021				
9/27/2021				
1/31/2022			0.053 (J)	0.072 (J)
2/1/2022				
2/2/2022	<0.1	<0.1		
2/3/2022				
8/2/2022			0.08 (J)	
8/5/2022		0.076 (J)		0.12
8/10/2022	0.065 (J)			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	5.35			
10/20/2016	5.3			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	5.24			
5/23/2017	5.39			
5/24/2017				
8/10/2017	5.47			
11/13/2017				
11/14/2017	5.4			
6/4/2018				
6/5/2018				
6/6/2018	5.37			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	5.39			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	5.31			
4/5/2019				
6/17/2019				
6/18/2019	5.3			
8/21/2019				
8/22/2019	5.39			
8/23/2019				
10/21/2019				
10/22/2019				
10/23/2019	5.33	5.68		
1/3/2020		5.64		
3/4/2020		5.75		
3/24/2020		5.58		
3/25/2020	5.53			
4/9/2020				
6/18/2020		5.67		
7/21/2020		5.72		
8/25/2020				
8/26/2020				
8/27/2020	5.32	5.7		
9/18/2020			7.54	7.5
9/22/2020				
9/24/2020	5.48	5.82		
9/25/2020				
9/28/2020				
11/10/2020			7.34	
11/11/2020				7.4
12/15/2020			7.27	7.39
1/19/2021			7.32	7.4

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/11/2021				
3/12/2021			7.52	7.51
3/16/2021				
3/17/2021	5.41	5.78		
3/18/2021				
3/19/2021				
8/12/2021			7.38	7.44
8/13/2021		5.45		
8/16/2021	5.4			
8/19/2021				
9/27/2021				
1/31/2022			7.34	7.44
2/1/2022				
2/2/2022	5.51	5.79		
2/3/2022				
8/2/2022			7.34	
8/5/2022		5.69		7.4
8/10/2022	5.37			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	1.6	14	0.63 (J)						
8/31/2016				280	190	130	150	88	36
10/20/2016	1.6						150	81	
10/24/2016		11	0.62 (J)	280					
10/25/2016					190	130			41
1/25/2017	1.6	12	0.62 (J)						
1/27/2017							150		
1/31/2017				300	210	130		87	37
5/23/2017		12	0.55 (J)	340			110	84	
5/24/2017	1.4				180	130			40
8/10/2017	1.6	11	0.66 (J)	300	180	130	140	78	40
11/13/2017	1.3		0.61 (J)						
11/14/2017		11		310	170	130	110	79	40
6/4/2018	1.4		0.73 (J)						
6/5/2018		9.9							
6/6/2018				351	168	132			49.7
6/7/2018							103	60.1	
10/1/2018	1	6.7	0.52 (J)						
10/2/2018					173	132			42.3
10/3/2018				381			169	91.5	
4/1/2019	1.7								
4/2/2019		8.7	0.78 (J)						
4/3/2019						139			36
4/4/2019				358	185				
4/5/2019							141	75.1	
6/17/2019				311	162	126			30.9
6/18/2019							116	77	
10/21/2019	1.8								
10/22/2019		6.8	0.6 (J)			123	133	80.9	23.2
10/23/2019				248	162				
1/3/2020									
3/4/2020									
3/24/2020	1.6		<1				129		
3/25/2020				251	161	116		78.4	27.9
4/9/2020		6.6							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	1		<1						
9/22/2020		5.3							
9/24/2020				293	177	126			
9/25/2020							146		24.7
9/28/2020								86	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	1.5								
3/12/2021			0.52 (J)						
3/16/2021		7.7							
3/17/2021									28.3
3/18/2021				286	196	128		87.8	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	110			
10/20/2016	110			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	120			
5/23/2017	97			
5/24/2017				
8/10/2017	96			
11/13/2017				
11/14/2017	110			
6/4/2018				
6/5/2018				
6/6/2018	95.5			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	121			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	95.1			
4/5/2019				
6/17/2019				
6/18/2019	102			
10/21/2019				
10/22/2019				
10/23/2019	101	<1		
1/3/2020		380		
3/4/2020		400		
3/24/2020		311		
3/25/2020	85.5			
4/9/2020				
6/18/2020		349		
7/21/2020		378		
8/27/2020		382		
9/18/2020			3.5	9.5
9/22/2020				
9/24/2020	97	370		
9/25/2020				
9/28/2020				
11/10/2020			2.3	
11/11/2020				4.5
12/15/2020			2.4	4.2
1/19/2021			2.6	3.9
3/11/2021				
3/12/2021			1.9	4.7
3/16/2021				
3/17/2021	107	332		
3/18/2021				

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/19/2021				
8/12/2021			1.4	4.3
8/13/2021		248		
8/16/2021	72.1			
8/19/2021				
9/27/2021				
1/31/2022			1.7	5.6
2/1/2022				
2/2/2022	100	303		
2/3/2022				
8/2/2022			2.1	
8/5/2022		358		3.4
8/10/2022	99.5			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	172	77	76						
8/31/2016				483	389	235	381	373	182
10/20/2016	108						319	305	
10/24/2016		111	65	517					
10/25/2016					316	223			172
1/25/2017	345	155	152 (o)						
1/27/2017							407		
1/31/2017				516	437	346		361	252
5/23/2017		74	52	637			258	359	
5/24/2017	126				352	234			184
8/10/2017	174	94	60	459	356	254	359	325	208
11/13/2017	158		75						
11/14/2017		89		545	375	313	310	373	252
6/4/2018	131		70						
6/5/2018		92							
6/6/2018				559	385	278			224
6/7/2018							223	338	
10/1/2018	101	91	76						
10/2/2018					374	274			230
10/3/2018				582			337	328	
4/1/2019	213								
4/2/2019		94	69						
4/3/2019						273			210
4/4/2019				535	340				
4/5/2019							334	308	
6/17/2019				515	370	272			
6/18/2019							254	215	
10/21/2019	187								
10/22/2019		95	81			308	348	354	212
10/23/2019				507	419				
1/3/2020									
3/4/2020									
3/24/2020	207		52				331		
3/25/2020				507	417	297		347	213
4/9/2020		48							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	139		62						
9/22/2020		84							
9/24/2020				517	411	253			
9/25/2020							340		188
9/28/2020								332	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	207								
3/12/2021			56						
3/16/2021		99							
3/17/2021									171
3/18/2021				465	410	255		328	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	278			
10/20/2016	165			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	263			
5/23/2017	190			
5/24/2017				
8/10/2017	175			
11/13/2017				
11/14/2017	253			
6/4/2018				
6/5/2018				
6/6/2018	188			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	238			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	149			
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	221	736		
1/3/2020		714		
3/4/2020		764		
3/24/2020		521		
3/25/2020	187			
4/9/2020				
6/18/2020		652		
7/21/2020		669		
8/27/2020		663		
9/18/2020			224	195
9/22/2020				
9/24/2020	170	696		
9/25/2020				
9/28/2020				
11/10/2020				229
11/11/2020			221	
12/15/2020			239	233
1/19/2021			224	199
3/11/2021				
3/12/2021			204	217
3/16/2021				
3/17/2021	213	626		
3/18/2021				

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/11/2022 12:39 PM View: Interwell PL
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
3/19/2021				
8/12/2021			234	212
8/13/2021		647		
8/16/2021	206			
8/19/2021				
9/27/2021				
1/31/2022			223	243
2/1/2022				
2/2/2022	220	602		
2/3/2022				
8/2/2022				222
8/5/2022		696	224	
8/10/2022	232			

FIGURE E.

Appendix III Trend Test - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWC-101	0.009687	64	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109	-0.0308	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3418	76	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	5.956	74	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	6.246	106	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.3864	70	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02278	-62	-58	Yes	16	25	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.014	-66	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-3.076	-74	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105	19.84	66	63	Yes	17	0	n/a	n/a	0.01	NP

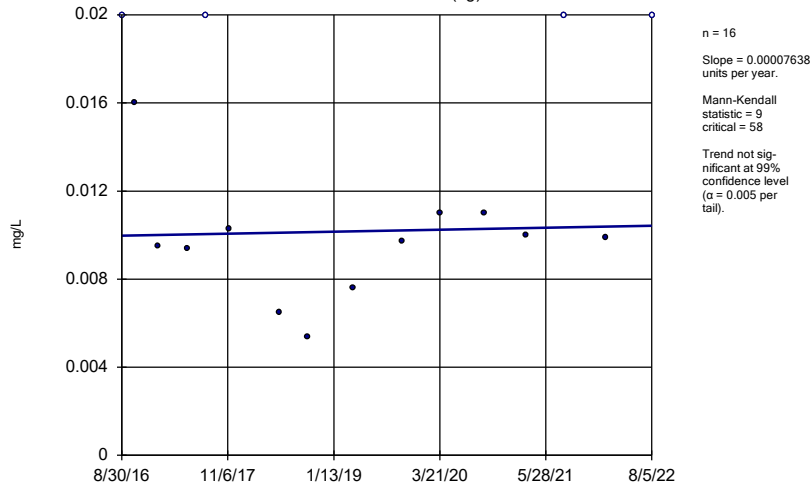
Appendix III Trend Test - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/7/2022, 12:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-111 (bg)	0.00007638	9	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.0003539	-17	-58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	0.000724	18	58	No	16	18.75	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-47 (bg)	0.005573	12	21	No	8	50	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-48D (bg)	-0.002125	-13	-21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101	0.009687	64	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102	-0.2643	-27	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.1032	56	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.0106	20	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.02644	53	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109	-0.0308	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-117	0.01627	27	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.007608	-12	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.818	36	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.1075	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3418	76	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-47 (bg)	0.78	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-48D (bg)	1.284	7	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-2.773	-9	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	5.956	74	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	6.246	106	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-118	1.33	58	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.04964	-14	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	-0.009605	-13	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.05023	-45	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-47 (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-48D (bg)	-0.1139	-12	-21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	0	3	38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.3864	70	63	Yes	17	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-111 (bg)	0.05655	26	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.0274	-58	-68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02397	52	68	No	18	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-47 (bg)	-0.02056	-3	-21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-48D (bg)	0	0	21	No	8	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01429	47	74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	-0.0222	-24	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02278	-62	-58	Yes	16	25	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.014	-66	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-47 (bg)	-0.8098	-14	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-48D (bg)	-0.7764	-8	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.614	-42	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	-11.09	-10	-38	No	12	8.333	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	3.311	21	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-3.257	-21	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-1.917	-61	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-3.076	-74	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117	-3.182	-33	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-1.699	-45	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	4.343	13	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.537	-19	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	0	1	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-47 (bg)	11.65	8	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-48D (bg)	0	-1	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-38.24	-21	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	9.656	24	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105	19.84	66	63	Yes	17	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

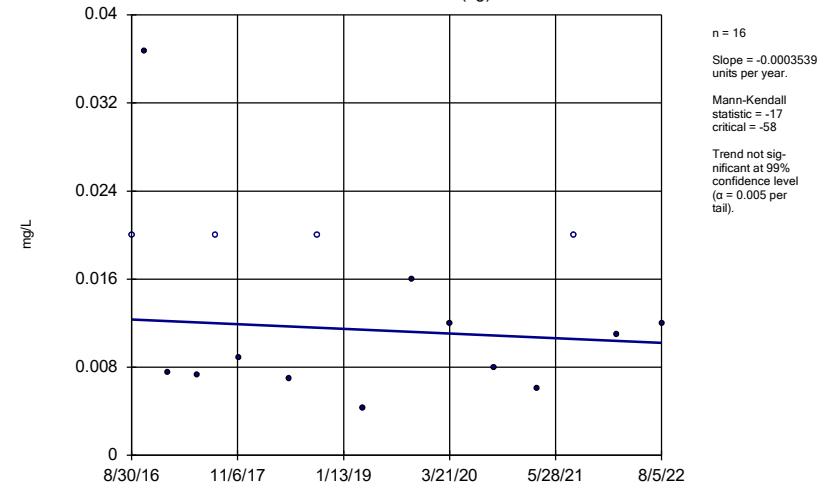
HGWA-111 (bg)



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

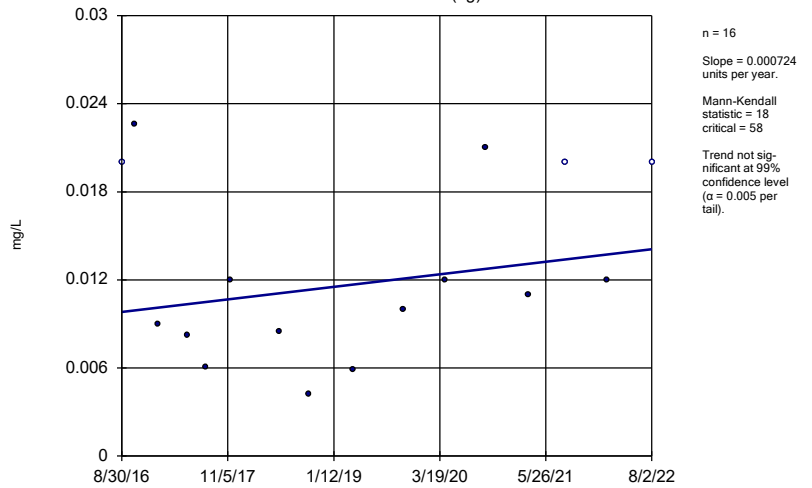
HGWA-112 (bg)



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

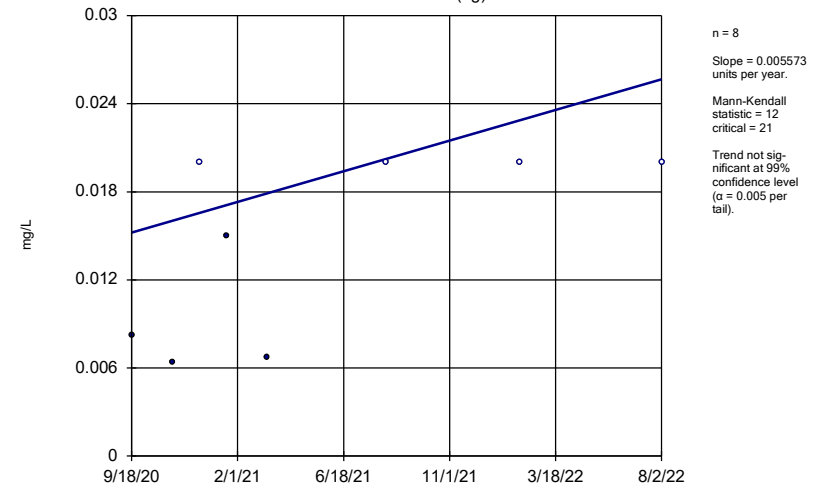
HGWA-113 (bg)



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

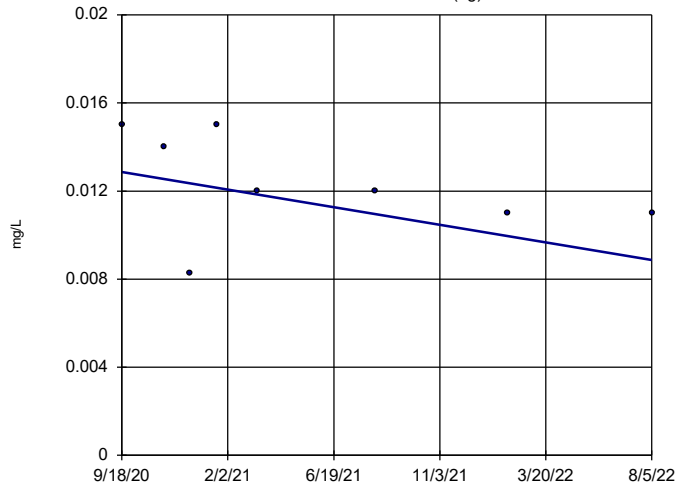
HGWA-47 (bg)



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)

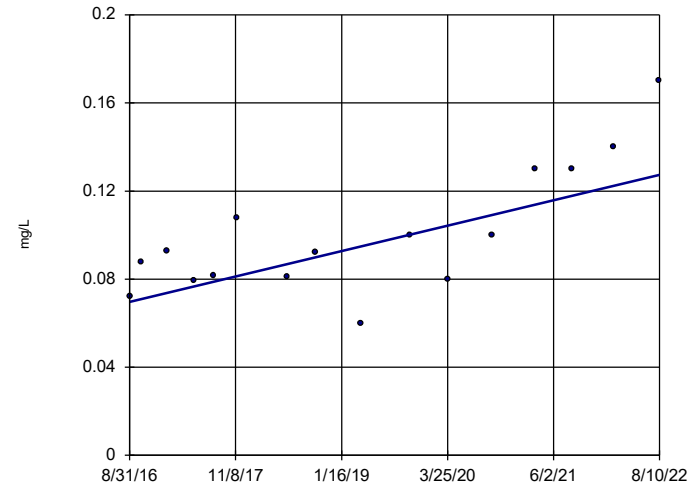


n = 8
 Slope = -0.002125 units per year.
 Mann-Kendall statistic = -13
 critical = -21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-101

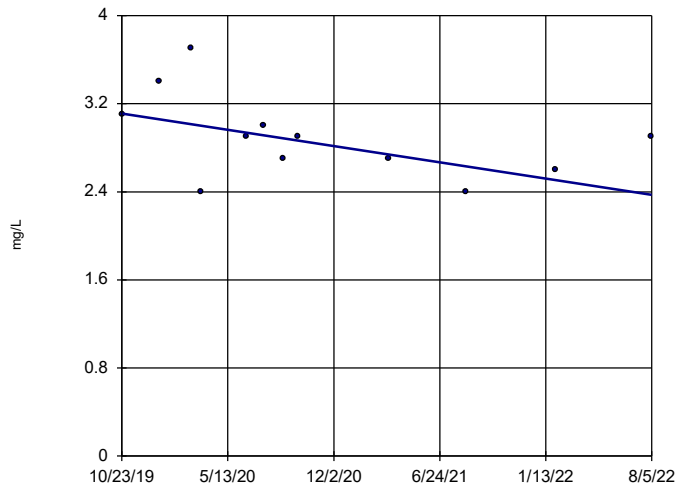


n = 16
 Slope = 0.009687 units per year.
 Mann-Kendall statistic = 64
 critical = 58
 Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-102

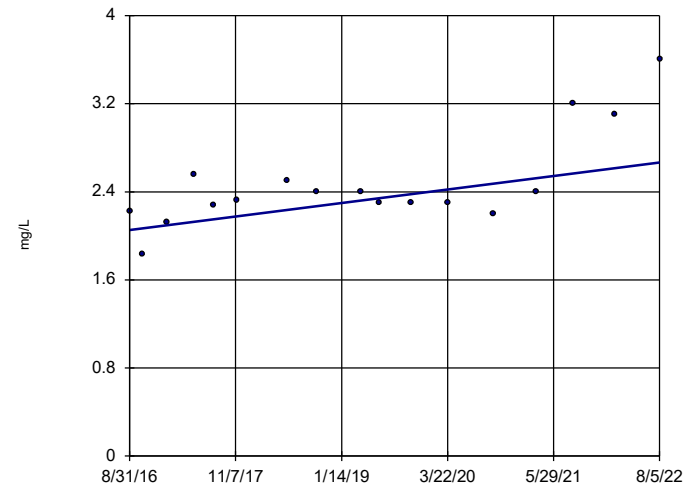


n = 12
 Slope = -0.2643 units per year.
 Mann-Kendall statistic = -27
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-103

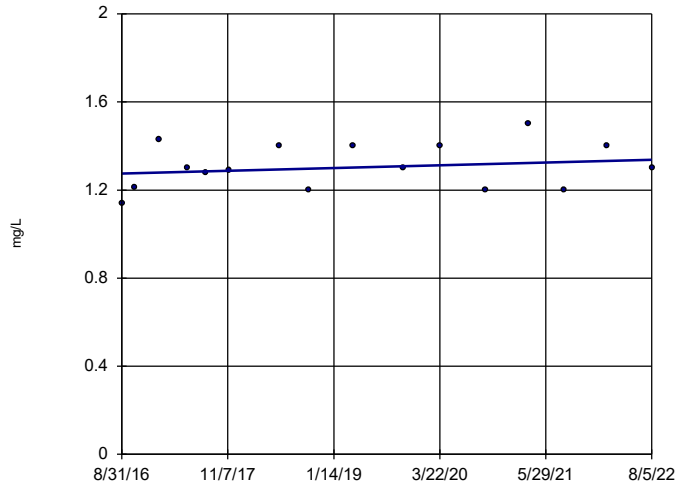


n = 17
 Slope = 0.1032 units per year.
 Mann-Kendall statistic = 56
 critical = 63
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

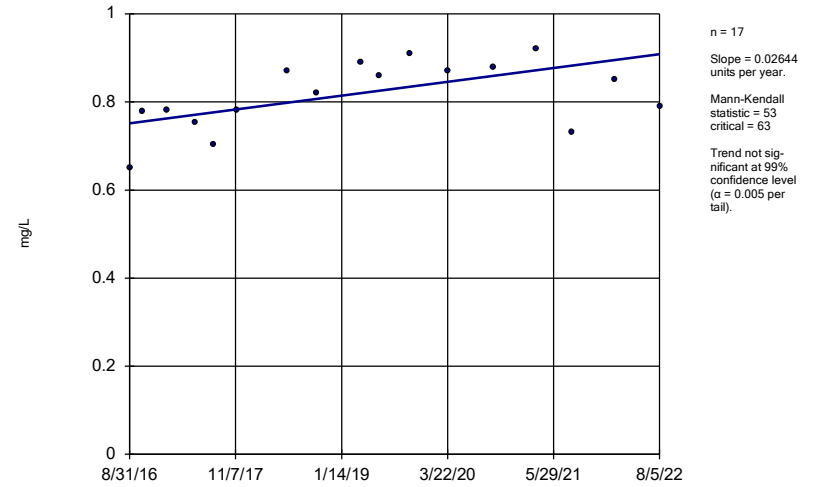
HGWC-105



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

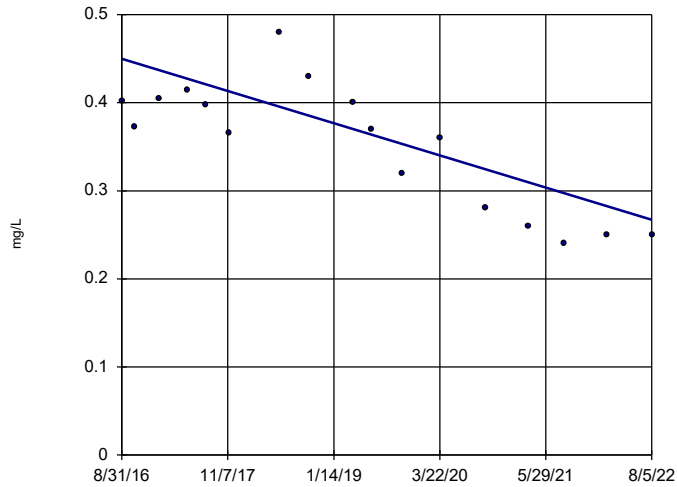
HGWC-107



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

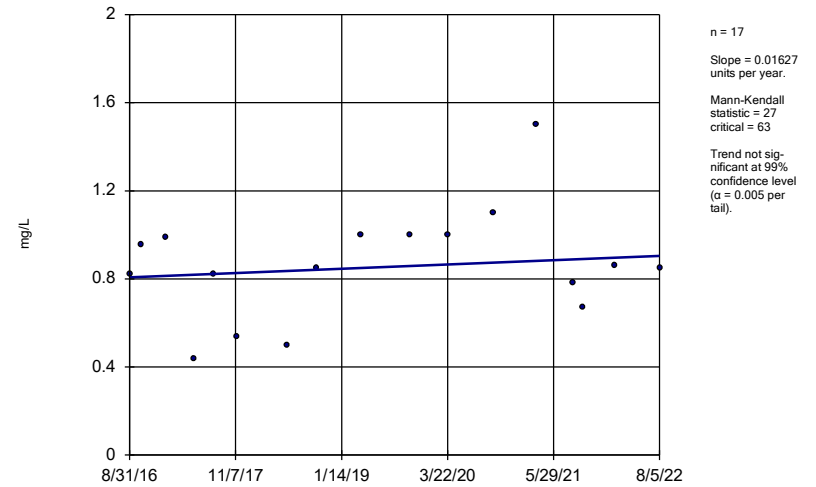
HGWC-109



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

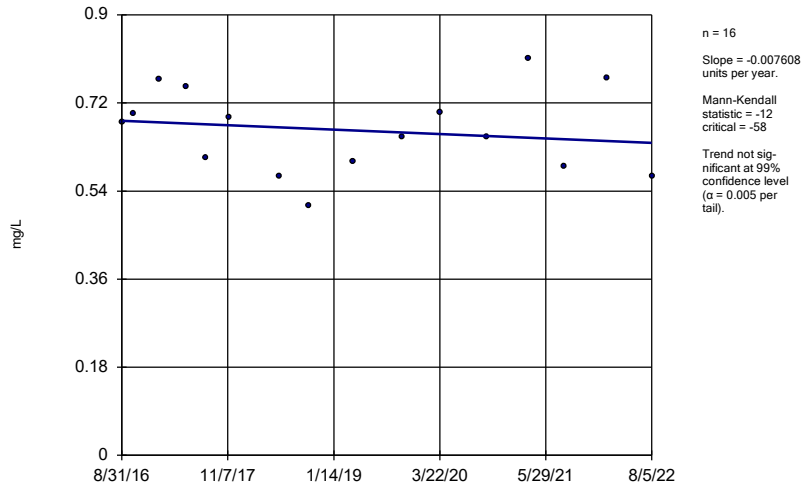
HGWC-117



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

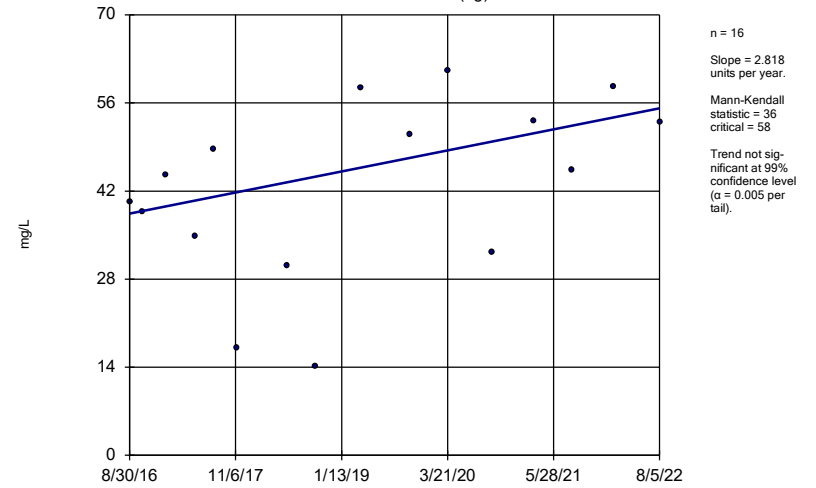
HGWC-118



Constituent: Boron Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

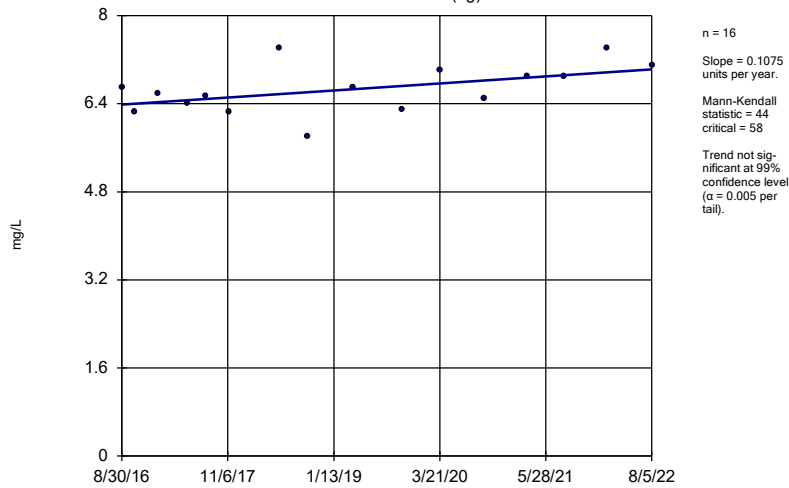
HGWA-111 (bg)



Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

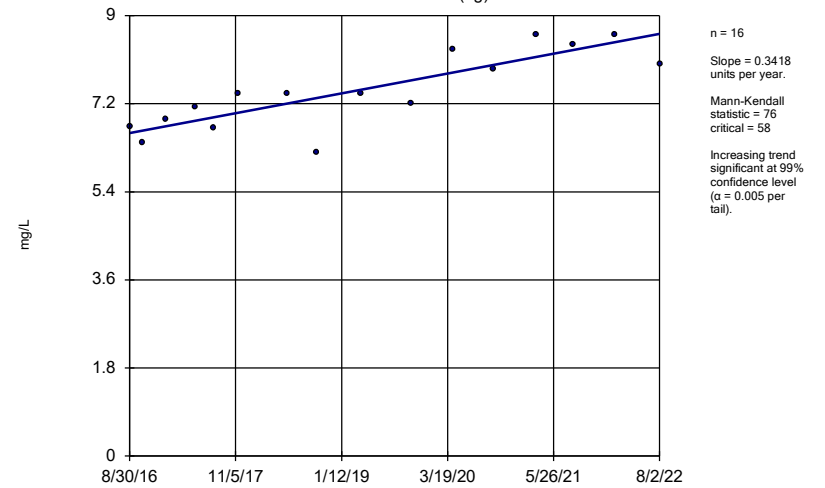
HGWA-112 (bg)



Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

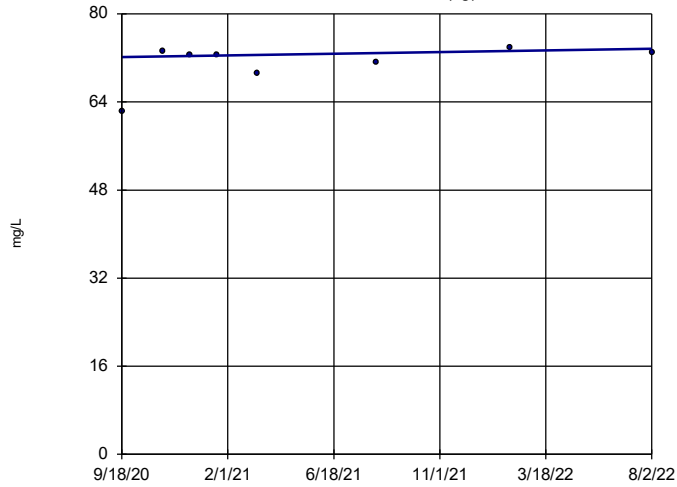
HGWA-113 (bg)



Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)

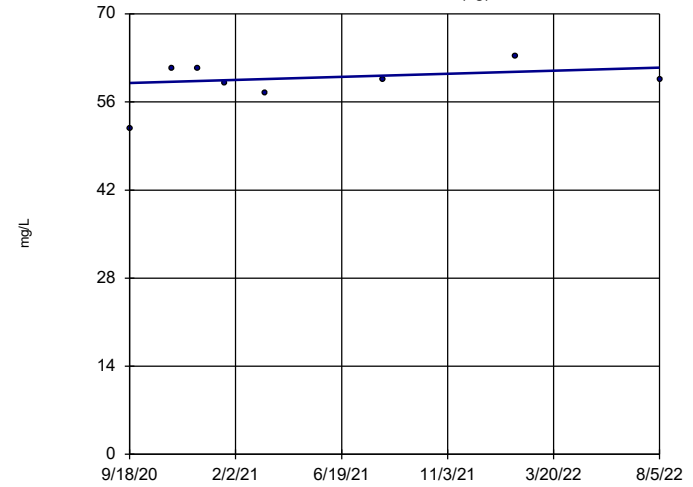


n = 8
 Slope = 0.78 units per year.
 Mann-Kendall statistic = 7
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)

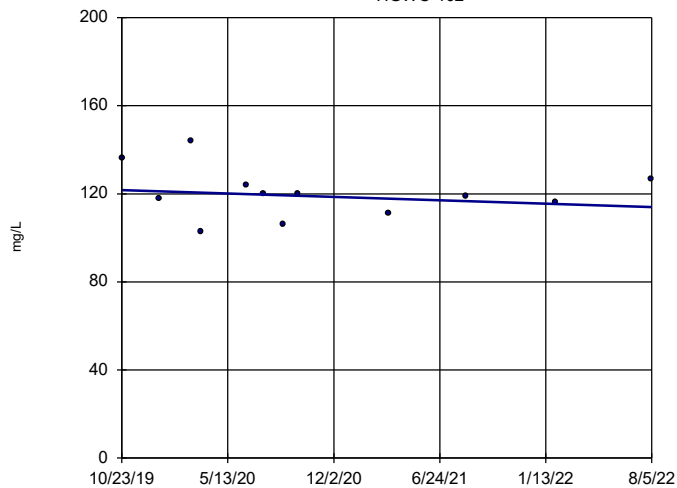


n = 8
 Slope = 1.284 units per year.
 Mann-Kendall statistic = 7
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-102

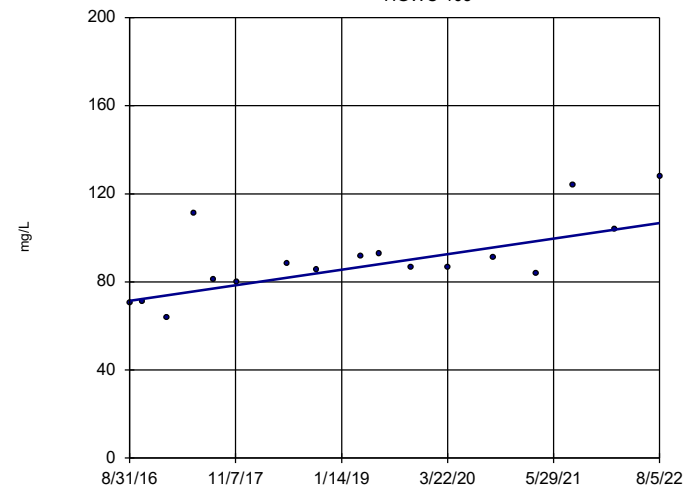


n = 12
 Slope = -2.773 units per year.
 Mann-Kendall statistic = -9
 critical = -38
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-103

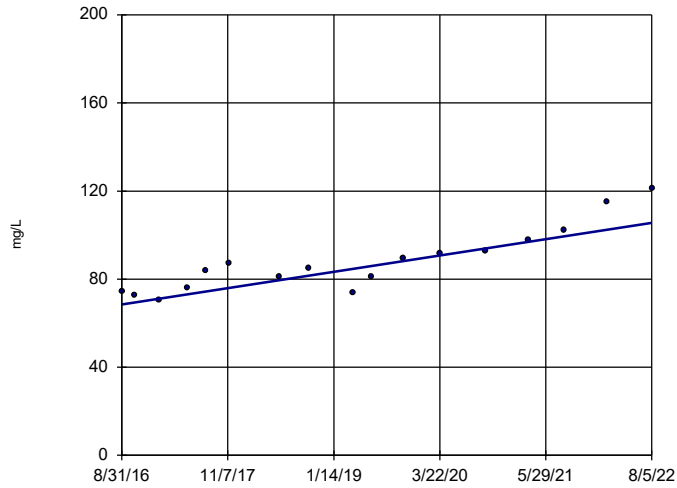


n = 17
 Slope = 5.956 units per year.
 Mann-Kendall statistic = 74
 critical = 63
 Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:06 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105

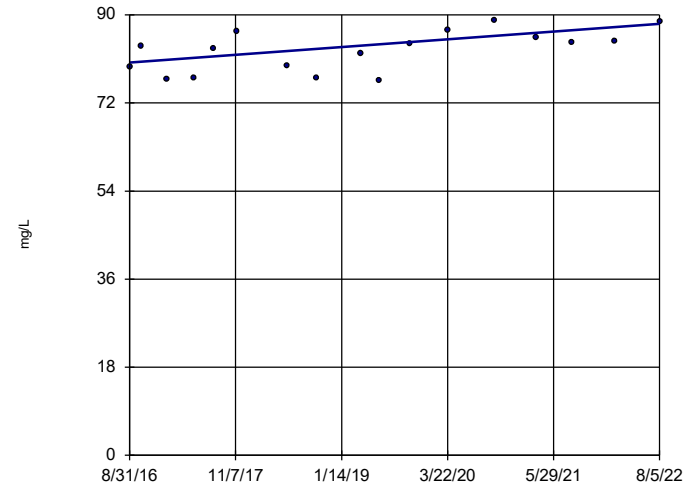


n = 17
 Slope = 6.246 units per year.
 Mann-Kendall statistic = 106
 critical = 63
 Increasing trend significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-118

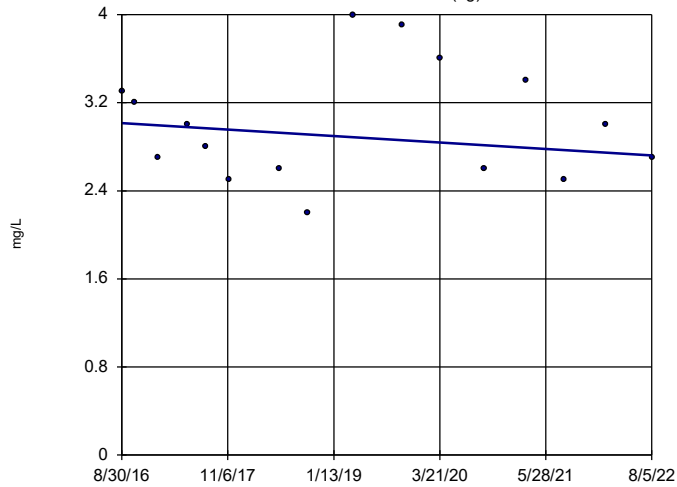


n = 17
 Slope = 1.33 units per year.
 Mann-Kendall statistic = 58
 critical = 63
 Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Calcium Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-111 (bg)

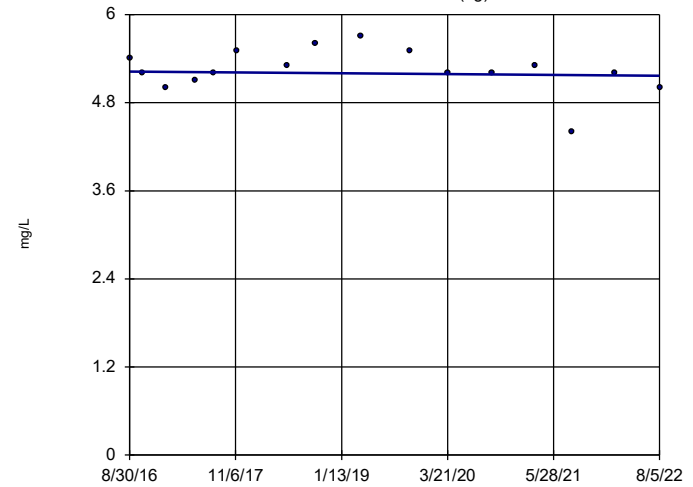


n = 16
 Slope = -0.04964 units per year.
 Mann-Kendall statistic = -14
 critical = -58
 Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-112 (bg)

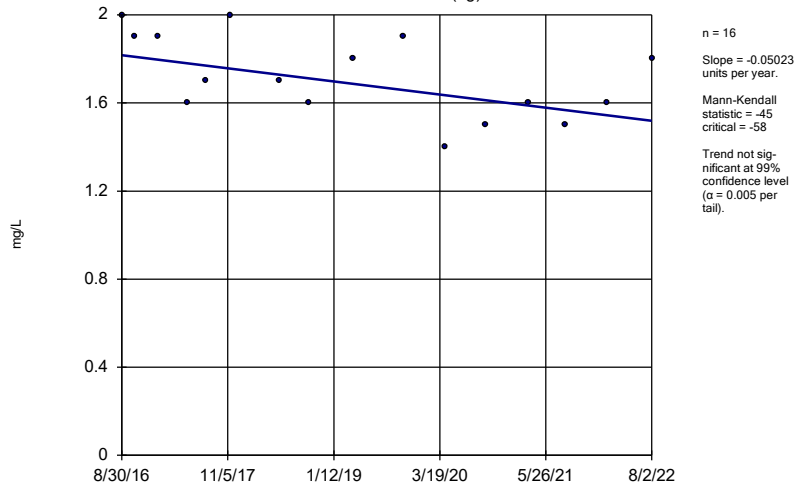


n = 16
 Slope = -0.009605 units per year.
 Mann-Kendall statistic = -13
 critical = -58
 Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

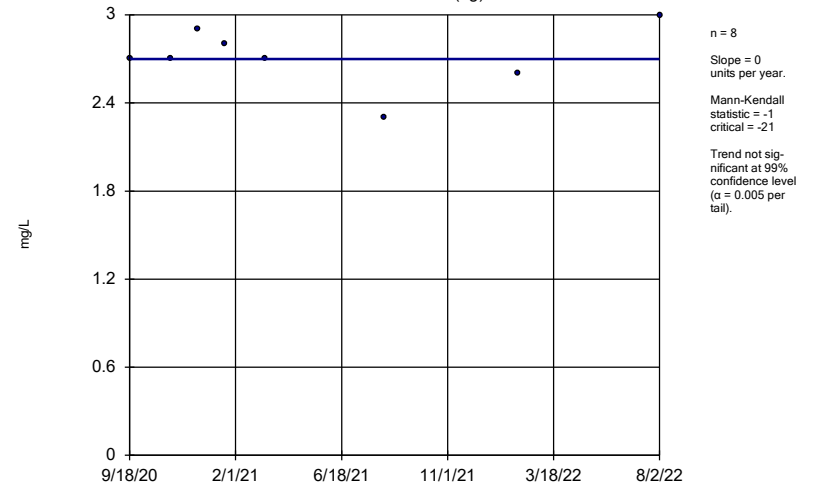
HGWA-113 (bg)



Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

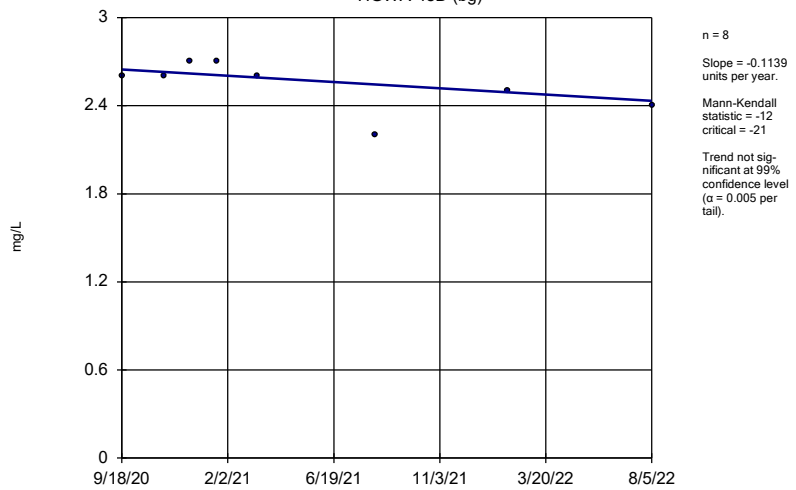
HGWA-47 (bg)



Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

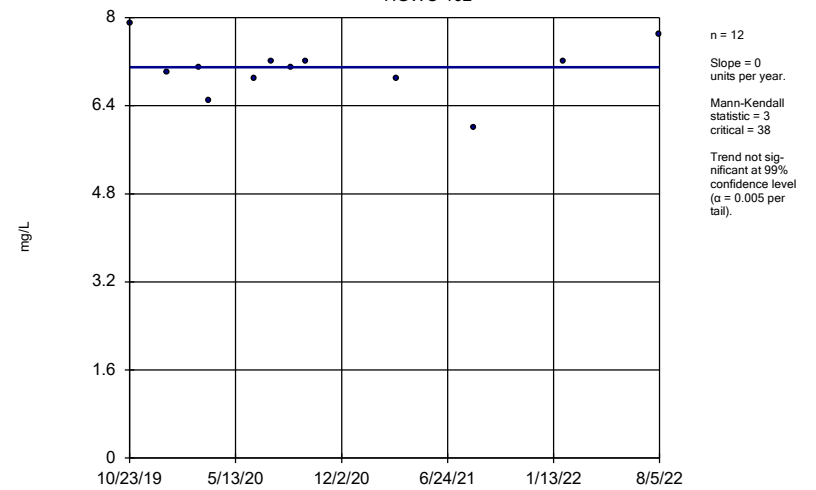
HGWA-48D (bg)



Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

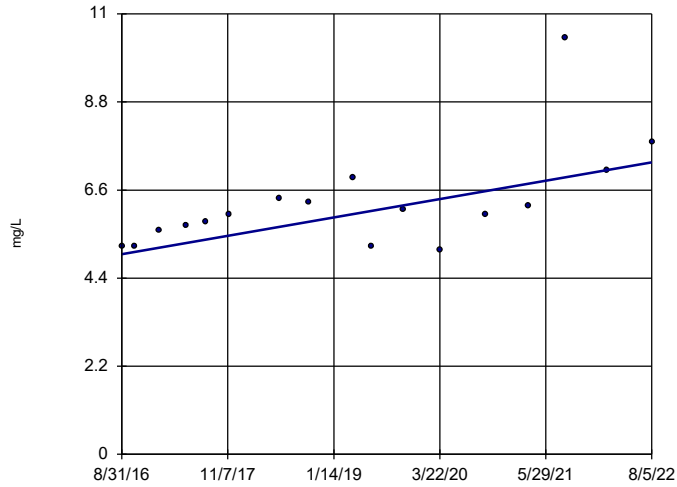
HGWC-102



Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

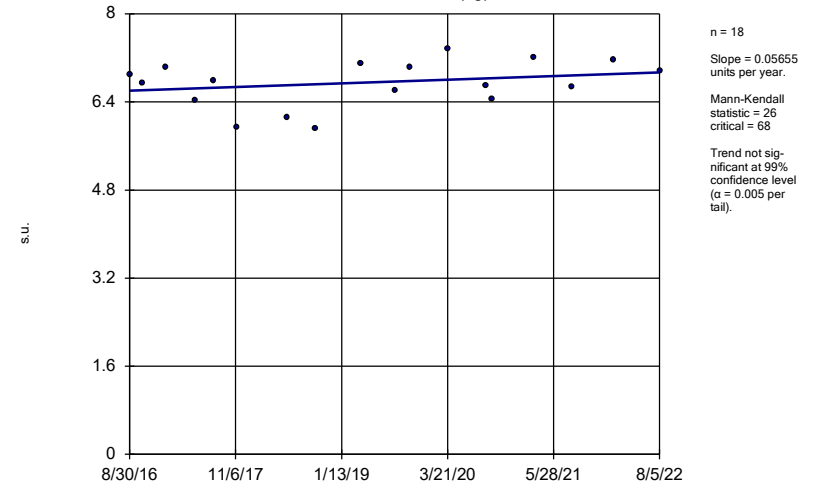
HGWC-103



Constituent: Chloride Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

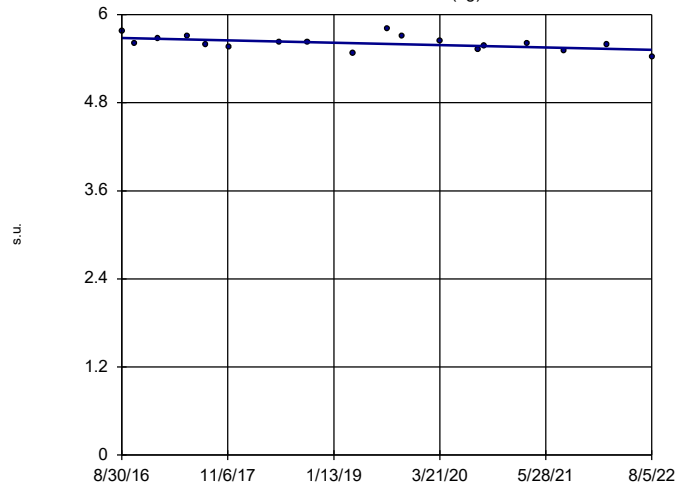
HGWA-111 (bg)



Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

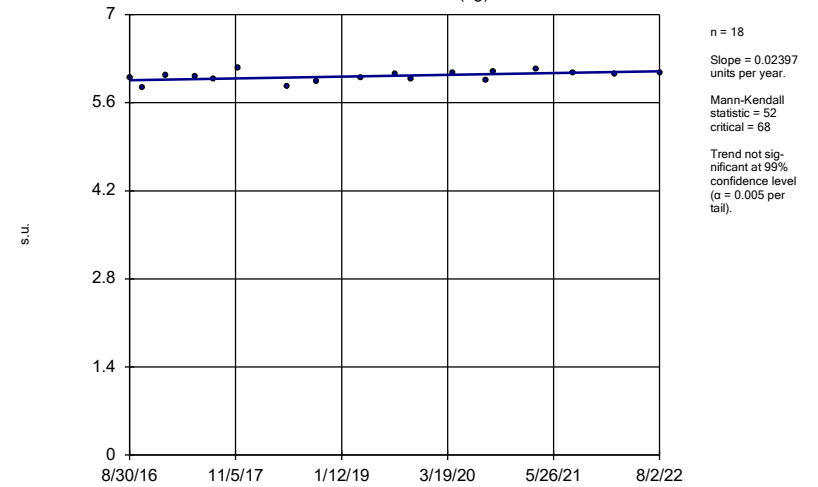
HGWA-112 (bg)



Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

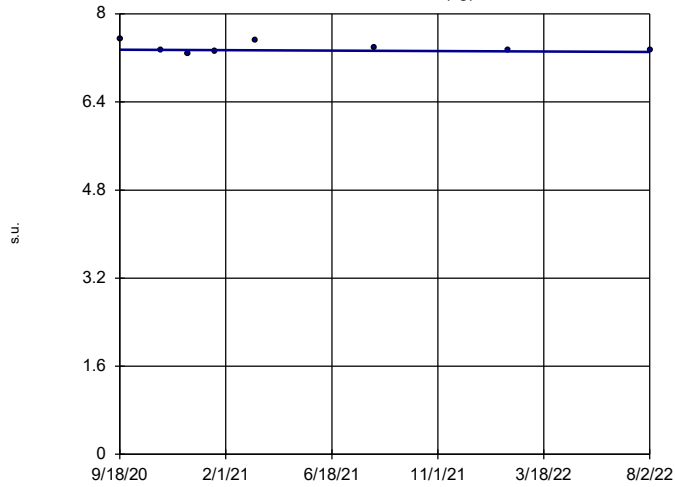
Sen's Slope Estimator

HGWA-113 (bg)



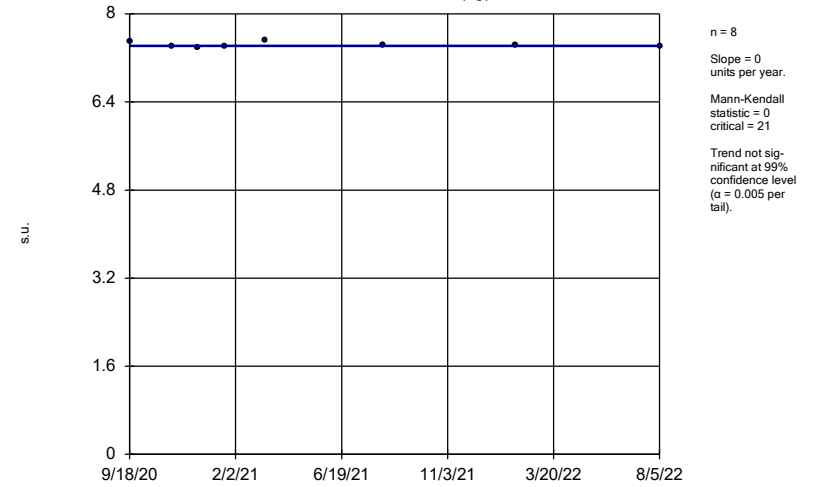
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator HGWA-47 (bg)



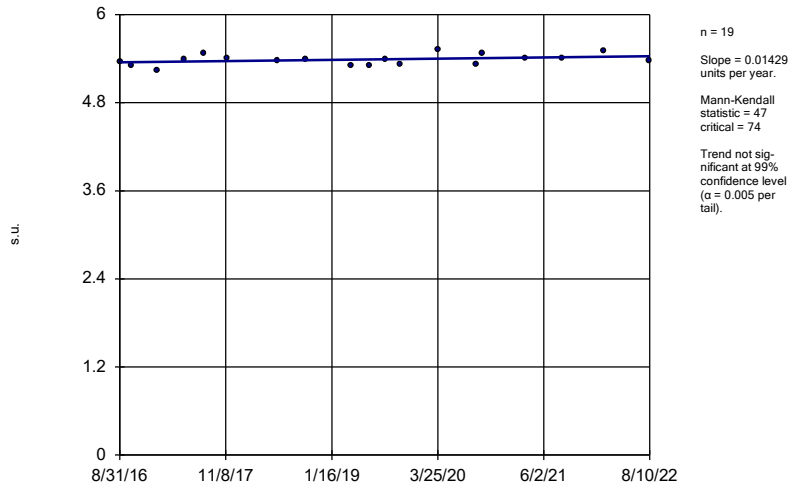
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator HGWA-48D (bg)



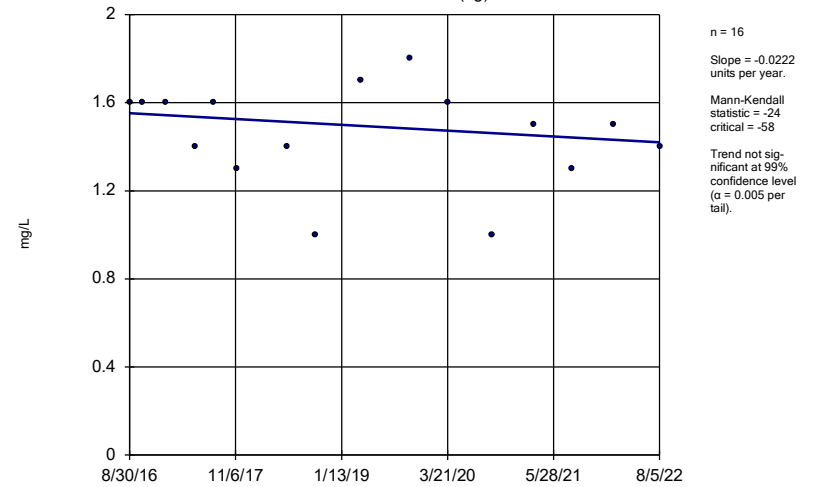
Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator HGWC-101



Constituent: pH Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

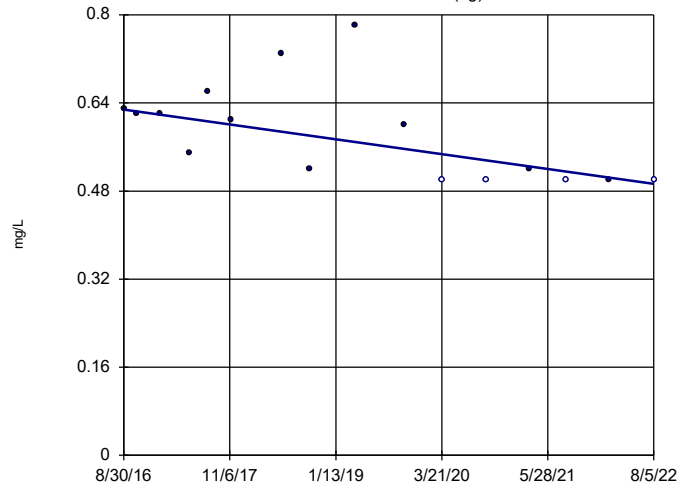
Sen's Slope Estimator HGWA-111 (bg)



Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-112 (bg)

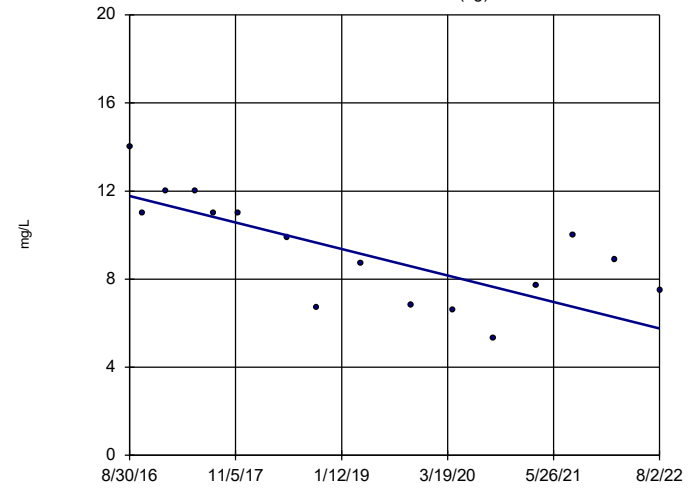


n = 16
Slope = -0.02278
units per year.
Mann-Kendall
statistic = -62
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-113 (bg)

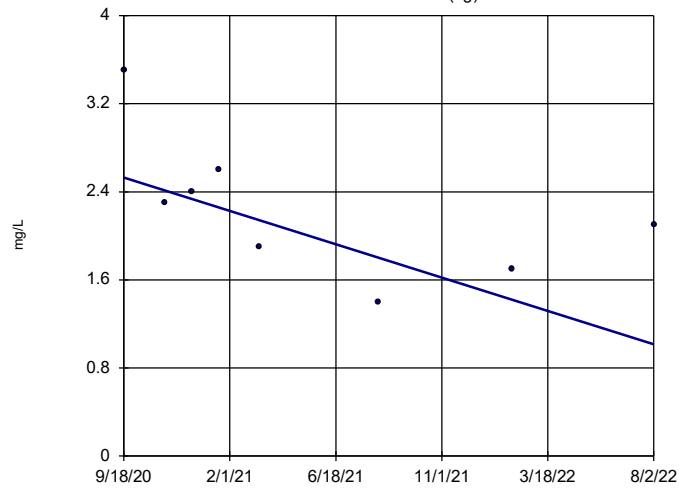


n = 16
Slope = -1.014
units per year.
Mann-Kendall
statistic = -66
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-47 (bg)

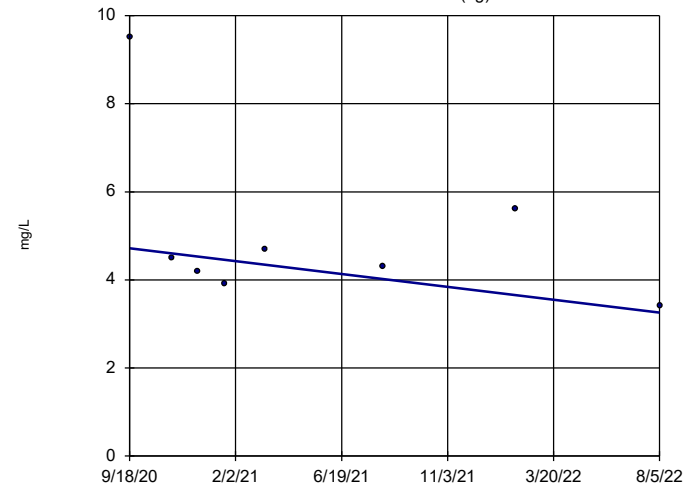


n = 8
Slope = -0.8098
units per year.
Mann-Kendall
statistic = -14
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)

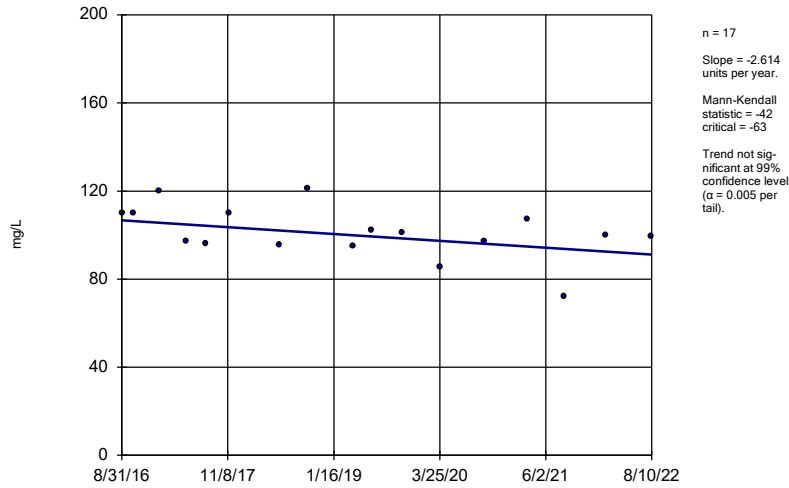


n = 8
Slope = -0.7764
units per year.
Mann-Kendall
statistic = -8
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-101

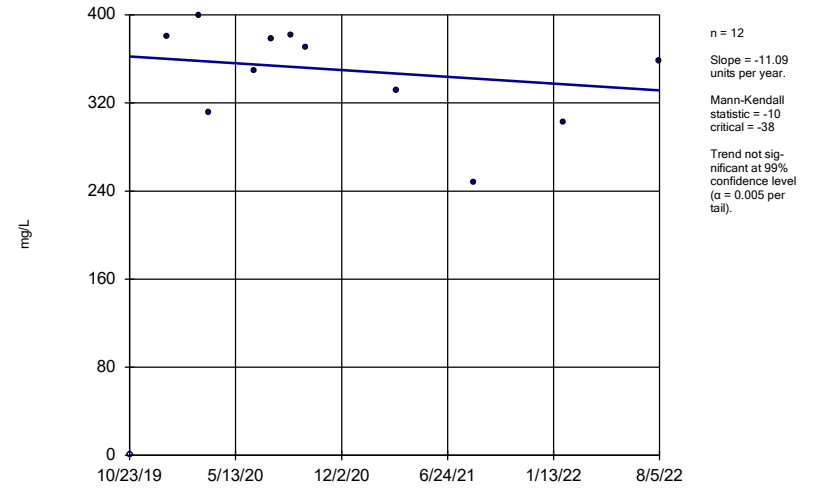


Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Sen's Slope Estimator

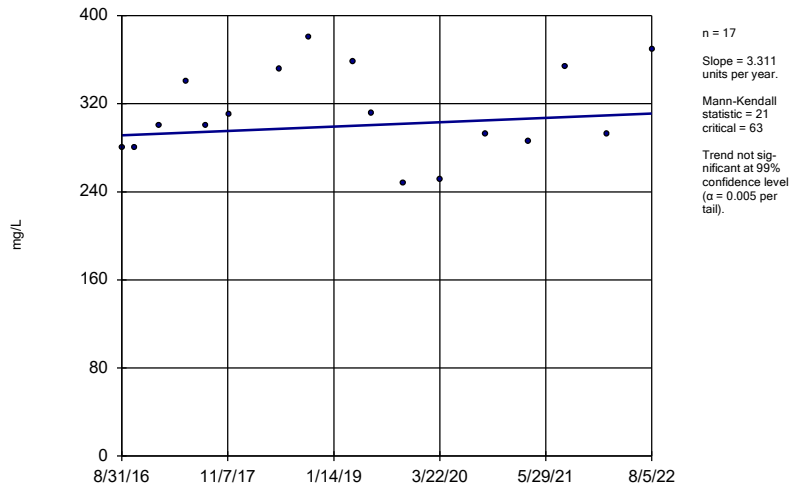
HGWC-102



Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

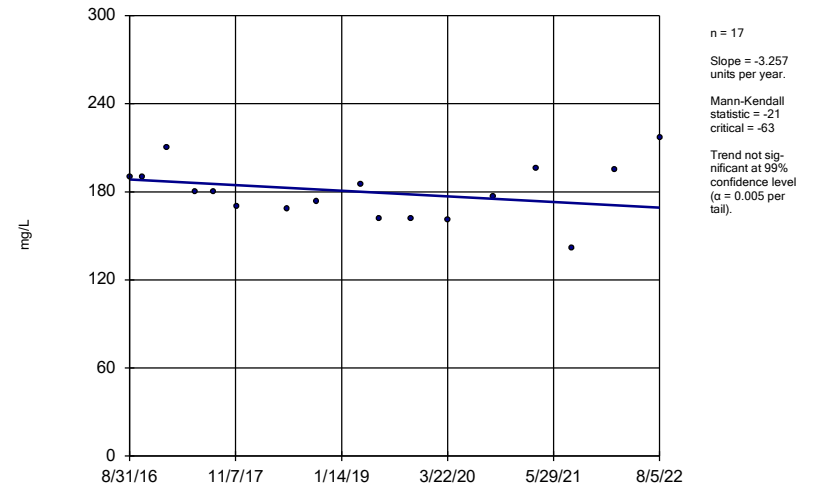
HGWC-103



Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

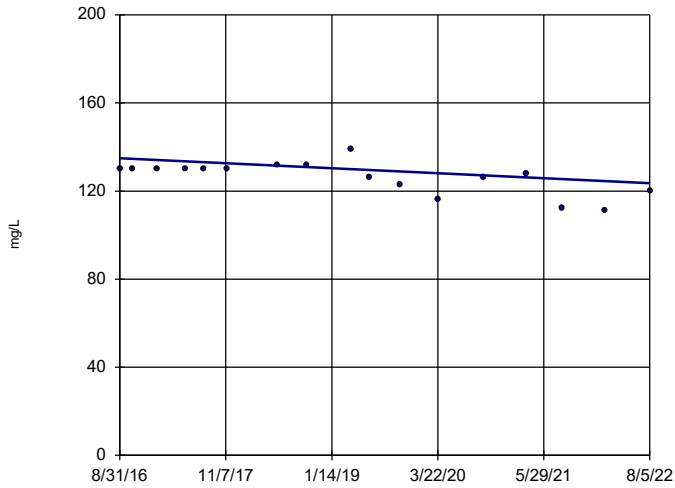
HGWC-105



Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-107

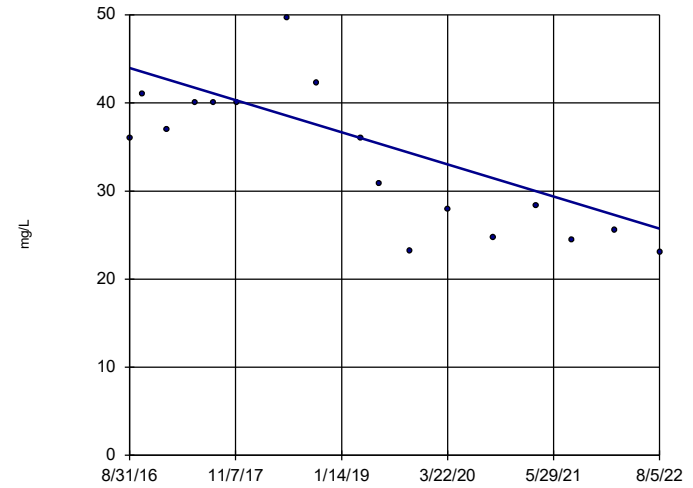


n = 17
 Slope = -1.917
 units per year.
 Mann-Kendall
 statistic = -61
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-109

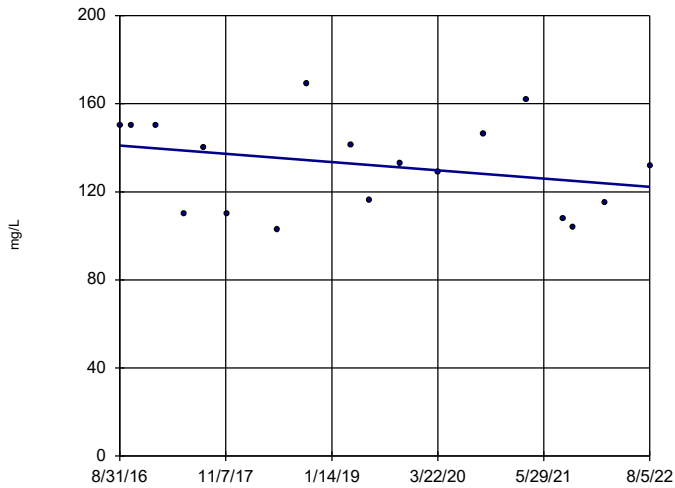


n = 17
 Slope = -3.076
 units per year.
 Mann-Kendall
 statistic = -74
 critical = -63
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-117

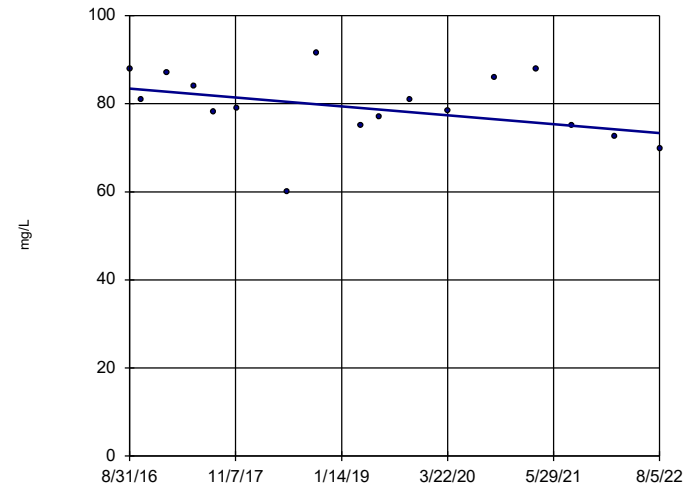


n = 18
 Slope = -3.182
 units per year.
 Mann-Kendall
 statistic = -33
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-118

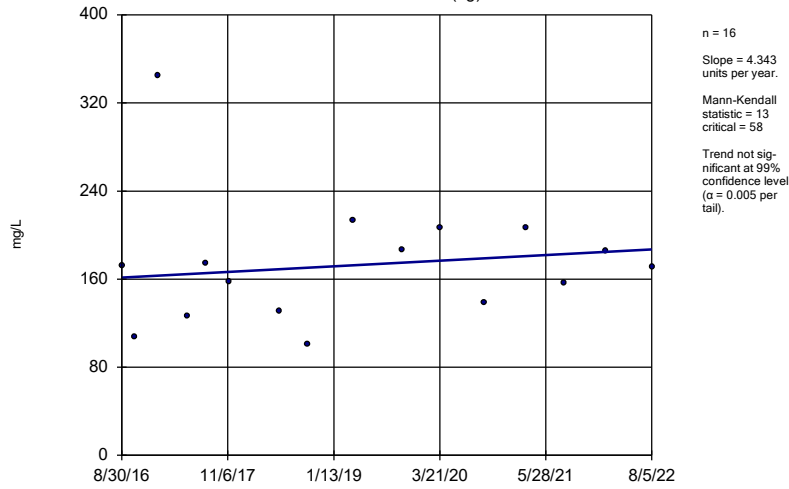


n = 17
 Slope = -1.699
 units per year.
 Mann-Kendall
 statistic = -45
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

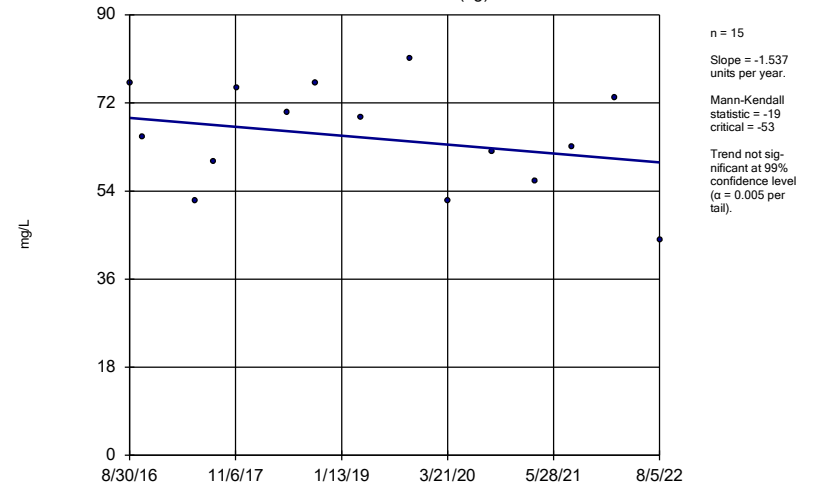
HGWA-111 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

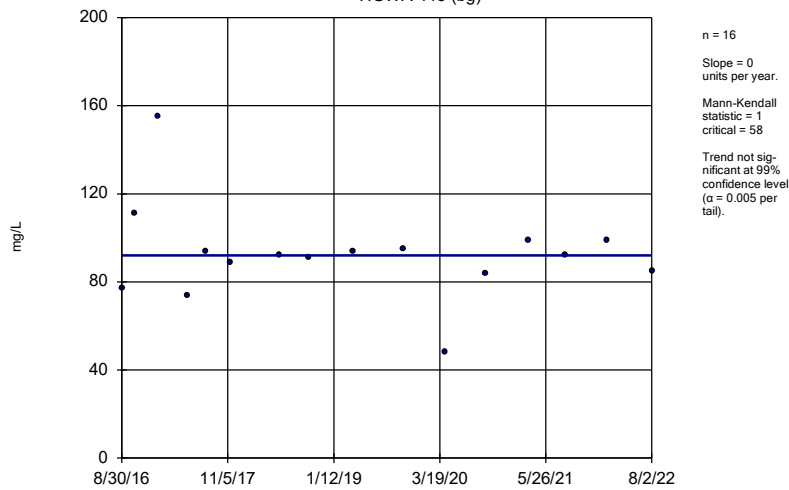
HGWA-112 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

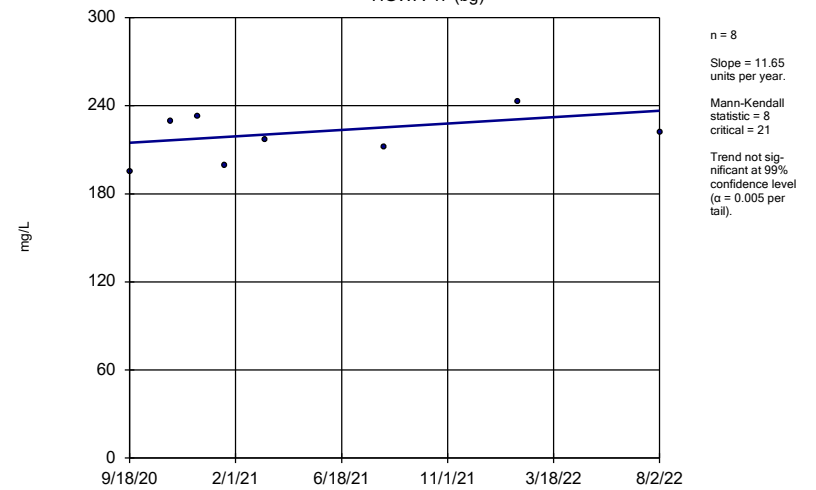
HGWA-113 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

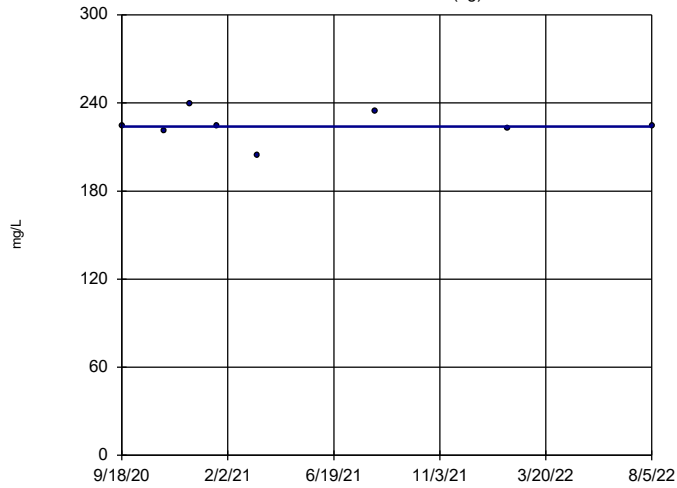
HGWA-47 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWA-48D (bg)

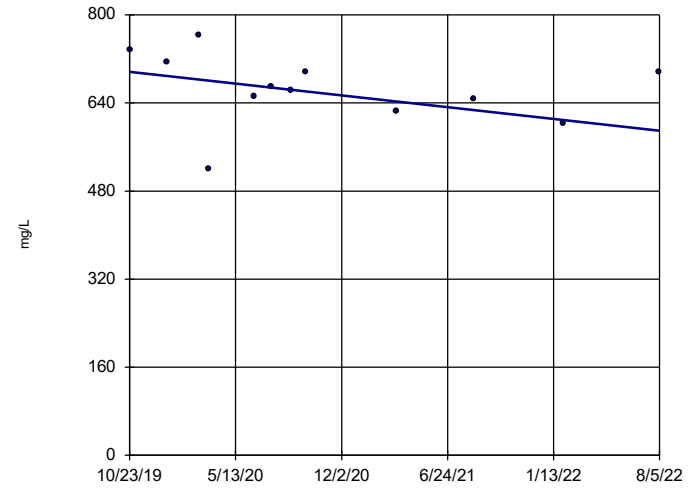


n = 8
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -1
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-102

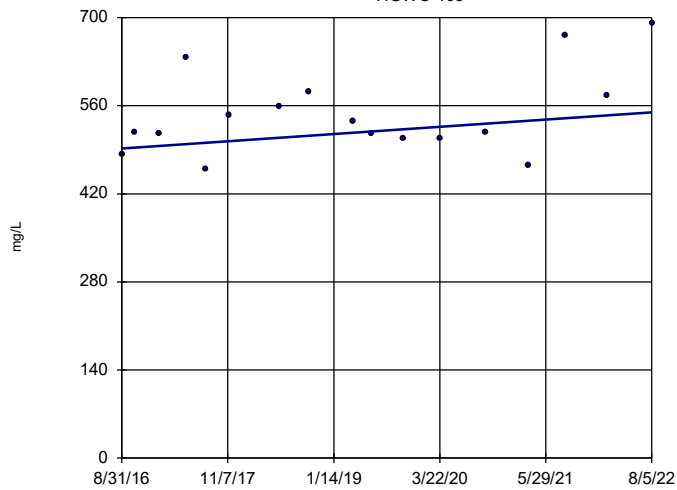


n = 12
 Slope = -38.24
 units per year.
 Mann-Kendall
 statistic = -21
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-103

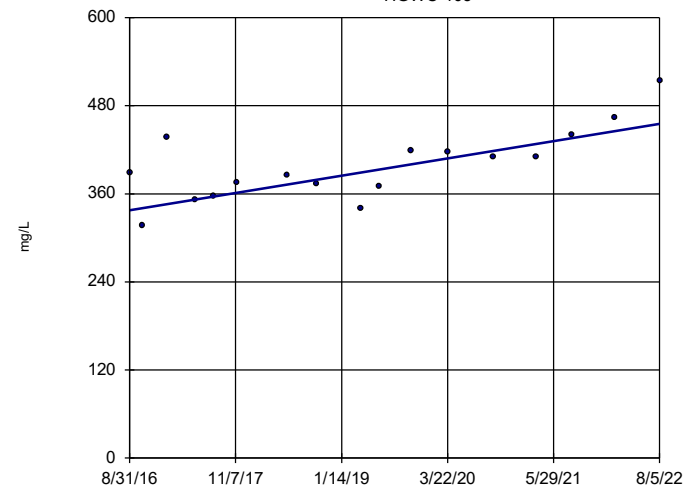


n = 17
 Slope = 9.656
 units per year.
 Mann-Kendall
 statistic = 24
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Sen's Slope Estimator

HGWC-105



n = 17
 Slope = 19.84
 units per year.
 Mann-Kendall
 statistic = 66
 critical = 63
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/7/2022 12:07 PM View: Trend Test
 Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	53	n/a	n/a	92.45	n/a	n/a	0.06597	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	92.54	n/a	n/a	0.03217	NP Inter(NDs)
Barium (mg/L)	n/a	0.11	n/a	n/a	n/a	67	n/a	n/a	0	n/a	n/a	0.03217	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0019	n/a	n/a	n/a	67	n/a	n/a	89.55	n/a	n/a	0.03217	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	67	n/a	n/a	100	n/a	n/a	0.03217	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0061	n/a	n/a	n/a	67	n/a	n/a	35.82	n/a	n/a	0.03217	NP Inter(normality)
Cobalt (mg/L)	n/a	0.005	n/a	n/a	n/a	67	n/a	n/a	88.06	n/a	n/a	0.03217	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	n/a	1.303	n/a	n/a	n/a	67	0.606	0.3494	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.1743	n/a	n/a	n/a	70	0.2617	0.07844	24.29	Kaplan-Meier	sqrt(x)	0.05	Inter
Lead (mg/L)	n/a	0.0016	n/a	n/a	n/a	67	n/a	n/a	68.66	n/a	n/a	0.03217	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	67	n/a	n/a	38.81	n/a	n/a	0.03217	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	53	n/a	n/a	77.36	n/a	n/a	0.06597	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	53	n/a	n/a	84.91	n/a	n/a	0.06597	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	53	n/a	n/a	79.25	n/a	n/a	0.06597	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	53	n/a	n/a	100	n/a	n/a	0.06597	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-4 GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.11	2
Beryllium, Total (mg/L)	0.004		0.0019	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0061	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.005	0.006
Combined Radium, Total (pCi/L)	5		1.3	5
Fluoride, Total (mg/L)	4		0.17	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-117	0.01281	0.006091	0.006	Yes	18	0	sqrt(x)	0.01	Param.

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.003	0.006	No	11	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-117	0.003	0.0012	0.006	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	17	94.12	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00065	0.01	No	12	66.67	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-109	0.002838	0.001558	0.01	No	17	5.882	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	18	94.44	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	17	94.12	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04568	0.03977	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03307	0.0271	2	No	12	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04044	0.03555	2	No	17	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.075	0.066	2	No	17	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03917	0.0363	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08767	0.08086	2	No	17	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.04931	0.04073	2	No	18	0	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.0907	0.0318	2	No	4	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.0618	0.05074	2	No	17	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000059	0.004	No	17	47.06	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	17	76.47	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.0005	0.000068	0.004	No	18	55.56	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	17	94.12	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.00011	0.005	No	17	17.65	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006894	0.0003139	0.005	No	12	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007959	0.0006841	0.005	No	17	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.0001	0.005	No	17	58.82	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0009479	0.0006476	0.005	No	18	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	4	75	No	0.0625	NP (normality)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	12	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00081	0.1	No	17	58.82	No	0.01	NP (normality)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	17	76.47	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	17	94.12	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	17	88.24	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.0012	0.1	No	18	77.78	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0017	0.1	No	17	70.59	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-101	0.002794	0.002112	0.006	No	17	5.882	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002006	0.001008	0.006	No	12	0	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.0023	0.001829	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00047	0.006	No	17	35.29	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.002092	0.001246	0.006	No	17	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-117	0.01281	0.006091	0.006	Yes	18	0	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-117A	0.00314	-0.0006348	0.006	No	4	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.0025	0.00045	0.006	No	17	47.06	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8728	0.4168	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.227	0.5519	5	No	11	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8936	0.4295	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8923	0.4959	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.08	0.5012	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8037	0.49	5	No	17	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.99	0.198	5	No	18	0	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	1.489	-0.6524	5	No	4	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.094	0.4393	5	No	16	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.065	4	No	18	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.22	0.076	4	No	12	83.33	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.071	4	No	18	72.22	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-105	0.13	0.074	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-107	0.16	0.064	4	No	18	55.56	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-109	0.1205	0.0777	4	No	18	11.11	No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.11	0.09	4	No	19	57.89	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-117A	0.1349	0.009082	4	No	4	50	No	0.01	Param.
Fluoride (mg/L)	HGWC-118	0.18	0.072	4	No	19	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	17	94.12	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	12	91.67	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	17	70.59	No	0.01	NP (normality)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	17	88.24	No	0.01	NP (NDs)

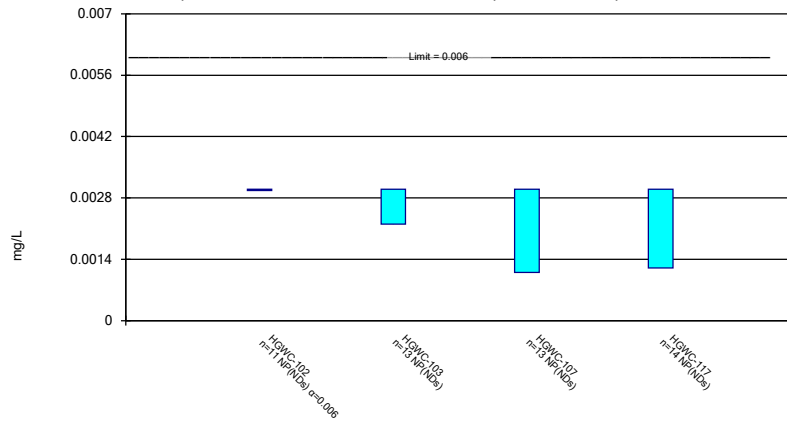
Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/11/2022, 1:22 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lead (mg/L)	HGWC-117	0.001	0.00025	0.015	No	18	72.22	No	0.01	NP (normality)
Lead (mg/L)	HGWC-118	0.001	0.00036	0.015	No	17	70.59	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-102	0.0013	0.00084	0.04	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	17	17.65	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.0042	0.003847	0.04	No	17	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	17	47.06	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117	0.0035	0.0017	0.04	No	18	16.67	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117A	0.005858	0.002668	0.04	No	4	0	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.04	No	17	35.29	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0002	0.002	No	11	90.91	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00027	0.00017	0.002	No	13	76.92	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	13	84.62	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117	0.0003	0.00015	0.002	No	14	71.43	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	4	75	No	0.0625	NP (normality)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	13	84.62	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.005	0.05	No	11	90.91	No	0.006	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.001	0.002	No	11	90.91	No	0.006	NP (NDs)

Non-Parametric Confidence Interval

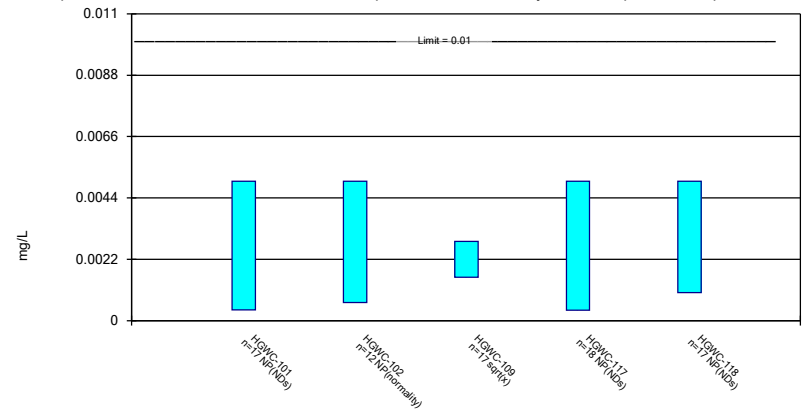
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

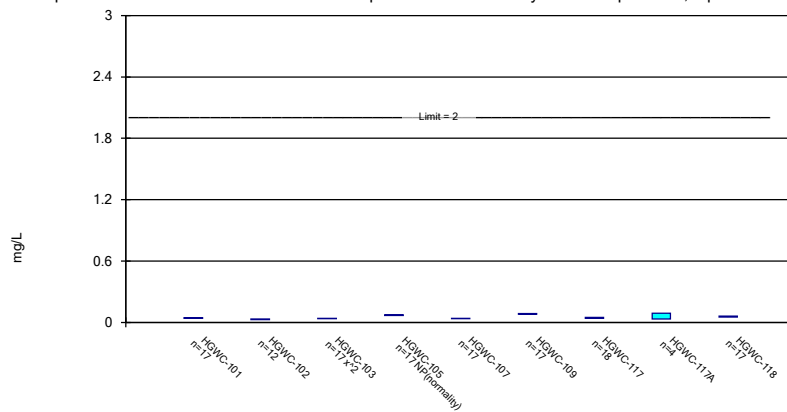
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

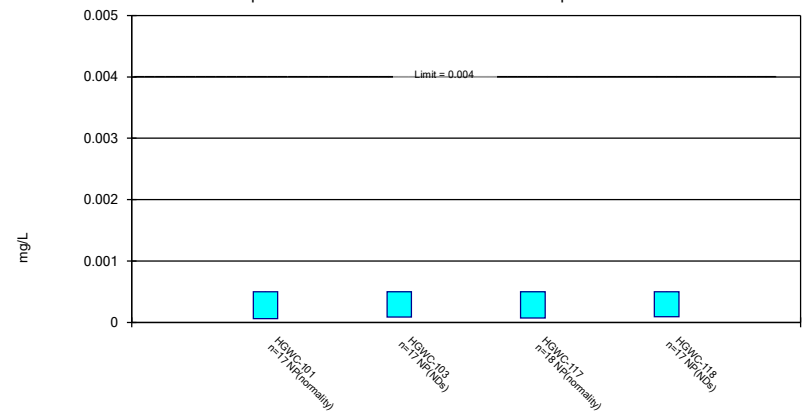
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Constituent: Barium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

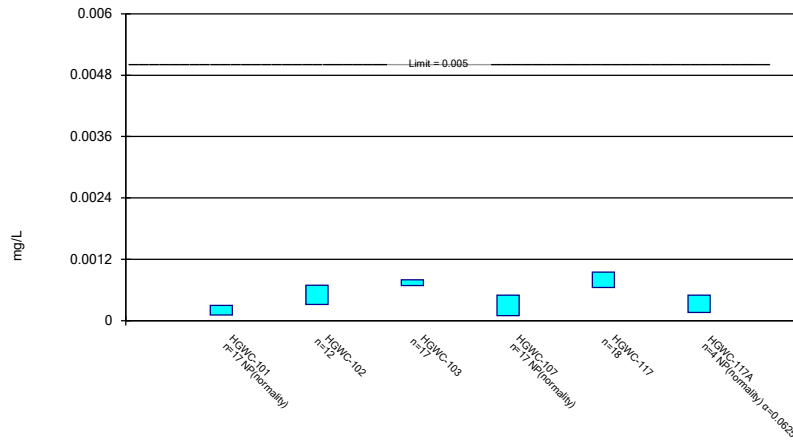
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

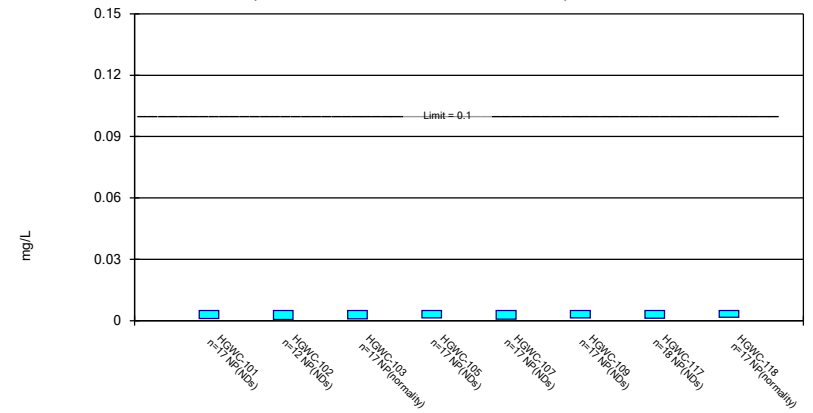
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

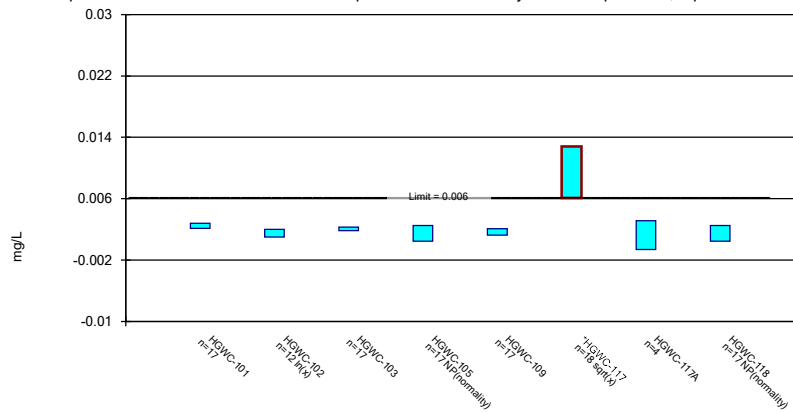
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

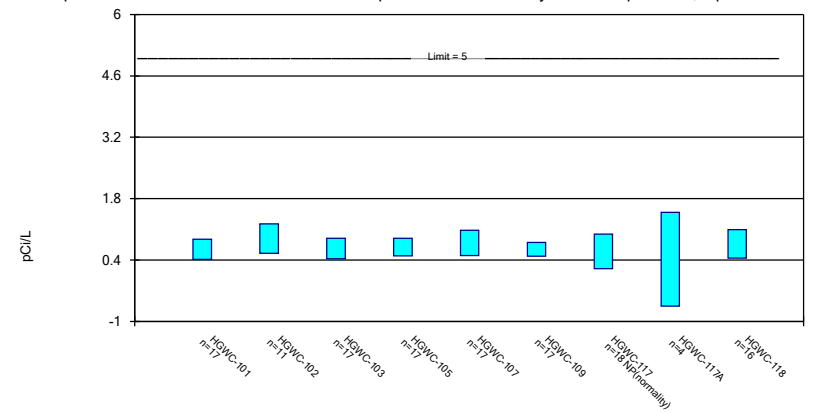
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

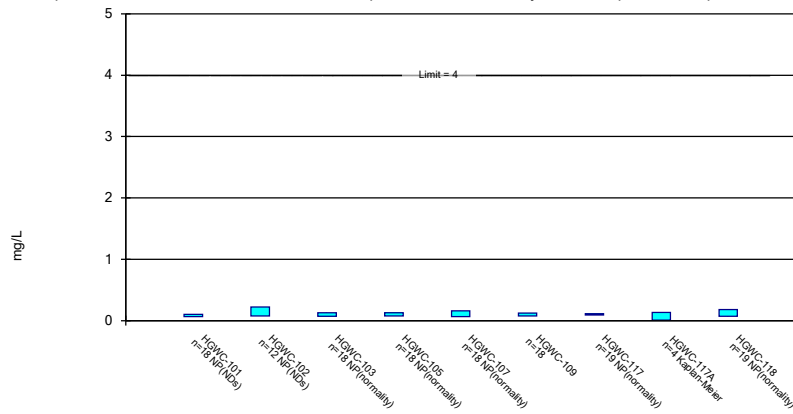
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 & 228 Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

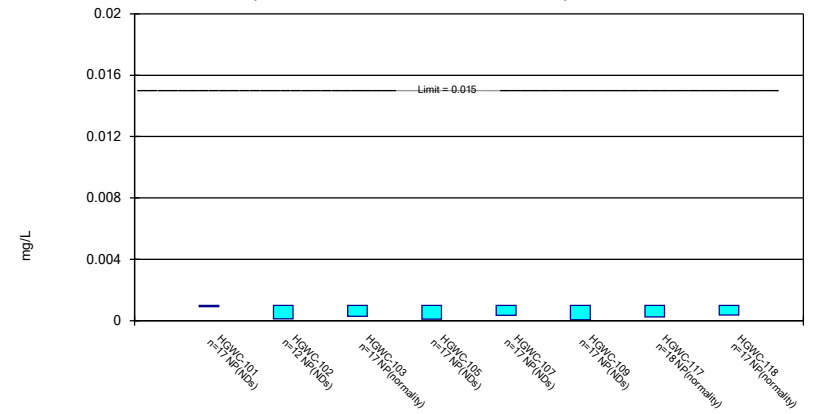
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

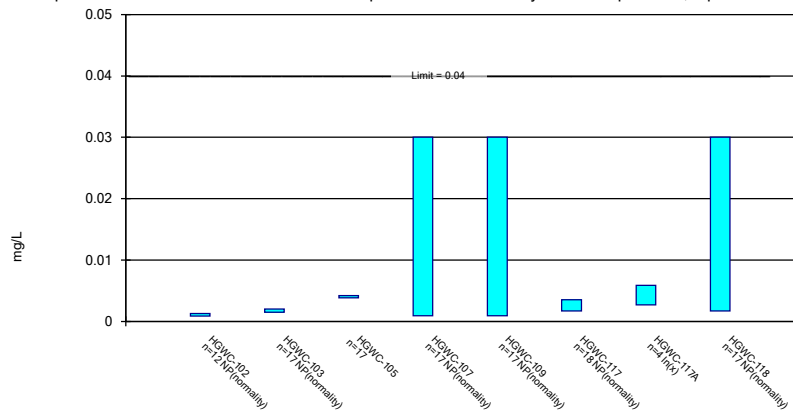
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

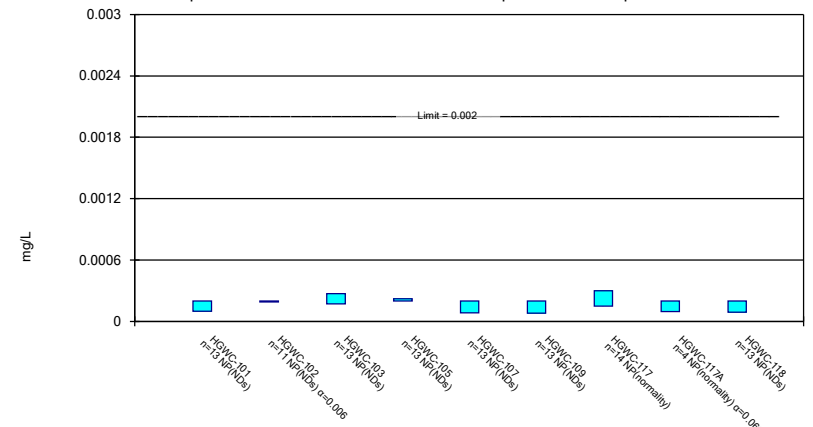
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

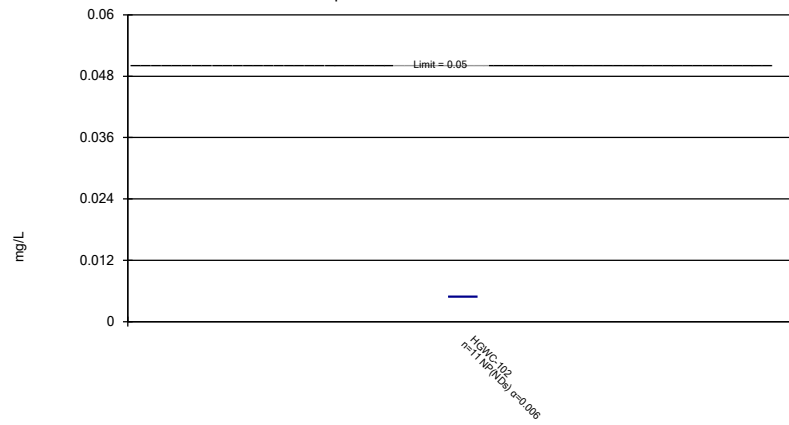
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

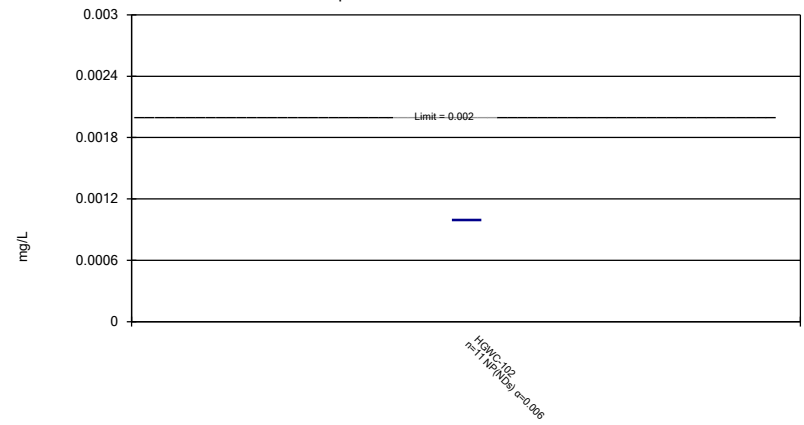
Compliance Limit is not exceeded.



Constituent: Selenium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 10/11/2022 1:21 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-107	HGWC-117
8/31/2016		<0.003	<0.003	<0.003
10/20/2016				<0.003
10/24/2016		<0.003		
10/25/2016			<0.003	
1/27/2017				<0.003
1/31/2017		<0.003	<0.003	
5/23/2017		<0.003		<0.003
5/24/2017			<0.003	
8/10/2017		<0.003	<0.003	<0.003
11/14/2017		<0.003	<0.003	<0.003
6/6/2018		0.0022 (J)	<0.003	
6/7/2018				<0.003
10/2/2018			0.0011 (J)	
10/3/2018		<0.003		<0.003
8/22/2019		<0.003		<0.003
8/23/2019			<0.003	
10/23/2019	<0.003			
1/3/2020	0.00076 (J)			
3/4/2020	<0.003			
3/24/2020	<0.003			
6/18/2020	<0.003			
7/21/2020	<0.003			
8/27/2020	<0.003	<0.003	<0.003	<0.003
9/24/2020	<0.003			
8/13/2021	<0.003		<0.003	
8/16/2021		<0.003		
8/19/2021				<0.003
9/27/2021				<0.003
2/2/2022	<0.003	<0.003	<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003	0.0012 (J)
Mean	0.002796	0.002938	0.002854	0.002871
Std. Dev.	0.0006754	0.0002219	0.000527	0.0004811
Upper Lim.	0.003	0.003	0.003	0.003
Lower Lim.	0.003	0.0022	0.0011	0.0012

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005		0.0045 (J)	<0.005	<0.005
10/20/2016	<0.005			<0.005	<0.005
10/25/2016			0.003 (J)		
1/27/2017				<0.005	
1/31/2017	<0.005		0.0022 (J)		<0.005
5/23/2017	<0.005			<0.005	<0.005
5/24/2017			0.0012 (J)		
8/10/2017	<0.005		0.0016 (J)	<0.005	<0.005
11/14/2017	<0.005		0.0011 (J)	<0.005	<0.005
6/6/2018	<0.005		0.0018 (J)		
6/7/2018				<0.005	<0.005
10/2/2018			0.0014 (J)		
10/3/2018	<0.005			<0.005	<0.005
8/22/2019	<0.005			<0.005	<0.005
8/23/2019			0.0035 (J)		
10/22/2019			0.0019 (J)	<0.005	<0.005
10/23/2019	<0.005	<0.005			
1/3/2020		0.00065 (J)			
3/4/2020		0.00036 (J)			
3/24/2020		<0.005		0.00037 (J)	
3/25/2020	0.00039 (J)		0.0025 (J)		<0.005
6/18/2020		0.00092 (J)			
7/21/2020		0.00083 (J)			
8/26/2020					<0.005
8/27/2020	<0.005	<0.005	0.0011 (J)	<0.005	
9/24/2020	<0.005	<0.005			
9/25/2020			0.0017 (J)	<0.005	
9/28/2020					<0.005
3/17/2021	<0.005	<0.005	0.0019 (J)		
3/18/2021					0.001 (J)
3/19/2021				<0.005	
8/13/2021		<0.005	0.0019 (J)		<0.005
8/16/2021	<0.005				
8/19/2021				<0.005	
9/27/2021				<0.005	
2/2/2022	<0.005	<0.005	<0.005	<0.005	
2/3/2022					<0.005
8/5/2022		<0.005	0.0022 (J)	<0.005	<0.005
8/10/2022	<0.005				
Mean	0.004729	0.003563	0.002265	0.004743	0.004765
Std. Dev.	0.001118	0.002126	0.001134	0.001091	0.0009701
Upper Lim.	0.005	0.005	0.002838	0.005	0.005
Lower Lim.	0.00039	0.00065	0.001558	0.00037	0.001

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0527		0.045	0.067	0.0391	0.0883	0.0547		0.0595
10/20/2016	0.0477						0.0529		0.055
10/24/2016			0.0386						
10/25/2016				0.0745	0.041	0.0831			
1/27/2017							0.049		
1/31/2017	0.0527		0.0365	0.0674	0.0382	0.0844			0.0613
5/23/2017	0.0436		0.0254				0.0352		0.068
5/24/2017				0.0668	0.0377	0.0784			
8/10/2017	0.0419		0.0396	0.067	0.0385	0.0903	0.0457		0.0638
11/14/2017	0.0407		0.0385	0.0643	0.039	0.083	0.0368		0.07
6/6/2018	0.043		0.043	0.068	0.039	0.095			
6/7/2018							0.036		0.059
10/2/2018				0.066	0.038	0.089			
10/3/2018	0.041		0.04				0.047		0.056
8/22/2019	0.043		0.036	0.066			0.036		0.052
8/23/2019					0.038	0.088			
10/22/2019					0.039	0.087	0.049		0.054
10/23/2019	0.043	0.037	0.039	0.066					
1/3/2020		0.036							
3/4/2020		0.033							
3/24/2020		0.024					0.051		
3/25/2020	0.038		0.036	0.074	0.037	0.084			0.06
6/18/2020		0.029							
7/21/2020		0.028							
8/26/2020									0.056
8/27/2020	0.045	0.028	0.038	0.068	0.034	0.083	0.047		
9/24/2020	0.041	0.029	0.036	0.075	0.039				
9/25/2020						0.085	0.05		
9/28/2020									0.046
3/17/2021	0.04	0.031				0.077			
3/18/2021			0.042	0.082	0.041				0.067
3/19/2021							0.058		
8/12/2021								0.079	
8/13/2021		0.026		0.073	0.033	0.08			0.043
8/16/2021	0.037		0.037						
8/19/2021							0.041		
9/27/2021							0.038	0.062	
2/2/2022	0.036	0.029	0.036		0.034	0.072	0.039		
2/3/2022				0.093				0.049	0.047
8/5/2022		0.031	0.037	0.088	0.036	0.085	0.044	0.055	0.039
8/10/2022	0.04								
Mean	0.04272	0.03008	0.03786	0.07212	0.03774	0.08426	0.04502	0.06125	0.05627
Std. Dev.	0.004716	0.003801	0.00416	0.008346	0.002297	0.005439	0.007089	0.01297	0.008824
Upper Lim.	0.04568	0.03307	0.04044	0.075	0.03917	0.08767	0.04931	0.0907	0.0618
Lower Lim.	0.03977	0.0271	0.03555	0.066	0.0363	0.08086	0.04073	0.0318	0.05074

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-103	HGWC-117	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005
10/20/2016	<0.0005		<0.0005	<0.0005
10/24/2016		<0.0005		
1/27/2017			<0.0005	
1/31/2017	<0.0005	<0.0005		<0.0005
5/23/2017	7E-05 (J)	<0.0005	<0.0005	<0.0005
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2018	5.9E-05 (J)	<0.0005		
6/7/2018			6.8E-05 (J)	<0.0005
10/3/2018	6.5E-05 (J)	<0.0005	<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005	7.9E-05 (J)	<0.0005
10/22/2019			<0.0005	<0.0005
10/23/2019	7.5E-05 (J)	<0.0005		
3/24/2020			<0.0005	
3/25/2020	<0.0005	<0.0005		<0.0005
8/26/2020				<0.0005
8/27/2020	5.7E-05 (J)	5E-05 (J)	4.9E-05 (J)	
9/24/2020	4.8E-05 (J)	8.8E-05 (J)		
9/25/2020			6.6E-05 (J)	
9/28/2020				<0.0005
3/17/2021	5.9E-05 (J)			
3/18/2021		6.1E-05 (J)		9.3E-05 (J)
3/19/2021			8.1E-05 (J)	
8/13/2021				<0.0005
8/16/2021	<0.0005	<0.0005		
8/19/2021			5.6E-05 (J)	
9/27/2021			<0.0005	
2/2/2022	6.2E-05 (J)	7.7E-05 (J)	8.3E-05 (J)	
2/3/2022				<0.0005
8/5/2022		<0.0005	7.8E-05 (J)	<0.0005
8/10/2022	6.4E-05 (J)			
Mean	0.0002682	0.0003986	0.0003089	0.0004761
Std. Dev.	0.0002254	0.0001886	0.00022	9.871E-05
Upper Lim.	0.0005	0.0005	0.0005	0.0005
Lower Lim.	5.9E-05	8.8E-05	6.8E-05	9.3E-05

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-107	HGWC-117	HGWC-117A
8/31/2016	0.0002 (J)		0.0006 (J)	0.0001 (J)	0.0008 (J)	
10/20/2016	0.0003 (J)				0.0008 (J)	
10/24/2016			0.0008 (J)			
10/25/2016				8E-05 (J)		
1/27/2017					0.0007 (J)	
1/31/2017	0.0001 (J)		0.0006 (J)	9E-05 (J)		
5/23/2017	0.0002 (J)		0.0006 (J)		0.0005 (J)	
5/24/2017				0.0001 (J)		
8/10/2017	0.0002 (J)		0.0007 (J)	<0.0005	0.0004 (J)	
11/14/2017	<0.0005		0.0007 (J)	<0.0005	0.0005 (J)	
6/6/2018	9.5E-05 (J)		0.00073 (J)	0.00012 (J)		
6/7/2018					0.00049 (J)	
10/2/2018				0.0001 (J)		
10/3/2018	0.00018 (J)		0.00078 (J)		0.00079 (J)	
8/22/2019	0.00014 (J)		0.0008 (J)		0.00064 (J)	
8/23/2019				0.00011 (J)		
10/22/2019				<0.0005	0.00068 (J)	
10/23/2019	0.0002 (J)	0.00026 (J)	0.00091 (J)			
1/3/2020		0.0002 (J)				
3/4/2020		0.00026 (J)				
3/24/2020		0.00068 (J)			0.00079 (J)	
3/25/2020	0.00014 (J)		0.00068 (J)	<0.0005		
6/18/2020		0.00047 (J)				
7/21/2020		0.00083 (J)				
8/27/2020	0.00019 (J)	0.00038 (J)	0.00082 (J)	<0.0005	0.0008 (J)	
9/24/2020	0.00014 (J)	0.00032 (J)	0.00076 (J)	<0.0005		
9/25/2020					0.00089 (J)	
3/17/2021	<0.0005	0.00094				
3/18/2021			0.00068	<0.0005		
3/19/2021					0.001	
8/12/2021						0.00016 (J)
8/13/2021		0.00069		<0.0005		
8/16/2021	0.00015 (J)		0.00081			
8/19/2021					0.0012	
9/27/2021					0.00098	<0.0005
2/2/2022	<0.0005	0.00055	0.0008	<0.0005	0.0012	
2/3/2022						<0.0005
8/5/2022		0.00044 (J)	0.00081	<0.0005	0.0012	<0.0005
8/10/2022	0.00011 (J)					
Mean	0.0002262	0.0005017	0.00074	0.0003353	0.0007978	0.000415
Std. Dev.	0.0001395	0.0002393	8.916E-05	0.0002031	0.0002481	0.00017
Upper Lim.	0.0003	0.0006894	0.0007959	0.0005	0.0009479	0.0005
Lower Lim.	0.00011	0.0003139	0.0006841	0.0001	0.0006476	0.00016

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016	<0.005						<0.005	<0.005
10/24/2016			<0.005					
10/25/2016				<0.005	<0.005	<0.005		
1/27/2017							<0.005	
1/31/2017	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	0.0006 (J)		<0.005				<0.005	<0.005
5/24/2017				<0.005	<0.005	<0.005		
8/10/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/14/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2018	<0.005		<0.005	<0.005	<0.005	<0.005		
6/7/2018							<0.005	<0.005
10/2/2018				<0.005	<0.005	<0.005		
10/3/2018	<0.005		<0.005				<0.005	<0.005
8/22/2019	0.00064 (J)		0.00063 (J)	<0.005			<0.005	<0.005
8/23/2019					<0.005	<0.005		
10/22/2019					<0.005	0.00062 (J)	<0.005	0.00066 (J)
10/23/2019	<0.005	<0.005	0.0015 (J)	0.0004 (J)				
1/3/2020		0.00063 (J)						
3/4/2020		<0.005						
3/24/2020		0.00051 (J)					0.0012 (J)	
3/25/2020	0.00098 (J)		0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)		0.00081 (J)
6/18/2020		<0.005						
7/21/2020		<0.005						
8/26/2020								0.00098 (J)
8/27/2020	<0.005	<0.005	0.00069 (J)	<0.005	<0.005	<0.005	0.00057 (J)	
9/24/2020	<0.005	<0.005	0.00081 (J)	0.00064 (J)	<0.005			
9/25/2020						<0.005	0.00067 (J)	
9/28/2020								0.0017 (J)
3/17/2021	0.00075 (J)	<0.005				<0.005		
3/18/2021			0.003 (J)	0.00058 (J)	<0.005			0.0021 (J)
3/19/2021							0.001 (J)	
8/13/2021		<0.005		<0.005	<0.005	<0.005		<0.005
8/16/2021	<0.005		<0.005					
8/19/2021							<0.005	
9/27/2021							<0.005	
2/2/2022	<0.005	<0.005	0.0013 (J)		<0.005	<0.005	<0.005	
2/3/2022				<0.005				<0.005
8/5/2022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/10/2022	<0.005							
Mean	0.003998	0.004262	0.003434	0.003995	0.004749	0.004531	0.00408	0.003897
Std. Dev.	0.001863	0.001725	0.002003	0.001875	0.001033	0.001332	0.001775	0.001788
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00098	0.00063	0.00081	0.0013	0.00074	0.0014	0.0012	0.0017

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.0033 (J)		0.0018 (J)	0.0014 (J)	0.0023 (J)	0.0035 (J)		<0.005
10/20/2016	0.0025 (J)					0.0045 (J)		<0.005
10/24/2016			0.0018 (J)					
10/25/2016				0.0013 (J)	0.0017 (J)			
1/27/2017						0.0041 (J)		
1/31/2017	0.001 (J)		0.0016 (J)	0.0006 (J)	0.0017 (J)			<0.005
5/23/2017	0.0025 (J)		0.0014 (J)			0.0071 (J)		0.0005 (J)
5/24/2017				0.0007 (J)	0.002 (J)			
8/10/2017	0.0029 (J)		0.0025 (J)	0.0006 (J)	0.0012 (J)	0.0031 (J)		0.0003 (J)
11/14/2017	0.003 (J)		0.002 (J)	0.0005 (J)	0.0014 (J)	0.0062 (J)		0.0004 (J)
6/6/2018	0.0016 (J)		0.0031 (J)	0.00056 (J)	0.0014 (J)			
6/7/2018						0.0083 (J)		<0.005
10/2/2018				<0.005	0.00081 (J)			
10/3/2018	0.0028 (J)		0.0023 (J)			0.005 (J)		<0.005
8/22/2019	<0.005		0.0019 (J)	<0.005		0.012		0.0003 (J)
8/23/2019					0.0027 (J)			
10/22/2019					0.0022 (J)	0.0064		0.00061 (J)
10/23/2019	0.0023 (J)	0.0018 (J)	0.0021 (J)	0.00038 (J)				
1/3/2020		0.0038 (J)						
3/4/2020		0.0021 (J)						
3/24/2020		0.0019 (J)				0.0087		
3/25/2020	0.0021 (J)		0.0022 (J)	0.00047 (J)	0.0022 (J)			<0.005
6/18/2020		0.0012 (J)						
7/21/2020		0.00098 (J)						
8/26/2020								0.00061 (J)
8/27/2020	0.0027 (J)	0.001 (J)	0.0019 (J)	<0.005	0.00086 (J)	0.011		
9/24/2020	0.0021 (J)	0.0011 (J)	0.0019 (J)	0.00044 (J)				
9/25/2020					0.001 (J)	0.011		
9/28/2020								0.00048 (J)
3/17/2021	0.0023 (J)	0.0012 (J)			0.003 (J)			
3/18/2021			0.0021 (J)	0.00045 (J)				0.0012 (J)
3/19/2021						0.011		
8/12/2021							0.0024 (J)	
8/13/2021		0.00085 (J)		<0.005	0.0011 (J)			<0.005
8/16/2021	0.0026 (J)		0.0022 (J)					
8/19/2021						0.017		
9/27/2021						0.015	0.0011 (J)	
2/2/2022	0.0027 (J)	0.0019 (J)	0.0022 (J)		0.002 (J)	0.022		
2/3/2022				<0.005			0.00041 (J)	0.00045 (J)
8/5/2022		0.001 (J)	0.0021 (J)	<0.005	0.0008 (J)	0.023	0.0011 (J)	<0.005
8/10/2022	0.0028 (J)							
Mean	0.002453	0.001569	0.002065	0.001318	0.001669	0.009939	0.001253	0.001462
Std. Dev.	0.0005444	0.0008277	0.0003757	0.0009411	0.0006755	0.006011	0.0008313	0.001027
Upper Lim.	0.002794	0.002006	0.0023	0.0025	0.002092	0.01281	0.00314	0.0025
Lower Lim.	0.002112	0.001008	0.001829	0.00047	0.001246	0.006091	-0.0006348	0.00045

Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.621 (U)		1.62	0.906 (U)	1.2	1.03	1.12		
10/20/2016	1.4						0.803 (U)		1.97
10/24/2016			1.01 (U)						
10/25/2016				1.03	1.11 (U)	1.07			
1/27/2017							1.08 (U)		
1/31/2017	0.906 (U)		0.976 (U)	0.868 (U)	1.45	0.588 (U)			1.03
5/23/2017	0.388 (U)		0.891 (U)				0.624 (U)		0.398 (U)
5/24/2017				0.728 (U)	0.393 (U)	0.593 (U)			
8/10/2017	1.03 (U)		0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.695 (U)		0.938 (U)
11/14/2017	0.769 (U)		0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.99 (U)		0.335 (U)
6/6/2018	1.28 (U)		0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)			
6/7/2018							1.04 (U)		0.696 (U)
10/2/2018				0.336 (U)	1.23	0.225 (U)			
10/3/2018	0.302 (U)		0.111 (U)				0.198 (U)		1.6 (U)
8/22/2019	0.474 (U)		0.946 (U)	0.694 (U)			0.333 (U)		0.904 (U)
8/23/2019					1.69	0.47 (U)			
10/22/2019					0.705 (U)	0.545 (U)	0.827 (U)		0.424 (U)
10/23/2019	0.776 (U)	0.858 (U)	0.571 (U)	0.584 (U)					
1/22/2020		1.04 (U)							
3/4/2020		1.32							
3/24/2020		1.23 (U)					0.815 (U)		
3/25/2020	0.603 (U)		0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)			0.915 (U)
7/21/2020		0.0938 (U)							
8/26/2020									1.19
8/27/2020	0.109 (U)	1.17 (U)	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	0.193 (U)		
9/24/2020	0.625 (U)	1.42	0.804 (U)	1.11 (U)	0.576 (U)				
9/25/2020						0.584 (U)	0.155 (U)		
9/28/2020									0.613 (U)
3/17/2021	0.248 (U)	0.401 (U)				0.556 (U)			
3/18/2021			0.274 (U)	0.252 (U)	0.145 (U)				0.323 (U)
3/19/2021							0.303 (U)		
8/12/2021								0.124 (U)	
8/13/2021		0.828 (U)		0.513 (U)	0.815 (U)	0.794 (U)			0.228 (U)
8/16/2021	0.667 (U)		0.493 (U)						
8/19/2021							0.155 (U)		
9/27/2021							0.905	1.05 (U)	
2/1/2022	0.162 (U)	0.806 (U)	0.569 (U)		0.0564 (U)	0.542 (U)	0.26 (U)		
2/3/2022				0.835				0.499 (U)	0.5 (U)
8/5/2022		0.618 (U)	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0.605 (U)	0 (U)	0.206 (U)
8/10/2022	0.601 (U)								
Mean	0.6448	0.8895	0.6616	0.6941	0.7906	0.6469	0.6167	0.4183	0.7669
Std. Dev.	0.3639	0.4051	0.3704	0.3163	0.4619	0.2503	0.3499	0.4716	0.5035
Upper Lim.	0.8728	1.227	0.8936	0.8923	1.08	0.8037	0.99	1.489	1.094
Lower Lim.	0.4168	0.5519	0.4295	0.4959	0.5012	0.49	0.198	-0.6524	0.4393

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	0.05 (J)		0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)		0.18 (J)
10/20/2016	0.03 (J)						0.11 (J)		0.12 (J)
10/24/2016			0.13 (J)						
10/25/2016				0.09 (J)	0.16 (J)	0.17 (J)			
1/27/2017							0.28 (J)		
1/31/2017	<0.1		<0.1	0.13 (J)	0.16 (J)	0.05 (J)			0.3
5/23/2017	<0.1		0.15 (J)				0.01 (J)		0.14 (J)
5/24/2017				0.07 (J)	0.009 (J)	0.13 (J)			
8/10/2017	<0.1		<0.1	0.03 (J)	<0.1	0.12 (J)	0.1 (J)		0.11 (J)
11/14/2017	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1		0.07 (J)
6/6/2018	<0.1		<0.1	0.074 (J)	0.057 (J)	0.15 (J)			
6/7/2018							<0.1		0.3
10/2/2018				<0.1	<0.1	<0.1			
10/3/2018	<0.1		<0.1				<0.1		0.12 (J)
4/3/2019					<0.1	0.05 (J)			
4/4/2019	<0.1		0.042 (J)	0.03 (J)					
4/5/2019							0.19 (J)		0.33
6/18/2019									0.89
8/22/2019	<0.1		<0.1	<0.1			<0.1		0.07 (J)
8/23/2019					<0.1	0.034 (J)			
10/22/2019					0.047 (J)	0.099 (J)	0.042 (J)		0.087 (J)
10/23/2019	<0.1	0.22 (J)	<0.1	<0.1					
1/3/2020		<0.1							
3/4/2020		<0.1							
3/24/2020		<0.1					<0.1		
3/25/2020	<0.1		<0.1	<0.1	<0.1	0.075 (J)			0.078 (J)
6/18/2020		<0.1							
7/21/2020		<0.1							
8/26/2020									0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	<0.1	<0.1	0.094 (J)	<0.1		
9/24/2020	<0.1	<0.1	<0.1	<0.1	0.064 (J)				
9/25/2020						0.091 (J)	<0.1		
9/28/2020									0.078 (J)
3/17/2021	<0.1	<0.1				0.089 (J)			
3/18/2021			<0.1	<0.1	<0.1				0.079 (J)
3/19/2021							<0.1		
8/12/2021								<0.1	
8/13/2021		<0.1		<0.1	<0.1	0.086 (J)			0.075 (J)
8/16/2021	<0.1		<0.1						
8/19/2021							<0.1		
9/27/2021							<0.1	<0.1	
2/2/2022	<0.1	<0.1	<0.1		<0.1	0.086 (J)	<0.1		
2/3/2022				<0.1				0.056 (J)	0.069 (J)
8/5/2022		0.076 (J)	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.075 (J)	0.12	0.12
8/10/2022	0.065 (J)								
Mean	0.09139	0.108	0.09739	0.09161	0.09278	0.09911	0.1051	0.094	0.1731
Std. Dev.	0.02071	0.03594	0.02311	0.02894	0.0351	0.0354	0.0539	0.02703	0.193
Upper Lim.	0.1	0.22	0.13	0.13	0.16	0.1205	0.11	0.1349	0.18
Lower Lim.	0.065	0.076	0.071	0.074	0.064	0.0777	0.09	0.009082	0.072

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016	<0.001						<0.001	<0.001
10/24/2016			<0.001					
10/25/2016				<0.001	<0.001	<0.001		
1/27/2017							<0.001	
1/31/2017	<0.001		<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	0.0009 (J)		<0.001				<0.001	<0.001
5/24/2017				<0.001	<0.001	<0.001		
8/10/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001		<0.001	<0.001	<0.001	<0.001		
6/7/2018							<0.001	<0.001
10/2/2018				<0.001	<0.001	<0.001		
10/3/2018	<0.001		<0.001				<0.001	<0.001
8/22/2019	<0.001		<0.001	<0.001			<0.001	<0.001
8/23/2019					<0.001	5.8E-05 (J)		
10/22/2019					7.9E-05 (J)	5.4E-05 (J)	0.00016 (J)	0.00025 (J)
10/23/2019	<0.001	<0.001	0.00043 (J)	6.8E-05 (J)				
1/3/2020		<0.001						
3/4/2020		0.00011 (J)						
3/24/2020		<0.001					0.00025 (J)	
3/25/2020	<0.001		7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001		0.0001 (J)
6/18/2020		<0.001						
7/21/2020		<0.001						
8/26/2020								0.00036 (J)
8/27/2020	<0.001	<0.001	0.00018 (J)	<0.001	<0.001	<0.001	0.00014 (J)	
9/24/2020	<0.001	<0.001	0.00028 (J)	4.9E-05 (J)	0.00034 (J)			
9/25/2020						<0.001	0.00019 (J)	
9/28/2020								0.00022 (J)
3/17/2021	<0.001	<0.001				<0.001		
3/18/2021			0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)			0.00088 (J)
3/19/2021							0.00038 (J)	
8/13/2021		<0.001		<0.001	<0.001	<0.001		<0.001
8/16/2021	<0.001		<0.001					
8/19/2021							<0.001	
9/27/2021							<0.001	
2/2/2022	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	
2/3/2022				<0.001				<0.001
8/5/2022		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/10/2022	<0.001							
Mean	0.0009941	0.0009258	0.0007768	0.00078	0.0008071	0.0008889	0.0007844	0.0008124
Std. Dev.	2.425E-05	0.0002569	0.0003623	0.0004089	0.0003624	0.0003135	0.0003607	0.000336
Upper Lim.	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0009	0.00011	0.00028	8.5E-05	0.00034	5.8E-05	0.00025	0.00036

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016		<0.03	0.0034 (J)	<0.03	<0.03	0.0024 (J)		<0.03
10/20/2016						0.0027 (J)		<0.03
10/24/2016		<0.03						
10/25/2016			0.0043 (J)	<0.03	<0.03			
1/27/2017						<0.03		
1/31/2017		<0.03	0.0042 (J)	<0.03	<0.03			<0.03
5/23/2017		0.0012 (J)				<0.03		0.0012 (J)
5/24/2017			0.0039 (J)	<0.03	0.0012 (J)			
8/10/2017		0.0016 (J)	0.004 (J)	<0.03	<0.03	0.0021 (J)		<0.03
11/14/2017		0.0015 (J)	0.0044 (J)	<0.03	<0.03	<0.03		<0.03
6/6/2018		0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)			
6/7/2018						0.0011 (J)		0.0015 (J)
10/2/2018			0.0041 (J)	<0.03	0.0013 (J)			
10/3/2018		0.0016 (J)				0.0021 (J)		<0.03
8/22/2019		0.0015 (J)	0.004 (J)			0.0012 (J)		0.0018 (J)
8/23/2019				0.00092 (J)	0.0009 (J)			
10/22/2019				0.00094 (J)	0.00088 (J)	0.0028 (J)		0.0027 (J)
10/23/2019	0.0012 (J)	0.002 (J)	0.0039 (J)					
1/3/2020	0.0011 (J)							
3/4/2020	0.0013 (J)							
3/24/2020	0.00084 (J)					0.0029 (J)		
3/25/2020		0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03			0.0017 (J)
6/18/2020	0.0013 (J)							
7/21/2020	0.0013 (J)							
8/26/2020								0.0028 (J)
8/27/2020	0.0011 (J)	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)	0.0024 (J)		
9/24/2020	0.0011 (J)	0.0017 (J)	0.0038 (J)	0.00098 (J)				
9/25/2020					0.001 (J)	0.0031 (J)		
9/28/2020								0.0022 (J)
3/17/2021	0.0012 (J)				<0.03			
3/18/2021		0.0018 (J)	0.0042 (J)	0.0011 (J)				0.0029 (J)
3/19/2021						0.0035 (J)		
8/12/2021							0.0036 (J)	
8/13/2021	0.0011 (J)		0.0038 (J)	0.00084 (J)	<0.03			0.0017 (J)
8/16/2021		0.0016 (J)						
8/19/2021						0.0017 (J)		
9/27/2021						0.0016 (J)	0.0035 (J)	
2/2/2022	0.0013 (J)	0.0019 (J)		0.001 (J)	0.00084 (J)	0.0017 (J)		
2/3/2022			0.0046 (J)				0.0051 (J)	0.0015 (J)
8/5/2022	0.0013 (J)	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0017 (J)	0.0038 (J)	0.0018 (J)
Mean	0.001178	0.006629	0.004024	0.01462	0.01467	0.006833	0.004	0.01187
Std. Dev.	0.0001395	0.01115	0.0002818	0.01495	0.0149	0.01068	0.0007439	0.01381
Upper Lim.	0.0013	0.002	0.0042	0.03	0.03	0.0035	0.005858	0.03
Lower Lim.	0.00084	0.0015	0.003847	0.00092	0.0009	0.0017	0.002668	0.0017

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-117A	HGWC-118
8/31/2016	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	7E-05 (J)		<0.0002
10/20/2016	<0.0002						<0.0002		<0.0002
10/24/2016			<0.0002						
10/25/2016				<0.0002	<0.0002	<0.0002			
1/27/2017							<0.0002		
1/31/2017	9.3E-05 (J)		8E-05 (J)	<0.0002	<0.0002	8E-05 (J)			9E-05 (J)
5/23/2017	<0.0002		<0.0002				<0.0002		<0.0002
5/24/2017				<0.0002	<0.0002	<0.0002			
8/10/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002			
6/7/2018							<0.0002		<0.0002
10/2/2018				<0.0002	<0.0002	<0.0002			
10/3/2018	<0.0002		<0.0002				<0.0002		<0.0002
8/22/2019	<0.0002		<0.0002	<0.0002			<0.0002		<0.0002
8/23/2019					<0.0002	<0.0002			
10/23/2019		<0.0002							
1/3/2020		<0.0002							
3/4/2020		<0.0002							
3/24/2020		<0.0002							
6/18/2020		<0.0002							
7/21/2020		<0.0002							
8/26/2020									<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
9/24/2020		<0.0002							
8/12/2021								9.4E-05 (J)	
8/13/2021		0.0001 (J)		0.00022	8.4E-05 (J)	8E-05 (J)			8.1E-05 (J)
8/16/2021	9.9E-05 (J)		0.00027						
8/19/2021							0.0003		
9/27/2021							<0.0002	<0.0002	
2/2/2022	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	0.00015 (J)		
2/3/2022				<0.0002				<0.0002	<0.0002
8/5/2022		<0.0002	0.00017 (J)	<0.0002	<0.0002	<0.0002	0.00014 (J)	<0.0002	<0.0002
8/10/2022	<0.0002								
Mean	0.000184	0.0001909	0.0001938	0.0002015	0.0001911	0.0001815	0.00019	0.0001735	0.0001824
Std. Dev.	3.907E-05	3.015E-05	4.053E-05	5.547E-06	3.217E-05	4.506E-05	4.93E-05	5.3E-05	4.304E-05
Upper Lim.	0.0002	0.0002	0.00027	0.00022	0.0002	0.0002	0.0003	0.0002	0.0002
Lower Lim.	9.9E-05	0.0002	0.00017	0.0002	8.4E-05	8E-05	0.00015	9.4E-05	9E-05

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.005
1/3/2020	0.0015 (J)
3/4/2020	<0.005
3/24/2020	<0.005
6/18/2020	<0.005
7/21/2020	<0.005
8/27/2020	<0.005
9/24/2020	<0.005
8/13/2021	<0.005
2/2/2022	<0.005
8/5/2022	<0.005
Mean	0.004682
Std. Dev.	0.001055
Upper Lim.	0.005
Lower Lim.	0.005

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 10/11/2022 1:22 PM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.001
1/3/2020	8E-05 (J)
3/4/2020	<0.001
3/24/2020	<0.001
6/18/2020	<0.001
7/21/2020	<0.001
8/27/2020	<0.001
9/24/2020	<0.001
8/13/2021	<0.001
2/2/2022	<0.001
8/5/2022	<0.001
Mean	0.0009164
Std. Dev.	0.0002774
Upper Lim.	0.001
Lower Lim.	0.001